

The work force participation of mothers with young children has steadily increased throughout the later part of the 20th century. For much of this time, working outside the home was an option for many American mothers, but many families are finding it difficult to survive in today's economy without two incomes. During the childbearing years, mothers are either choosing to remain in the labor force after the birth of a child or are going back to work sooner, before their children have reached school age (Casper, 1997). By 1991, nearly 60% of all women with preschool aged children (ages 3-5) were working, regardless of their marital status (Rindfuss et al. 1996). Although most women are working during their childrearing years, there is still a sizable percentage of women who, for various reasons, remain outside of the paid labor force.

Over the past thirty years, social science research has focused on this new balance of work and motherhood. Many studies have investigated who is more likely to delay childbearing or continue to work during the childbearing years, as well as who is most likely to drop out and who is the quickest to return based on various socio- demographic factors. While these studies have created a profile of the type of women who participate in the labor force, these studies have largely focused on the effects of human capital and economic characteristics, missing other important family characteristics. Very few of these studies have addressed the potential effect of children's health on their mother's work trajectories.

This paper explores whether workforce participation trajectories differ for mothers of children with disability as compared to those mothers with non-disabled

children. The following analyses examine differences in the rate at which mothers re-enter the labor force after the birth of a child, as well as their exit from paid employment after a birth. It is hypothesized that mothers who have a child with a disability will be slower to return to work or be more likely to drop out of the labor force if she is working at the time of the birth. Matched records from the 1993 NHIS and the 1995 NSFG provide a unique opportunity to investigate the effects of child disability on the workforce participation of mothers using event history techniques.

Background

Child disability can affect the family in a variety of ways. Family research focused on the effects of child disability have found that many of these families face significant emotional and financial strain. This is especially true for the mothers of children with disability. Research by Heller et al. (1997) has shown that mothers spend more time in caregiving roles and carry the bulk of caregiving relative to fathers of children with disability. Consistent with this, other study findings suggest that these families are more likely to be composed of breadwinning husbands and full-time wives and mothers (Traustadottir 1991). Because of this increase in caregiving tasks, mothers of children with disability may be more likely to stay out of the labor market.

While at the same time, mothers of children with disability face increasing financial burdens, thus encouraging labor force participation. Further research has examined the economic factors that hinder the return to work for all mothers. These studies mainly focus on the difficulties associated with child care costs; however most of these studies ignore the important needs of children with disability. Special care-giving

needs for these children are often more expensive and less available than traditional child care, both of which could hamper a woman's decision to return to work.

While research in the field of women's labor force participation is plentiful, few studies have focused on the effects of child disability on maternal work. Although child disability is not used as a factor in predicting maternal workforce participation in these studies, they do provide a conceptual framework in which to place child disability. Many of these studies show that age, marital status, education level, work status of the respondent's mother, and various other demographic variables influence whether a mother will continue to work during her childbearing years (Barrow, 1999; Wenk and Garrett, 1992; Klerman and Leibowitz, 1990; Leibowitz and Klerman, 1995).

Other research has dealt directly with child disability and mothers' work status. Work produced almost 20 years ago by Breslau, Salkever, and Staruch (1982) first examined the labor force participation of mothers with disabled children. Their findings indicated that having a child with disability negatively influences the work force participation of mothers. Expanding on these findings, other research has found that this negative relationship between child disability and labor force participation is most devastating for single mothers, who are more likely to face financial hardship by staying out of the labor force (Acs and Loprest, 1999).

Most recently Porterfield (2002) used the 1992 and 1993 Survey of Income and Program Participation (SIPP) data to examine the implications of child disability on the family. She found that the presence of young children, regardless of disability status, negatively affects the work choices of mothers. When children enter school, married mothers of children with disability are less likely to enter the labor force, or increase

labor hours, than married mothers without such children or single mothers, regardless of child's disability status. Although this study does shed some light on the influence of child disability on the work patterns of mothers, it only takes a cross-sectional snapshot of a sample of mothers and does not examine the long term effects of child disability on maternal work force participation. This current research project will expand upon Porterfield's findings by further investigating the rate of return, if ever, for these mothers of children with disabilities, as well as their rate of exit if they were working at the time of the child's birth.

Data

In order to properly investigate the influence of child disability on the work trajectories of mothers, data for this research project must contain both mothers' work histories as well as the disability status of their children. Since this information can not be found on one nationally representative dataset, two datasets have been merged together for these analyses. To conduct this analysis we matched the health and disability information for children in the 1993 National Health Interview Survey (NHIS) with fertility and contraceptive histories of their mothers found in the 1995 National Survey of Family Growth (NSFG).

The 1993 NHIS is a continuing, nationwide interview survey designed and administered by the National Center for Health Statistics (NCHS). Information is obtained about the health, disability, and other characteristics of each member of the household. This is provided by the person in the household reported to be the most capable of providing accurate health information, in most cases this is the mother. The

sample provides national estimates of the civilian non-institutionalized population. Socio-demographic characteristics of mothers and the disability status and birth dates of their co-resident children are provided in the data.

The 1995 NSFG is a nationwide survey that examines marital, fertility, contraception and employment trajectories of women ages 15-44. Like the NHIS, the NSFG is designed and administered by NCHS. Detailed information regarding employment and marital history, as well as a variety of demographic and economic characteristics, were obtained through in-person surveys and short self-administered questionnaires for 10,847 civilian, non-institutionalized women. This includes information about the birth dates of all children regardless of residence, and the dates in and out of paid employment.

The 1993 NHIS provided the sampling frame for the 1995 NSFG. As a result, records from women interviewed in the 1993 NHIS can be linked to records of the same women interviewed in the 1995 NSFG.^a We merged these files so that the unit of analysis is a birth. Each birth record contains the disability status of that child (the focal child), the disability status of older children in the household (if any), and the mother's employment history. To assess the rate of matching birth records, we restricted the sample to records containing birth dates in both the NHIS and the NSFG (11,670 records), and to records referring to children biologically related to the mother, ages 3-18 in 1995, and living at home in 1993. Of these 9,280 records, 8,711 had matching birth dates within a +/- 3 month range. Analysis of all 9,280 records indicates that selected (8,711) and non-selected (569) records do not differ significantly by the child's disability status.^b The latter group was selected as the basis for our analysis of birth/work intervals.

A mother could have up to 10 birth-work intervals in this file (n=14,958).

Measures

Child Disability

Measuring child disability is very complex. It can be measured using information on medical conditions, limitations in activities of daily living, and ability to participate in age-appropriate social roles (Fujiura and Rutkowski-Kmitta 2001). Activity limitations are powerful measures of disability. They are easily reported by primary caregivers and proxy persons alike, and present a clear understanding of difficulty in everyday situations. The 1993 NHIS gathered activity limitation information for all children in the household, focusing on limitations in age-appropriate activities expected to last 12 months or longer due to a health condition. For children under the age of 5, the activity limitation was measured by the child's ability to participate in play or other preschool activities. For children ages 5-17, activity limitation is indicated by a report that the child is limited or unable to attend school, needs a special school or special classes. Children limited in activity are classified as having moderate limitation (6.04%; n=526); children unable in activity are classified as having severe limitation (0,61%; n=53).

Although in some cases child disability is evident at birth, more often disability is first diagnosed at school entry when peer group comparisons reveal behavioral or learning problems. While information regarding the child's medical condition and age at diagnosis would enhance our understanding our understanding of the complex relationship between child disability and mother's subsequent employment history, this information is not available for children in the 1993 NHIS.

Work Status

Women with at least one child when the NHIS data were collected are included in the analyses. Work histories of these mothers begin at her 18th birthday and continue until the date of interview. The start and end date of every job the mother held during this time, as well as whether it was part-time or full-time were recorded in the survey. The majority of mothers in the sample were not working during the month of the child's birth. Almost 9% of mothers in the sample were pregnant before their work histories began; this is important to note since work histories begin at age 18 and a woman could give birth before this time.

The first analysis will focus on whether the amount of time from birth to return to work varies as a function of the disability status of the child. The duration (in months) of the non-work interval begins with the first month of the child's birth and ends with the child's mother working or censoring. Intervals are right censored if the child's mother does not return to work before she turns 44 or by the date of the interview.

The second set of analyses will examine the rate at which the child's mother exits the workforce if she was working at the time of the child's birth. The duration (in months) of the exit-work interval begins with the first month of the child's birth and ends with the child's mother leaving the workforce for more than 3 months or censoring. Intervals are right censored if the child's mother does not leave the labor force for more than 3 months before she turns 44 or the interview takes place.

Control Variables

Appendices A and B will describe the variables used in the analyses as well as their frequency distributions. All control covariates were measured at the start of each

interval, and include parity, mother's age at the child's birth, marital status, education level, work status of respondent's mother, and other socioeconomic characteristics of the woman. Previous research has found that the covariates used in the following models all significantly predict mothers' labor force participation. For example, prior research has found that single mothers are more likely to participate in the labor force than married mothers (Porterfield 2002; Wenk and Garrett 1992).

Methods

Event history techniques will be used to address the two preliminary research hypotheses. The first hypothesis is as follows: Children with disability are more likely to have mothers who will stay out of the labor force longer after their birth than children without disability. For these sets of analyses, the file will be restricted to mothers who were not working at the time of the child's birth (n=8,850). This file includes children who have mothers who never work during the period of time collected by the NSFG and also includes children who were born before the mother's 18 birthday (as stated above, work information begins at the mother's 18 birthday, not the child's birthday). In the final analysis, births occurring before the age of 18 will be excluded from the dataset because it would be incorrect to assume that the mothers of children born before age 18 were not working.

The second set of analyses will test the second hypothesis: Children with disability are more likely to have their working mothers drop out of the labor force for more than three months after their birth than children without disability. For this set of analyses, the file will be restricted to children who had mothers who were working at the

time of their birth (n=6,083). Therefore, the original dataset has been divided into two different samples, births that occurred while the mother was not in the labor force and births that occurred while the mother was in the labor force.

Future Analyses

Other studies using the restricted dataset, conducted in conjunction with the authors, show strong evidence that child disability, defined by the functional limitation model, is a strong predictor of various family outcomes. Papers under review using this dataset suggest that child disability can affect a mother's subsequent fertility. Other research using this matched dataset, presented as a poster at PAA 2002, showed a relationship between child disability and marital dissolution. Final analyses will also investigate differences in part-time/full-time work, timing of separation/divorce, and periods of time out of the labor force that might coincide with specific developmental periods in diagnosing child disability (such as entry into school). It may be more appropriate to investigate the work patterns of the mothers over their life course rather than examine only their exit out/entry in the labor force surrounding the birth of their child. The final analysis will take a broader scope in trying to consider the important relationship between child disability and mother's work force trajectories.

Endnotes

^a Restricted-use data from the 1993 NHIS and the 1995 NSFG were merged by mothers' original identifiers through collaboration between the authors and NCHS. Overall, the original merged dataset had 18,961 birth records, with 45.4% of NHIS and NSFG birth dates matching within a +/- 3 month range. However, 3,254 of these birth records were missing data from the NHIS and 4,028 were missing data from the NSFG. To better assess the rate of match, we limited the sample to those birth records most likely to contain matching birth dates. Of the 11,670 records containing birth dates from both the NHIS and NSFG, 9,280 records referred to children biologically related to the women respondent, ages 3-18 in 1995 and lived at home in 1993. 93.8% of this group had matching birth dates within a +/- 3 month range (N=8,711) and served as the basis for our sample.

^b Older children were significantly more likely to be selected, but at a decreasing rate as the child's age increased. Non-Hispanic Black, and children whose mother was between ages 14-19 at the time of their birth, or had high school education or less were significantly less likely to be selected. Women ages 40-44 at the time of the child's birth were more likely to be selected. Because only about 6% of records were excluded, however, we feel that the effect of this bias on our results is minimal.

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