Journal of Health Economics 29 (2010) 353–363

Contents lists available at ScienceDirect

Journal of Health Economics

journal homepage: www.elsevier.com/locate/econbase

Maternal employment and the health of low-income young children

Lisa A. Gennetian [a,*], Heather D. Hill [b], Andrew S. London [c], Leonard M. Lopoo [c]

[a] The Brookings Institution, Economic Studies, 1050 Massachusetts Avenue, Washington DC, United States
[b] University of Chicago, United States
[c] Syracuse University, United States

ARTICLE INFO

Article history:
Received 23 July 2009
Received in revised form 2 February 2010
Accepted 23 February 2010
Available online 3 March 2010

Keywords:
Maternal employment
Children's health
Poverty
Welfare

ABSTRACT

This study examines whether maternal employment affects the health status of low-income, elementary-school-aged children using instrumental variables estimation and experimental data from a welfare-to-work program implemented in the early 1990s. Maternal report of child health status is predicted as a function of exogenous variation in maternal employment associated with random assignment to the experimental group. IV estimates show a modest adverse effect of maternal employment on children's health. Making use of data from another welfare-to-work program we propose that any adverse effect on child health may be tempered by increased family income and access to public health insurance coverage, findings with direct relevance to a number of current policy discussions. In a secondary analysis using fixed effects techniques on longitudinal survey data collected in 1998 and 2001, we find a comparable adverse effect of maternal employment on child health that supports the external validity of our primary result.

1. Introduction

Labor force participation rates among single mothers in the U.S. remain high, at 76%, following a spike of nearly 10 percentage points in the late 1990s (U.S. Department of Labor, 2007; Blank, 2002). Although employment is predicted to substantially alter the time and money resources parents invest in children, there is little empirical evidence of consistent positive or negative effects of maternal work on low-income children's achievement or behavior (Baydar and Brooks-Gunn, 1991; Brooks-Gunn et al., 2002; Desai et al., 1989; Waldfogel et al., 2002). Even less is known about any potential influences of maternal employment on children's health outcomes. Maternal employment may benefit children's health by increasing parents' ability to purchase high-quality food, housing, and medical care. But, time spent at work may also decrease mothers' ability to care for and supervise children, leading perhaps to less healthful activities, such as eating poorly or engaging in too many sedentary activities. Low-income children of single mothers may be particularly likely to benefit from increases in family income, but, depending on the quality of non-parental care, may also be more vulnerable to the negative effects of decreased maternal availability.

This study examines maternal employment as one potentially critical influence on the health status of young children in low-income families. We do this by taking advantage of a unique exogenous increase in employment induced by a welfare-to-work experiment called the National Evaluation of Welfare-to-Work Strategies (NEWWS). Random assignment to the NEWWS Labor Force Attachment (LFA) program serves as an instrument for maternal employment in models predicting maternal reports of children's overall health status. The validity of the instrument is strengthened by the design of the NEWWS LFA program, which focused almost exclusively on helping participants find jobs, rather than providing education, training, or work supports, such as child care subsidies and health insurance coverage. The NEWWS LFA programs also did not have earnings supplements or an earnings disregard. Therefore, the programs did not increase income because mothers traded their welfare dollars for earnings as they increased their work effort. Our use of randomization to an employment program as an instrument controls not only for maternal preferences and ability, but also for child characteristics and the possibility that child health determines maternal work decisions.

The contribution of this work is multi-fold as most studies on the topic of maternal employment use high- or mixed-SES samples, which makes it difficult to know whether the results can be generalized to low-income families. There is equivalently limited information and ambiguous predictions about the role of socioeconomic status in moderating these relationships. Low-income mothers are often employed in poor quality jobs, characterized by low wages, instability, limited employee benefits, and nonstandard hours (Guyer and Mann, 1999; Johnson and Corcoran, 2003), all

* Corresponding author. Tel.: +1 914 834 2200.
E-mail address: gennetl@nber.org (L.A. Gennetian).

0167-6296/$ – see front matter © 2010 Elsevier B.V. All rights reserved.
doi:10.1016/j.jhealeco.2010.02.007

of which could exacerbate parents' stress and reduce their ability to do the carework that is necessary to address children's health and health care needs (Parcel and Menaghan, 1994, 1997; Presser, 2003; Presser and Cox, 1997; Scott et al., 2004). Family resources and health insurance coverage can actually decline and become less stable as welfare-reliant mothers move from government assistance to paid employment (Angel et al., 2006; Bitler et al., 2005; Heflin, 2006; Kaestner and Kaushal, 2003; Seccombe and Hoffman, 2007) as a result of administrative links between programs, the high marginal tax rates associated with income eligibility rules (Holt and Romich, 2007), and the fact that many low-wage jobs do not provide access to private health insurance as a benefit or an affordable option.

Moreover, few existing studies have an identification strategy that separates the confounding characteristics of family, child, and local environments from parental employment. A handful of recent studies associate maternal employment with increased rates of overweight, contagious illness, and accidents among children (Anderson et al., 2003; Gordon et al., 2007; Phipps et al., 2006; Ruhm, 2008). Although these studies carefully control for a range of correlates of maternal employment and child health, including child fixed effects, the estimates could still be vulnerable to omitted variable bias.

We find adverse effects of maternal employment on child health among young low-income children, particularly boys. The effects are modest in size: A percentage point increase in employment induced by a welfare reform program decreases the probability of a child being in very good or excellent health by 0.6 percentage points. This decrease is meaningful, however, given the strong association between having very good or excellent health and reduced incidence of asthma and other limiting conditions (CDC, 2008). In addition to testing the sensitivity of our estimates to several alternate specifications, and deriving estimates by child gender, we report findings from two complementary analyses. First, we compare NEWWS program impacts to those from another experimental welfare-to-work program, which showed concomitant effects on employment but not on child health. This comparison suggests that adverse health effects of maternal employment may be tempered by increased income or by public health insurance coverage that is accompanied by increased maternal employment. Second, we conduct an analysis using child-level fixed effects techniques on post-welfare reform longitudinal survey data collected in 1998 and 2001, and find a comparable adverse effect of maternal employment on child health that provides support for the external validity of the primary analysis.

Ongoing debates about public investment in child care, early childhood education, and work supports focus on children's cognitive and social-emotional skills (e.g. Duncan et al., 2007; Cunha and Heckman, 2009), but children's health has arguably equal if not greater importance for future productivity. Poor health in childhood is increasingly viewed as an important determinant not only of long-term health, and of costly health conditions, but of human capital development and socioeconomic attainment in adulthood (Haas, 2006, 2007; Hayward and Gorman, 2004; Palloni, 2006; Palloni and Milesi, 2006). Low birth weight and chronic health conditions in childhood are both associated with fewer years of completed schooling (Almond et al., 2005; Behrman and Rosenzweig, 2004; Black et al., 2007; Case et al., 2002; Conley and Bennett, 2001), in part because less healthy children miss more days in school and spend more time in bed and in the hospital (Bloom and Cohen, 2007; London et al., 2002). Our findings suggest that additional policy attention be paid to children's health in the context of early childhood programs, supports for low-wage workers, and interventions to promote preventive care among low-income children.

2. Background

We posit a straightforward Becker/Grossman framework for understanding how increased maternal employment might affect the development of low-income children as a function of trade-offs in parental time and resources to invest in children (e.g. Becker and Lewis, 1973; Grossman, 1972; Bianchi, 2000; London et al., 2004; Scott et al., 2004). Employment may increase family income, which can be spent on more or better-quality food products and higher-standard housing, both of which are expected to produce positive health outcomes. In addition, greater employment among single mothers has the potential to improve the health of low-income children and reduce health inequities by increasing parents' abilities to purchase private health insurance and high-quality, regular medical care. Children covered by health insurance, whether private or public, have higher rates of immunization and lower rates of avoidable hospitalizations and mortality (Aizer, 2006; Currie and Gruber, 1996), and, among low-income families, private insurance has been associated with better parent-reported child health (Shook Slack et al., 2007).

Child health also may be adversely affected by maternal employment. Reductions in parental time and supervision could translate into less parental attentiveness, greater reliance on fast or less nutritious foods, less time outside and engaging in recreational activity, and disruptions of family routines. Observational studies indicate that children in high socioeconomic status families with working mothers are more likely to be overweight (Anderson et al., 2003; Phipps et al., 2006). Working mothers have also been found to spend less time on certain activities related to health and nutrition, such as cooking and grocery shopping, as well as eating with, playing with, and supervising children (Cawley and Liu, 2007; Fertig et al., 2009).

Deleterious effects of maternal employment on child health also stem from children's increased exposure to respiratory, ear, and gastrointestinal infections in the non-parental and group child care settings where children spend more time when their mothers work (Gordon et al., 2007; Johansen et al., 1988; NICHD, 2001, 2003). For instance, 10 weekly hours of center-based child care is associated with a 4 percentage point increase in rates of respiratory infections and mediates the effects of maternal work hours entirely (Gordon et al., 2007). Longitudinal, qualitative research also suggests that there is considerable instability in the patchwork of child care arrangements to which low-income children are exposed, and that there is substantial variation in the quality and potential healthfulness of such non-parental care arrangements (Scott et al., 2005).

While prior studies control for a wide range of observed child and parent characteristics, and in some cases include child fixed effects, it is difficult to know whether they capture causal relationships. Of particular concern is the threat from simultaneity bias or reverse causality. Mothers of children with health problems may be more likely to work or to work more hours in order to pay for medical costs, or to work less if their children need more care (London et al., 2002). Without an exogenous shock to employment, the estimate of the effect of maternal employment on child health may actually capture the reverse causality or be an average of bidirectional effects. In an analysis of longitudinal data, Ruhm (2008) assessed the potential for simultaneity bias in models predicting health in one period as a function of maternal employment in the prior periods, by including a control for maternal employment in the year following the health assessment. In his analysis, the likelihood of obesity and overweight were positively and significantly associated with work hours in the following year, suggesting that the direction of causality could be quite complex.