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The effects of parental leave on child health and postnatal care: Evidence from Australia

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ABSTRACT

One of the arguments that is advanced in support of paid maternity leave policies is that the mother's time away from work, around childbirth, is expected to improve child health and development. However the research evidence on these links is scarce and, until recently, little was known about the link, if any, between child health and parental leave in particular. Using an extended random effects estimator to control for selection bias and unobserved heterogeneity, we employ micro-level data from the Parental Leave in Australia Survey, which is a nested survey of the Longitudinal Study of Australian Children, to examine the effects of parental leave on measures of child health and the provision of health inputs to the child. We found that parental leave around childbirth was significantly associated with prolonged breastfeeding, up-to-date immunisation and other positive effects on some chronic health conditions such as asthma, bronchiolitis. For example, children of mothers who took an additional week of paid maternity leave have a lower probability of having asthma and bronchiolitis (1.1 and 0.5 percentage points less likely, respectively). They are also slightly more likely to be breastfed until one month and 6 months of age (2.1 and 0.6 percentage points, respectively).

1. Introduction

One reason that is advanced for maternity leave is that the workplace attachment for the mother is improved. Yet the health of both the mother and her child may also be affected by the provision of maternity leave. The health production model (Grossman, 1972) and variants of it (see, for example, Ruhm, 2000; and Jacobson, 2000) provide a theoretical basis for hypothesising that maternity and paternity leave provisions may positively affect the health inputs – including parental time – that are supplied to young children. The limited literature that exists has either examined the relationship between maternity leave and child developmental outcomes, or the relationship between maternity leave and infant mortality rates overlooking the impacts of child's general health status and chronic conditions in particular. Another limitation in the research is that most of the studies have focused on the USA (e.g. Berger and Waldfogel, 2004; Berger et al., 2005; Rossin, 2011; Huang and Yang, 2014 among others), a few of them on some European countries (e.g. Gregg et al., 2005; Haines and

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Kintner, 2008; Dustmann and Schonberg, 2012) and Canada (e.g. Baker and Milligan, 2008b; Baker and Milligan, 2010). No Australian study to date has focused on the impacts of parental leave on child health. A further difficulty with testing the association between maternity leave and child morbidity indicators (e.g., general health status and medical conditions) is that of controlling for unobserved factors that may affect both the availability of, or decision to take, maternity leave as well as the amount of time that parents dedicate to care for their children. The effects of maternity leave on children's health thus may be estimated with bias when these problems are ignored.

This study fills the gap in the literature by investigating effects of parental leave on various child health indicators (e.g., general health status and the probability of having medical conditions) and indicators of postnatal care (e.g., breastfeeding and immunisation) using data from the Parental Leave in Australia Survey (PLAS). It also investigates the role of paternal leave, as Gregg and Waldfogel (2005) suggested, on child health and postnatal care. The PLAS is a between-wave (Wave 1 and Wave 2) survey that was conducted in 2005 in conjunction with the Longitudinal Study of Australia Children (LSAC). We militate against the potential bias due to unobserved heterogeneity by using a rich random effect estimator that was proposed by Mundlak (1978) and extended by Contoyannis and Li (2011). This study is, to the best of our knowledge, the first attempt to examine the relationship between parental leave and child health using household-level data in Australia.

2. Literature review

2.1. Parental leave and child health

The subject of paid maternal and paternal leave is a topic that is of widespread interest, both due to the perceived benefit that continued attachment to the workforce may have for women in particular, and because maternal and paternal leave may also produce health and developmental benefits for children. This is a topic of popular debate that is now being informed by increasing evidence about the potential benefits of both maternal and paternal leave. For instance, The Economist magazine has carried several discussions of this topic over the past 18 months. In a 2014 article (Economist, 2014a), citing the work of Baum and Ruhm (2013) on the extension of parental leave in the State of California, it argued that the United States currently offers women in most jurisdictions very little by way of maternal leave, while the Californian reforms – introduced in 2004 and providing 55% wage replacement for women, up to a weekly threshold of $1075 – had increased labour force attachment and participation, and increased the duration of maternal leave by, on average, two weeks. More recently, Economist (2014b) turned its attention to the putative benefits of paternity leave, citing evidence that paternal leave increases fathers' interactions with their children, confers long-term benefits on children, and also benefits mothers by spreading the effort associated with childcare across both parents. This, in turn, enables women to maintain greater labour market attachment. From the viewpoint of public policy, maternity and paternity leave have potentially-widespread implications for the economy, especially in respect of work, welfare and health.

There is a rich academic literature on maternity and paternity leave too. In a pioneering study on the effects of maternity leave, Winegarden and Bracy (1995), used data from 17 OECD countries in four periods – 1959, 1969, 1979 and 1989 – and found that maternity leave contributed to reductions of the infant mortality rate. The marginal effects from their estimates suggest that an additional week of paid maternity leave was associated with a reduction in infant mortality of approximately 0.5 deaths per 1000 live births. Ruhm (2000) examined data for 16 OECD countries in the 1969–1994 periods and produced similar findings. Ruhm found that longer parental leave was associated with lower infant mortality rates (a 10-week increase in paid maternity leave was estimated to lead to 1–2 per cent reduction of the infant mortality rate). However, Ruhm's (2000) study did not include two important OECD countries: the United States and Japan. Ruhm (2000) also did not examine the effect of types of parental leave other than paid/job-protected parental leave. Tanaka (2005) extended the work of Ruhm (2000) to include the USA and Japan and updated the data set from 1994 to 2000. The author examined health outcomes other than the mortality rate and controlled for other social policies that were in effects during the study period and might also affect child health. Her results also showed that longer paid maternity leave was associated with lower infant mortality rates. In addition, paid maternity leave was associated with a statistically significantly lower probability of having a low birth weight child, but did not affect the probability of immunisation against measles and diphtheria–tetanus–pertussis (DTP). Tanaka (2005) found no statistically significant effects of other types of leave (i.e., unpaid leave and other leave that was not job-protected) on infant mortality. On the contrary, using policy data for 185 UN member countries, Daku et al. (2012) found that full-time equivalent weeks of maternity leave is associated with higher probability of childhood vaccination rates.

Although most of the early studies of parental leave and child health have used aggregate data, there have been several studies since 2000 that have used micro-level data. Most of these studies have analysed data from the National Longitudinal Survey of the Young (NLSY), which has been conducted as a nation-wide longitudinal study in the United States since 1979. For example, Han et al. (2001), Waldfogel et al. (2002), Brooks-Gunn et al. (2002) and Ruhm (2004) used NLSY data to show that maternal employment in the first year of life is associated with adverse effects on child cognitive outcomes. These studies did not, however, address the question of whether maternal employment affects child development outcomes or indicators within the first year of life. To answer that question, Berger et al. (2005) focused on analysing the effects of mothers who return to work within 12 weeks of giving birth, using ordinary least squares (OLS) and propensity score matching, and found statistically significant reductions in both breastfeeding and immunisation: children whose mothers returned to work early were less likely to have regular health check-ups and were less likely to be breastfed. Gregg et al. (2005) also