Family Structure, Housing and Child Health

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Extended Abstract

It is well established that, for a wide range of outcomes and across a wide range of industrialized countries, children who grow up living with married biological parents have, on average, better outcomes than children who experience other family structures (for reviews see Amato and Keith 1991a; Amato and Keith 1991b; Amato 2000; McLanahan and Sandefur 1994; Sigle-Rushton and McLanahan 2004). However, it is less clear what this association means and how it should be interpreted. A good deal of debate has centred on whether the association represents something "real" or merely spurious, and a wide range of statistical methods – each with their own strengths and limitations -- have been deployed in an attempt to remove selection bias and identify the direct or "causal" effect of family structure on child outcomes (see Sigle-Rushton and McLanahan 2004 or Steele, Sigle-Rushton and Kravdal 2008 for a discussion). In much of this work, researchers have focused predominantly on whether and how parameter estimates linking family structure and child outcomes change before and after some sources of bias are controlled or expunged. The predominant concern is whether the parameters remain significantly different from zero after techniques to control for self-selection or to remove unobserved heterogeneity bias are applied.

Although the potential for bias raises important and vexing questions, concerted efforts to identify the "causal" effects of family structure may have diverted attention from other equally relevant questions about how we should understand the relationship between family structure and child outcomes. Whether or not significant associations remain, as they often, but not always, do, even after we attempt to remove (some of the most important) sources of bias, it is both theoretically and policy relevant to determine why is it that children who live with a single mother or two cohabiting parents have poorer heath and developmental outcomes than children who live with two biological parents. Reviews of the literature often posit plausible reasons for what might explain the association between family structure and child outcomes, but studies seeking to adjudicate between differing hypotheses or to develop a greater understanding of the processes that lead to poorer outcomes are far less common than studies seeking simply to determine whether any statistically significant association can be "written off" as a spurious relationship by including additional controls or applying more advanced statistical techniques. From a policy perspective, this preoccupation is unfortunate, not least because many of the factors and processes the might plausibly underlie or contribute to the link between family structure and child outcomes are likely to be amenable to policy intervention (Sigle-Rushton and McLanahan 2004).

This study devotes particular attention to the role of housing as an potential explanatory pathway that explains the relationship between family structure and child health. Both housing quality and housing stability have been shown to be strongly linked to child well-being (Ziol-Guest and McKenna 2009; Fertig and Reingold 2007) and both are likely to be closely linked to family structure. Because they have higher incomes (Sigle-Rushton and McLanahan 2002), married, two parent families are better able to afford appropriate housing for themselves and their children. Dissolution, more likely amongst unmarried parents, can generate disruptive residential moves into lower quality housing or public housing projects.

The latter are often strongly associated with poor adult and child health outcomes. On the other hand, insecure housing with inadequate space and/or amenities, may also contribute relationship instability. Finally, insalubrious housing conditions may also have independent and direct effects on child outcomes. Drawing on these observations, the primary aim of this study is to model and understand the inter-relationships between family structure, housing, and child health.

Data

This study uses data from the Fragile Families and Child Wellbeing Study. The baseline sample, collected between 1998 and 2000, contains information on 4900 births in 20 large US cities. Unmarried mothers were oversampled, and so sample weights are applied when presenting descriptive statistics and controls for family structure are included in all multivariate models. The mothers' first interview took place within 48 hours of the birth while she was still in the hospital. Fathers were interviewed either in the hospital or elsewhere, a short time later. Although follow-up interviews took place when the children were about 1, 3, 5 and 9 years old, the models are estimated using only the first three waves of data. The first three years of life are critical for child development. In addition, during the preschool years, many children will spend large amounts of time exposed to the home environment.

Dependent variables include several measures of both physical health and cognitive development all of which are measured at the second follow-up wave when the children are about 30 months old. Physical health is measured using three indicators: whether the mother reports that the child has anything other than "very good" or "excellent" health, whether the child has asthma, or whether the child is overweight (using BMI and the CDC thresholds). Cognitive development is measured using the Peabody Picture Vocabulary Test (PPVT). In contrast to the health outcomes which are measured all measured as binary variables, we standardize the test score and use it as a continuous variable in our multivariate models.

The data contain detailed information on housing circumstances, particularly at the first and second follow-up waves. Focal housing variables include indicators for housing tenure (whether the mother lives in a her own home, whether she rents on the open market, whether she lives in public housing or receives rent subsidies or whether she lives with others rent-free), transitions into home ownership, and a count of the number of residential moves. Family structure is measured with a range of indicators that take into account both the nature of the relationship. In particular I distinguish between parents who are married, cohabiting, romantically involved and who have no relationship. I also include indicators for transitions into marriage and relationship dissolution that took place since the child was born.

Additional controls at the child (measures of the child's age, sex, birth order and whether the child was a multiple birth), mother (age, ethnicity, nativity, PPVT test score, language, subsequent child bearing, and self-reported health) and environment (over-crowding and exposure to cigarette smoke) are also considered.

Methods

To explore the ways in which family structure and housing are co-determined and associated with child development, I use both nested regression and graphical chain models. Nested regression models shed light on whether and how parameter estimates change when additional variables are introduced. Graphical chain models, increasingly popular in life course research (see, for example, Borgoni, Berrington, and Smith 2004), are used to complement and to aid in the interpretation of the OLS regression results. The models which are similar to but more flexible than structural equation models (and more appropriate when variables are categorical or dichotomous(, isolate the intermediate and complex relationships

between independent variables, and so shed light on the ways in which housing and family structure are co-determined.

Preliminary results

Preliminary findings suggest strong links between family structure and housing at the second follow-up wave. Owner occupiers are more likely to have been married at birth and to have remained in the same home for the first years of the child's life. Children living in privately rented homes are most likely to have experienced three or more residential moves in their first years of life and they are least likely to have been continuously co-resident with their biological fathers. For general health and asthma, in particular, housing tenure appears to be an important explanatory pathway. Although social housing tenants have lower housing costs and greater disposable income and although compared to other renters, they are less likely to report residential moves, children living in social housing have significantly poorer physical health outcomes.

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