Family Instability and Selection Effects on Children

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A growing body of literature suggests that children who experience multiple transitions in family structure may fare worse developmentally than children raised in stable two-parent families and perhaps even than children raised in stable, single-parent families. This body of research presents what we call the *instability hypothesis,* the prediction that children are affected by disruption and changes in family structure as much as (or even more than) by the type of family structures they experience. If this hypothesis were true, it would suggest that a significant reinterpretation of the effects of family structure on children's well-being may be warranted. For example, it would imply that a child born to a single parent might be as well off, or perhaps even better off, if the parent did not subsequently cohabit or marry.

However, most empirical tests of the instability hypothesis have neglected an alternative explanation. The clear association between multiple transitions and negative child outcomes does not necessarily imply that the former causes the latter. In fact, multiple transitions and negative child outcomes may be associated with each other through common causal factors reflected in the parents' antecedent behaviors and attributes. We call this explanation the *selection hypothesis.*

We test the selection hypothesis against the instability hypothesis in a statistical analysis of nationally representative longitudinal data that includes detailed information on children's behavioral and cognitive development, family history, and mother's background prior to the child's birth. We use the 1979 through 2000 waves of the National Longitudinal Survey of Youth (NLSY) and its 2000 mother-child supplement, the Children of the NLSY, for the

statistical analysis. Outcome variables measured in 2000 include indicators of children's cognitive achievement and internalizing and externalizing behavior problems. Key sets of predictor variables include: (1) measures of the children's family structure histories, including the number of transitions; and (2) measures of mothers' problem behavior obtained between 1979 and 1986, before any of the children in the sub-sample were born. If the associations between transitions and child outcomes are substantially reduced by accounting for mother's background, we will conclude that the analyses provide support for the selection hypothesis. Both hypotheses would receive support if the effect of transitions were substantially reduced but still statistically significant in the presence of controls for mother's background.

Background

Strong evidence for the instability hypothesis was first presented by Wu and Martinson (1993). They examined the association between several measures of family disruption and the likelihood that a woman would have a premarital birth. In a multivariate model using data from the National Survey of Families and Households, they found that the likelihood of a premarital birth was significantly related to the number of transitions a woman had experienced while growing up but not to the amount of time she had spent in a single-parent family or whether she was living with a single parent as an adolescent. They concluded, "Clearly our results challenge conventional wisdom by suggesting a stronger effect of family instability and a weaker effect of prolonged exposure to a mother-only family than previous research would suggest" (1993, p. 225). In a follow-up article, Wu (1996) replicated his finding, using a data set that contained better measures of family income (the National Longitudinal Survey of Youth 1979), with the caveat that early exposure to a single-parent family was also associated with premarital births for African Americans. Further support for the instability hypothesis came from studies of

children's psychological, behavioral, and cognitive well-being (Amato and Sobolewski, 2001; Cockett and Tripp, 1994; Najman, Behrens, Andersen, Bor, O'Callaghan, and Williams, 1997; Kurdek, Fine, and Sinclair, 1995; Woodward, Fergusson, and Horwood, 2001).

Yet Wu and Martinson (1993) acknowledged the selection hypotheis: "A final possibility is that families marked by chronic instability represent a particularly problem-prone segment of the population. Under such a selection hypothesis, children in families marked by chronic instability could be at especially high risk of problem behaviors for reasons unrelated to family instability" (p. 228). However, they did not pursue this possibility empirically.

Only one study has done so, and its findings suggest caution in attributing causal significance to the experience of multiple transitions. Capaldi and Patterson (1991) studied 206 mostly white, fourth-grade boys from predominantly lower- and working-class families in a metropolitan area in Oregon. The authors found that boys who had experienced multiple family transitions had the highest risk for depression, academic failure, and delinquent behavior. But in a second stage of their research, Capaldi and Patterson included measures of the mothers' "antisocial behavior," using arrest records, driver's license suspensions, questions about substance abuse, age at first birth, and scores on a personality inventory. Once these indicators were included in the model, the coefficient for the association between boys' adjustment and multiple transitions became nonsignificant. The authors argued that parents' antisocial behavior led to both lower parental involvement – indicated by poorer monitoring of children's behavior and fewer family activities – and difficulties in maintaining stable marital and romantic relationships.[1]

[1] In a later study of the same group of boys, Capaldi, Crosby, and Stoolmiller (1996) found a positive, significant association between parental transitions and sexual initiation that was not mediated by parental antisocial behavior.

The Oregon study, then, suggests that diminished parenting skills and diminished relationship skills may co-vary, creating the appearance of a causal relationship between multiple transitions and children's adjustment when, in fact, parental vulnerabilities cause both the transitions and the adjustment difficulties. Yet the study is based on a small sample of boys of limited diversity from one metropolitan area (Capaldi and Patterson 1987). The selection hypothesis still has not been tested against the instability hypothesis in a large, representative sample of children.

Research Design and Methods

General Overview of Study Sample and Measures

To carry out a test of the selection hypothesis requires a data set with the following characteristics: A large, representative sample of children whose adjustment is assessed in several domains; detailed information about the children's family and household histories; and information on mothers' behavioral, cognitive, and emotional characteristics measured prior to the births of the children. The data set that best meets these requirements is the 1979 National Longitudinal Survey of Youth (NLSY79) and its mother-child supplement, Children of the National Longitudinal Survey of Youth (CNLSY).

We use data from the 1979 through 2000 waves of the NLSY79 and the 2000 wave of the CNLSY, the most recent data available. The response rate for the NLSY79 in 2000 was 80.6 percent (U.S. Bureau of Labor Statistics, 2002). The analysis file consists of one record per eligible child, with data from the mother attached to the record. The merged mother/child file for 2000 includes data on 3,392 children of 1,965 mothers. We restrict our analysis to children age 8 to14 because their mothers' age at birth is similar, on average, to mothers' mean age at birth

nationally for children of the same age.[2] We also exclude Latino(a) children from the sample, because they are not representative of Latino(a) children born to parents who entered the United States after 1979. The final sample includes approximately 1500 white and African-American children.

Analysis plan

For all children, outcomes are measured by standardized scores on four assessments. Scores on the mathematics, reading comprehension, and reading recognition sections of the Peabody Individual Achievement Test (PIAT) indicate cognitive ability. The standardized externalizing behavior score from the Behavioral Problems Index (BPI) indicates behavioral problems. The BPI is administered to mothers of children in the CNLSY, and parent reports may be biased by the parent's own behavior or attitudes. Therefore, for children age 10 to 14 who completed a self-assessment, we create a scale based on self-reports of behavior as an additional outcome.

We conduct a multivariate analysis in two steps. In step 1, we estimate models for child outcomes measured in 2000 that are similar to the models presented in existing studies of the instability hypothesis. These models are intended to replicate the finding that, controlling for a standard set of background variables, the number of transitions a child has experienced is significantly associated with lower scores on cognitive indicators and higher scores on behavior problem indicators. In step 2, we add in covariates that reflect characteristics of the mother and her environment before the child was born (and for some measures, before any of her children were born). If the associations between transitions and child outcomes are substantially reduced

[2] Because of the survey initially sampled 14 to 21 year olds in 1979, children who were under age 8 in 2000 were born to mothers who were older, on average, than the mothers of children under 8 nationwide. Conversely, children who were over 14 in 2000 were born to mothers who were younger, on average, than mothers of children over 14 nationwide.

in step 2, we will conclude that the analyses provide support for the selection hypothesis. Both hypotheses would receive support if the effect of transitions were substantially reduced but still statistically significant. Where the dependent variable is a standardized test score, we use OLS models for the multivariate analysis. In the analysis of children's self-reports of behavior, the dependent variable is a count variable with overdispersion, so we use a negative binomial regression.

In step 1 our objective is to replicate existing analyses of the association between instability and child outcomes. The key independent variable is the number of transitions the child has experienced, which we treat as a continuous linear variable. Transitions include moves in or out of the household by cohabiting partners or husbands, but not moves into households where the child's mother is absent. Control variables in this step include the child's gender and age and the number of adults living in the household. Following Wu and Martinson (1993), we also include two indicators of family structure: whether the child currently lives in a two-parent, mother-only, or mother-and-stepparent household, and whether the child lived with his/her mother only for at least 75 percent of his/her first six years (following Wu and Martinson 1993). We also include a dummy variable indicating whether any transition transpired within the last two years, in order to separate the effect of the recency of a transition from the cumulative effect of multiple transitions. Because previous research (Wu 1996, Wu and Thomson 2001) found different effects of family structure and instability by race, we conduct separate analyses for white and African-American children.

In step 2, we introduce the mother's background characteristics. We use two categories: those that represent the mother's background prior to, or at the time of, her first birth; and those that were measured prior to the birth of the child in our sample but not necessarily prior to his or

her mother's first birth. We include three measures in the first category: the number of family transitions the woman experienced growing up, age at first sex, and age at first birth. The second category, attributes of the mother's background measured prior to the child's birth, includes drug use prior to the child's birth, illegal behaviors, early family structure transitions, and cognitive achievement.

Results

Our step 1 results indicate a strong correlation between family instability and children's cognitive achievement and socioemotional well-being for white children only. Thus, we replicate past studies on instability for whites but not for African Americans. Our step 2 multivariate results indicate strong support for the selection hypothesis to explain the association between family instability and children's cognitive achievement, as measured by math and reading comprehension scores. The coefficient for family instability is reduced to near zero when we include indicators of potential selectivity such as the mother's Armed Forces Qualification Test score and educational attainment, suggesting that virtually all of the association between instability and cognitive achievement may be due to selectivity. We find moderate support for the selection hypothesis to explain the association between instability and socioemotional well-being, as measured by reports of externalizing behavior. The coefficient for family instability is reduced in magnitude when indicators of potential selectivity are included, but it retains marginal statistical significance. Thus, our analyses suggest that both instability effects and selection effects my underlie the association between family instability and socioemotional well-being. Our paper will provide a detailed discussion of these results and will consider the implications for research on family structure and child development.

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