

The Long-Term Consequences of Having Children with More than One Man: Assessing Women's Wages, Depression, and Physical Health at Midlife

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Introduction

The last thirty years have witnessed an era of increasing social and economic inequality among American families (Western, Bloome & Percheski, 2008). As a result of the hollowing out of the middle class, many children are facing starkly unequal childhoods, with those on the lower end of the income distribution experiencing not only childhood deprivations, but reporting poorer health and well-being, and lower educational and income attainment across the lifecourse (Warren 2012). In the ongoing discourse about the causal mechanisms behind these patterns, the ways families form and dissolve over time has proven integral, with children brought up by two biological parents advantaged relative to all others (Cherlin 2010; McLanahan and Percheski, 2008).

Because children are most commonly raised by their mothers after a divorce or relationship dissolution, an exploration of women's relationship and childbearing histories provides unique insights into how family processes may be affecting women and their children's access to socioeconomic resources. The goal of this paper is to explore how having children with more than one person—one type of families in which children are being raised without two biological parents—may influence the creation and perpetuation of family-level inequalities by influencing women's economic, mental, and physical well-being over time.

Background and Current Investigation

Recent estimates suggest that nearly one in five American women has children with more than one person (hereafter referred to as multipartnered fertility or 'MPF') by the time they reach middle age and complete their childbearing (Dorius 2010). Though research on MPF is still in its infancy, work in this area has found that having children with several partners is associated with a range of negative outcomes for women (Klerman, 2007), including higher levels of depression, spending more time in poverty and fewer years employed, having lower levels of education, greater relationship instability, and more partners over the lifecourse than women who have their children with the same man (see Carlson & Furstenberg, 2006; Dorius 2010; Guzzo & Furstenberg, 2007; Manlove, Logan, Ikramullah & Halcombe, 2008; Monte 2011; Turney & Carlson 2011).

Along with facing disadvantages after MPF has occurred, women who go on to have children with more than one person start their childbearing career less well off than women who have all of their children with the same man (known as single partner fertility or 'SPF'). At the time of their first child's birth women with multipartnered fertility have fewer family resources, are younger, are less likely to be married or cohabiting with their partners, have known their partners for a shorter period of time, and have lower levels of education than their counterparts. Furthermore, MPF is more common among minority men and women—particularly African Americans—and has been associated with father's incarceration and drug use and mother's receipt of government aid (see Carlson & Furstenberg, 2006;

Dorius 2010; Guzzo & Furstenberg, 2007; Logan, Manlove, Ikramullah & Cottingham, 2006; Meyer, Cancian & Cook, 2005).

When considering the unique characteristics of MPF women around the time of their first child's birth and again after MPF has occurred, it is not surprising that the people who started out less well-off tend to end up disadvantaged relative their peers. What is not well understood is whether experiencing multipartnered fertility magnifies these effects. That is, does MPF exacerbate economic and health inequalities over the long run? Or, is the relationship between MPF and wages, depression, and physical health due to selection into this family form?

On the one hand, researchers have demonstrated that MPF may influence one's access to resources and high quality partnerships, and this may accentuate the disadvantages MPF women face. Harknett and Knab (2007) found that although kin networks are greatly expanded when biological parents are added, grandparents and grandparent-in-laws are less likely to provide instrumental support in terms of financial, housing, and childcare assistance when grandchildren do not share the same biological mother or father. This lack of access to kin support, especially childcare, has been shown to influence the ability of MPF women at the bottom end of the income distribution to get and maintain jobs (Monte 2011). MPF women also report significantly different relationship experiences, including poorer quality intimate relationships marked by more conflict, less support, and less effective co-parenting practices (Carlson & Furstenberg, 2006) and has been tied to greater relationship instability and more partners over time than women who have their children with the same man (Harknett & McLanahan, 2004). While not all of the mechanism have been tested directly, theoretical models of MPF suggest that increases in chronic stress and boundary ambiguity, paired with decreases in social support, may create a variety of interpersonal and structural challenges that significantly influence a women's long-term mental and physical health (Dorius 2012a), as well as their ability to maintain strong ties to the labor force throughout adulthood (Monte 2011).

On the other hand, uncertainty remains as to the true consequences of MPF once selection into this family form is taken into account. It is plausible that the disparities between MPF and SPF women do not reflect differences due to having children with more than one person, but rather are tied to the net of disadvantage these women have been enmeshed in from youth, and having children with more than one man may do little to change these women's prospects for good or ill. Because of the strong relationship between multipartnered fertility and social disadvantage across the lifecourse, this topic is fertile ground for incorporating modeling approaches that address selection bias (alternately known as omitted variable bias, ignorability, and/or exogeneity). This paper uses multiple techniques for assessing the long-term influence of MPF on women's lives while addressing selectivity, including random and fixed effects regression models and a potential outcomes framework based on propensity score weighting. *The goal of this paper is to explore whether MPF is significantly linked to long-term differences in women's wages, depression, and physical health at midlife and how this might contribute to the stratification of American families.*

Data and Methods

We draw on data from the *National Longitudinal Survey of Youth* (NLSY79), which is a nationally representative sample of American women who were 14-22 years old when they were first interviewed in 1979. Since the time of the first survey, the respondents have been interviewed every year until 1994, and biennially thereafter until 2010, for a total of 24 waves of data collection that cover the majority of women's relationships and childbearing experiences from their teens to their late forties. Over this time, many of the respondents have left their childhood homes, gone to college, started a career, cohabited

with partners, gotten married, and had children of their own, making this an ideal sample in which to study family and individual variation across the life course. This is a particularly useful resource for examining multipartnered fertility because the women in the sample were in their late forties to early fifties by the last survey, had completed their expected childbearing, and by extension, had finalized their MPF statuses.

The descriptive sample used for this project includes the original 6,282 women from the cross-sectional and supplemental samples, with military and economically disadvantaged respondents excluded because of lack of consistent assessment by NLS (n=1,342). Other ineligible respondents include those who died before the final survey (n=151) or missed at least three consecutive or five total waves of data collection (n=811) making the estimation of MPF untenable. The final sample of eligible women is n=3,978, and is composed of roughly 63% from the cross-sectional sample and 37% from the minority oversample. To make appropriate comparison groups for the OLS and Logit models, the analytic sample is further reduced to mothers of two or more children (n=802 dropped), and those who provided a valid response to each of the three dependent variables: wages, depression, and physical health at age 40. The final analytic sample includes n=2,007 women aged 45-53 years old in 2010.

Multipartnered Fertility. Multipartnered fertility status is a dichotomous measure indicating whether a woman has ever had children by two or more fathers. This was assessed by creating a detailed relationship history for each woman from 1979-2010 and noting when births occurred within relationships to identify unique birth fathers. By triangulating data from the women's self-reports (NLSY), the biological children's self-reports (CNLSY), and the household roster for each year, multipartnered fertility was ascertained for all women in the sample, including those in non-residential relationships at the time of birth (see Dorius 2012b for a complete discussion of these coding procedures).

Characteristics at the time of first birth. Race, age, immigrant status, education, region, family resources, number of transitions, and relationship type have all been shown to influence the likelihood of multipartnered fertility occurring. As a result, we consider each item as controls in our OLS models, and as key predictors in the Probit models used for generating propensity score weights. The general hypothesis is that younger women, minorities, non-immigrants, and people with less are more likely to enter into MPF relationships than their older, White, educated, and immigrant counterparts (Carlson & Furstenberg, 2007). Further, because relationship status prior to first birth is intimately tied to MPF (Manlove et al. 2008) we control for both relationship status at the time of first birth as well as the number of relationship transitions prior to first birth. Our rationale is that those who are single or who have not been in a residential relationship (fewer transitions) will be more likely to go on to engage in MPF during their lifetime.

Outcomes at Midlife. Wages, depression, physical health are ascertained at the survey closest to when the women turned 40 years old. The **log of hourly wages** are adjusted to 2011 dollars and are included as a key aspect of the respondent's long term economic well-being, which may be influenced by one's ties to the labor force and multipartnered fertility status. Physical and mental health were assessed with the SF-12 Health Survey included in the 40 year old health module. One of the benefits of this scale is that it is easily understood by respondents and does not require that individuals visit health professionals to know how they fare on the items. While initially designed for clinical samples, the SF-12 has been shown to reliably assess health for community samples (Burdine, Felix, Llewellyn, Wiltraut, & Musselman, 2000). The health survey includes a general assessment of mental health known as the **SF-12 Mental Component Score**, which includes an assessment of limitations of social activities and usual roles due to emotional problems, as well as psychological distress and overall mental well-being. The

measure also includes a general assessment of physical health known as the **SF-12 Physical Component Score**, which surveys one's general health, bodily pain, vitality, and whether health limits physical activities, social activities, or usual roles. Both the mental and physical health components are normally distributed in the NLSY79 women's sample, with the range of scores for mental health going from 7.5 (very poor health) to 71.4 (very good health), and an unweighted mean of 51.9. Similarly, the range for physical health went from 11.2 (very poor health) to 66.6 (very good health) and had an unweighted mean of 51.4. The Mental and Physical Component Scores were designed to norm at 50 and have a standard deviation of 10 for the general population, with older individuals generally scoring between 1 to 3 points lower for every additional decade of life (Burdine et al, 2000).

Analysis

Our analyses are divided into three parts. The first stage will provide a descriptive examination of multipartnered fertility among women in the NLSY79 sample. This will include detailed information about the characteristics at first birth as well as outcomes as midlife. In the second stage of analysis, we will use Probit regression techniques to assess the individual characteristics (race, age, immigrant status, education, region, family resources, number of transitions, and relationship type) predicting entrance into MPF. Later, we will use the predicted values obtained in these Probit models to create weights for the potential outcomes assessment. In the third stage, we will predict wages, depression, and physical health at midlife with OLS random and fixed effects models and weighted propensity score models. The potential outcomes framework will include an examination of the basic bivariate relationships between MPF and well-being (discussed below), as well as interaction models and assessments of birth timing and spacing. Our paper will conclude by assessing the long-term consequences of MPF over three distinct well-being indicators and discuss how these findings might shed light on the role of having children with more than one person on the escalating stratification of American families.

Results

Due to space limitations, full results are not presented in the long abstract, although key findings for the Probit and bivariate Potential Outcomes Framework models are noted. The full set of models described in the analytic plan above will be overviewed in the conference session.

At the bivariate level, multipartnered fertility is substantively and significantly linked to lower wages and poorer mental and physical health at midlife (t-tests produce p values of $<.01$), as well as to all of the items identified as important in understanding entrance into MPF (characteristics of first birth). Probit models were used to estimate women's pathways into MPF (pseudo $r^2 = .27$) and found that age, education, relationship status at first birth, and number of transitions prior to first birth were important predictors of having children with more than one man ($p <.01-.05$). The residuals of the Probit models were saved and used to create a weight that controls for selection into MPF in the potential outcomes models. We verified that the covariates of interest balanced in the data, and then ran robust regressions with the weighted propensities for the initial bivariate tests. These results indicate that the difference in wages among MPF and SPF women that were uncovered in the t-tests are actually due to selection into this family form, and are not a result of MPF exacerbating wage inequalities over time ($p >.1$). Conversely, we find significant ($p <.1$) reasons to believe that the differences between MPF and SPF women regarding mental and physical health have substantive importance and suggest that having children with more than one person may driving inequalities in mental and physical health at age 40, net of one's early experience of disadvantage.

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