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Multi-Partner Fertility in a Disadvantaged Population: Results and Policy Implications of an Empirical Investigation of Paternity Actions in St. Joseph County, Indiana

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Introduction

In this paper, we report data on multipartner fertility (MPF) in a population of children and parents for whom paternity actions were brought in 2008 or 2010 in St. Joseph County, Indiana. The computerized, court-based record system we utilized enabled us to collect information on parental characteristics and child outcomes that other MPF researchers have been unable to access. Our research thus offers a unique, data-rich window into an important—and growing—aspect of contemporary family life. It also points the way to needed shifts in family policy and law.

I. Multipartner Fertility in Context

Multipartner fertility, in plain English, refers to a parent who has produced at least two children with at least two different partners. MPF has long been with us. Until the twentieth century, MPF was typically associated with the death of a spouse. Becoming a youthful widow or widower was commonplace; in one Virginia county, 69% of children born in the seventeenth century and more than 50% born in the eighteenth

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century lost at least one parent before age eighteen.[1] Remarriage often occurred quickly, particularly when the widow or widower had young children.[2] For younger couples, MPF generally followed in short order.

As rising life expectancies reduced the probability of youthful widow- or widowerhood, the locus of MPF shifted to divorce. We do not know the low point for MPF, but there is no question that MPF rates began to take off during the 1960s with the rapid increase in divorce, which is concentrated among young couples. By 1980, about 20% of children living with their mothers had a half sibling from a parent's remarriage.[3]

The rapid rise in nonmarital cohabitation and birth has caused a further acceleration of MPF as nonmarital relationships are, everywhere, less stable than marriage.[4] By 2004, 11.7% of U.S. children were living with at least one half-sibling,[5] and 30% of U.S. adults polled reported having a step or half-sibling.[6]

Epidemiological factors have perennially been important predictors of MPF. In the era when MPF resulted primarily from early widow- or widowerhood, life expectancy was markedly lower among the poorer classes.[7] Today, too, MPF is unevenly distributed, and epidemiological factors continue to play a large role in explaining variation in MPF levels.

One important variable is maternal education. As recently as the 1970s, MPF was only slightly higher (or, in some nations, about the same) among

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1. *See* Darrett B. Rutman & Anita H. Rutman, A Place in Time: Middlesex County, Virginia 1650–1750, at 114 (1984). In wealthy England and Wales, life expectancy was thirty-seven years in 1700, forty-one in 1820, and forty-one in 1870. *See* David Cutler et al., *The Determinants of Mortality*, 20 J. Econ. Perspectives 97, 99–100 (2006).

2. *See* Satomi Kurosu et al., *Remarriage, Gender, and Rural Households: A Comparative Analysis of Widows and Widowers in Europe and Asia* (presented at Annual Meeting of Population Ass'n of Am., New Orleans, LA, Apr. 17–19, 2008), http://paa2008.princeton.edu/papers/80758.

3. *See* Larry L. Bumpass, *Demographic Aspects of Children's Second-Family Experience*, 90 Am. J. Soc. 608 (1984).

4. *See* Jaap Dronkers, *Cohabitation, Marriage & Union Instability in Europe* fig.2, Inst. Fam. Studies (Apr. 7, 2016), https://ifstudies.org/blog/cohabitation-marriage-and-union-instability-in-europe; Paula Fomby & Cynthia Osborne, *Family Instability, Multipartner Fertility, and Behavior in Middle Childhood*, 79 J. Marriage & Fam. 75 tbl.1 (2016) (in U.S. Fragile Families study, 14.5% of nonmarital children and 64.3% of marital children experienced stable single-partner fertility at age 9).

5. *See* Rose M. Kreider & Jason M. Fields, *Children's Coresidence with Half Siblings* 5–6, tbl.1 (presented at Annual Meeting of Population Ass'n of Am., Dallas, TX, Apr. 15–17, 2010), https://www.census.gov/content/dam/Census/library/working-papers/2010/demo/2010_Kreider_Fields.pdf (10.6% did so in 1991).

6. *See* Pew Research Center, *A Portrait of Stepfamilies*, Pew Research Ctr. (2011), http://www.pewsocialtrends.org/2011/01/13/a-portrait-of-stepfamilies/.

7. *See, e.g.*, Jona Schellekens, *Morality and Socio-Economic Status in Two Eighteenth-Century Dutch Villages*, 43 Pop. Stud. 391 (1989).

poorly educated women as compared to their well-educated counterparts. Today, in a range of countries, children born to poorly educated mothers are two to three times as likely to experience MPF as those born to mothers who have completed college.[8]

Another important variable that applies across nations is the age at which a parent first gives birth. Women who give birth to their first child at age twenty-nine or older are highly unlikely to experience MPF; those who give birth to their first child as teenagers are highly unlikely to avoid it.[9] The older a woman is when she first gives birth, the fewer the years in which she may become pregnant again. Youthful relationships are also less stable than those formed later.[10] And early parenthood decreases the likelihood of higher education and higher socioeconomic status, both associated with a better chance of relational stability.[11]

MPF has increased across the Western industrialized world, and it is everywhere linked with parental age at first birth, education, and union type. But there is still considerable variation in the likelihood of MPF across nations. The United States is currently at the MPF pinnacle, a phenomenon that reflects a comparatively high rate of youthful, unintended pregnancy that occurs in relatively unstable, nonmarital relationships.[12]

MPF is also particularly worrisome in the United States. Although education and MPF are everywhere linked, the U.S. gradient is particularly steep. U.S. investigators report that, among fathers with two or more children, 43.1% of men with less than a high school education have had children with multiple partners, as compared with only 5.5% of those with a college degree.[13] Reflecting this educational divide, researchers have consistently found that MPF is linked to poverty and other indicators of

8. *See* Elizabeth Thomson et al., *Childbearing Across Partnerships in Australia, the United States, Norway, and Sweden*, 51 Demography 485, fig.1 (2014).

9. *See* Dronkers, *supra* note 4; Thomson et al., *supra* note 8, at fig.4.

10. *See, e.g.*, Alison Aughinhaugh et al., *Marriage and Divorce: Patterns by Gender, Race, and Educational Attainment*, Monthly Labor Rev. 1, 13 tbl.6 (U.S. Bureau Labor Statistics, Oct. 2013).

11. *See id.*; C.E. Basch, *Teen Pregnancy and the Achievement Gap Among Urban Minority Youth*, 81 J. Sch. Health 614 (2011); K.A. Moore et al., *Age at First Childbirth and Later Poverty*, 3 J. Res. Adolescence 393 (1993).

12. *See* Thomson et al., *supra* note 8.

13. *See* Laura Tach et al., *The Family-Go-Round: Family Complexity and Father Involvement from a Father's Perspective*, 654 Annals Am. Acad. Pol. Sci. 169 (2014).

social and economic disadvantage such as race,[14] incarceration,[15] receiving public assistance,[16] and having given birth within a comparatively unstable nonmarital union.[17] In sum, U.S. MPF is particularly worrisome because it is strongly associated with poverty, discrimination, and other negative conditions linked with low socioeconomic status. It thus has the potential to exacerbate the already large risks disproportionately faced by children born to low-income parents.[18]

MPF is also associated with social and emotional deficits that may impede effective parenting. MPF parents have lower levels of social support and weaker co-parental relationships than single-parent fertility (SPF) parents.[19] Both MPF mothers and fathers report significantly greater depression and less satisfaction with parenting.[20]

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14. *See* Marcia J. Carlson & Frank Furstenburg, *The Prevalence and Correlates of Multipartnered Fertility Among Urban U.S. Parents*, 68 J. Marriage & Fam. 718, 724–25 (2006) (black mothers and fathers are significantly more likely to experience MPF); Karen Benjamin Guzzo & Frank Furstenberg, *Multipartner Fertility Among Young Women with a Nonmarital First Birth*, 39 Perspectives Sexual Reproductive Health 29, 32, tbl.1 (2007) (African American MPF rate more than twice that of Hispanic and non-Hispanic whites).

15. *See* Carlson & Furstenburg, *supra* note 14, at 725–26, tbl.4 (MPF twice as high among men who had been incarcerated). *See also* Erik Evenhouse & Siobhán Reilly, *Women's Multipartnered Fertility and the Criminal Justice System* (Nat'l Poverty Working Paper Series #11–26, 2011).

16. *See* Susan L. Brown et al., *Family Structure and Child Well-Being: Integrating Family Complexity*, 77 J. Marriage & Fam. 177 (2015) (receipt of public assistance was more common among children in complex families (28.3%) than noncomplex families (17.4%)); Maria Cancian et al., *The Evolution of Family Complexity from the Perspective of Nonmarital Children*, 48 Demography 957 (2011) (60% of firstborn children whose mother entered the welfare system in Wisconsin in 1997 had a half-sibling by their tenth birthday).

17. *See* Carlson & Furstenberg, *supra* note 14, at 71 (in 59% of unmarried couples and 21% of married couples, both parents already had at least one child by another partner); Mindy E. Scott et al., *Multiple Partner Fertility Among Unmarried Nonresident Fathers, in* Handbook of Father Involvement: Multidisciplinary Perspectives 97–115 (C.S. Tamis-LeMonda & N. Cabrera eds., 2d ed. 2013) (in national survey, 14% of all fathers and 48% of those unmarried and nonresident when first child was born had MPF).

18. *See* Greg J. Duncan & Jeanne Brooks-Gunn, *Income Effects Across the Life Span: Integration and Interpretation*, *in* Consequences of Growing Up Poor 596–611 (Jeanne Brooks-Gunn & Greg J. Duncan eds., 1997); Robert D. Putnam, Our Kids: The American Dream in Crisis 46–79 (2015).

19. *See* Marcia J. Carlson, *Family Structure, Father Involvement, and Adolescent Behavioral Outcomes*, 68 J. Marriage & Fam. 137 (2006); Marcia J. Carlson et al., *Coparenting and Nonresident Father's Involvement with Young Children*, 45 Demography 461 (2008); Kristen Harknett & Jean Knab, *More Kin, Less Support: Multipartner Fertility and Kin Support Among New Mothers*, 69 J. Marriage & Fam. 237 (2007); Lindsay M. Monte, *Blended but Not the Bradys: Navigating Unmarried Multiple Partner Fertility*, *in* Unmarried Couples with Children 183–203 (Paula England & Kathryn Edin eds., 2007).

20. *See* Karen Benjamin Guzzo et al., *New Partners, More Kids: Multi-partner Fertility in the United States*, 654 Annals Am. Acad. Pol. Soc. Sci. 66 (2014).

Researchers have also found that MPF predicts a variety of negative outcomes for children. MPF fathers are more than six times less likely to live with their children (13.3% versus 85.1%) than SPF fathers.[21] MPF fathers also pay less support per child, are more likely to fall behind in their payments,[22] and tend to reduce both visitation and child support to prior children after children with new partners are born.[23] Children who have half siblings are significantly more likely than others to change schools;[24] live in neighborhoods with greater physical disorder;[25] exhibit delinquent, aggressive, or externalizing behavior;[26] have sex earlier; and report more drug use.[27] The pathways from MPF to these negative outcomes are still unclear, but MPF is significantly associated with shifts in household composition,[28] and it increases the likelihood of conflict, between parents and between parents and new partners, over limited resources and time.[29] Moreover, separation from a parent may create feelings of "ambiguous loss" that are more powerful and more negative than those that follow a parental death.[30]

Although most MPF research findings come from the United States, we cannot assume that they do not apply elsewhere. Researchers who analyzed whether educational outcomes for Norwegian children were affected by fathers' MPF report that, "for nuclear [and blended] families, . . . fathers' MPF is associated with . . . worse educational outcomes." The research team was able to control for paternal income and concluded that

21. *See id*.

22. *See* Cancian et al., *supra* note 16; Jennifer Kane et al., *How Much In-Kind Support Do Low-Income Nonresident Fathers Provide? A Mixed-Method Analysis*, 77 J. Marriage & Fam. 591 (2015) (MPF fathers paid less in-kind support than SPF fathers).

23. *See* Wendy Manning & Pamela Smock, *New Families and Nonresident Father-Child Visitation*, 78 Soc. Forces 87 (1999); Wendy Manning & Pamela Smock, *Swapping Families? Serial Parenting and Economic Support for Children*, 62 J. Marriage & Fam. 111 (2000).

24. *See* Kreider & Fields, *supra* note 5.

25. *See* Colleen E. Wynn, *Paternal Multipartner Fertility and Child Neighborhood Disorder* (Fragile Families Working Paper WP16-07-FF, 2016), https://fragilefamilies.princeton.edu/sites/fragilefamilies/files/wp16-07-ff.pdf.

26. *See* Jacinta Bronte-Tinkew et al., *Fathering with Multiple Partners: Links to Children's Well-Being in Early Childhood*, 71 J. Marriage & Fam. 608 (2009); Fomby & Osborne, *supra* note 4, at tbl.1.

27. *See* Cassandra Dorius & Karen Benjamin Guzzo, *The Long Arm of Maternal Multipartnered Fertility and Adolescent Well-Being* (Nat. Ctr. Fam. & Marriage Res. Working Paper Series WP-13-04, 2013).

28. *See* Fomby & Osborne, *supra* note 4, at tbl.1.

29. *See* Carey E. Cooper et al., *Mothers' Partnership Instability and Coparenting Among Fragile Families*, 96 Soc. Sci. Q. 1103 (2015).

30. *See* Pauline Boss, Ambiguous Loss: Learning to Live with Unresolved Grief (2009); Paul R. Amato & Bruce Keith, *Parental Divorce and the Well-Being of Children: A Meta-Analysis*, 110 Psych. Bull. 26 (1991).

"resources (or lack thereof) cannot explain the MPF results that we are observing."[31]

In sum, MPF appears to pose serious risks to children, risks that are independent of low socioeconomic status. Given the strong links between low socioeconomic status and MPF, MPF has the potential to multiply and enhance the many risks that children born into poverty already confront.

II. Our Study and Sample

Our study focuses on 688 paternity actions brought in St. Joseph County, Indiana, during 2008 and 2010. For these cases, the court-based record system that we obtained judicial permission to access provided us with extraordinarily rich and detailed information about focal children (the oldest born to parents who were parties to the paternity order) and their families. Unusually (perhaps uniquely), the record system provides clickable links to other family court records for parents and their children. We were thus able to link parental MPF to a number of variables about which other MPF researchers have not had information. More specifically, we were able to access detailed information on child support awards and enforcement, the allocation of parenting time, orders of protection, child maltreatment reports and findings, juvenile status, and delinquency charges, as well as the child's and parents' addresses and moves. The court records also enabled us to determine if the focal child's parents had children with other partners and, most of the time, both the number of other partners involved and the total number of children the parent had with those partners. For half siblings living in St. Joseph County, we were able to access the same information available for focal children and their siblings. The same information was available for parents if the parent lived in St. Joseph County during his or her minority. For children and parents with a history of court involvement, the files also contained case notes. For example, we could typically see the results of drug tests, the number and duration of residential placements, school history (truancy, expulsion, behavioral problems), family background (parents involved in crime, family receives welfare, etc.), and the child's mental and emotional state (suicide precautions, risk of violence, known substance abuse).

31. *See* Donna K. Ginther et al., *Fathers' Multiple-Partner Fertility and Children's Educational Outcomes* (Econ. Demography Workshop, 2017), http://ipl.econ.duke.edu/seminars/system/files/seminars/1698.pdf.

Using other databases,[32] we were also able to determine whether parents had adult criminal records, if they had been incarcerated, and, most of the time, conviction charges. Finally, using recorded addresses, we were able to identify the census tracts in which the focal child and parents lived and the demographic characteristics associated with residence in those tracts. In sum, the databases from which we obtained case information offered the opportunity to look at MPF in an unusually detailed way.

The study site, St. Joseph County, Indiana, is also an excellent location in which to examine MPF. The demography of St. Joseph County is fairly consistent with that of the United States as a whole except that it is somewhat poorer and has a lower proportion of Hispanic and foreign-born residents.[33] St. Joseph County also offers extremes. It is home to the University of Notre Dame, a prestigious school with more than 1,000 full-time faculty members and professional staff. It also contains South Bend (population around 100,000), once a thriving hub of manufacturing employment that is now, like most of the American "rust belt," struggling with a massive decline in stable, blue-collar employment. Most Notre Dame faculty and staff live in or near St. Joseph County, creating a large base of well-educated, well-paid citizens. But South Bend has entrenched pockets of deep poverty. In 2015, *The Economist* reported that "[t]he city's unemployment rate remains in the low double digits; 28% of its inhabitants live below the poverty line and 75% of children in public

32. The Probate Court Quest database that was our primary source of information showed parental periods of incarceration that were known to the court. Indiana also has two open-access, online record systems that enabled us to obtain detailed information on parental convictions and imprisonment for in-state crimes: Indiana MyCase (https://mycase.in.gov/), with records dating from the 1990s, is searchable by name and birth date; it provides detailed case information about all civil cases (including traffic infractions) and criminal cases in which the named individual was a party. The Indiana Department of Corrections also has an online database, https://www.in.gov/apps/indcorrection/ofs/ofs, searchable by name, birth date, and offender number, that describes periods of incarceration and conviction charges. The PACER database enabled us to obtain conviction and sentencing information for virtually all fathers prosecuted in federal court. For convictions and state incarceration outside of Indiana, we used both official, online databases and Lexis-Nexis Accurint. State systems were often incomplete; for example, in Illinois, there is no online database for Cook County, the Illinois county where sample parents were most likely to have lived. Many online corrections databases (including those of neighboring states Illinois and Michigan) also delete records after a prisoner is released. Accurint gave us some information about crimes and sentences outside of Indiana, but we cannot be sure that our count of non-Indiana criminal activity is complete.

33. *See Small Area Income and Poverty Estimates*, U.S. Census Bureau, https://www.census.gov/did/www/saipe/data/interactive/saipe.html?s_appName=saipe&map_yearSelector=2010&map_geoSelector=mhi_c&s_state=18&s_county=18141&s_measures=mhi_snc&s_year=2015,2010.

schools are eligible for the free lunches offered to low-income families."[34] St. Joseph County is thus a place that, in the aggregate, is quite average. But its averages mask large contrasts and, reflecting these contrasts, crime, unemployment, poverty—and the families we studied—are highly concentrated in some neighborhoods.[35]

Our sample, composed of 674 unmarried mothers and 673 fathers,[36] reflects the demographic variables—youth, lack of education, low income, membership in a racial minority—associated with nonmarital birth.[37] Fathers' median age at the birth of the focal child was 23.0 years; mothers' median age was 22.[38] Median total income for the sample was $27,248 per year, well below the $42,316 St. Joseph County median; only 25% of sample parents had combined incomes exceeding $30,680 per year.[39] Fully 51.7% of sample fathers for whom race information was available were African American, more than four times the proportion of African Americans in St. Joseph County generally;[40] 37.9% were non-Hispanic white; and 10.9% were Hispanic. Of the mothers, 42.4% were African American; 47% were non-Hispanic white, and 9.1% were Hispanic.

While the demographic characteristics of our sample are consistent with those of American nonmarital parents generally, the sample contains an even larger proportion of unstable relationships. In the U.S. Fragile Families study, 35% of couples with a nonmarital child were still together

34. V.v. B. (anon.), *Life in South Bend: A Company Town without a Company*, The Economist, May 19, 2015, http://www.economist.com/blogs/democracyinamerica/2015/05/life-south-bend.

35. More than half of focal children lived in seventeen of St. Joseph County's seventy-three census tracts.

36. Thirteen mothers and fifteen fathers appear twice (or, in one case, three times) in our sample of paternity/child support orders. Here, except when describing focal child outcomes (*see* tbl. 6, *infra*), we report data on individual parents and have excluded later paternity actions involving a parent already included in the sample.

37. *See* Sara McLanahan & Wade Jacobsen, *Diverging Destinies Revisited*, *in* Families in an Era of Increasing Inequality 3–23 (Paul R. Amato et al. eds., 2015).

38. In many cases, we were unable to determine the parent's age when his or her first child (with any partner) was born. Age at first birth is thus certainly lower for both fathers and mothers than in the general population, but we cannot estimate by exactly how much.

39. These figures almost certainly overstate parental income as 47.1% of fathers and 55.9% of mothers involved in sample paternity actions had incomes that were "imputed" (i.e., made up). *See* Margaret F. Brinig & Marsha Garrison, *Getting Blood from Stones: Results and Policy Implications of an Empirical Investigation of Paternity Actions in St. Joseph County, Indiana*, 56 Fam. Ct. Rev. 521 (2018).

40. In 2010, 12.7% of St. Joseph County residents were African American; 78.7% were non-Hispanic white, and 7.3% were Hispanic (2.5% were other). *See 2010 Interactive Population Map*, U.S. Census Bureau, https://www.census.gov/2010census/popmap/.

when the child turned five.[41] In our population, the median age of focal children (the first born to this mother and father) at the time a paternity/support order was entered was two years (average 3.6 years), and only 24.6% of focal children were five years or older at order entry.[42]

Perhaps reflecting this high level of instability, in a very large proportion of sample cases, paternity was established through genetic testing at the time a paternity action was brought, while, nationally, paternity is established consensually through an affidavit of paternity signed by both parents in hospital at least 60% of the time.[43] The court records typically did not permit us to determine which parents cohabited and which did not, but the high rate of genetic testing also suggests a lower rate of cohabitation than among the general pool of unmarried parents.

Given the lack of national data, we cannot draw comparisons between the sample and the larger pool of nonmarital parents with respect to involvement with the child welfare system, family court, and criminal justice system. But the parents we studied had a very high rate of the kind of involvement seen in the U.S. Fragile Families study. About a quarter of the sample mothers (24%) and fathers (26.2%) had one or more children who were the subject of a substantiated child maltreatment report or living with a guardian. Close to four of ten fathers (38.5%) and two of ten mothers (22%) had a record of alcohol or drug abuse.[44] Close to a third (31.7%) of fathers had been incarcerated for ninety days or more.[45] For parents who lived in St. Joseph County by age fourteen, close to half of

41. *See* Sara McLanahan & Audrey N. Beck, *Parental Relationships in Fragile Families*, 20 Future Child. 17 (2010).

42. Hispanic children were somewhat older (median age 2, average age 4.5 years) at order entry than non-Hispanic white (median age 2.0, average age 3.3 years) or African American (median age 2, average age 3.7 years).

43. *See* Child & Family Research P'ship, Univ. Tex. at Austin, In-Hospital Acknowledgement of Paternity: Literature Review 3 (Aug. 2012) (2010 data), http://childandfamilyresearch.utexas.edu/sites/default/files/CFRP_AOP_Literature-Review_October2012_web.pdf.

44. We determined substance abuse based on (1) a child protection investigation report describing substance abuse; (2) an adult conviction for the possession or sale of illegal drugs; (3) a DUI conviction; or (4) a juvenile record showing positive drug or alcohol tests, an arrest for possession or sale of illegal drugs, or a notation indicating substance abuse. We did not code a single marijuana possession or a single public-intoxication offense as substance abuse whether the offense occurred as a juvenile or as an adult. Similarly, we did not code a single underage alcohol possession or a single positive alcohol or marijuana test as substance abuse. In sum, our determination of substance abuse is based on misconduct that led to official intervention by the police or child welfare authorities, the most serious outcome of substance abuse. While our count almost certainly underestimates the full extent of substance abuse within the sample, it likely captures the most serious cases.

45. Of the mothers, 3.7% had been incarcerated.

fathers (49.9%) and mothers (44.6%) had at least one juvenile delinquency arrest, and more than a quarter (28.6% of fathers, 34.6% of mothers) had at least one juvenile status (runaway, truancy, habitual disobedience, curfew violations) offense record.

In sum, our study population is disproportionately composed of the most disadvantaged and most fragile of nonmarital families, a group that is itself more fragile and disadvantaged than marital families.

III. Sample Parents' Multipartner Fertility

In our sample, 56.1% of mothers and 46.7% of fathers had at least one child with another partner. The gap between maternal and paternal MPF is likely due to underreporting by fathers who had not consistently lived in St. Joseph County.[46] Whether the father had lived in St. Joseph County from age fourteen was a significant positive predictor of MPF.[47] This is unsurprising because, for fathers who consistently lived in St. Joseph County and whose children with other partners also lived there, the court database shows all children for whom paternity has been established; but, when a father has had a child outside St. Joseph County, the database contains a record only when a reciprocal support action has been filed against the father. MPF fathers with children unknown to the St. Joseph County authorities have no incentive to provide information about these children in a paternity action because prior children will not reduce a support obligation unless a support order has been entered for those children.

A. What Predicts MPF?

MPF was significantly correlated with a number of demographic variables. For mothers, the most significant predictors of MPF in the full sample were her age at entry of the focal child's paternity order, her post-2009 residential moves, her history of substance abuse, the number of children she had with the focal child's father, that father's identification as African American, the father's having imputed income of $104 per

46. *See* Kara Joyner et al., *The Quality of Male Fertility Data in Major U.S. Surveys*, 49 DEMOGRAPHY 101 (2012) (estimating that male underreporting in a national survey may amount to a fifth of all births and noting that underreporting is particularly pronounced among unmarried fathers).

47. Pearson's $R = .104$ ($p = .007$). *See* text at notes 62, 64, and 86, *infra.*

week,[48] and the level of disadvantage in the census district where the focal child resided.[49] All of these variables were positively correlated with MPF except for the number-of-children and imputed-income variables, which were negative.[50]

Age has invariably been found to be a significant predictor of MPF.[51] Other researchers have also reported that, when fathers spend more time in a committed relationship with their child's biological mother, they are less likely to have children with other women; logically, this would be true of mothers, too.[52] Neighborhood characteristics have also been previously linked to MPF.[53] But our data on the relationship between residential instability and MPF are novel; other researchers have not had access to information about the frequency of residential moves. Our research sample

48. The amount of $104 per week represents one-half of federal poverty-level income for a single person in 2010. Before 2010, the local Office of Child Support Enforcement always imputed income at the minimum-wage level. The unwritten policy introduced in 2010 authorizes the lower $104 value when a parent has a known substance-abuse problem, impaired work ability due to a medical problem, a felony record, and for either parent a lack of both a high school diploma or GED degree and an employment history. *See* Correspondence with St. Joseph County IV-D Office (on file with authors). For more on income imputation in the sample, see Brinig & Garrison, *supra* note 39.

49. We calculated disadvantage using PCA analysis, for both focal children and fathers, based on five census tract variables: unemployment rate, percentage of high school graduates, median income, percentage below the poverty line, and proportion of residents who were African American. *See* M.A. Pett et al., Making Sense of Factor Analysis: The Use of Factor Analysis for Instrument Development in Health Care Research (2003). However, because our sample is highly clustered in certain census tracts, it likely fails to show the full extent of neighborhood effects. *See* Tama Leventhal & Jeanne Brooks-Gunn, *The Neighborhoods They Live In: The Effects of Neighborhood Residence on Child and Adolescent Outcomes*, 126 Psych. Bull. 309, 321 (2000); George Galster, *The Mechanism(s) of Neighbourhood Effects: Theory, Evidence, and Policy Implications*, *in* Neighbourhood Effects Research: New Perspectives 23 (Maarten van Ham et al. eds., 2012).

50. $N = 656$.

Variable	Beta	Stand. Error	Signif.	Odds Ratio
Father is African American	.430	.188	.022	1.537
Children with focal child's father (#)	–.341	.110	.002	.711
Mother's moves post-2009 (#)	.257	.043	.000	1.293
Mother has substance abuse	.622	.225	.006	1.862
Census tract disadvantage level	.260	.113	.022	1.297
Mother's age at order entry	.107	.016	<.001	1.113
Father has imputed income $104	–1.222	.362	.001	.295
Constant	–3.200	.480	.000	.041

51. *See* sources cited in note 9, *supra.*

52. *See* Carlson & Furstenburg, *supra* note 14; Kathryn Edin & Timothy Nelson, Doing the Best I Can: Fatherhood in the Inner City (2013).

53. *See* Wynn, *supra* note 25 (neighborhood disorder).

suggests, however, that residential instability is an important predictor of MPF.

The variables significantly linked to maternal MPF in our sample accounted for only 17–23% of outcome variance.[54] Other personal characteristics about which we lack information (for example, education level) are undoubtedly relevant and important. But it is notable that, within this group of low-income mothers, personal income was not a significant predictor of MPF.[55]

Many MPF researchers have focused on parents who have at least two children in analyzing the antecedents of MPF.[56] This approach simplifies prediction as it avoids the complication of determining whether an individual will have a second child at all. We analyzed MPF in this smaller population as well as the full sample, and regression analysis did produce a model that explained a larger fraction of outcome variation. For this group of mothers with at least two children, five variables explained 30–46% of MPF variance.[57] The number of children the mother had with the focal child's father and her identification as Hispanic were negatively linked with her MPF; all other variables were positively linked with MPF (see Table 1).[58]

Table 1
Mother's MPF (Mothers with at least two children), *N* = 480

Variable	Beta	Stand. Error	Signif.	Odds Ratio
Children focal child's father (#)	–1.566	.187	<.001	.209
Mother's post-2009 moves (#)	.175	.061	.004	1.192
Census tract disadvantage level	.372	.184	.044	1.450
Mother's age at birth focal child	.142	.036	<.001	1.152
Mother is Hispanic	–1.047	.416	.012	.351
Petition year 2008	.929	.297	.002	2.531
Constant	.103	.932	.912	1.108

54. The two most common measures for reporting how much variance is explained by a set of predictors are those provided by the Cox & Snell method and the Nagelkerke method. Here, we report both. Cox & Snell R^2 = .171; Nagelkerke R^2 = .230. For this and all regressions reported, we used forward stepwise regression or conditional logistic regression.

55. Mother's gross income, Pearson's R = .038 (p = .337).

56. *See* Guzzo et al., *supra* note 20 (describing studies).

57. Cox & Snell R^2 = .299; Nagelkerke R^2 = .461. Total N = 482.

58. However, our capacity to estimate the effects of neighborhood disadvantage were limited. *See* sources cited in note 49, *supra.*

Because we had information on family history and juvenile court involvement for parents who lived in St. Joseph County that was lacking for the full sample, we separately analyzed this smaller group to see if other variables had predictive power. For the in-county group of mothers with two or more children, the explanatory variables and their predictive capacity were fairly consistent with our results for the full sample.[59] As with the full sample, the mother's moves, Hispanic ethnicity, and her age (this time, at order) were positively related to her MPF; the number of children the mother had with this father was negatively related. For the in-county group, the census tract variable did not survive regression analysis, but the mother's juvenile history as a runaway was a significant predictor. The mother's history as a runaway was positively related to her MPF; 86.7% of in-county mothers with at least two children and a history of being a runaway were MPF, as compared to 73.8% of in-county mothers of two-plus children who lacked a runaway history. However, the mother's history of child maltreatment, juvenile status offenses, and juvenile delinquency were not significantly correlated with her MPF (see Table 2).[60]

Table 2
Mother's MPF (in county at age 14, mothers with 2+ children), *N* = 305

Variable	Beta	Stand. Error	Signif.	Odds Ratio
Children focal child's father (#)	–1.793	.249	<.001	.166
Mother's post-2009 moves (#)	.214	.076	.005	1.239
Mother's age at order entry	.112	.037	.003	1.119
Mother is Hispanic	–1.272	.575	.027	.280
Mother was runaway	1.469	.463	.001	4.344
Constant	.792	1.049	.450	2.208

59. Cox & Snell R^2 = .311; Nagelkerke R^2 = .469. Total N = 306.

60. Mother's CHINS p = .141; JS p = .810; JD p = .646. The CHINS, JS, and JD histories of the mother's siblings also failed to show a significant correlation with her MPF.

For the full sample, fathers' MPF was significantly related to some of the variables that significantly predicted mothers' MPF, but not all.[61] Age and the post-2009 moves were significant predictors for fathers as well as mothers. But neither the number of children the father had with the focal child's mother nor neighborhood disadvantage survived regression analysis for fathers. Parental reconciliation, the father's identification as African American, the number of possible fathers excluded before paternity was established, the father's conviction of Part 1 (most serious) felony, the income of the focal child's mother, and residence in St. Joseph County at age fourteen were significant for fathers but not for mothers. Reconciliation and conviction of a serious felony were the only variables negatively linked with MPF. The explanatory power of the regression model was low; it explained even less variance (18% to 25%) than did the variables significantly correlated with maternal MPF.[62]

Among fathers known to have two or more children, some of the same variables were significant predictors. But the number of putative fathers excluded, parental reconciliation, and the in-county variables all lost their predictive power while the income of the focal child's mother now became a significant predictor. As with the mothers, prediction improved dramatically for this smaller, more focused group (see Table 3).[63]

61. $N = 600$.

Variable	Beta	Stand. Error	Signif.	Odds Ratio
Father's post-2009 moves (#)	.229	.040	.000	1.257
Father convicted Pt. 1 crime	–.786	.262	.003	.455
Father is African American	.639	.185	.001	1.894
Father's age at birth focal child	.081	.015	<.001	1.084
Mother's gross income ($)	.002	.001	.020	1.002
Excluded fathers (#)	.730	.327	.026	2.075
Parents reconciled	–.730	.265	.006	.482
Father in county at age 14	.646	.206	.002	1.908
Constant	–3.873	.507	<.001	.021

62. Cox & Snell $R^2 = .186$; Nagelkerke $R^2 = .249$. Again, the father's income was not significantly correlated with his MPF; Pearson's $R = –.017$ ($p = .662$).

63. Cox & Snell $R^2 = .385$; Nagelkerke $R^2 = .549$. Total $N = 447$.

Table 3
Fathers' MPF (Fathers with at least two children), *N* = 418

Variable	Beta	Stand. Error	Signif.	Odds Ratio
Father's post-2009 moves	.245	.058	<.001	1.278
Father convicted Pt. 1 felony	–1.079	.364	.003	.340
Father is African American	.723	.296	.015	2.060
Children focal child's mother (#)	–1.902	.219	<.001	.149
Father's age at birth focal child	.118	.028	<.001	1.125
Income focal child's mother ($)	.003	.001	.019	1.003
Constant	–.048	.809	.953	.953

For the in-county group of fathers with two or more children, the explanatory variables and their predictive power were completely consistent with results for the full group of fathers with two children.[64] The same variables survived regression analysis, and no additional juvenile history variables (maltreatment, foster care, delinquency, status offenses, residential placement) survived regression analysis.

B. How Many Additional Partners?

Typically, MPF fathers and mothers had only one or two additional partners. For MPF fathers, the median number of other mothers was one; the mean, 1.72. For mothers, the median number of other fathers was one; the mean, 1.47.

Stepwise regression analysis revealed that factors similar to those predictive of MPF were also the most important predictors of partner number. For mothers with at least two children, the number of children the mother had with the father of the focal child, the father's age, her Hispanic ethnicity, her residential moves, census tract disadvantage level, and the petition year all continued to be important predictors. The identification of the focal child's father as non-Hispanic white was also a significant, and negative, predictor. These variables explained about 30% of case variance (see Table 4).[65]

64. Cox & Snell R^2 = .401; Nagelkerke R^2 = .575. N = 294; Total N = 317.
65. Adjusted R^2 = .306.

Table 4
Number of Partners with Whom Mother Has Other Children (Mothers with 2+ children), *N* = 447

Variable	Beta (Unstand.)	Stand. Error	Beta (Stand.)	*T*	Signif.
(Constant)	.645	.201		3.212	.001
Children focal child's father (#)	–.345	.045	–.321	–7.689	<.001
Mother's post-2009 moves	.092	.013	.279	6.870	<.001
Father's age birth focal child	.026	.005	.203	4.918	<.001
Father is non-Hispanic white	–.222	.085	–.113	–2.600	.010
2008 petition year	.171	.075	.092	2.290	.022
Census tract disadvantage level	.110	.049	.097	2.250	.025
Mother is Hispanic	–.283	.132	–.088	–2.145	.032

For the in-county group, results were very similar.[66] The census tract variable did not survive regression analysis; the mother's runaway history again did. As with MPF, either no other variable related to the mother's personal history (maltreatment, JS/JD, adult crime) or her family history was significantly correlated with her partner number.

For fathers with at least two children, the most important positive predictors of partner number were the father's age at the birth of the focal child, his residential moves, and his identification as African American. The only negative predictor was the number of children the father had with the focal child's mother. The predictive value of the model was less for fathers than mothers, however (see Table 5).[67]

66. Adjusted R^2 = .334.

Variable	Beta (Unstand.)	Stand. Error	Beta (Stand.)	*T*	Signif.
(Constant)	.820	.246		3.330	.001
Children focal child's father (#)	–.391	.056	–.356	–6.923	<.001
Mother's post-2009 moves	.067	.016	.219	4.310	<.001
Father's age at birth focal child	.027	.008	.180	3.490	.001
Father is non-Hispanic white	–.371	.096	–.196	–3.850	<.001
Mother has imputed minimum wage income	.219	.090	.123	2.445	.015
Mother was runaway	.246	.101	.122	2.440	.015
Mother is Hispanic	–.440	.185	–.123	–2.377	.018

67. Adjusted R^2 = .280.

Table 5
Number of Partners with Whom Father Has Other Children (Fathers with 2+ children), *N* = 407

Variable	Beta (Unstand.)	Stand. Error	Beta (Stand.)	*T*	Signif.
(Constant)	.580	.257		2.257	.025
Children focal child's mother (#)	–.451	.058	–.340	–7.770	<.001
Father's post-2009 moves	.090	.017	.234	5.413	<.001
Father is African American	.518	.103	.216	5.012	<.001
Father's age birth focal child	.029	.008	.167	3.812	<.001

For in-county fathers, both income and serious (Part 1) crime were significant, and negative, predictors of partner number. As with MPF, no personal or family history variables survived regression analysis for the paternal in-county group. The model's predictive value did improve, however.[68]

C. MPF Predictors: General Trends and Gender Differences

In our view, the most intriguing variable in Tables 1–5 is moves. For both mothers and fathers, no matter how MPF is assessed, moves remain a highly significant predictor of MPF. It is well-established that residential instability is much more common among poor families than others. Poor families are also more likely to experience forced moves occasioned by eviction or other negative events,[69] and recent research has established that such forced moves are associated with relocation to neighborhoods with higher poverty and violent-crime rates, future unforced moves,

68. Adjusted R^2 = .328. N = 300.

Variable	Beta (Unstd.)	Std. Error	Beta (Std.)	*T*	Signif.
(Constant)	.472	.338		1.398	.163
Children focal child's mother (#)	–.456	.076	–.303	–5.960	<.001
Father is African American	.483	.134	.187	3.603	<.001
Father's age at birth focal child	.056	.010	.277	5.409	<.001
Father's post-2009 moves	.083	.020	.219	4.228	<.001
Father's gross income	–.001	.000	–.175	–3.205	.002
Father convicted Pt. 1 felony	–.437	.163	–.142	–2.683	.008

69. In our sample, an eviction proceeding brought against the mother was significantly and positively correlated with her post-2009 moves. Pearson's R = .152 (p < .001).

mental health problems, material hardship, and homelessness.[70] However, we have not found any prior research that has examined the relationship between residential instability and MPF, and our data are inadequate to determine, for the vast majority of moves, whether it was voluntary or forced. For many sample cases, we cannot even be sure whether residential instability preceded MPF or accompanied it. But given the consistent, highly significant link between MPF and residential instability across our sample, it is clear that far more research on the relationship between these two variables is needed.

The consistent link between a runaway history and MPF for in-county women also deserves further study. Runaways have much higher rates of sexual abuse than the general population; they are also more likely to report lack of parental support, school disengagement, substance abuse, and depression.[71] Our data are inadequate to reveal which of these correlates of being a runaway predict MPF; further research will be necessary.

The fact that conviction of a serious (Part 1) felony was a *negative* predictor of male MPF is also intriguing and worthy of further research. Incapacitation is one possible explanation for the association we found; Part 1 crime is more likely to result in a longer period of incarceration than less serious crimes. However, although these variables did not survive regression analysis, for the in-county group, the father's serious delinquency arrest, his time in residential placement, and both his personal and family history of child maltreatment were also negatively correlated with MPF.[72] It is thus possible that our results reflect both the value that men in a highly disadvantaged population like the one we studied place on fatherhood and the likelihood that the women with whom these men might partner prefer those with fewer negative characteristics, such as a history of incarceration.

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70. *See* Matthew Desmond et al., *Forced Relocation and Residential Instability Among Urban Renters*, 89 Soc. Sci. Rev. 227 (2015); Matthew Desmond & Tracey Shollenberger, *Poverty, Housing, and the Mechanisms of Neighborhood Selection* (Paper presented at Am. Sociological Assoc. Annual Meeting, 2013).

71. *See, e.g.*, Joan S. Tucker et al., *Running Away from Home: A Longitudinal Study of Adolescent Risk Factors and Young Adult Outcomes*, 40 J. Youth Adolescence 507 (2011) (reviewing literature).

72. For the in-county group, the father's history of serious delinquency arrest, Pearson's $R = -.229$ ($p < .001$); residential placement days, Pearson's $R = -.168$ ($p = .003$); personal maltreatment history, Pearson's $R = -.113$ ($p = .044$); personal foster care history, Pearson's $R = -.128$ ($p = .023$); family maltreatment history, Pearson's $R = -.132$ ($p = .018$). For the in-county group, the number of partners with whom the father had had children was also significantly correlated with his family maltreatment history, Pearson's $R = -.117$ ($p = .043$); residential placement days, Pearson's $R = -.168$ ($p = .003$); and serious delinquency arrest, Pearson's $R = -.145$ ($p = .012$).

There is considerable evidence to support the claim that disadvantaged men place a high value on fatherhood and often welcome new pregnancies even when prior relationships have failed. Kathryn Edin and Timothy Nelson, who conducted an in-depth ethnographic study of poor, inner-city fathers in Philadelphia, report that more than half of all pregnancies were "welcomed without reservation" and three quarters of fathers were either "happy" or "accepting."[73] They also found that "with each new pregnancy there is a possible child who exists only as pure potential, and this is where men's optimism shines."[74] Thus, because men "seem to want the 'whole fatherhood experience,'" their past failures "put them at risk of repeating the series of non-decisions that will bring yet another child into the world with a new partner."[75] Our data do not directly provide evidence of the extent to which optimism about birth, or lack of other optimism sources, figures into men's willingness to risk new pregnancies and births. But "lack of economic capacity makes access to respectability difficult for low-income men . . . [and leaves them reliant on] reputational traits—such as sexual prowess . . . —[that] place [them] at greater risk for fathering out-of-wedlock children with numerous women. . . ."[76] Fertility, within populations and across nations, is also invariably higher when incomes are lower.[77]

Our data also suggest that men with negative characteristics may be comparatively disadvantaged in attracting new mates. Although there is evidence that unmarried mothers are less likely to have a high-quality relationship when confronted with a shortage of potential partners,[78] there is a surprisingly small amount of sociological literature on mate choice by disadvantaged women. However, our findings on the negative relationship between adverse paternal characteristics such as a serious criminal record and juvenile history are entirely consistent with standard economic and evolutionary theories of female mate choice, which typically propose

73. Edin & Nelson, *supra* note 52, at 51, 53 & tbl.2.

74. *Id.* at 68.

75. *Id.* at 86–87. *See also* Kathryn Edin & Maria Kefalas, Promises I Can Keep: Why Poor Women Put Motherhood Before Marriage 58, 62 (2005) ("large majority [of fathers] respond positively to the pregnancy" and "[o]verall, children are seen not as millstones but as life preservers, saviors, redeemers, and the strength of the sentiment behind these fathers' words makes them all the more remarkable").

76. Robert E. Aronson et al., *Challenges to Masculine Transformation Among Urban Low-Income African American Males*, 93 Am. J. Pub. Health 732, 736 (2003).

77. *See* T. Paul Schultz, *Fertility and Income* (Yale Econ. Growth Ctr. Discussion Paper No. 925, 2005), http://www.econ.yale.edu/~pschultz/cdp925.pdf.

78. *See* Kristen Harknett, *Mate Availability and Unmarried Parent Relationships*, 45 Demography 555, 556 (2008).

that women choose mates based on their comparative capacity to be good providers.[79] It is also clear that crime—which "disadvantaged" men in our sample with respect to MPF—plays an important role in the breakdown of relationships among low-income parents. In a landmark study of poor, inner-city mothers, one in three "said that crime, usually drug dealing, and the almost inevitable spell in jail or prison were what broke the[ir relationships] apart."[80]

It is intriguing that women were not comparatively "disadvantaged" by drug or alcohol histories and other negative traits in the same way that men were; to the contrary, for the in-county group, the mother's runaway history was positively correlated with her MPF. The research literature on male mate choice in conditions of disadvantage is even sparser than that on female choice. We can only speculate on the reasons for this pattern. But male mate choice has, traditionally, been driven more by homemaking capacity and fertility signifiers, such as youth, than by breadwinning capacity.[81] This might reduce the perceived disadvantages of women's negative histories. Across species, women also tend to be the choosier sex.[82]

IV. The Impact of MPF on Children

As noted in Part I, earlier research has established that MPF is associated with a number of childhood risks, including less contact with fathers, lower child support, lesser educational attainment, more delinquency, more drug use, and earlier sex.[83] Our data source did not permit us to examine all of the associations reported in these earlier studies, although it did allow us to measure parental contact, delinquency, child support value, and child support arrearages. We were also able to examine other risks that earlier researchers have not previously evaluated, including child maltreatment, exposure to intimate partner violence (as measured through maltreatment investigations and orders of protection), juvenile status offenses, and residential moves.

79. *See* David M. Buss, *The Science of Human Mating Strategies: An Historical Perspective*, 24 PSYCH. INQUIRY 171–177 (2013).

80. *See* EDIN & KEFALAS, *supra* note 75, at 81. More than a third of these mothers blamed alcoholism or drug addiction. In our in-county sample, the father's drug/alcohol involvement was negatively correlated with his MPF ($p = .001$), although the relationship did not survive regression analysis.

81. *See* Marcel Zentner & Alice H. Eagly, *A Sociocultural Framework for Understanding Partner Preferences of Women and Men: Integration of Concepts and Evidence*, 26 EUR. REV. SOC. PSYCH. 328–373 (2015).

82. *See* Buss, *supra* note 79.

83. Dorius & Guzzo, *supra* note 27, at 3.

Our findings on parental contact and child support are consistent with those reported in earlier studies. Paternal MPF was significantly, and negatively, related to the value of his child support obligation, the size of his overdue payments (arrearage), and the amount of parenting time he had with the focal child. Of SPF fathers ordered to pay support, 57.4% had no support arrearage; the average of their maximum arrearage was $2,601. Only 41.9% of MPF fathers had no arrearage; the average of their maximum arrearage was $4,305. When mothers had custody, SPF fathers were granted, in the parenting-time order, 36.7 overnight visits on average. MPF fathers averaged only 30.1 overnights, and more than 70% had none. The correlations between arrearages and parenting time did not survive regression analysis, but, with respect to child support, this is largely because a father's children with other mothers affect his child support obligation only when they have produced another child-support obligation. Variables capturing these payment obligations did survive regression analysis and contributed significantly both to the value of the father's support obligation to the focal child and siblings as well as the size of his arrearage.[84]

Our findings on juvenile delinquency are also consistent with earlier research; although the relationship between parental MPF and the focal child's delinquency again did not survive regression analysis, the proportion of maternal SPF children who were involved in delinquent behavior (3.4%) was less than half the proportion of maternal MPF children (7.4%) with such involvement.[85] Moreover, when parents' children with other partners were added to the analysis, the relationship between delinquency/status offenses and MPF was significant for fathers as well as mothers and survived regression analysis (see Table 6).

Additionally, our data revealed other risks significantly correlated with maternal MPF, paternal MPF, or both. Maternal MPF was linked with more risks than paternal MPF.[86] Although some risks significantly correlated

84. *See* Brinig & Garrison, *supra* note 39, at tbls.3, 5.

85. While the proportion of focal children involved in delinquency is quite low, focal children are still quite young; in 2017, the median age of focal children was only ten years.

86. Almost certainly, our analysis does not include all of sample fathers' children. Unmarried men often fail to report children (*see* Joyner et al., *supra* note 46), and men who have not consistently lived in St. Joseph County are more likely to have evaded a formal paternity and child support order than those whose children are known to local officials. *See* text at note 43, *supra*. However, the father's presence in St. Joseph County by age fourteen was not significantly related to the likelihood that he had a child with a substantiated Child in Need of Services (CHINS) report or a juvenile services or juvenile delinquency record. We thus do not think that our greater capacity to detect MPF for in-county men weakens our findings on the relationship between fathers' MPF and these child outcomes.

with maternal MPF (intimate partner violence, less paternal visiting time) did not survive regression analysis, child maltreatment, foster care placement, and the focal child's residential moves all did.

Table 6
MPF and Child Outcomes

MPF	Mother's MPF	#Add'l Fathers	#Children with Add'l Fathers	Father's MPF	#Add'l Mothers	#Children with Add'l Mothers
Focal child moves post order	.260***(***)	**.351*****(***)**	.338***(***)	.154***	.166***	.182***
Parent has one or more children with substantiated maltreatment report	**.288*****(**)**	.396***(***)	.407***(***)	**.250*****(**)**	.316***(***)	**.331*****(**)**
Parent has one or more children with JS/JD record	**.332*****(***)**	.361***(***)	.366***(***)	**.252*****(**)**	.296***(***)	**.303*****(***)**
Parent has one or more children in foster care or guardianship	**.178*****(*)**	.254***	.234***			
Mother has experienced IPV	.086*	.169***	.152***			
CS value (father pays support)					–.170***	–.165***
CS arrears (father pays support)				.109**	.129**	.117**
Father parenting time (when mother has custody)					–.127**	–.126**

* p < .05 ** p <.01 *** p < .001 **( ) post regression analysis**

MPF focal children were almost three times more likely to have experienced child maltreatment than SPF children (20.7% versus 7.8%). Increased numbers of partners and half siblings were also positively correlated with an increased likelihood of maltreatment. Again, by adding

parents' children with other partners to the equation, the relationship between child maltreatment and MPF became stronger and extended, significantly, to fathers as well as mothers.

A significant association between maternal MPF and the number of post-order residential moves experienced by the focal child also survived regression analysis. In the population of SPF children, 60.3% experienced two or fewer moves; the median for SPF children was two moves. By contrast, 66.4% of MPF children experienced three or more moves; the median for MPF children was three moves, and 10.7% experienced five or more. Again, the strength of the correlation between moves and maternal MPF increased along with the number of parental partners and the number of other children, and paternal MPF was also significantly correlated with the focal child's residential moves, although this correlation did not survive regression analysis.

Child maltreatment and residential instability have been linked to a wide array of adverse outcomes. Maltreated children are more likely to experience developmental delays and to exhibit behavioral problems; as adults, they are at greater risk of both physical and mental health impairment, substance abuse, criminal behavior, and becoming a maltreating parent.[87] The number of childhood residential moves is associated with social and emotional adjustment,[88] addictive behavior,[89] use of mental health services,[90] and school readiness, completion, and

87. *See Maltreatment: Long Term Effects*, 87 Va. Child Protection Newsl. (Joanne Grayson ed., 2010), https://psychweb.chbs.jmu.edu/Graysojh/pdfs/Volume087.pdf (summarizing literature); Child Welfare Information Gateway, U.S. Dep't Health Hum. Servs., *Long-Term Consequences of Child Abuse and Neglect*, Child Welfare Info. Gateway, https://www.childwelfare.gov/topics/can/impact/long-term-consequences-of-child-abuse-and-neglect/.

88. *See* Emma K. Adam, *Parental and Residential Stability and Children's Adjustment*, 13 Current Directions Psych. Sci. 210 (2004); Gloria A. Simpson & Mary Glenn Fowler, *Geographic Mobility and Children's Emotional/Behavioral Adjustment and School Functioning*, 93 Pediatrics 303 (1994).

89. *See* David J. DeWita, *Frequent Childhood Geographic Relocation: Its Impact on Drug Use Initiation and the Development of Alcohol and Other Drug-Related Problems Among Adolescents and Young Adults*, 23 Addictive Behaviors 623 (1998).

90. *See* Jeffrey Millegan et al., *The Effect of Geographic Moves on Mental Healthcare Utilization in Children*, 55 J. Adolescent Health 276, 278 (2014).

achievement[91]—even a move to a better neighborhood is associated with a lower chance of graduating from high school.[92] Indeed, one group of researchers concluded that the effect of six or more moves as compared to no moves was equivalent to the difference between growing up in a middle-class or poor family.[93]

The fact that MPF predicts child maltreatment, out-of-home placement in foster care or guardianship, and residential instability independent of other known risks such as poverty[94] and substance abuse[95] is particularly worrisome because risk exposure has cumulative effects.[96] Decades of research on adverse childhood experiences (often abbreviated as ACEs) has established both that "similar consequences can result from different antecedent risks" and that "ACEs tend to have a dose-response relationship with many unwanted outcomes."[97] The negative outcomes associated with adverse childhood experience often have lifelong consequences, and it is "now widely accepted that early adversity contributes to morbidity and mortality over the life course."[98]

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91. *See* Rebekah Levine Coley & Melissa Kul, *Cumulative, Timing-Specific, and Interactive Models of Residential Mobility and Children's Cognitive and Psychosocial Skills*, 87 CHILD DEV. 1204, 1211, 1218 (2016); J.J. Cutuli et al., *Academic Achievement Trajectories of Homeless and Highly Mobile Students: Resilience in the Context of Chronic and Acute Risk*, 84 CHILD DEV. 841 (2013); Simpson & Fowler, *supra* note 88; Sara A. Schmitt et al., *Residential Mobility, Inhibitory Control, and Academic Achievement in Preschool*, 26 EDUC. & DEV. 189 (2015); Scott J. South et al., *Student Mobility and School Dropout*, 36 SOC. SCI. RES. 68, 89–91 & tbl.4 (2007); Kathleen M. Zio-Guest & Claire C. McKenna, *Early Childhood Housing Instability and School Readiness*, 85 CHILD DEV. 103, 111 (2014).

92. *See* Molly W. Metzger et al., *Residential Mobility During Adolescence: Do Even "Upward" Moves Predict Dropout Risk?*, 53 SOC. SCI. RES. 218 (2013).

93. *See* South et al., *supra* note 91.

94. *See* Maria Cancian et al., *The Effect of Family Income on Risk of Child Maltreatment* 2–4 (Inst. for Research on Poverty Discussion Paper No. 67-10, 2010) (reviewing literature). A qualitative study of children living in poverty noted more moves for those living in poverty, suffering family disruption, and being African American. Becky Pettit, *Moving and Children's Social Connections: The Critical Importance of Context* (Ctr. Research Child Wellbeing Working Paper 98-04, 2000), http://crcw.princeton.edu/workingpapers/WP98-04-Pettit.pdf.

95. Between one-third and two-thirds of child maltreatment cases involve substance abuse. *See* JILL GOLDMAN ET AL., U.S. DEP'T HEALTH & HUM. SERVS., A COORDINATED RESPONSE TO CHILD ABUSE AND NEGLECT: THE FOUNDATION FOR PRACTICE 28 (2003), http://www.childwelfare.gov/pubs/usermanuals/foundation/foundation.pdf.

96. *See* Gary W. Evans & Pilyoung Kim, *Childhood Poverty and Health: Cumulative Risk Exposure and Stress Dysregulation*, 18 PSYCH. SCI. 953 (2007).

97. *See* J.P. Mersky et al., *Impacts of Adverse Childhood Experiences on Health, Mental Health, and Substance Use in Early Adulthood: A Cohort Study of an Urban, Minority Sample in the U.S.*, 37 CHILD ABUSE & NEGLECT 917 (2013) (reviewing literature).

98. *See id.*; U.S. Centers for Disease Control, *Adverse Childhood Experiences (ACEs)*, U.S. CTRS. FOR DISEASE CONTROL & PREVENTION, https://www.cdc.gov/violenceprevention/acestudy/index.html.

Of course, we do not mean to suggest that MPF *causes* child maltreatment, residential instability, or other risks to childhood development. Researchers investigating the impact of adverse childhood experience have found that risks tend to cluster; a child exposed to one adverse experience often is exposed to several.[99] The links between MPF and adverse experiences are likely complex. But accumulating evidence on the association between MPF and parental functioning and our findings on the association between MPF and maltreatment, out-of-home placement, delinquency/status offenses, and residential instability suggest that far more research on MPF is warranted. It is possible that MPF should be identified not only as a factor influencing the likelihood of other adverse childhood experiences, but as an adverse experience itself.

V. Conclusion: What Can Be Done?

Given the significant risks associated with MPF, effective strategies to prevent and ameliorate MPF are needed. The challenges associated with developing such strategies are huge; in this brief Article, we cannot do more than introduce this vitally important topic. We discuss strategies in order of likely effectiveness, and we do not consider political feasibility.

In our view, the strategy that is by far the most likely to have an impact on MPF relies on long-acting, reversible contraceptives (LARCs) coupled with contraceptive counseling and school-based sex-education programs. Although the pregnancies of young, poorly educated, unmarried parents—the group most at risk of MPF—are typically welcomed by both fathers and mothers,[100] the vast majority are unplanned. Nationally, unintended pregnancy is more than four times as frequent among poor women than their higher-income counterparts.[101] But researchers who tracked young women's attitudes and pregnancies over time found that only about 10% of those who became pregnant "stated a strong desire to get pregnant" just before the pregnancy occurred.[102] Kathryn Edin and Maria Kefalas

99. *See* Mersky et al., *supra* note 97. *See also* U.S. Ctrs. for Disease Control, *supra* note 98.

100. *See* Edin & Kefalas, *supra* note 75, at 30–37; Edin & Nelson, *supra* note 52, at 51, 53 & tbl.2; Jennifer J. Frost & Selene Oslak, Teenagers' Pregnancy Intentions and Decisions: a Study of Young Women in California Choosing to Give Birth 12–13 (Alan Guttmacher Institute, 1999), http://www.guttmacher.org/pubs/or-teenspreg-survey.pdf (half of the young, pregnant women interviewed reported that their baby's father had wanted them to conceive).

101. Isabel Sawhill et al., Brookings Ctr. on Children & Families, The Impact of Unintended Childbearing on Future Generations 5 fig.2 (2014), https://www.brookings.edu/wp-content/uploads/2016/06/12_impact_unintended_childbearing_future_sawhill.pdf.

102. Jennifer S. Barber et al., *The Relationship Context of Young Pregnancies*, 35 J.L. & Inequality 175, 196 (2017).

similarly report that only 17.2% of births to the poor, young mothers they studied were fully intentional;[103] most frequently (45.7% of the time), the birth was "in between" intended and unintended or, as one of the mothers put it, "[i]t's like I wasn't *planning* to have a kid [but] I wasn't doing nothing to *stop* it from happening neither."[104] Most couples told Edin and Kefalas that they had used contraception at the beginning of the relationship. But once there was an understanding that they had "become an exclusive pair,"

> he often abandons condoms because continued use would signal a lack of fidelity and trust. And the same young woman who initially took a birth control pill each day, wore the patch each week, or visited the clinic for the "depo" (Depo-Provera) shot every three months suddenly decides that these practices are not worth the trouble.[105]

In the group Edin and Kefalas studied, even women whose relationships had not become exclusive sometimes abandoned contraception, saying "they tired of the required routine" or that the method used had unwanted side effects.[106] Other researchers have made similar findings.[107]

LARCs have the potential to alter this "in between" pattern of pregnancy induced by contraception abandonment. The contraceptive effect of LARCs endures for years, not months, without any further planning or action by the LARC user. LARCs thus change the default outcome from no contraception to fully effective contraception.

A large literature uniformly demonstrates that defaults have enormous power. Whether choice arises in the context of car insurance, food selection, or pension contribution level, default options are chosen most of the time.[108] An expanding volume of research literature also strongly suggests that LARCs, by changing the default from no pregnancy

103. *See* Edin & Kefalas, *supra* note 75, at 237, tbl.5.

104. *Id.* at 40, 237 tbl.5.

105. *Id.* at 38. *See also* Frost & Ostlak, *supra* note 100, at 14 tbl.5 (80% of respondents had used contraceptives at some point, but 63% reported no contraceptive use during the month when pregnancy occurred).

106. Edin & Kefalas, *supra* note 75, at 38.

107. *See* Frost & Oslak, *supra* note 100, at 9–10 tbl.2 (32% of respondents had intended to become pregnant, 25% had not cared, and 43% had not intended to become pregnant); Wendy D. Manning, *Childbearing in Cohabiting Unions: Racial and Ethnic Differences*, 33 Fam. Planning Persp. 217, 221 (2001) (44% of cohabiting and 61% of single noncohabiting women said that their first birth was unintended).

108. *See* Richard H. Thaler & Cass R. Sunstein, Nudge: Improving Decisions About Health, Wealth, and Happiness 85–89 (2009).

protection to effective contraception, can have a dramatic impact on unintended pregnancy. Indeed, in the U.S. CHOICE study of nearly 10,000 women ages fourteen to forty-five, only one percent of LARC users had an unintended pregnancy over a three-year follow-up period.[109]

Researchers have also found that, once cost barriers have been removed, LARCs are the preferred contraceptive for a sizeable majority of young women. In the CHOICE study, 75% of all participants and 80 percent of those ages fourteen through seventeen chose a LARC method; 86% of those who chose a LARC were still using it a year later.[110] Researchers have also found that, even when women seek short-acting, reversible forms of contraception, a high proportion will select a LARC when offered.[111]

In our view, school-based education programs are also a key component of an effective MPF-prevention program. Programs that combine sex education with a range of services such as tutoring and career counseling have achieved excellent results in reducing early pregnancy; indeed, two such programs have reduced teen pregnancy rates by as much as half.[112] Were high-quality school programs combined with low-cost, community-based health services offering LARCs, it seems likely that MPF could be significantly reduced while also enhancing the life prospects of low-income young adults. Such an effort should also be highly cost effective.

Of course, even with the best of preventive efforts, many ill-prepared and disadvantaged young adults will still bear children within fragile relationships that have few prospects of long-term success; across the economic spectrum, couples overestimate the chances of long-term relational success when a partnership is new and fulfilling.[113] Kathryn Edin, Timothy Nelson, and Laura Tach—all highly respected social scientists who have spent years studying MPF—have recently urged that, for parents at high risk of MPF, "[e]nhancing a father's bond with the child he has first

109. *See* Gina Secura, *Long-Acting Reversible Contraception: A Practical Solution to Reduce Unintended Pregnancy*, 65 Minerva Ginecology 271 (2013). *See also* Contraceptive Choice Ctr., http://contraceptivechoice.wustl.edu/#MISSION; Justin T. Diedrich et al., *Long-Acting Reversible Contraception in Adolescents: A Systematic Review and Meta-analysis*, 216 Am. J. Obstetrics & Gynecology 364 (2017).

110. *See* Secura, *supra*, note 109; Diedrich et al., *supra*, note 109.

111. *See* David Hubacher et al., *Long-Acting Reversible Contraceptive Acceptability and Unintended Pregnancy Among Women Presenting for Short-Acting Methods: A Randomized Patient Preference Trial*, 216 Am. J. Obstetrics & Gynecology 101 (2017).

112. *See* Douglas Kirby, Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy (Nat. Campaign to Prevent Teen Pregnancy, 2001).

113. *See* Lynn A. Baker & Robert E Emery, *When Every Relationship Is Above Average: Perceptions and Expectations of Divorce at the Time of Marriage*, 17 L. & Hum. Behav. 439 (1993).

may also be a way to prevent the 'father-go-round'—the pattern of serial selective involvement documented in our past work."[114] More specifically, Edin, Nelson, and Tach suggest that programs funded as part of a national "responsible fatherhood" initiative "should be bolstered, and the body of best practices research that guides them ought to be strengthened."[115]

Although research on the effectiveness of the federally funded Responsible Fatherhood programs has not yet been completed, another federally funded initiative aimed at improving the relationships of young, disadvantaged couples has been studied in depth; the results are not encouraging. Although one of eight demonstration projects did show some benefits associated with program participation, overall, the program had no effect on the quality or stability of couples' relationships with each other or their co-parenting; it actually had a small negative effect on some aspects of father involvement.[116] A more ambitious relationship-education program in Norway produced equally dismal results. Researchers evaluating the program, offered to all Norwegians expecting a first child, concluded that it "was not possible to detect any positive effect of relationship education attendance in our study."[117]

Both the U.S. and Norwegian programs offered fairly brief interventions, and some family-education programs have produced positive, cost-effective results. The Nurse-Family Partnership Program has been intensively studied, using rigorous evaluation criteria, for more than three decades and has demonstrated positive results on a wide range of outcomes, including prenatal health, child maltreatment and injuries, school readiness, maternal employment and welfare dependence, subsequent pregnancies, and even the mortality of mothers and children.[118] A handful of high-quality early education programs have also produced enduring benefits, and a fairly recent meta-analysis of parenting programs offering cognitive-behavioral therapy or services to parents of children with conduct disorders concluded that programs that met strict research-

114. Kathryn Edin et al., *The Diverging Destinies of Fathers and What It Means for Children*, *in* Families in an Era of Increasing Inequality 213, 220 (Paul R. Amato et al. eds., 2015).

115. *Id. See also* Tach et al., *supra* note 13.

116. *See* Robert G. Wood et al., The Long-Term Effects of Building Strong Families: A Relationship Skills Education Program for Unmarried Parents, OPRE Report 2012-28B, Executive Summary at viii–xii (2012), http://www.mathematica-mpr.com/publications/PDFs/family_support/BSF_36month_impact_ES.pdf.

117. *See* Øystein Mortensen et al., *Participant Characteristics and Outcomes of Relationship Education in the Transition to Parenthood*, 3 Scandinavian Psychologist e12 (2016), https://doi.org/10.15714/scandpsychol.3.e12.

118. The studies are numerous. They are listed at http://www.nursefamilypartnership.org/Proven-Results/Published-research.

design criteria produced a variety of cost-effective positive outcomes.[119] What tends to distinguish the successful programs from the failures is professionalism and intensivity; success does not come cheaply. But while we are skeptical that high-quality, large-scale programs will actually materialize, we agree with Edin, Nelson, and Tach that such programs are worth further research to determine what works and how well.

Edin, Nelson, and Tach also urge that, once the relationship between the father and mother has dissolved, "policy must clearly signal that society honors fathers' value as parents and not just as paychecks."[120] More specifically, they urge that "we need to insure that unmarried fathers have the same de facto rights to a visitation agreement that formerly married fathers . . . have via the courts though the divorce process" and to "integrate fathers into the full range of social institutions that serve families with children, and make these institutions truly gender neutral."[121] Here, we think far more research is needed. For, while Edin, Nelson, and Tach are clearly right that unmarried fathers see their children after separation less than married fathers,[122] unmarried fathers are, in fact, equally entitled to visitation with their children once paternity has been established; there is no legal barrier to their obtaining it. Indeed, some states—including Indiana, our research site—have enacted legislation explicitly specifying that nonmarital fathers are entitled to the same visitation as marital fathers.[123] What actually inhibits paternal involvement—maternal attitudes, paternal disinterest, local child support enforcement, court practices, and culture—is unclear. Edin, Nelson, and Tach are right in urging that public policy

119. *See* Mairead Furlong et al., *Cochrane Review: Behavioural and Cognitive-Behavioural Group-Based Parenting Programmes for Early-Onset Conduct Problems in Children Aged 3 to 12 Years (Review)*, 8 Evidence Based Child Health 318 (2012); Lynn A. Karoly et al., *Early Childhood Interventions: Proven Results, Future Promise* at xxvi, tbl.S.4 (RAND Corp. 2005); Lawrence J. Schweinhart et al., High/Scope Educ. Res. Fund, The High/Scope Perry Preschool Study Through Age 40: Summary, Conclusions, and Frequently Asked Questions (2005).

120. Edin et al., *supra* note 114.

121. *Id.* at 220–21.

122. In our sample, 68% of fathers were awarded no overnight parenting time. *See* Brinig & Garrison, *supra* note 39. Of course, there are situations—a history of abuse or serious IPV, for example—when father involvement may be undesirable.

123. *See* Ind. Code. § 31-14-14-1 (specifying that, except in cases of significant risk to the child's health or safety, a "noncustodial parent is entitled to reasonable parenting time") and the associated Indiana Parenting Time Guideline (specifying that this standard applies to "all child custody situations, including paternity cases . . ."). Ind. Sup. Ct., Ind. R. Ct., Indiana Parenting Time Guidelines, Scope of Application, https://www.in.gov/judiciary/rules/parenting/#_Toc47086098.

should support unmarried-father involvement, but at this point we do not know precisely what discourages it.

Larger initiatives—to reduce the high rates of incarceration that both disrupt family relationships and severely reduce the number of available men in poor communities, to provide skills training to help poor parents escape the low-wage labor market, to ensure that minimum-wage employment can actually support a family—are also crucial to reducing MPF and ameliorating its adverse effects. For, like child maltreatment and residential instability, MPF is a symptom of past and present disadvantage, as well as a cause of disadvantage in the future.