Summary: *Intellectual Merit*

Multipartnered fertility (or "MPF") occurs when adults have children with more than one person. And as a result of the new and varied ways in which people can form and dissolve their childbearing relationships, current multipartnered fertility is often conceptualized as a reproductive pattern that occurs within the intersection of changing *legal* (e.g. married or single) and *residential* (e.g. coresident or nonresident) ties. Because MPF is a relatively new area of research, the majority of analyses conducted thus far have focused on the prevalence and correlates of multipartnered fertility with very little attention given to the long-term consequences or the theoretically important pathways through which MPF may influence a person's wellbeing. The goal of this proposed research is to fill the gaps in the literature by being the first empirical study of the long-term consequences of multipartnered fertility on the lives of mothers and their adolescent children. The three research questions that motivate this project are:

1. What are the causes of women's multipartnered fertility? Specifically, how do personal characteristics in late adolescence such as the stability and composition of one's family of origin, economic resources, IQ, grades, and internalizing and externalizing problem behaviors influence the likelihood of women experiencing MPF at some time in their adult life?
2. What are the long term consequences of MPF on women? Among women who have ended their childbearing years, do those with multiple birth partners report more depression, poorer mental or physical health, or a higher incidence of alcohol abuse than non-MPF women?
3. How does maternal multipartnered fertility influence child wellbeing? Among children in their late adolescence, does experiencing maternal MPF influence the timing of one's early sexual experience, internalizing and externalizing problems in high school, or the likelihood of having a teen birth?

Drawing on work by previous scholars, I suggest three possibilities for linking MPF to wellbeing, including: *fertility staging*, *family instability*, and *selection effects*. I hypothesize that each of the three approaches will have independent and significant direct effects on wellbeing. Furthermore, when they are modeled simultaneously, it is expected that each mechanism (and MPF) will remain a significant predictor of maternal and adolescent wellbeing.

Data from this project come from the *National Longitudinal Study of Youth 1979-2006* and the *Youth and Child Supplement 1986-2006.* The data are longitudinal, intergenerational, and nationally representative of a birth cohort of women and their children. To date, these data have not been used to assess multipartnered fertility, and this study is the first to use nationally representative sample of women who are nearing the end of their childbearing years, rather than focusing on early childbearing among younger women.

Summary: *Broader Impacts*

The publication of these findings in peer reviewed journals has the potential to impact the way multipartnered fertility is understood and studied by family scholars. In particular, this project is unique in its approach to the population studied (women rather than men, and adults nearing the end of their childbearing years rather than those who are just beginning to have children), the data used (mother and child reports), and the measurement of multipartnered fertility (including measures of salience rather than a simple dichotomy). These findings may also impact the larger community through informing family policy and interventions, especially those aimed at helping disadvantaged youth and their mothers.

Project Description

During the past 50 years cohabitation, single parenthood, and nonmarital childbearing have risen while marriage rates have fallen and the stability of marriage and marriage-like relationships has declined (Bumpass & Lu, 2000; Seltzer, 2000; Teachman, Tedrow, & Crowder, 2000). Norms regarding the family have also shifted during this time, with some of the most important transformations surrounding the decoupling of marriage and childbirth, especially for poor minority women (Edin & Kefalas, 2005), as well as a loosening of normative objections to premarital sex and cohabitation (Lesthaegne, 1995, Popenoe, 1993), and a decline in 'shotgun marriages'(Akerlof, Yellen, & Katz, 1996). As a result of these changes, children today are being raised in increasingly complex families, and the opportunities for adults to have children with more than one partner (called *multipartnered fertility or "MPF"*) have risen dramatically. While little is known about the influence of multipartnered fertility on individual wellbeing, work done on family complexity more generally has shown that instability is often associated with poorer outcomes for children (see meta-analysis by Amato & Gilbreth, 1999) as well as adults (see review of literature by Amato & Dorius, forthcoming). The goal of this proposed research is to be the first empirical study of the long-term consequences of multiple partner fertility on the lives of mothers and their adolescent children. This will be accomplished by using a multigenerational, longitudinal, and nationally representative sample of a birth cohort of women who were followed from adolescence to the end of their childbearing years, and linking their multipartnered fertility histories to self-reported measures of mother and child wellbeing across a variety of domains.

Research Questions

Policy researchers were among the first to study multipartnered fertility, largely in response to the problems that arose when marriage promotion efforts were undertaken among the poor (who often had children from prior relationships) and when tougher child-support laws were imposed on nonresident fathers (who frequently had to provide resources for children across multiple households) (e.g. Meyer, Cancian, & Cook, 2005). Given the impetus for this area of research, it is not surprising that much of the sociological inquiry into MPF has been dominated by an interest in whether men who have children with more than one partner 'swap' their attention and resources from their nonresident biological child to their newer, resident biological child (Manning & Smock, 1999; Manlove, Logan, Ikramullah, & Holcombe, 2008; England & Edin, 2008).

Although this is an important area of research, one of the goals of this study is to challenge the field's general research focus on paternal MPF by demonstrating that mothers' multipartnered fertility is also critical in understanding child and mother wellbeing. Because women are more likely to gain custody of their children upon divorce or separation than men, knowing the mother's history of relationship formation and dissolution provides a more complete understanding of the family context in which children are raised. While the connection between maternal MPF and family context is unambiguous, there has been almost no empirical work to link maternal multipartnered fertility to the wellbeing of women and children, especially over time. According to Klerman, "No studies to date have shown that multipartnered fertility has long term consequences for mothers or children," although related research provides evidence to suggest this may be the case (2007:57). To address these critical gaps in the literature, I pose three research questions:

4. What are the causes of female multipartnered fertility? Specifically, how do personal characteristics in late adolescence such as the stability and composition of one's family of origin, economic resources, IQ, grades, and internalizing and externalizing problem behaviors influence the likelihood of women experiencing MPF at some time in their adult life?
5. What are the long term consequences of MPF on women? Among women who have ended their childbearing years, do those with multiple birth partners report more depression, poorer mental or physical health, or a higher incidence of alcohol abuse than non-MPF women?
6. How does maternal MPF influence child wellbeing? Among children in their late adolescence, does experiencing maternal MPF influence the timing of one's early sexual experience, internalizing and externalizing problems in high school, or the likelihood of having a teen birth?

Review of the literature

One of the basic issues at hand is why women engage in multipartnered fertility, and how the choice to have children by more than one person may be influenced by other relevant factors (question one). Current research indicates that contemporary MPF is most common among unmarried couples—often nonresidential unmarried men and women, and that marital status, cohabitation, education, occupation, religion, age, race/ethnicity, and immigration all help explain the likelihood of a person having had children by a previous partner. In practice, adults who experience MPF are more likely than their single partner fertility (SPF) counterparts to be older, less religious, native to the U.S., have known their partner for a short period of time before getting pregnant, unmarried, and either cohabiting or single at the time of birth. In terms of their fertility, MPF individuals are more likely than SPF adults to have an early first sexual experience, early childbearing, more nonmarital births, and more children. Multiple partner fertility is also often tied to poverty, and social, economic, and educational disadvantage. It is more prevalent among urban populations, 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 (Carlson & Furstenberg, 2006; Guzzo & Furstenberg, 2007a; Guzzo & Furstenberg, 2007b; Harknett & Knab, 2007; Logan, Manlove, Ikramullah, & Cottingham, 2006; Manlove et al., 2008; Meyer et al., 2005). In addition to the traits of the mother near the time of her child's birth, MPF has been associated with stable characteristics exhibited much earlier, including growing up in a household that was not headed by two biological parents (Carlson & Furstenberg, 2006). While research has not considered other stable traits as predictors of MPF, related work has found that poor grades and internalizing and externalizing problems when young are associated with later relationship instability and nonmarital childbearing (both central components of MPF).

A second key issue in the study of multipartnered fertility is whether women who have children with more than one person experience any lasting disadvantage compared with those who do not (question two). For the majority of women, multipartnered fertility includes stressors and strains that single partner fertility women do to encounter. When a mother's relationship with a birth father dissolves she is often faced with several emotionally draining events at once, including mourning a failed relationship, gaining full custody of a child, becoming a single parent, and experiencing a loss of income. Taken together, the emotional and financial strain may leave MPF mothers worse off than their single partner fertility counterparts. For poor

women, the problems associated with union disruptions may be exacerbated even more (Stirling and Aldrich, 2008). Research on family instability suggests that following a union dissolution many women are likely to report immediate as well as chronic problems, including depression (Barrett 2003; Simon, 2002; Williams & Dunne-Bryant, 2006), higher drug and alcohol use (Simon, 2002), lower income and wealth (Stirling & Aldrich, 2008), a higher risk of wealth disadvantage in old age (Wilmoth & Koso, 2002), and an increased risk of health problems (Dupre & Meadows, 2007). Although most of the predictions for how MPF may influence a woman's long term wellbeing have been extrapolated from studies of instability, recent research on has shown that multipartnered fertility may have an independent effect on maternal wellbeing, even after controlling for number of transitions and union status at birth. Research by Harknett and Knab (2007) suggests that although MPF allows women to create broader kin networks from which they might draw assistance, the ties to previous partners and their families are very weak and do not translate to more maternal support in terms of financial, housing, and child-care assistance. Furthermore, when either the husband *or* the wife report prior multipartnered fertility, mothers are less likely to report that instrumental support is available to them during the three years following a recent birth. This finding is important because it indicates that although MPF creates more kin networks from which women might draw assistance, the weak ties to the families of previous partners do not translate into more maternal support.

Finally, it is important to move beyond parental MPF to consider the lasting influence of multipartnered fertility on children's lives (question three). Although a lack of available data precludes one from estimating rates of MPF for the entire population, studies of select samples suggest that MPF affects as many as 1 in 10 men and 1 in 5 fathers (Logan et al., 2006). And while MPF may not be the majority experience of adults in the United States it is becoming an increasingly common context for raising children, with several studies indicating that as many as 1 in 4 children nationally (Logan et al., 2006), and 1 in 2 children from disadvantaged and urban settings (Harknett & Knab, 2007; Meyer et al, 2002) may be part of an MPF family during their childhood. This changing context for childrearing is likely to be an important influence on children's lives. Because modern MPF is characterized by serial relationship formations and disruptions, MPF families are universally defined by instability, stepparent relationships, and a higher likelihood of spending time in a single-parent family, all of which have been associated with negative consequences for children. For example, when parents divorce or separate, children see declines in emotional, behavioral, social, health, and academic outcomes (Amato, 2009). And while living with a single mom between relationships, children are more likely to report having poorer health and lower educational attainment (Amato, 2000), less father support in terms of money and time investment (Sorenson & Zibman, 2001), and increased poverty, earlier sexual activity, and higher risk of having a teen birth (Bumpass & Lu, 2000). Furthermore, the mother's re-partnering that leads to a new father-figure in the home may result in unique disadvantages for MPF children. According to King (2006), forming close bonds to step and nonresidential fathers is difficult when children face other disadvantages such as having parents with little education, or being born out of marriage (both common in MPF homes). This may negatively impact MPF children because strong bonds are associated with positive wellbeing whereas weak bonds are associated with the lowest level of well being. Because of the disadvantages MPF children frequently face, forming close bonds to new step parents may be particularly difficult for them, which may further exacerbates the continuing influence of MPF on wellbeing. Re-partnering may also impact child wellbeing when it is related to changes in the nonresident father-child relationship. When moms are single, father involvement tends to be

greater (Hofferth, Pleck, Stueve, Bianchi, & Sayer, 2002). Conversely, when mothers remarry or cohabit with a new partner the contact between nonresident fathers and their children declines (Amato & Meyers, 2009; Hofferth et al., 2002; Juby, Billette, Laplante, & Le Bourdais, 2007; Landale & Oropesa, 2001; Manning, Stewart, & Smock, 2003; Seltzer, Schaeffer, & Charng, 1989). This may occur because nonresident fathers feel they are less needed when a stepfather is present and willing to manage portions of the fathering role. Or, perhaps mothers who repartner may no longer encourage or facilitate contact between the nonresident father and his children (Cheadle, Amato, & King, 2009; England & Edin, 2008). Furthermore, when the biological father re-partners, his childrearing responsibilities may be spread among multiple households, making it increasingly difficult to meet the financial obligations of parenthood (Meyer et al., 2005). And this lack of parental financial and emotional resources may be associated with declines in child well being (Carlson & Furstenberg, 2006). In addition, when men or women have children from previous partners, there is often hostility and jealously between them and their new partners which increases the likelihood of future relationship disruptions which again may harm a child's stability and long term wellbeing (Edin & Kefalas, 2005).

Theory

In anticipating the consequences of multipartnered fertility described above, it is important to consider the theoretical mechanisms that may connect MPF to individual outcomes (questions two and three). Drawing on work by previous scholars, I suggest three possibilities for linking multipartnered fertility to wellbeing, including: fertility staging, family instability, and selection effects. Because each approach is expected to have an important and independent influence on multipartnered fertility and wellbeing outcomes, all three will be tested in the final models both separately and as a group.

The central tenant of **fertility staging** is that the conditions surrounding a child's birth influence later parental relationships as well as mother and child outcomes. Theoretical support for this comes out of the life course hypothesis, which emphasizes that "individuals bring a history of experiences to their decision making and examines how the timing and sequencing of life events, as well as the cohort of birth, may be associated with life outcomes such as MPF" (Manlove et al., 2008). Some of the key measures of fertility staging are whether nonmarital or nonresidential childbearing have occurred, and the age of the mother at the time of birth. When women have children while they are very young (especially if they are unmarried) they have increased odds of future nonmarital childbearing and multipartnered fertility (Guzzo & Fursetnberg, 2007a) as well as periods of single parenthood (Bumpass & Lu, 2000). Likewise, empirical work has linked nonmarital fertility with instability in later relationships. In a working paper by Mincy (2002), when couples had either a mother or father with children from a previous relationship they were less likely to be married to one another one year after the birth of a child. Similarly, Carlson and Furstenberg (2006) found that the mother-father relationship at year three was negatively impacted by the man's prior MPF such that current MPF partners were seen as more conflictual, less supportive, less effective co-parents, and were more likely to have dissolved a relationship compared to women who reported their partners had no prior fertility history. In addition to nonmarital fertility, nonresidential relationships at the time of birth have also been found to influence women's later relationship and fertility histories. For example, research has shown that children who are born to nonresidential unions are less likely to spend time in a marital union throughout their childhood, and are more likely to experience family disruption in terms of entering and exiting cohabiting unions (Bumpass & Lu, 2000). And as a

result of the increased time in a single parent home, children are more likely to be exposed to the serious consequences of this family type including: poverty, poor school performance, earlier sexual activity, more premarital births, increased likelihood to cohabit, marry early, and divorce more frequently than other children (Bumpass & Lu, 2000).

The **family instability** model suggests that people who experience multiple transitions fare worse than those who do not largely because of factors associated with stress and resiliency. According to Fomby and Cherlin, "an instability effect rests on the proposition that each of the transitions of parents, partners, and stepparents into and out of a household requires adjustments that can be stressful, at least initially, for the biological parent and the children, and that the cumulative effect on children's well-being can be substantial (2007:183)." An important component of this approach is the understanding that all transitions (including re-partnering) can harm mother and child wellbeing. A broad review of literature supports the notion that instability of all types can lead to stress which has both short and long term consequences on mothers and children (see review by Coleman, Ganong, & Fine, 2000). Empirical work consistently shows that children who experience family instability fare worse than children who have continuously married (or continuously single) parents on a number of emotional, behavioral, social, health, and academic outcomes (Amato & Gilbreth, 1998; Amato, 2005; Fomby & Cherlin, 2007). Research done in the area of family instability also suggest that adults who experience instability as children are less likely to form intimate relationships, have lower levels of education, and are more likely to divorce than other adults (see review by Amato & Dorius, forthcoming). These findings indicate that some of the effects of instability last beyond the event of formation and dissolution and well into adulthood.

According to the **selection effect** approach, it is possible that the stable characteristics of the mother influence both her reproductive and relationship history as well as the wellbeing of her and her children. For example, it may be the same set of maternal characteristics that predict a woman's ability to maintain a positive mental outlook (influencing maternal wellbeing), parent effectively (influencing child wellbeing), and maintain stable relationships with partners (influencing multipartnered fertility). The selection approach brings to bear the important question of spurious findings and reverse causality when estimating individual outcomes. In order to determine whether it is the mother's traits or MPF that influence wellbeing it is important to control for relevant maternal characteristics that are generally stable overtime, including the mother's qualities in late adolescence such as the stability and composition of her family of origin, her grades and IQ, and a range of internalizing and externalizing behaviors that were reported decades before most woman decided to engage in multipartnered fertility.

Hypotheses

Following from the three research questions, the literature review, and the theories described above are five hypotheses related to maternal multipartnered fertility.

Question 1: "What are the causes of maternal multipartnered fertility?"

H1 Maternal characteristics and the nature of the home environment during adolescence will predict a women's likelihood of experiencing multipartnered fertility. The following factors are hypothesized to be positively related to maternal MPF: instability in one's family of origin, presence of a stepparent in one's family of origin, economic resources in one's family of origin, low grades or IQ scores in late adolescence, and reports of internalizing or externalizing problems during high school.

Question 2: "What are the long term consequences of maternal MPF on women?"

H2 Women who experience multipartnered fertility will scores lower than nonMPF women on a number of wellbeing indicators. Specifically, multipartnered fertility is hypothesized to have a direct and significant negative relationship with a number of maternal outcomes during late middle-age, including depression, mental health, physical health, and alcohol abuse.

H3 The three theoretical mechanisms described previously (fertility staging, family instability, and selection effects) will each have an independent and significant direct effect on maternal wellbeing. Furthermore, when they are modeled simultaneously, it is expected that each mechanism (and MPF) will remain a significant predictor of maternal wellbeing.

Question 3: "How does maternal MPF influences child wellbeing in late adolescence?"

H4 Children who are raised in homes with maternal multipartnered fertility will score lower than children from single partner fertility homes on a range of wellbeing indicators. In particular, maternal multipartnered fertility is hypothesized to have a direct and significant positive relationship with a number of child outcomes during late adolescence, including early sexual intercourse, teen birth, internalizing problems, externalizing problems, and alcohol and drug use.

H5 The three theoretical mechanisms described previously (fertility staging, family instability, and selection effects) will each have independent and significant direct effect on adolescent wellbeing. Furthermore, when they are modeled simultaneously, it is expected that each mechanism (and MPF) will remain a significant predictor of adolescent wellbeing.

Data

To address questions one and two I will be using the women's sample of the *1979 National Longitudinal Survey of Youth* (NLSY), which is a nationally representative sample of American women who were 14-22 years of age when they were first interviewed in 1979. These women were surveyed every year until 1994 and since then have been interviewed on a biennial basis. The sample for these analyses include 5,220 women from the main NLSY sample, with military and economically disadvantaged subsamples excluded due to a lack of consistent assessment over the 22 survey periods. Based on estimates from The Bureau of Labor statistics, these data are estimated to capture well over 90% of the women's final childbearing by 2004 (when women were 39-47), and by extension, the vast majority of their multipartnered fertility histories (www.nls.org). The data used in this project include an additional two years of information (women aged 41-49), which will capture an even greater proportion of the completed multipartnered fertility histories.

For the analysis of question three, which considers the consequences of maternal MPF on adolescent wellbeing, I will be linking the NLSY79 mother's self-reported relationship and fertility data with the *Youth and Child Supplement 1986-2006* which provides self-reported data for a range of wellbeing measures, including cognitive, socioemotional, and physiological assessments. When weighted, this sample is representative of all children born to women in the high school class of 1979. Overall, 1,927 children and 1,480 mothers were eligible for inclusion in these analyses because they met the following guidelines. The child (1) completed the 2006 survey items related to child wellbeing, (2) was between 14 and 19 years of age at the time of the last survey, (3) lived with the mother from birth to 2006 (with absences no longer than three

months consecutive and 12 months total), and (4) had a mother who did not miss more than three interviews during the child's life.

There are several advantages to using this data set. First, it captures multipartnered fertility toward the end of a women's childbearing, which is advantageous because it offers a completed fertility history which can be assessed relative to the long term impacts on family life rather than the immediate implications of the disruption and formation pattern. This approach is unique in that no other published study known to the author considers female MPF among an older cohort of women. A second advantage to using this data is that it contains self-reports of wellbeing from mothers and children which decreases the likelihood of same-source bias. Third, the data are longitudinal so it is possible to capture change in the important measures of well-being, relationship formations and dissolutions, and important contextual factors such as income and education. Fourth, this is a nationally representative sample and will be the first project to estimate national prevalence rates of MPF for women older than 25. This is likely to have important implications for our understanding of multipartnered fertility throughout the life course as well informing family interventions geared toward slightly older women. And, fifth, this data set is unique from other large-scale nationally representative data sets in that it provides a partner ID number for each resident relationship over the 30 year period. This partner ID number is instrumental in assessing MPF because it allows researchers to link individual partners with specific births, which is one of several ways multipartnered fertility is assessed with this sample.

Dependent Measures

For question one, the outcome of interest is a binary measure of mother's multipartnered fertility status. This variable has been created with a two prong strategy designed to increase coverage of estimating MPF among nonresident fathers. Because the NLSY data only contains relationships on residential unions (marital and cohabiting), it is difficult to identify nonresident birth partners who contribute to a women's MPF status by looking at relationship histories alone (Guzzo & Furstenberg, 2007a). This proposal offers an important advancement to the study of multipartnered fertility because it goes beyond matching information on coresidential unions with fertility data and instead incorporates a previously unused measure of multiple partner fertility: the adolescent's self-report of their biological relatedness to each of the mother's other children. If the adolescents respond that all other children born to the mother have the same father as them, the women are coded as having single partner fertility (SPF). When adolescents report that at least one other child born to the mother has a different father then them, the mother is coded as experiencing multipartnered fertility. When mothers have fewer than two children, the mother is coded as having either 0 or 1 child (no possible MPF). Using this approach I was able to categorize 80% of women's MPF for a subsample of the data used as a pilot study for this proposal. For all unidentified cases, MPF status was assessed based on mother's reports of three items. The first item was whether each child's father was in the household at the time of the survey. If all children had a father present in the household (and there was only one partner listed) the mother was coded as having single partner fertility. Second, if some, but not all, of the children had a father present in the household the mother was coded as having MPF. Third, if none of the children had a father present in the household, the mother's reports of how far away the father of each child lived were compared. If women reported that children had fathers who lived different distances from her home (in the same survey) they were considered different men and the mothers were coded as having MPF. By using the child and mother reports of

relatedness, father in household, and father's distance from the home, I was able to categorize the entire subsample of NLSY79 women. As a data check, I compared the child's reports with the mother's reports and found agreement in MPF status in over 90% of the cases. When conflicting information was found, the child reports were used since they directly assessed MPF.

For question two, the outcomes of interest included four indicators of maternal well-being, including a measure of depression which was assessed with a nine item Center for Epidemiological Studies Depression Scale (CES-D) that measures the symptoms of depression and discriminates between clinically depressed individuals and others. The items related to how often during the past week a person felt depressed, felt that everything was an effort, slept restlessly, was lonely, sad, could not get going, had trouble keeping one's mind on what was happening, could not shake off the blues, or did not feel like eating. Other measures of wellbeing include the general assessment of mental and physical health which was constructed from a 12-question health survey designed by John Ware of the New England Medical Center Hospital. And an assessment of alcohol abuse (How often have you had 6 or more drinks on one occasion during the last 30 days?).

For question three, the outcomes of interest were related to child well-being, and included measures of alcohol and drug use (average of four items that ask about the number of times during the past three months the respondent has smoked a cigarette, drunk alcohol, used marijuana, or used other drugs), age at first sexual intercourse (in years), whether respondent has had a child (1=yes) externalizing problems (average of nine items related to externalizing behaviors, such as: how often in the last year did the respondents stay out later than their parents said, hurt someone badly enough to need bandages, lied to parents about something important, taken something from a store without paying for it, damaged school property on purpose, gotten drunk, had to bring parents to school because of something they did wrong, skipped a day of school without permission, or stayed out at least one night without permission?). And internalizing problems (how often does child feel sad and blue, on edge, nervous or tense, happy, bored, lonely, worn out, excited, too busy to get everything done, or pressured by mom and dad?).

Independent measures

The independent measures used in the mother's analyses include: a binary measure of multipartnered fertility, total number of children, and mother's age at each birth. For question one, variables on household stability in family of origin were assed when the respondent was 14 (1=respondent was living with both biological parents), presence of a stepparent in family of origin (1=yes), three estimates of economic resources in family of origin (both parents working=1; father working fulltime=1; and mother working fulltime=1), high school grades (0.0-4.0 scale),and intelligence test scores (normed average with mean of 100), education status (highest grade completed, in years) and employment (number of hours respondent usually works at main job per week, and estimated hourly pay at main job per week).

Variables used in the child analyses include information on the target child's sex (1=male) and age (in years), the mother's age at each birth, whether the birth was marital and/or residential, and detailed relationships histories for each mother that include the number and timing of each relationship formation and dissolution from the time of the child's birth through 2006 such as number of transitions (1-11), length of each formation (in months), length of each separation (in months), whether the child lived in a married home (1=yes), single parent home(1=yes), cohabiting home(1=yes), or stepfamily home (1=yes) at some point during their

childhood. In terms of maternal multipartnered fertility constructs, this study will use funding to construct a number of MPF salience variables, including: the number of MPF partners, the average number of children per partner, the length of residential union formation between the mother and father of the target child, and the length of union disruption between the dissolution of the mother/father relationship and the entrance of the new partner or the final survey.

Research Design

This study has three research design components. First, the data will be analyzed to examine the causes of multipartnered fertility for a national sample of women (question one). To do so I will conduct a logistic regression analysis that compares the log odds of a women experiencing MPF (or not) by the individual and family level characteristics reported in the first wave of the survey, including: family of origin stability and composition, parental resources, IQ, grades, internalizing problems, and externalizing problems.

Second, the data will be used to explore the consequences of multipartnered fertility for all women, as well as provide analysis for mothers only (question two). For each of the outcomes of interest (depression, general physical and mental health, and alcohol use) I will compare women with no children, 1 child, 2 or more children from a single partner, and 2 or more children from multiple partners in a multivariate regression analyses that will include all relevant controls (for example, income, age, and education). Then, I will consider the same outcomes with childless women excluded (model 1). Next, I will test of the possible pathways between MPF and maternal wellbeing with a hierarchical analysis of selection effects (model 2), fertility staging (model 3), and family instability (model 4). Finally, I will include all models simultaneously to see if one of the theoretical mechanisms is more influential in predicting maternal wellbeing than another (model 5). I anticipate that the direct influence of MPF will weaken as the theoretically relevant models are included, although it will remain significant in all five models. For each of the analyses suggested for question two, I will use a multilevel approach which adjusts for the within and between family variance to account for differences among women who had siblings in the sample (about 41% of the original NLSY79 sample).

And last, the data will be analyzed to determine the influence of multipartnered fertility on children's wellbeing (question three). For this portion of the project, I plan to analyze each of the outcomes of interest (child internalizing problems, externalizing problems, drug and alcohol use, age at first intercourse, and whether the respondent has had a child) separately in a series of hierarchical models. First, I will compare children from single partner fertility homes with those from multiple partner fertility homes (controlling for the number of siblings) on each of the dependent measures (model 1). Then, I will test the theoretical links between MPF and maternal wellbeing through the step-wise addition of selection effects (model 2), fertility staging (model 3), and family instability (model 4). Finally, I will include all models simultaneously to see if one is more influential in predicting child wellbeing than another (model 5). As before, I anticipate that the direct influence of MPF will weaken with each additional model, although it will remain a significant predictor of child wellbeing even after accounting for the important theoretical mechanisms described above. For all models related to question three, I will use a multilevel approach which adjusts for the within and between family variance to account for differences among children who had siblings in the sample (about 23% of the original child sample).

Expected Findings

I expect women's rate of MPF will be similar to national samples of men, with slightly less than 10% of all women experiencing MPF and close a quarter of mothers reporting MPF. Furthermore, I expect the findings of the logistic regression (question one) to conform with earlier research on family instability which suggests that women and children who experience family disruptions such as divorce or separation have lower wellbeing, even after several years of the event occurring. In terms of the multivariate hierarchical linear models (questions two and three), I anticipate that MPF will have a direct influence on mother and child wellbeing, and that this influence will remain significant, although may wane, as theoretically relevant mechanisms are added to the model.

Project Work to Date

About 1000 cases have been coded for the child effects portion of the project (question 3), to reflect characteristics at birth, link fathers to children, and determine MPF for mothers of children aged 14-19 in 2006. The initial work indicates that relationship histories can be quantified for the vast majority of women, MPF can be determined, and variables can be constructed that will allow me to carry out the analysis as described in this proposal. I am requesting additional funding to code about 4,200 additional women and to recode the 1000 cases already done to include relationship histories which occurred prior to the birth of the target child.

Limitations

One limitation of this data set is its inability to directly assess nonresidential relationships over time. Given that a significant proportion of multipartnered fertility occurs with at least one nonresidential partner (Logan et al, 2006) it is likely that I am undercounting MPF for women who have not had children within marriages or cohabitations. This limitation is largely overcome through the use of child reports of sibling relatedness and mother reports of father involvement across all her children, both of which capture nonresidential and residential MPF without the need to match fertility and relationship histories. Even with these precautions, one cannot generalize to all women born to this birth cohort without noting that MPF is likely undercounted for this group. However, the implications of MPF are not threatened by this limitation, because undercounting the women's experiences will most likely have a dampening effect on the statistical significance in the models. If significant relationships emerge with this data, one can be reasonably certain that relationships would be even stronger with more accurate data. A second limitation to this project is the generalizability of the sample is limited to women who are now in their mid to late 40s. While this provides an excellent understanding of lifetime multipartnered fertility patterns, it is likely to not be generalizable to younger generations who may have higher rates of MPF. Current research indicates that the likelihood of having children with more than one partner is increasing over time, largely because younger cohorts are transitioning to new-partner births "more quickly and at a higher rate than older cohorts" (Guzzo & Furstenberg 2007b), which suggests that the future of family life will increasingly be composed of parents who engage in multiple partner fertility, and that younger cohorts will have higher prevalence rates than older cohorts. Again, this limitation does not discount the findings of the middle-age birth cohort, but rather suggests that patterns that emerge for this group may be even more prevalent among younger cohorts of women.

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Figure 1. Conceptual Model of Maternal Multipartnered Fertility and Maternal Well-Being

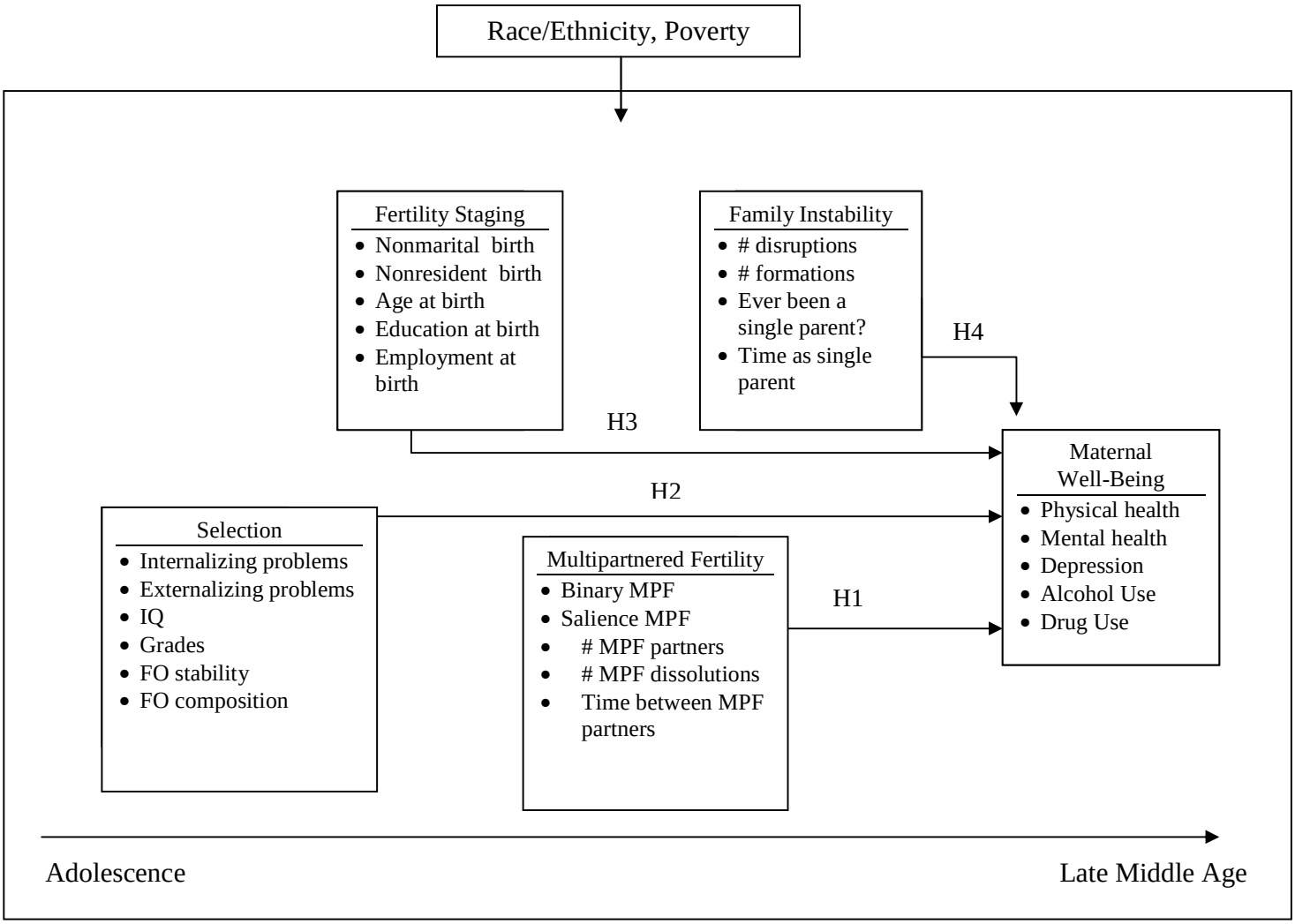

Figure 2. Conceptual Model of Multipartnered Fertility and Child Well-Being