QUALITY OF MALE FERTILITY DATA IN MAJOR U.S. SURVEYS

Extended Abstract

Concerns about the quality of male fertility data is widespread and have a long history. For instance, when studying reports of child support, Cherlin, Griffith and McCarthy (1983) found that compared to women, men reported fewer children from prior marriages in both the 1970 and 1980 Current Population Surveys (CPS). This finding led the CPS to discontinue its collection of fertility histories from men (Byrne 1997). Researchers examining child support payments in other surveys have similarly documented deficits in men's reports of births from previous unions (Garfinkel, McLanahan and Hanson 1998; Seltzer and Brandeth 1994; Sorensen 1997). These concerns raise serious questions about our ability to study the causes and consequences of male fertility.

Because of the importance of research on fathers in today's social policy debates, the Federal Interagency Forum on Child and Family Statistics organized the Nurturing Fatherhood Initiative, a task force that was federally mandated in the mid 1990s to improve data and research on male fertility and fathering (Cherlin and Griffith 1998). The Nurturing Fatherhood Initiative informed the collection of information on fathers in several recent surveys, including the 1997 Cohort of the National Longitudinal Survey of Youth (NLSY97) and the men's fertility data in the 2002 National Survey of Family Growth (NSFG). These data sets are widely used today to study topics such as men's transition to fatherhood (e.g., Hynes et al 2008) and multi-partner fertility (e.g., Guzzo and Furstenberg 2007; Manlove et al. 2008). Still, it is not clear whether explicit attempts to improve the quality of male fertility data have been successful, and the extent to which improvements in data quality are likely to alter results from models of early parenthood.

Filling an important gap, this study evaluates the quality of men's fertility data in the 1979 and 1997 Cohorts of the NLSY, and in the NSFG 2002. As we discuss below, these three surveys differ in ways that allow us to identify aspects of surveys that improve data quality. We focus on early male fertility (i.e., fertility before the age of 25) because the majority of births in these early years are nonmarital (Morgan and Rindfuss 1999), and nonmarital births are less likely to be counted (Rendall et al 1999). In addition, respondents in the NLSY97 are still young, making it impossible to study fertility rates for older men in this survey. We estimate fertility rates for men in the three surveys and compare them to population estimates of male fertility rates that we create by combining data from the National Center for Health Statistics and the U.S. Census Bureau. Calculating the ratio of survey rates to population rates, we document how the undercount of births to men in surveys differs according to several of their characteristics, including their age, race/ethnicity, marital status, and birth cohort. In addition to evaluating the quality of the male fertility data, we use Monte Carlo simulations to demonstrate how undercounting biases associations between early parenthood and other variables.

EXPECTATIONS

Focusing on early fertility, we expect the quality of male fertility data to be higher in the NLSY79 and 97 than in the NSFG 2002. The cross-sectional design of the NSFG means that the period of recall between the birth and survey administration for most men was considerably longer than in NLSY79 and 97; these longitudinal surveys interviewed respondents yearly in young adulthood and updated their fertility histories at each interview.

The exclusion of certain groups of men from the sampling frame may further compromise quality of male fertility data in the NSFG. The NSFG is a nationally-representative sample of men and women between the ages 15 and 44 who resided in households as of 2002. Men and women were not interviewed if they were in jail or prison, or if they were on a military base. Black men are disproportionately excluded from household-based surveys because of their higher rates of incarceration and military enlistment (Hernandez and Brandon 2002). While the NLSY79 and 97 both began with representative samples of non-institutionalized civilian youth, they followed respondents who subsequently became incarcerated or joined the military.

We also expect the quality of male fertility data to be better in the NLSY97 than in the NLSY79. The NLSY97 respondents were younger at the time of the first interview than were NLSY79 respondents. The oldest respondents in the NLSY79 were 21 at the start of the panel and were asked to recall events that occurred several years in the past. In contrast, the oldest respondents in NLSY97 were 16 at the start of the study. Consequently, men in the NLSY97 were less likely than men in the NLSY79 to have had a birth before the start of the panel. Furthermore, NLSY97 respondents were more representative of their birth cohorts than were NLSY79 respondents because by age 21; some men in the NLSY79's birth cohorts were not living in households due to incarceration and military service and were therefore not in the sampling frame.

However, far more births in the late 1990s were to nonmarital couples than in the late 1970s and early 1980s. This large increase in the proportion of early births to nonmarital couples significantly tempers our predictions about overall improvement in male fertility data quality across the two cohorts of the NLSY. We evaluate both marital and nonmarital fertility rates to understand the influence of changing relationship context on the quality of male fertility data.

Like surveys in general, all three of these surveys are likely to under-represent men with tenuous ties to households (Martin 2007). Furthermore, the weights provided by these surveys to adjust for nonresponse simply take into account sex, race/ethnicity, and age. Studies addressing attrition in the NLSY97 and 79 suggest that youth from more disadvantaged backgrounds are more likely leave the sample than their counterparts from more advantaged backgrounds (Aughinbaugh and Gardecki 2008; MaCurdy, Mroz, and Gritz 1998). While nonresponse and selective attrition can potentially compromise the representation of both men and women in surveys, they are found to be more problematic for men (Fitzgerald, Gottschalk, and Moffitt 1998). To obtain a rough idea of the quality of female fertility data, we additionally compare the fertility rates for women in the three surveys to their respective rates in the population.

Differences between men's and women's counts of fertility may not only be an artifact of data collection efforts, but may additionally reflect the fact that some fathers are unaware of their paternity. The Fragile Families and Child Wellbeing Study, which

interviewed a representative sample of mothers giving birth in large U.S. cities between 1998 and 2000, offers clues about men's awareness of their paternity. Fragile Families asked unmarried mothers about their relationship with the father at the time of the birth. Only 1% of women could not identify the father of the birth, and another 9% had little or no contact with the father; the remainder of women reported they were in a friendship, marriage, or cohabiting relationship at the time of the birth (Carlson, McLanahan, England and Devaney 2005). If we take the most extreme position and assume that mothers with little or no contact with the biological father at the time of the birth did not ever tell the father about the pregnancy, these results suggest that 10% of biological fathers may not be aware that they have a child. It is likely that some of these mothers did tell the fathers about the pregnancy, bringing the true share below 10%.

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