Family Planning Centers and Unintended Pregnancy: The Effect of Proximity and Provider Type

Overview:

Almost fifty percent of pregnancies in the United States are unplanned (Finer and Zolna forthcoming). Low income and welfare dependent women, Black and Latina women, and women with less education, are likely to have more children than the national average, and are more likely to experience unintended pregnancies (Finer and Henshaw 2006). Women in the United States with less than a high school education and women who have their first child before age 24 are more likely to have more children than they intend. Moreover, while their fertility goals are fairly closely aligned with national averages, Black women are significantly more likely to overachieve their fertility intentions than white women (Morgan and Rackin 2010). This disparity between fertility intentions and outcomes, especially among disadvantaged groups, deserves further examination.

In 2008, more than 17.4 million women were considered "in need" of publicly funded family planning services in the United States (Frost et al 2010). Despite this apparent unmet need for contraceptive services, most previous research on access to reproductive healthcare and contraceptives has taken place in developing countries rather than in the United States (Entwisle et al 1997; Ezeh et al 2010). Studies in these countries have found that geographic access to affordable and available family planning services plays a large part in women's incidence of unintended pregnancy and birth (Matthews et al 1997; Bongaarts and Sinding 2009; Miller 2010). In the US, similar studies have examined access to abortion, and its impact on unplanned births, finding evidence that geographic proximity and access to abortion services decreased instances of unplanned births (Lichter et al 1998; Guldi 2008; Jones et al 2008). Following these examples, this research will examine the relationship of geographic proximity and access to

contraceptives and family planning services to fertility outcomes in the United States, thus filling important gaps in the literature.

In addition to the presence of publicly funded family planning centers, this research will explore the effects of center type on pregnancy and fertility outcomes. Previous studies have suggested that variations in the quality of care available affect women's ability and motivation to successfully use contraceptives (Bongaarts and Bruce 1995). Following this research, I explore how clinics with differing levels of regulations in care (determined by type of center and if the center receives Title X funding) affect women's pregnancy and birth outcomes. Finally, I will examine variations in the impact of living in a county with a center, and on the type of center present across race, poverty status, and education groups.

Data :

For this study, I will use data from the 1997 wave of the National Longitudinal Survey of Youth. The NLSY97 is a nationally representative sample of approximately 9,000 youths who were 12 to 16 years old as of December 31, 1996, and who are interviewed on an annual basis. This paper uses thirteen rounds of the NLSY97, from 1997 until 2009. In 2009, respondents' ages ranged from 24 to 28. While the survey, conducted by the Bureau of Labor Statistics, focuses mainly on respondents' participation in the workforce, and on their employment transitions, it also includes rich data on respondents' achieved education, pregnancy intentions and outcomes, income, and demographic attributes. This data, as well as variables on respondents' geographic locations each year, make this data well-suited for this research. Of the approximately 9,000 respondents in the original round of the NLSY97, 4,385 were female. Only women will be used in this analysis.

Variables:

Pregnancy and outcomes: Respondents are asked each year if they have become pregnant, the month and year their pregnancy ended, and if their pregnancy ended in a live birth, an abortion, or another outcome. Prior to 1999, only respondents over age 14 were asked these questions. Between 1997 and 2009, 2,477 women reported 6,063 pregnancies, which resulted in 4230 live births (including fifty-one sets of twins), and 1,884 abortions, miscarriages, and stillbirths.

Fertility Intentions: Respondents were asked in 1997, 2000, and 2001 what percentage chance there was that they would become pregnant in the next year, and in 2000 they were asked the percent chance that they will become pregnant in five years. Older respondents (born in 1980, 1981, or 1982) were also asked in 1997 to specify the percentage chance that they will have a child by age 20. Finally, in 2001, respondents were asked their percent chance of having two/two more children, and their percent chance of having three or more children.

Socioeconomic Variables: The NLSY also includes rich data on income and poverty status. The researchers created a variable to measure respondents' household income ratio to the poverty line. I have created variables to indicate if respondents live in households that are at or below the poverty line, or at twice the poverty line. These respondents can all be considered low income. I also include controls for parents' education, respondents' education, race/ethnicity, receipt of various welfare services, religion, and immigration status.

Geographic data: The NLSY97 collects restricted access geocode data, which will allow the respondents' state and county location to be known at each interview period.

Publicly funded family planning centers: In conjunction with the NLSY, I use data on publicly funded family planning centers at a county level collected by the Guttmacher Institute. The Guttmacher Institute has national public use data on the US state and county location of publicly

funded family planning centers in the years 1994, 1997, 2001, and 2006. Additionally, this dataset includes information on the type of center(s) in each county (Planned Parenthood, county health departments, etc., and if the center is funded through Title X). Matching the Guttmacher data, with the geocode data from the NLSY, I will be able to check for the presence of a family planning center in the county in which a respondent resides, as well as neighboring counties.

Methods:

I use hazard models to measure how a respondent's risk of unintended pregnancy is affected by living in a county with or without a publicly funded family planning center, and further, if the type of center affects birth outcomes, controlling for socioeconomic measures. Table 1 shows preliminary results for the differences in intended fertility and achieved fertility between the years 2000 and 2005, by race and poverty status. In 2000, respondents were asked to estimate the percent chance that they would become pregnant in the next five years. Their answers to this question were then compared to their actual number of pregnancies between 2000 and 2005 (five years later). Clear differences based on race and poverty status emerge. Among white respondents who estimated that they had a 0% chance of becoming pregnant within 5 years, 75.71% did not become pregnant, while only 50.15% of non-white respondents who answered in the same way had experienced no pregnancies by 2005. Similar differences arise between respondents whose average household income between 2000 and 2005 was equal to or below the federal poverty line and those whose average household income was above the poverty threshold. These preliminary results suggest that the NLSY97 data does reflect disparities in achievement of fertility intentions found in the US as a whole, and that further exploration, using county level proximity to publicly funded family planning centers could provide some insight into this inequality.

Table 1: Percentage Achieving Fertility Intentions by Race and Poverty Status, 2000-2005

Respondent's stated percent chance of becoming pregnant within 5 years (2000)	Number of Pregnancies, 2000-2005	**White** percentage (frequency)	**Non-white** percentage (frequency)	**Above pov. Line** percentage (frequency)	**Equal to or below pov. Line** percentage (frequency)
0% chance					
	0 preg.	75.71% (477)	50.15% (342)	68.93% (579)	50.85% (238)
	1 preg.	14.92% (94)	25.07% (171)	19.05% (160)	22.22% (104)
	2 preg.	5.24% (33)	15.98% (109)	8.45% (71)	14.96 (70)
	3 preg.	2.7% (17)	5.57% (38)	2.14% (18)	7.91% (37)
	4 or more preg.	1.43% (9)	3.23% (22)	1.43% (12)	4.06% (19)
1-25% chance					
	0 preg.	75.21% (443)	50.76% (201)	71.29% (514)	49.24% (129)
	1 preg.	15.28% (90)	26.77% (106)	17.89% (129)	25.57% (67)
	2 preg.	6.62% (39)	14.39% (57)	7.63% (55)	15.27 (40)
	3 preg.	2.55% (15)	5.30% (21)	2.36% (17)	7.25% (19)
	4 or more preg.	0.34% (2)	2.78% (11)	0.83% (6)	2.67% (7)
26-50% chance					
	0 preg.	60.28% (320)	48.44% (249)	56.91% (420)	49.01% (149)
	1 preg.	22.83% (121)	23.93 (123)	23.58% (174)	23.03% (70)
	2 preg.	7.55% (40)	16.73% (86)	10.30% (76)	16.45% (50)
	3 preg.	5.47% (29)	7.00% (36)	5.83% (43)	6.58% (20)
	4 or more preg.	3.77% (20)	3.89% (20)	3.39% (25)	4.93% (15)
51-75% chance					

	0 preg.	62.11% (59)	43.44% (53)	50.0% (82)	57.69% (30)
	1 preg.	16.84% (16)	30.33% (37)	25.61% (42)	19.23% (10)
	2 preg.	13.68% (13)	16.39% (20)	15.24% (25)	15.38% (8)
	3 preg.	6.32% (6)	8.20% (10)	7.32% (12)	7.69% (4)
	4 or more preg.	1.05% (1)	1.64% (2)	1.83% (3)	0.00% (0)
76-100% chance					
	0 preg.	37.13% (62)	28.57% (56)	31.25% (80)	35.24% (37)
	1 preg.	28.74% (48)	34.18% (67)	34.77% (89)	24.76% (26)
	2 preg.	22.16% (37)	19.90% (39)	22.27% (57)	18.10% (19)
	3 preg.	8.38% (14)	9.18% (18)	7.42% (19)	11.43% (12)
	4 or more preg.	3.59% (6)	8.16% (16)	4.30% (11)	10.48% (11)

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