

Family Planning Programs and Fertility Preferences in Northern Ghana

Abstract

This paper contributes to understanding the associations between a culturally sensitive family planning program and fertility preferences. Previous research on family planning programs are largely focused on addressing unmet need for contraception. Yet, scholars have asserted that even if the expressed need for contraception is met, fertility will remain well above replacement levels. Needed to propel low fertility and accelerate economic development are programs that influence explicit desires to limit child-bearing at low parities. This paper uses longitudinal data from the Navrongo experiment in Northern Ghana to examine the impact of a culturally sensitive family planning program on fertility preferences. Results show that change in fertility preferences are largely a function of the Navrongo experiment net of socio-economic characteristics. Involving traditional social institutions in health planning and services is significantly related to expressing a desire for no more children at lower parities and promoting preferences for smaller family sizes among women. Overall, women seem to be shifting towards lower preferences for children although decline in preferences is comparatively modest to precipitate a transition to low fertility. We discuss the implications of our findings in the context of policy frameworks to increase access to contraception in developing countries.

Introduction

Although there has been persistent debate about the relationship between high fertility and economic development (National Research Council 1986; Kelley 1988) and the effectiveness of family planning programs in reducing fertility (Pritchett 1994), recent studies might have calmed this debate by showing evidence that reducing fertility facilitates economic growth in poor countries that foster appropriate microeconomic policies (DasGupta et. al. 2011; World Bank 1984) and that family planning programs are an effective approach to reducing fertility and fostering reproductive change (Bongaarts, 2011; DasGupta et. al. 2011).

Nowhere is this debate more palpable than in sub-Saharan Africa, where fertility remains the highest in world thereby eroding any gains in living standards from recent increases in Gross Domestic Product (GDP) (IMF 2010). Although several community-based distribution programs (CBD) in the 1980s-1990s in Sub-Saharan Africa expanded access to convenient contraceptive methods at reduced cost (supply-side programs), little evidence exists that these programs have reduced fertility at levels experienced in Asia (Joshi and Schultz 2007) and Latin America (Miller 2010) much less yielded economic benefits at the household and community

levels. In recent decades, support from donors for family planning programs have dwindled as concerns have been raised that supply-side programs ignore deeply ingrained socio-cultural constraints to fertility reduction in sub-Saharan Africa, particularly as it relates to gender stratification and inequality (Tavory and Swidler 2009). Yet scholars have asserted that adoption of fertility limitation behaviors is conditional on the emergence of explicit desires to terminate childbearing at low parities (Casterline 2009).

Reducing fertility preferences has been a low priority in Asia and Latin America where desired family size has declined to near replacement levels as contraceptive use has increased. In Sub-Saharan Africa however, the situation is different, poverty, less education and higher than expected mortality has prevented a decline in desired family size, hence the need for deliberate efforts to induce declines in desired family size and consequently limit fertility to a few births per woman.

However, existing evidence on the impact of family planning programs is mixed as some programs showed an impact on fertility preferences while others did not (Freedman 1997). Moreover, many family planning programs and their evaluations have focused on how to address unsatisfied contraceptive demand rather than on how to reduce preferences. Unmet need is now included as an MDG indicator of progress on Goal 6, to overall, reduce maternal mortality. Yet analysis has shown that even if the expressed need for contraception to avoid unintended pregnancies is met, fertility will remain well above replacement levels. Thus there is the need to assess how family planning programs induce explicit desires to limit child-bearing at low parities in a traditional African setting that is not expected to foster demographic transition. The purpose of this paper therefore is to assess the long-term impact of a culturally sensitive family planning program on fertility preferences in an economically adverse setting in sub-Saharan Africa. Specifically, the study addresses the following research questions:

- Do family planning programs reduce fertility preferences among younger women over time?
- Do such programs affect women's desire to limit or to space childbearing?

- What are the mechanisms through which such programs impact fertility preferences?

Conceptual Framework

Modern contraceptive use as an effective means of addressing the needs of women who either want to stop or postpone childbearing in sub-Saharan Africa are the lowest of any region of the world (Khan et al. 2007). Barriers to persistently low rates of use have been investigated in the context of supply-side factors and demand-side factors. Supply-side factors address barriers such as contraceptive availability, cost and convenience (Cleland et al. 2006), while demand-side factors examine motivations to contraception, socio-cultural factors (such as low education, women's autonomy), fear of side effects and mistrust of hormonal and barrier methods (Tavory and Swidler 2009). However, the effectiveness of family planning programs based on supply-side factors has been mixed and there is debate whether these programs are uniquely suited for the African context given that motivations to limit fertility are low (Frank and McNicoll, 1987; Rutenberg and Watkins, 1997).

On the other hand, demand-side factors, particularly fertility preferences have been found to be important in predicting fertility behavior (Bongaarts 2011). However, the evidence is mixed if family planning programs can help reduce fertility preferences especially in resource-constrained setting such as Sub-Saharan Africa. Using these perspectives, I build a framework and test specific hypotheses to explicate the mechanisms through which variously designed; culturally sensitive CBD programs can reduce fertility preferences and ultimately fertility decline in a sahelian setting of Northern Ghana.

Data and Preliminary Results

Data for this project comes from the Community Health and Family Planning Project (CHFP) of the Navrongo Health Research Center (NHRC) in the Kassena-Nankana District of Northern Ghana. Launched in 1993 and scaled up district-wide in 1996, the CHFP combined four alternative strategies of delivering quality

family planning services in a rural impoverished sahelian setting with the aim of fostering demographic change. Four experimental research cells were launched: **Cell I**- mobilized traditional social institutions by using male volunteers to sensitize men to gender and reproductive health issues and challenge traditional norms sustaining high fertility (referred to as the *zurugelu* cell (togetherness)); **Cell II**- marshaled community health nurses, retrained in community liaison and relocated them to live in health posts and conduct household health service outreaches (referred to as the resident nurse cell); **Cell III**- combined strategies in Cell I and II (referred to as the combined cell) and **Cell IV**- served as the comparison cell where the existing Ministry of Health clinical and outreach services were maintained without the community-based experimental activities in Cell I and II.

The project was monitored through two simultaneous quantitative data collection activities; the Navrongo Demographic Surveillance System (NDSS) launched in 1993 that continuously records events such as births, deaths, marital changes and migrations and a Panel survey system (1993-2003) of randomly selected clusters comprising about 1900 extended family compounds drawn from the NDSS database. Women of reproductive ages and their co-resident spouses were interviewed with instruments designed to maximize comparison with the national Demographic and Health Surveys (DHS). The analysis here draws from women who were interviewed in both 1995 and 2000 panel surveys. The sample was further limited to women at parity two or higher and excludes women who were pregnant at the time of the survey. These restrictions yielded a sample size of 2189.

The outcome variable is fertility preferences in the follow-up survey. This was constructed as a dichotomous indicator of whether or not a respondent did not want any more children (coded as 1) vs. want more children. The key predictor is cells of the family planning experimental treatment and standard covariates are drawn from the baseline survey in 1995.

Table 1 shows preliminary results of the test of the impact of various experimental treatments on fertility preferences. In both the baseline and full model, the odds of wanting no more children for respondents in Cell II of the experimental treatment is positive and significant. Women exposed to the Zurugelu approach were 54 and 63 percent more likely to indicate that they do not want to have any more children accounting for their fertility preferences at baseline and background socio-economic characteristics.

Table 1. Odds Ratios Predicting Desire Not to have Anymore Children in 2000 from Exposure to Family Planning Experiment Treatments at Baseline in 1995, Navrongo Experiment.				
	Model 1		Model 2	
Family Planning Experimental Cell				
Cell 1-Zurugelu services	1.54	**	1.63	**
Cell 2-Resident Nurse Services	0.86		0.82	
Cell 3-Combined Nurse and Zurugelu Services Cell	0.87		0.90	
Fertility Preferences at Baseline				
Want no More Children in 1995	3.37	**	2.25	
Baseline Socio-demographic Characteristics				
Modern contraceptive use in 1995			1.00	
Age Squared			1.00	**
Primary Education			0.99	
Secondary/higher education			1.43	*
Married/living together			1.21	
Number of living children			1.21	**
Kassem ethnic group			1.05	
Christianity			1.01	
Approve of family planning			0.92	
Discussed family planning with spouse			1.16	
Intercept	1.39	**	0.09	**
-2 Log Likelihood	1525.46		1332.22	
Likelihood Ratio	286.16	**	472.67	**
Number of cases	2189		2189	
Notes: Reference categories: Cell 4: Comparison cell; Want more children in 1995; Does no use modern contraception; No education; Not married; Nankam Ethnic group; Muslin/traditional religion; Does not approve of Family Planning; Did not discuss family planning with spouse. Significance Level: **p?.01; *p?.05; † p? 1.0.				

On-Going Analysis

Assessment of the impact of an experiment is an arduous one. That of the Navrongo experiment is further challenging since it is considered a quasi-experiment and subject to several sources of bias. Efforts are therefore being made to identify some potential sources of biases and to control for and or minimize these biases. For instance, pre-program differences in fertility and related socio-demographic characteristics between the cells at baseline may be a source of bias in our findings; similarly issues of contagion, length and timing of exposure to interventions etc. are other important sources of biases that must be dealt with. Work is also under way to use more than two data points and employ more rigorous longitudinal modeling techniques such as random and fixed effects to adequately account for proper causal inferences implied in this paper.