Winfred Avogo
Victor Agadjanian
James F. Phillips

Arizona State University
Population Council

Family Planning Programs and Fertility Preferences: The Role of Ideational Change Processes in Northern Ghana

Introduction

There is much discussion in the demographic literature on the impact of family planning programs on desired fertility (e.g., Phillips et al 1996; Ampofo et al 1976; Arends-Kuenning et al 1996; Bongaarts and Watkins 1995). This discussion is part of a broader debate on whether preferences for fewer children are brought about by mortality decline, modernization, and ideational change or by family planning programs. Some experimental studies have supplied evidence that family planning programs have served to convert existing preferences for fewer children to a demand for contraception which was then served by the program (Koenig et al 1987; DeGraff 1991). The proponents of the ideational change perspective, on the other hand, stress the role of ideas about the desirability of smaller family sizes and their spread through informal social networks regardless of family planning program efforts (Cleland and Wilson 1987; Freedman 1997; Agadjanian 2005). However, it proved notoriously difficult to examine empirically the spread of ideas about fertility preferences through diffusion processes. This paper takes on this task by taking advantage of unique longitudinal data on social interaction and fertility preferences from the Kassena-Nankana District of rural northern Ghana to investigate whether diffusion processes through informal social interaction impact on and or magnify program effects on fertility intentions. The paper has two main objectives: first, to examine how social interaction in informal networks spreads ideas of the benefits of smaller family sizes, and

second, to determine if direct program efforts in an experimental study are associated with fertility intentions.

Conceptual Framework

Our conceptual framework draws from two interrelated processes—social learning and social influence (Bongaarts and Watkins 1996; Kohler 2001; Montgomery and Casterline 1993, 1996) to explain the mechanisms through which social interaction influences fertility preferences. Social learning describes the means through which information is acquired from others. Social influence, on the other hand, evaluates novel information and ideas and mainly operates through authority, deference and social conformity pressures. We adopt a gendered perspective on social interaction and use dyadic links of both husband's and wife's accounts of social interaction to predict the fertility intentions of marital partners. Because we model fertility preferences of marital partners, we include spousal interaction on reproductive matters in order to capture the dynamics of interactions outside the marital unit. In our conceptual model, we expect men and women who indicate discussing matters of childbearing such as how to avoid pregnancy, ensure proper birth spacing or have the number of children that they want, at time *I* to be associated with a desire to limit childbearing at time *II*. We posit that social interaction with peers operates both directly and indirectly through spousal communication and that these effects are net of couples' socioeconomic, ethnocultural, and demographic background characteristics.

Data and Methods

Data used in this paper come from the 1995 and 1999 panel surveys conducted in the Kasena-Nankana District of Ghana. The Kassena-Nankana district is located in the northeastern part of Ghana and shares borders with districts in the three northern regions of Ghana as well as Burkina Faso. The district is characterized by semi-arid climate, dispersed settlements and

subsistence agriculture. The population of the district is currently estimated at 142,000 inhabitants, most of whom reside in rural areas.

The panel surveys, conducted annually since 1994, are a major component of the data collection systems of the Navrongo Health Research Centre and were instituted to assess changes in reproductive behavior and preferences and contraceptive use under the Community Health and Family Planning project (CHFP). The CHFP is a four-celled factorial experimental research, designed primarily to test the impact of convenient community health and family planning services on fertility and mortality rates in the district. The project is implemented by mobilizing two types of resources—the usual Ministry of Health resources, and community participation in service delivery and program management. The four cells thus represent the different combinations of resources that are mobilized. Cell I has the community volunteers locally referred to as Yezura Zeena (YZ) only; cell II has the Community Health Officers (CHO) only; cell III has both CHO and YZ; and cell IV maintained the standard Ministry of Health services only and serves as the comparison area for the project (Nazzar Alex et al. 1995) for a detailed description of the Navrongo Experiment).

The core instrument of the panel surveys was adopted from the core questionnaire of the 1993 Ghana Demographic and Health Survey. The instrument collects information on respondents' background, reproductive histories, contraception use, pregnancy and breastfeeding and fertility preferences. Women in the sample and their co-resident spouses are interviewed on these topics where applicable. In the 1998 and 1999 panel surveys an expanded diffusion and social interaction module was added to the core instrument and administered to sampled women and their spouses in cell III (most intensive) and IV (comparison). The 1998 and 1999 social interaction modules covered more issues than the 1995 module, but the core questionnaire and

the basic social interaction variable- discussion of childbearing and reproductive matters with personal network partners other than the spouse remained the same. The longitudinal nature of our data therefore allows us to assess the influence of informal discussions on childbearing in 1995 on fertility intentions, as reported in 1999.

Because a substantial number of the surveyed men and women were in polygynous union, it implies that some observations are repeated for polygamous men. To account for this within-man variability, we fit random effects logistic regression models.

Fertility intention is our outcome variable and is a dichotomous measure of respondents who want no more children and those who want more children. Discussion of childbearing matters within a personal network was the main independent variable and was also operationalised as a dichotomy taking the value of '1' if the respondent indicated discussing childbearing matters within a personal network and '0' if otherwise. The intervention program cell measure was controlled for in the analyses. Other explanatory variables included as covariates are age, education, type of union, ethnic group, contraceptive use and approval of family planning and spousal communication.

Preliminary Results

Preliminary results of the analyses indicate that social interaction is a significant predictor of fertility preferences net of socio-economic and demographic factors and family planning program efforts. Men's exposure to discussions on childbearing seems to exert a significant effect on subsequent fertility intentions, even though the magnitude of these effects is smaller than those observed for women's interaction. Further analyses to enhance the causality argument and to explore ways of reducing the possible impact of endogenous network selection, due to

unobserved fixed factors, largely demonstrate the importance of our findings especially in respect of women versus men's networks.

Discussion and Next Steps

The preliminary results of this analysis illustrate the importance of social interaction within men and women's networks on the fertility intentions of marital partners. This relationship is further enhanced by family planning program efforts that supply information and services. However, the results call for additional research to fully understand these complex processes.

We conduct further analyses incorporating the interaction effects of family planning intervention services within the experimental design of the study area and social interaction on fertility intentions. We also explore the influence of social interaction on agreement and disagreement among marital partners on fertility intentions. The policy implications of our findings are also explored.

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