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Addressing Men's Concerns about Reproductive Health Services in a Rural Sahelian Setting of Northern Ghana: The "*Zurugelu Approach*"[1]

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The "*Zurugelu Approach*"

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Abstract : *In rural Sahelian settings, addressing the contraceptive needs of women can precipitate anxiety and opposition among men. The Navrongo Community Health and Family Planning Project (CHFP) addressed the profoundly complex gender challenges of introducing reproductive health services in such a societal setting by developing a multi-faceted approach to outreach and dialogue with chiefs, elders, and lineage heads, and male social networks. This outreach was conducted in conjunction with a program of community gatherings in which community leaders were involved in explaining the program to men. In this manner, male leadership systems were mobilized to raise awareness and acceptance of family planning. This paper reports on fertility trends observed in the course of a trial of alternative approaches for family planning introduction. Combining nurses with male mobilization methods produced significant effects on fertility, but outreach by nurses without male mobilization had no effect. Qualitative results suggest that the CHFP dissipated discord and empowered women to implement their reproductive preferences, ultimately contributing to fertility decline. However, subsequent to the CHFP, volunteers joining the program following the experiment were untrained in male mobilization methods. For this reason, expanding access to family planning by posting nurses to comparison communities, without supporting gender strategies had no impact. Fertility decline in the post-project era was limited to communities where the male mobilization approach was originally introduced, but insignificant where contraceptive access was established without male mobilization. Findings attest to the critical importance of mitigating the social costs of family planning to women by addressing the concerns and needs of men.*

Introduction

The use of convenient, nonclinical, community-based services that use community organization, structure and institutions has emerged as the core strategy to expand access to contraceptive technologies in sub-Saharan Africa (Kols and Wawer 1982). Lessons from experimental projects, first in Asia and Latin America, revealed that this approach, collectively termed "community-based distribution" (CBD), can enhance the quality, appropriateness and impact of family planning programs (Foreit et al. 1978; Freedman 1987). Widespread commitment to the CBD approach ensued, and with it, the proliferation of analogous programs in Africa. It was assumed that CBD implementation would expand the acceptability and convenience of contraception and reduce costs, thereby extending use among clientele who seek contraceptives but would not use services that are confined to clinical settings (Ross and Frankenberg 1993). The lack of convenient access to contraceptives was viewed as the primary barrier to the practice of family planning rather than cultural and societal barriers.

In Africa, the proliferation of CBD programs with contrasting operational designs challenged the view that CBD implementation would have uniform consequences. Throughout the region, CBD typically focused on the provision of oral contraceptives, foam tablets, and condoms. Some programs promoted the concept of dual protection against unwanted pregnancy and sexually transmitted infections including HIV/AIDS (e.g. Musau 1997; D'Cruz-Grote 1997). Other CBD initiatives integrated family planning services with child health and

welfare services (e.g. Nicholas 1978; Ringheim et al. 2011). Some CBD projects emphasized the advantages of deploying local volunteers to make family planning supplies and information readily available (Bertrand et al. 1986 and 1993; Ross et al. 1987), while other programs employed salaried paramedical workers to visit households and provide condom and oral pill supplies (e.g. Zinanga 1990, Munyakazi 1989). Alternatively, CBD agents were engaged in the commercial sales of contraceptives in traditional markets or in conjunction with social marketing efforts (e.g. Bertrand 1991).

Although the various CBD strategies that proliferated in Africa during 1980s-1990s were shown to contribute to increasing contraceptive adoption (e.g. Goldberg et al. 1989; Dube et al. 1998), research yielded little evidence that CBD reduced fertility (Phillips et al. 1999). In Africa, where post-partum abstinence customs often substantially reduce fertility, adoption of modern family planning methods can substitute for such birth spacing behaviors, fostering debate about the relevance of CBD to demographic change in the region.

The absence of impact in Africa has been attributed to the persistence of socio-cultural constraints, most prominently gender stratification and inequality. Studies have associated CBD with both decreases in unmet need (Luck et al. 1996) and increases in unmet need (Debpuur et al. 2002) for contraceptives, but the mechanisms through which it attains such effects remain unclear. Several analysts have shown that gender inequity, spousal dynamics, and norms that value large families in male-dominated lineages play a greater role in determining unmet need in Africa than does access (Bongaarts and Bruce 1995; Rutenberg and Watkins 1999). Few studies (e.g. Doctor, 2010) have connected CBD inputs with mediating variables, such as spousal communication and fertility preference outcomes. Other studies (e. g Bawah, et al. 1999) connect spousal communication with increases in contraceptive use. Nevertheless, because this evidence-base lacks sufficient coherence, the policy implications of the effect of CBD strategies on gender dynamics and contraceptive ideational change remain poorly understood.

This paper assesses the relative impact of contrasting CBD programs on socio-cultural processes that mediate fertility and contraceptive behaviour in a socially and culturally adverse setting in Africa. It uses mixed methods to test the hypothesis that these contrasting operational designs have differential fertility effects. We consider the example of Kassena-Nankana District in northern Ghana, an impoverished rural area characterized by subsistence farming, the persistence of traditional social institutions, and bride-wealth traditions which regard women as property of male-dominated lineages for ensuring reproduction. The people of the locality are predominantly peasant farmers for whom traditional beliefs and ancestral allegiance inform their way of life. Women are allowed very little autonomy, a situation that is reinforced by their low levels of literacy and limited mobility. Owing to dispersed settlements that lack modern economic or communication systems, women are

isolated from new institutions, ideas and practices (Doctor et al. 2009). Maternal health seeking has historically been governed by local traditional, poverty and male-dominated gate-keeping systems (Adongo et al. 1997). In this context, family planning services challenge ingrained norms of male prerogative over reproduction.

This paper uses data from the Navrongo Demographic Surveillance System (NDSS), fertility determinants results from panel surveys, and qualitative interviews to assess the relationship between CBD program strategies and fertility. The CHFP combines the challenges of implementing family planning services in an impoverished and traditional Sahelian setting with the opportunity to test hypotheses with excellent longitudinal demographic data that can be interpreted with guidance from qualitative research.

Cells of the experimental design.

In 1994 the Navrongo Health Research Center launched a three village pilot project for developing and refining operational strategies for community-based health and family planning services. In 1996, the pilot was scaled up to a district-wide test of the hypothesis that improving family planning services could have demographic effects among the Kassena-Nankana. Known as the Community Health and Family Planning (CHFP) Project, the initiative combined formative, operations and experimental research on a test of the relative effects of alternative service strategies on child mortality and fertility. Each strategy was integrated into a modified regimen of an approach to primary health care known as the "Integrated Management of Childhood Illnesses" (IMCI) and two arms of the experiment corresponded to four competing policy positions regarding optimal ways to add family planning to IMCI:@@@

Cell 1: The Zurugelu system. One set of activities marshalled traditional social institutions for community leadership and participation, with the aim of building male involvement and understanding of the program.[1] The program trained male volunteers to sensitize men to gender and reproductive health issues, address their informational needs, challenge prevailing views on reproduction and promote the use of condoms. Equipped with discussion themes that were developed in focus groups, volunteers targeted opinion leaders, such as chiefs and elders, and used traditional forums, namely durbars, to convene men and disseminate messages. This approach advanced women's position by linking them to leadership opportunities in durbars and outreach events, and involved them in planning and directing events that had been the sole prerogative of chiefs and elders. This arm of the study was termed the "*Zurugelu"* component, which in the local language connotes togetherness for the common good. Family planning services in Cell 1 were delivered through Ministry of Health clinical activities.

Cell 2: Community Health Officers. Cell 2 of the CHFP represents the CBD condition. An existing cadre of Community Health Nurses were trained in community liaison and organizational methods and re-located from sub-district clinics to village-based locations.[2] These retrained workers were termed "Community Health Officers (CHO)." These nurses were based at health posts and equipped to conduct household service outreach, but there were no *Zurugelu* activities. Community leaders were convened and invited to construct, with local volunteer labor and resources, a temporary structure where these nurses could live and work. Over time, GHS resources have been used to convert temporary community constructed facilities into permanent health posts known as "Community Health Compounds." In all, 16 Cell 2 and 3 communities took up this challenge, comprising the CHO dimension of the CHFP design.

Cell 3: The Combined condition: Communities in this cell were exposed to a combination of both the *Zurugelu* and CHO interventions. As in Cell 2, community leaders were invited to convene meetings for the purpose of discussing health problems and feasible means of developing community support for service delivery. Also, as in Cell 2, particular emphasis was focused on discussing the health service capabilities of CHO and health care that could be provided if community members volunteered to construct health posts where nurses could reside and provide services. With guidance from the project, facilities were developed with traditional construction methods and materials, and nurses were posted with a mandate to provide care at these facilities, visit households, promote childhood vaccination, and make family planning available. After the nurses were assigned to village health posts, volunteers were recruited, trained, and deployed to implement the male-focused *Zurugelu* approach to family planning promotion and also support the organizational requirements of CHO services such as the childhood vaccination program, health referral, and community outreach.

Cell 4: The comparison area. In Cell 4, usual Ministry of Health clinical and outreach services were conducted with staff densities equivalent to the staffing patterns of the treatment cells. It lacked the community-based service experimental activities of Cells 1, 2 and 3. Though no new technologies were tested in this cell, none of the existing health services were withdrawn either.

Figure 2 about here

Analytical Framework

The CHFP was designed to address debate about the demographic significance of family planning programs in Africa. By the 1990s, the literature on contraceptive introduction in rural African settings portrayed access to supplies as the main barrier to use, under the assumption that increased availability of services in convenient

rural locations offset unmet need for family planning by addressing logistical constraints (Robey *et al*; 1993; National Population Council, 1994 and Ghana Statistical Service, 1994). This "supply-side" perspective is illustrated in Figure 1 by pathways labelled "A".[3] Demand for fertility regulation was deemed to be "latent," owing to social, monetary, and logistical costs associated with contraception. Mitigating these costs, through CBD, was posited to be a viable mechanism for serving the needs of women, and reducing excess fertility.

At the outset of the Navrongo Project, however, the impact of these contraceptive distribution schemes in Africa was unknown and their efficacy the subject of discussion and debate (e.g. Caldwell and Caldwell, 1988). Demand-side perspectives in this debate are illustrated by the pathways labelled "B" in Figure 2. In this view, socio-structural factors associated with the corporate community, extended family, and institutions of marriage maintain high fertility norms and motives (illustrated with the exogenous determinants leading to B in Figure 1). Africa, it was argued, is a uniquely unfavourable context for developing CBD supply-side strategies, since the motivation to regulate fertility was negligible (e.g. Frank and McNicoll, 1987).

Studies of birth interval dynamics showed that fertility regulation in Africa is often the consequence of cultural practices that profoundly affect birth spacing, even in the absence of contraception (e.g. Shoenmaecker *et al,*. 1981). Shown in Figure 1 as pathway C, cultural practices that sustain post-partum abstinence can be substituted with temporary use of contraception, without affecting fertility levels (Bledsoe, et al. 1998). Evidence that CBD can increase contraceptive use does not necessarily mean that CBD reduces fertility.

The framework proposed in this analysis reflects a review of these perspectives and their relative explanatory power vis-a-vis the fertility changes observed over the course of the CHFP. Along with analyses of panel data showing that these patterns evolved over time, qualitative studies were also used to inform the design of the CHFP and assess community reactions during implementation. Analyzed together they reflect the gender context of the project, and each pathway in Figure 1 is delineated by gender, illustrating the consequences of gender stratification, male pronatalist reproductive motives, and the constrained autonomy of women. Men and their motives define the context for women to implement their reproductive preferences. In this context, neither purely socio-structural or cultural climate for contraceptive demand, nor simple efforts to increase access to services, defines the demand for children and motivation to adopt family planning. Based on these findings, it was reasonable to posit that the CHFP could be fully realized without a combined services condition, Cell 3, which addressed the need for strategies that would impact both pathways A and B in Figure 1. To assess the merit of this hypothesis, cell specification of the service delivery approach and concurrent evaluation was required. The following tells this story and reviews its implications for policy and program action.

Methods

Quantitative methods. Since July, 1993, the NDSS has conducted continuous monitoring of health and demographic events such as marital changes, births, deaths, migrations into households and out of households on a population of approximately 143,000 individuals and 43,000 women of reproductive age (Binka, et al. 1999; Phillips, et al. 2000; Ngom et al. 2001). Beginning in 1993 and ending in 2003, the CHFP augmented the NDSS with a yearly panel survey to collect detailed information on socio-demographic characteristics, reproductive preferences and behaviour, health seeking behaviour, and other topics. A randomized cluster sample of approximately 18 percent of 12,000 extended family "compounds" of Kassena-Nankana District was drawn from the NDSS population. All women aged 15-49 and their co-resident spouses were interviewed at the time of each survey, with questionnaire instruments that were designed to maximize comparison with national Demographic Health Survey modules for reproductive health and family planning (Debpuur, et al. 2002).

Qualitative methods. Qualitative data were compiled at the onset of pilot activities and again in 1996, two years after the project had been launched, with the goal of gauging community reactions to the general CHFP. All data used for the present analysis was compiled in 1996. The present analysis thus aims to ascertain possible predictive value of themes from an early period in the project that could explain long term demographic trends. The 1996 sessions were convened with a special emphasis on fostering discussion of how reactions may have differed by cell. In each cell of the experiment, eight Focus Group Discussions (FGD) were held with 8-12 individuals in each group. A total of over 80 men and women participated in the interviews. Two discussions were held in each Cell - one exclusively with men and the other with women. Only married individuals were selected for group discussions. In addition, participants were purposively selected to reflect both men and women who were currently using, those who had ever used, and those who had never used contraceptives. The age of the female participants ranged from 20-38 years, and that of the males ranged from 28-45 years.

Four individuals with experience in moderating FGDs were recruited and divided into two teams, each comprised of a moderator and a facilitator. Assistance was sought from key informants to help identify and recruit participants from the community for the interviews. Information about the objectives of the discussion and the purpose of the overall study were provided to each potential participant. Confidentiality with regard to their participation and anonymity with regard to their stored data were assured, and each participant was asked for his or her verbal consent to participate in the interview or focus group discussion. Permission to audio-record the discussions was also sought and obtained.

All interviews were tape recorded in Kassim and/or Nankam, the two main dialects of the area. The recordings were then transcribed into English and analysed according to principal themes in an effort to assess the extent of the community's response to program activities. Unique words and phrases or those that were difficult to translate remaining in the local language were left untranslated. Data were analysed using a grounded theory approach which generalised views and perceptions of the various themes.

The Fertility Impact of the CHFP

Fertility levels and trends Figure 3 presents total fertility rates (TFR) and age-specific fertility rates by cell and project years, respectively. As the figure shows, the TFR declined gradually in all study areas over the 1994-2000 period, although slopes in the fertility trend were insignificant in Cells 1, 2, and 4 in the this period of initial project exposure. In Cell 3 the decline was significant, however, and equivalent to a one birth reduction in total fertility prior to "scale up" in 2000 (Debpuur, et al. 2003; Phillips et al. 2006).

In all cells, fertility increased in 2000, most prominently in Cell 3. These shifts may have been the consequence of a general operational problem that affected all four areas. In 1999, the Ministry of Health imposed a scheme for the provision of essential drugs that was known as the "Exemption Scheme." All under-5 children were to be provided with cost-free access to essential drugs. But, the central supply of drugs was unsustainable, stockouts were common, and community nurse operations were dramatically curtailed. This disruption in primary health care indirectly affected the provision of contraceptive services. By 2000 project supported changes provided a basis for the Exemption Scheme to function, restoring essential operations. But, the 1999 disruption was associated with widespread discontinuation of contraceptive use.

Other operational changes in 2000 affected the supply on family planning services. Beginning in 2000, communities of the *Zurugelu* Cell 1 and Comparison Cell 4 were provided with nurses on the CHO Cell 2 model. This change in the design was gradual, with implementation constrained by the pace of construction of community health posts. Nevertheless, the gradual conversion of experimental operations had discernable fertility implications that are illustrated by the trends in Figure 3. Linear spline regression is employed to test the proposition that the scaling up process was associated with a disjuncture in the TFR time trend for the subsequent period.

It is appropriate to note, however, that expansion of the CHFP followed operational activities that essentially abandoned the *Zurugelu* approach to addressing "social costs" constraints to family planning. Although volunteer operations were developed in the post-CHFP period, the scaling up process was gradual and focused on the promotion of IMCI and other priority child survival initiatives of UNICEF in a new program

known as "High Impact, Rapid Delivery" (HIRD). Since the *Zurugelu* reproductive health emphasis of the CHFP was not scaled up in Cells 2 and 4, "scaling up" was tantamount to converting Cell 1 to a Cell 3 design while Cell 2 was unaffected by change and Cell 4 was converted to a Cell 2 design. Thus, in Cells 2 and 4 *Zurugelu* family planning activities were lacking even though volunteers were deployed for health promotion. Changes introduced convenient access to comprehensive doorstep health services provided by nurses, but sustained operational variance in the family planning component of community health care. Most importantly, the prior existence of *Zurugelu* activities in Cell 1 led to significant fertility decline when community-based nursing services were instituted in that context, suggested by the post scale up slope in Cell 1 that is identical to the slope of Cell 3 in the corresponding period. Conversely, the absence of a male focused *Zurugelu* strategy in Cell 2 was associated with an insignificant fertility impact of the HIRD design of the scale up. Where doorstep family planning was never a focus of the original CHFP --the scale-up of CHFP services in Cell 4 communities had the effect of developing doorstep health services without the provision of correspondingly intense *Zurugelu* family planning activities for men that could offset social costs of family planning. As a consequence, the phasing in of community-based services had no apparent fertility impact even though mortality effects of the HIRD approach were sufficient to sustain the health and survival impact of the CHFP. Findings thus suggest that developing family planning access, in the absence of strategies for mitigating social costs, had little discernable impact.

Insert Figure 3 about here

Qualitative Appraisal of Men's Reactions to the CHFP

Qualitative research, conducted early in the CHFP exposure period provide explanatory data for interpreting the fertility trends in the years that followed. Focus group discussions with male members of the study population in 1996 in each cell revealed that reactions and attitudes formed in response to CBD differed according to delivery strategy. The areas in which differences emerged most prominently involved men's reproductive preferences, acceptance of contraceptive use, views toward women's reproductive autonomy and, lastly, recourse to gender-based violence.

Reproductive preferences. Contrary to initial evidence of pervasive male misgivings and fears about family planning, many men subsequently expressed the view that family planning can have positive benefits, suggesting that initial project activities were already impacting reproductive preferences. The discussion of reproductive preferences in all experimental cells suggested that the desire to have a large number of children was decreasing even by 1996. A common theme of respondents, in all cells of the project, was the view that the

current generation has faced unprecedented agricultural adversity. Given pervasive poverty, men in particular, often expressed the view that having fewer children was more desirable now than has been the case for the previous generation. Several men suggested that parents should respond to adversity by having smaller families so that their limited resources could have a greater impact on the health, educational and professional development of their children. Discussion thus suggested that generalized social change was emerging from recent decades of agricultural adversity, even at the onset of the CHFP.

However, subtle distinctions between cells are evident. Whereas economic and agricultural pressures were salient across cells, attitudes toward decreasing the number of children a family has, nevertheless, varied according to exposure to health service orientation. The shift towards preferences for fewer children, which was most prominent in *Zurugelu* communities, may have been influenced by community gatherings (referred to as "durbars") and the social interaction among peers that such events catalyze.[4] The program appears to have contributed to a transition away from strong pronatalist values by fostering open discussion of the link between family planning and the growing poverty-led demand for spacing and limiting births. As male two respondents exposed to *Zurugelu* activities in Cell 1 stated:

> *I think it will be good to have few children. If my father had a small family I think I should have been able to attend school to a higher level than I have. But because we were many, my father was not able to take care of our school needs and as a result we had to stop schooling at a very low level.*

> *Those who have never heard it and have now got the message should try and practice it. You have two children now, and there is no food for them to eat yet in the night you won't allow your wife to sleep, two or three days you will have many children crying for food and health, something you cannot do.*

In Cell 1, these responses suggest childhood educational attainment is both increasingly important and increasingly unaffordable, given the intensifying economic pressures arising from diminishing agricultural productivity. In Cell 3 where these sentiments were also common, parental costs of child bearing were linked with a perception that family planning was an appropriate response of men to family economic problems:

> *What I have to say is that, in the past when we farmed, we got enough food to take care of our children so that they will be strong and healthy. Now… it is difficult to feed your children, take them to hospital and clothe them. Those who understand the current economic situation will try family planning.*"

> *"If you have so many children and they are sick, you cannot cater for them. Here, we want our children to be farmers, but if you have one child at school and two children at home and the one*

in school comes home asking for school fees, which are now high, and the others are also sick, you will not be able to meet their needs.

Commentary from men in this experimental area not only connects the utility of family planning to mitigate economic pressures by limiting family size, but also the mutually reinforcing link between family planning and child health and care-seeking. The combined approach of Cell 3, including household promotion of child health and management of common illnesses, alleviated men's widespread perception that large families were an essential response to the likelihood that many would die from disease during infancy and early childhood. This view was sustained by the ongoing provision of child health promotion and services in households – improved access to live saving care entrenched the belief that families could succeed in keeping children alive if family size remained within manageable limits. Additional views that figured prominently in discussions with men from Cell 3 included increased practice of birth spacing discussions within couples, increased value attached to women's preferences, a stronger sense of personal commitment to child spacing through family planning specifically, and engagement with the health system more broadly.

Men in households only exposed to the community-health officer (CHO) piece of the intervention expressed views only marginally affected by increased accessed to family planning. Comments made by male community members from Cell 2 regarding the utility of contraception illustrate this effect:

Women need to be educated well on family planning use. I'm saying this because some women use family planning when they have not given birth, even for the first time, and sometimes not at all. Family planning use is good when a women has given birth to three or so babies."

It is good to have a large family because our great grandparents have an adage that 'two heads are better than one.' So if you have two children struggling to make life worthwhile, it is better that having just one child. Man will never eat grass, he shall always survive (man will always live above waters).

Though male participants had become open to family planning, its use was deemed as appropriate only after minimum fertility desires had been attained, at which point spacing though contraceptive uptake could commence. This preference was, in turn, perpetuated by ongoing adherence to traditional, pronatalist norms which, in Cell 2, remained unquestioned in the absence of *Zurugelu* activities.

Those interviewed in Cell 4, where men were neither exposed to *Zurugelu* activities nor services provided by a CHO, maintained typically traditional reproductive preferences owing to the belief that some children are likely to die from disease during their first years. Also emerging saliently in the discussions was a

general ambivalence toward the suggestion of smaller family sizes. This is highlighted in the following quotes from male participants in cell 4:

> *Family planning is good but the fact is that whenever there is an outbreak of measles, it can kill as many as six or seven children of a single couple, so if you have four children and this happens, it means you have no child. If you can help us with a method that would prevent our children from dying, we can practice family planning.*
>
> *Some women cannot even have more than four children so such women's families have been planned by God. Some of us even wish our wives who have just one or two children to have more but we cannot, so how do we practice family planning.*

Among those exposed to neither experimental service orientation, attitudes remained closed to the notion of striving for a smaller family size, owing to the inaccessibility of services that could spare children from the scourge of disease. Though men recognized economic and other pressures imposed by rearing many children, they maintained traditional positions resting on the utility of children to "fend for themselves" on farms. Incidence of pregnancy and pregnancy outcomes were viewed in largely fatalistic terms – renouncing couple's right to regulate fertility in defence of God's will. Throughout discussions the problem of infertility or challenges to have enough children emerged almost as commonly as the challenge of rearing many children. Families should focus on meeting their needs for both sons and daughters before any means to plan family size be taken into consideration.

In general, discussions suggest that *zurugelu* activities had attitudinal effects that interacted with the provision of convenient family planning services. Male focused community outreach resonated with economic conditions that were fostering social change. Supported by the social and economic changes occurring in this setting, men were prompted to increasingly view children as costly rather than as signs of abundance that would contribute to agrarian wealth. In communities where family planning was accessible, emerging views interacted with reproductive health messages and discussions in ways that enabled women to convert preferences into spousal discussion of family planning and actual use.

Contraceptive Acceptability. Men's attitudes towards implementing reproductive preferences mirrored those which they expressed regarding an ideal family size. In the *Zurugelu* only Cell 1, men seemed conflicted expressing support for family planning, while also expressing discord and mistrust about family planning services. Here also, child survival emerged as a concern of men:

We have actually heard about family planning, but some of us do not want to practice it for fear that our children may all die. My mother gave birth to fifteen of us, but I am now her only child surviving. If she had given birth to two children she would have been childless now. That is why even though we want to practice family planning, on second thought we discard the idea..

If a couple understands one another, they can go to the hospital and the doctor will turn the womb of the woman so that she will not get pregnant again

One bad thing about [contraceptive use] is that some of the women do it without informing their husbands... [the women] do not respect their husbands... there are women who used to give birth so often, we can see that they allow longer time between their children. We think that these women are practicing family planning, but the fact is that they will not inform you before doing it.

As with reproductive preferences, men not exposed to household child survival services remain inclined to reject family planning, despite the understanding of it generated through *Zurugelu* outreach. Emphasis on maintaining a strong lineage through offspring takes priority over expanding couples' underlying reproductive desires through contraceptives use. Spousal communication is highlighted and valued among participants, at least conceptually, but, in practice, the adoption of contraceptive methods occurs distantly from the household domain. This undermines longstanding male gate-keeping practices and stirs spousal mistrust and a search for clandestine services, ultimately exacerbating traditionally loose conjugal bonds.

Feedback from men exposed to both *Zurugelu* activities and Community Health Officer in Cell 3 bore similarities to responses heard in Cell 1; however, men conveyed greater openness to women's use of modern methods, mostly as a function of increased availability of services that promoted child survival. Family planning in this setting was discussed not simply as a service for women to access in secret, but rather as an opportunity for couples to achieve fertility aims together. The following quotes by men in cell 3 clarify these points:

"Our fathers used to have so many children because measles could kill all of them. In their time there was nothing like a clinic or even vaccines against all these diseases but we have been immunizing our children against measles now and for some years now, even though there is normally an outbreak of measles, it is not able to kill the children. In my opinion, family planning is good... we have changed our attitude towards family planning, but health as well"..

"The contraceptives really help and we are not against the use of these methods but if a woman comes to the clinic without the husband, insist that she brings the husband. These women are trying to take control of our homes as decision makers.... You have to organize a meeting like

this one, talk to the women about family planning and tell them to come along with their husbands if they want to adopt a method." (Male community members, Cell 3).

The combination of doorstep prevention and management of childhood illness with volunteer outreach and family planning service delivery from nurses produced attitudinal change decidedly in favour of contraceptive use. The pronatalist position oft-viewed as an immutable cultural feature would, thus, seem to be conditioned by the perceived likelihood of childhood mortality, which, when reduced, prompts the adoption of health beliefs aligned with modern notions of fertility regulation and reproductive choice. Sensitization to these concepts inculcates a sense of responsibility amongst men to pursue this course with their wives, still as a gate-keeper, but one that is better informed and willing to make decisions about reproduction through discussions with wives. In these cases, women's desires ultimately seemed to carry more weight than had previously been the case.

In contrast, men in Cell 2 – where only the Community Health Nurses were operating –tended to believe that women had taken full control of the decision to use contraception. Although they supported the general concept and purpose of family planning, these men lamented their lack of understanding and education on the methods. This perpetuated myths and misunderstanding of the side-effects of family planning that, in turn, led to reservations and discontinuation of method use. The way in which service delivery targeted only women introduced marital tensions that propagated male aversion to method use, despite their vague agreement with the idea of family planning:

Family planning makes women become flirts, because they are practicing family planning and they know they will not get pregnant again, they go after men outside their marriages... that it will prevent your wife from getting unwanted pregnancies is good. But we do not know what we can do about the women going outside their marriages to look for men when they are practicing family planning."

"The problem we have with family planning is that we are not properly educated about it. The women go and they just mix drugs anyhow for them and so some of them can't give birth after taking the drugs. I have a number of sisters who are victim of this. Now they can no longer give birth. You don't educate the women properly" .(Male community members, Cell 2)

Men in this setting expressed ardent concern for being excluded from birth spacing decisions and offence for how they felt nurses had brought divisiveness and mistrust into their marriages. Whereas contraceptive use represented a continuous source of male anxiety in all cells, in those without exposure to *Zurugelu* activities, male reservations to family planning were portrayed in emasculating terms (as though the introduction of the nurse promoted covert service seeking) which violated their prerogative as head-of-household. Whereas contraceptive use was acceptable, the manner in which it was being promoted and accessed was not. More

education and communication that targeted men and couples, it seemed, would be necessary to mitigate these barriers.

In Cell 4, where the population was neither exposed to the *Zurugelu* activities nor the CHO, men expressed a sense of helplessness with respect to the concept of family planning in general. Although they had heard of contraceptives and thought that they could be useful, poverty and limited educational opportunities gave rise to the belief that they particularly could not benefit from family planning. These views are highlighted in the following statements made by men from cell 4:

> *"We have heard about family planning but we have not practiced it. This is because we have not understood it. A husband or a wife may therefore want to practice it but because his or her partner does not understand it, he or she may not agree to do it... some couples practice the methods yet their women still get pregnant. I therefore think we need education on the methods."*

> *"Some people do not have money to practice these methods and a result they always see them as unnecessary. Three years ago, they used to give the pill and the loop to people free of charge in this area. Of late, they do not do that again and people are forced to buy from the drug stores but the prices of these things in the stores are very high that some of us cannot afford them."*

In this case, the emasculating effects of introducing family planning did not take effect due to the more fundamental barriers to services that this population faced: knowledge, access and perceived cost. Though the monetary cost of contraceptives was the same across cells, the absence of sensitization, outreach and doorstep services in Cell 4 precluded men in this setting from making a cost-benefit decision that is well-informed, involves spousal communication, and is unencumbered from the opportunity costs and stigma attached to active care-seeking.

Women's Reproductive Autonomy. The CHFP has had a significant impact on shifting gender roles in the exposed communities. As the project progressed, women increasingly took control of their reproductive decision-making, and in response, men gradually learned to accept this fundamental change. Family planning adoption was perceived to be tantamount to women's assertions of autonomy, precipitating concern and anxiety among men across all experimental cells. However, early in the experimental period, there emerged discernable cell variation in male tolerance of women's family planning decision-making. Men in Cell 1 (where *Zurugelu* activities were carried out without the CHO) openly communicated about family planning, but linked the practice to spousal sexual mistrust:

> *"Some of the women do not feel free to discuss family planning issues with their fellow women because if they discuss it with them and they are not in support, they may go out to talk about*

them. They may even think that those who want to do it are women who like flirting with men, that is why they want to do that."

"Even if it is that the women see them practicing the family planning, then they will snicker and say the women is flirting and maybe moving outside the house to be away from the husband. So for this she may not decide to discuss with some of the women."

Whereas openness to women's reproductive freedom appears to have been an early response to CHFP activities in Cell 3, the lack of direct services constrained reproductive autonomy. Nonetheless, some men expressed a willingness to take action to mitigate the effects of stigma on service seeking. In this sense, men in cell 3 seemed not simply supportive of the idea of women's autonomy; they were also involved in putting the concept into practice:

"Some couples do discuss family planning, and when they are all convinced that family planning is good, the man gives the wife the go ahead to use it. Even if it gets to a situation that the woman goes to the nurse and she asks her for her husband to come, the man goes with his wife".

Exposure to the actual service itself, together with the effects of sensitization and communication activities, enabled men to either accompany their wives to a service point or concur with their mobility without undo concern about ostracism from other men. In Cell 3, women's autonomy may have been enhanced more generally, enabling women to participate in village governance:

"There are great changes. If there are meetings, we come out just like today. The men also attend their meeting. In the past when they call meetings and women attend, it is a problem in the house, but now women are free to attend meetings just as men". (Female community member, Cell 3).

In Cell 2, where Community Health Nurses were deployed without supporting *Zurugelu* activities, study participants reported relatively severe social constraints to the practice of women's autonomy. These constraints included male spousal mistrust and recourse to violence with concomitant reluctance among women to discuss family planning with their husbands. In expressing this sentiment, a man noted:

"Some women are aware that their husbands know that they flirt with other men outside their marriages. Such women may therefore not feel free to discuss family planning with their husbands. This may bring a conflict between the man and the woman who has discussed it with the man's wife."

> *"... the reason why I will beat my wife if she tells me that she wants to use family planning is that if I have only two children, both of them can die over night.I can also die as well; so if I allow my wife to use family planning for five years and my children die, one day what will I do if Addah's (referring to a fellow participant) children come to attack my house? That is why I will not let her do it. If I see her using it I will beat her".*

Where services were provided without outreach to men, activities heightened male suspicion that they were excluded from reproductive decision-making, reducing their authority and status in the family. Similar perspectives were expressed by men in Cell 4, where women often sought services clandestinely, incurring spousal discord in the process:

> "*Most women do family planning without the knowledge of their husbands. The man may want to have children, but the woman may not be ready at that time and she can't explain that to her husband. So she simply hides and goes to the nurse for the family planning and you will not be aware, and you continue to have sex without the woman becoming pregnant.*"

Spousal divisions and conflict are increased by the limited male engagement and spousal communication, as well as by the inaccessibility of facility-based family planning services. Men may intensify their gate-keeping activities because they fear the humiliation and disrespect that occurs when women secretly violate reproductive responsibilities and adopt a contraceptive method. Women's autonomy is thus constrained due to the threat of marital discord and violence which could occur if their facility visits are witnessed and their secret is discovered.

Gender-based violence. Another salient theme across cells were men's attitudes regarding gender-based violence, particularly as a form of recourse against women's decision to use contraception. Aacceptance of this behaviour was greater in cells that were never exposed to the male-focused sensitization and communication activities characteristic of the *Zurugelu* approach.

In contrast, men from Cell 2 described violence against spouses as a relic of the past, mostly in terms of the concurrent religious transition which took place across study areas from traditional forms of worship to Christianity:

> *"As for me, I will say [gender violence] has become less common because Christianity was not common here at the time it was high. We had our own way of worshiping before Christianity and Islam came. Our way of marriage is different from Christians and Muslims. Why I'm saying this is that violence has reduced is that I wed with my wife, I have taken a vow never to subject her to any violence treatment. So religion has brought down the level of violence against women in this community"* (Male community member, Cell 1).

Men in Cell 3 (where both experimental arms were implemented) largely discussed gender-based violence in terms of forcing their spouses to have sex. As in other areas where the *Zurugelu* was implemented, this too was reportedly on the decline:

> *"In this community some men force their wives to have sex with them. It happens that the man is in the mood and a woman is not in agreement. As for me, I don't force my wife to have sex."* (Male community member, Cell 3).

With the availability of convenient community-based family planning services, men resort less to forcing sex upon their wives who no longer have to abstain in order to avert unwanted pregnancy. Having been sensitized to pursue spousal communication and consensus, these men tended to discuss marital relations in terms of forming an agreement rather than imposing their will.

In Cell 2 communities, where nurses provided family planning without the support of male-focused volunteers, gender-based violence was also discussed as a reaction to family planning more frequently than in any of the other cells. As one woman noted:

> *"Men force their wives into sex, especially deep in the night when the whole place is silent. Most quarrels in the dead of night is as a result forced sex. There is the saying that nobody separate fight or quarrels in the dead of the night, so the man will definitely prevail over the women."* (Female community member, Cell 2).

Violence in this case was often justified by respondents as a legitimate response to perceived women's disobedience and disrespect that is implicit in any decision to regulate fertility. Nurse provided services that ignored male concerns, invoked these sensitivities by giving women an avenue to pursue their reproductive freedom in defiance of patriarchal norms. Worries and concerns were most prominent in Cell 2, but in Cell 4 similar responses arose:

> *When a man wants to have sex with his wife and she refuses, the man will beat her. The man will say what did I marry for and you're refusing me sex. It is possible that there is something wrong with the woman but the man will not understand her. At times men refuse their wives food stuff like millet for the reason that she is misusing it, but it is because of sex which is not good".*

Where men were exposed to *Zurugelu* activities without CHO services, they were more supportive of the of reproductive health services that the project provided. Nevertheless, in the absence of the actual community-based provision of child health services, these supporting attitudes were often unaccompanied by adoption of family planning– an action that men perceived to be a woman's thing. Moreover, motivation to regulate

fertility in Cell 1 was offset by concerns about high childhood mortality risks, as illustrated by the following sequential exchange among a panel of older men:

> Respondent 1: *The family planning is good [for some people] but rather not good to practice here. This is because if you restrict yourself to about three children and fever, which is very common here, happens to take two, what do you do again?*
>
> Respondent 2: *The bad effect of family planning is if you restrict yourself to about two children and death happens to take away one.*
>
> Respondent 3: *Among us Kassena people, you may give birth to ten children and they will all be suffering. The eleventh child may be the one who will come to save all the ten others from their suffering.*
>
> Respondent 4: *Quite apart, death is very common among children in this community. So, even though your idea is good, we will give birth to many children so that even if there is death, some will still be left.*

These concerns were addressed in Cell 3, where both arms were deployed. Men could understand the rationale for the concept of family planning without expressing undue concerns that children would not survive. Moreover, where Zurugelu activities engaged with male networks in ways that diffused ideas about the relevance and acceptability of contraception, the program not only expanded the accessibility of family planning services for women, but also enhanced the acceptability of the practice among men.

Discussion

Recent reviews have expressed renewed concerns that high fertility constrains economic progress in poor countries, and enhanced commitment to family planning programs represents a sound approach to fostering reproductive change (DasGupta et al. 2011; Bongaarts and Sinding, 2009). The results of this analysis support the hypothesis that family planning services can have fertility effects even in a profoundly gender-stratified patriarchal setting. However, results bring into question perspectives that focus solely on the provision of contraceptive supplies. The CHFP shows that convenient community-based services are essential but insufficient to achieving fertility impact. In this project, the provision of accessible family planning services, delivered without open advocacy of family planning among men, had no discernable impact. Additional community-based organizational services are required for offsetting male attitudes that elevate the social costs of contraception. Scaling up community-based nursing services, without attention to the social development needs of men, had pronounced benefits for the health and survival of children without having corresponding effects on fertility. Nonetheless, the CHFP focus on child health services was crucial to achieving fertility

impact. The acceptability of fertility regulation was enhanced when child health services suggested to men that child survival had improved, obviating the rationale for large families.

Moreover, CHFP results suggest that appropriate engagement with men can introduce direct benefits to the reproductive and social autonomy of women that extend beyond the practice of family planning. This is especially so when the delivery of family planning and child survival interventions are conducted at the community-level with social engagement strategies that address the concerns and needs of men. Activities that reached men with information, networking, and social support not only offset the social costs of contraception, but also extended to women increased autonomy, facilitating petty trading, fostering social networking and eroding the influence of social institutions that constrain mobility. Nonetheless, men and women have contrasting perceptions about the extent to which gender relations have changed over the years. While men expressed that gender relations are improving, women often reported the contrary. Social discord that can arise with the introduction of family planning requires sustained and carefully planned programmatic engagement. There is a need to regularly review program strategies, with a particular focus on promoting gender development.

Programs should employ service delivery models that both expose couples to comprehensive primary healthcare services which include family planning and combine those with culturally appropriate forms of outreach that facilitate communication, adoption and enactment of appropriate reproductive and child health behaviours, including service utilization. Supply focused services can precipitate social and household tensions that constrain positive health and demographic results. Supply- and demand-focus strategies are thus mutually reinforcing components of program success.

Demographic results from the post-experimental period attest to the importance of sustaining *Zurugelu* activities. The family planning impact of the Navrongo project was dissipated with the termination of its *Zurugelu* component. New volunteers recruited in the post-CHFP era were sponsored by a UNICEF program known as "High Impact Rapid Delivery" that focused on health to the exclusion of family planning and reproductive health. Nurses assigned to communities in the post-experimental era sustained childhood mortality decline, but no fertility impact was realized. Findings thus attest to the importance of focusing family planning strategies on the needs and concerns of men. Once family planning was openly promoted among men, spousal communication about contraception could be pursued by women without anxiety about ensuing discord. Without this essential commitment to male mobilization, community-based primary health care will fail to address women's reproductive aspirations and service delivery needs.

Conclusion

The CHFP was launched in the mid-1990s to address themes in global and national population policy debates. To many observers pervasive poverty, widespread adversity and continuing traditionalism structured high fertility constraining prospects that family planning programs could succeed in such settings. To others, such constraints signalled the need for a bold and comprehensive supply-side approach. In Ghana , policy planners were deliberating on the relative merits of contrasting views on how best to make services available –whether to rely on clinical services their extension to community locations, or pursue a more complex approach involving the mobilization of community social institutions and volunteerism. Debate also focused on the relative merits of programs that depend up paid professional nurses to provide care in communities versus approaches that deployed unpaid volunteers as health promoters. The role of men in family planning services was not originally a factor under discussion in Ghana's policy debate, but as evidence was gathered to guide decision-making, gender stratification and related social costs of contraception became a prominent focus of strategic planning.

Evidence from the CHFP substantiates perspectives represented by the supply-side pathways A portrayed in Figure 1. Nevertheless, analysis of qualitative data attests to the importance of addressing the socio-structural and cultural determinants represented by pathway B. In the absence of effective means of addressing social costs, demar side perspectives in pathway B predominate. Even if CBD is implemented, and unmet need for family planning is evident, convenient services can fail to affect fertility because the perceived social costs of fertility regulation reinfo constraints to demand for contraception. As Figure 1 illustrates, fertility determinants among women are embedded the context of corresponding determinants among men. In the absence of strategies for addressing this stratification, male views predominate and spousal reproductive communication languishes. To succeed, programs must create a climate for spousal communication that is free of conflict. Gender outreach that provides women with an outlet for communicating problems and soliciting help can provide support for reproductive autonomy that would not spontaneously arise. Open discussion of family planning enabled women to implement their preferences, but catalysing conflict-free spousal discussion required enabling strategies from the CHFP. This meant developing and delivering services that reached groups of men through networks and leadership systems that they respected and embraced as their own. It meant providing information and avenues of open discussion but also ways to reach individual men who were outspoken in their opposition to their wives reproductive aspirations. The result was a program that utilized patriarchal traditions of communication, networks, and leadership for organizing outreach tha would enhance the reproductive autonomy of women. The end result was a *zurugelu approach* that had a more general social impact than is effect on family planning practice.

The success of *Zurugelu* volunteers cannot be extrapolated to all volunteer-based strategies, however. Sustaining the family planning focus of the *zurugelu* was crucial to the success of the program; the HIRD approach failed to affect fertility. Moreover, *zurugelu* strategies pursued in isolation of nurse outreach also failed. *Zurugelu* activities are effective mechanisms for introducing and sustaining ideational change, but without convenient services for women, community mobilization and male outreach was an insufficient strategy for introducing behavioral change. But where *zurugelu* activities were combined with CHO services, uptake of contraceptive services was greater and more sustained than where *zurugelu* activities lacked supporting CBD. Combining CBD with male-focused Zurugelu activities introduced sustained and significant reproductive change among the Kassena-Nankana of northern Ghana.

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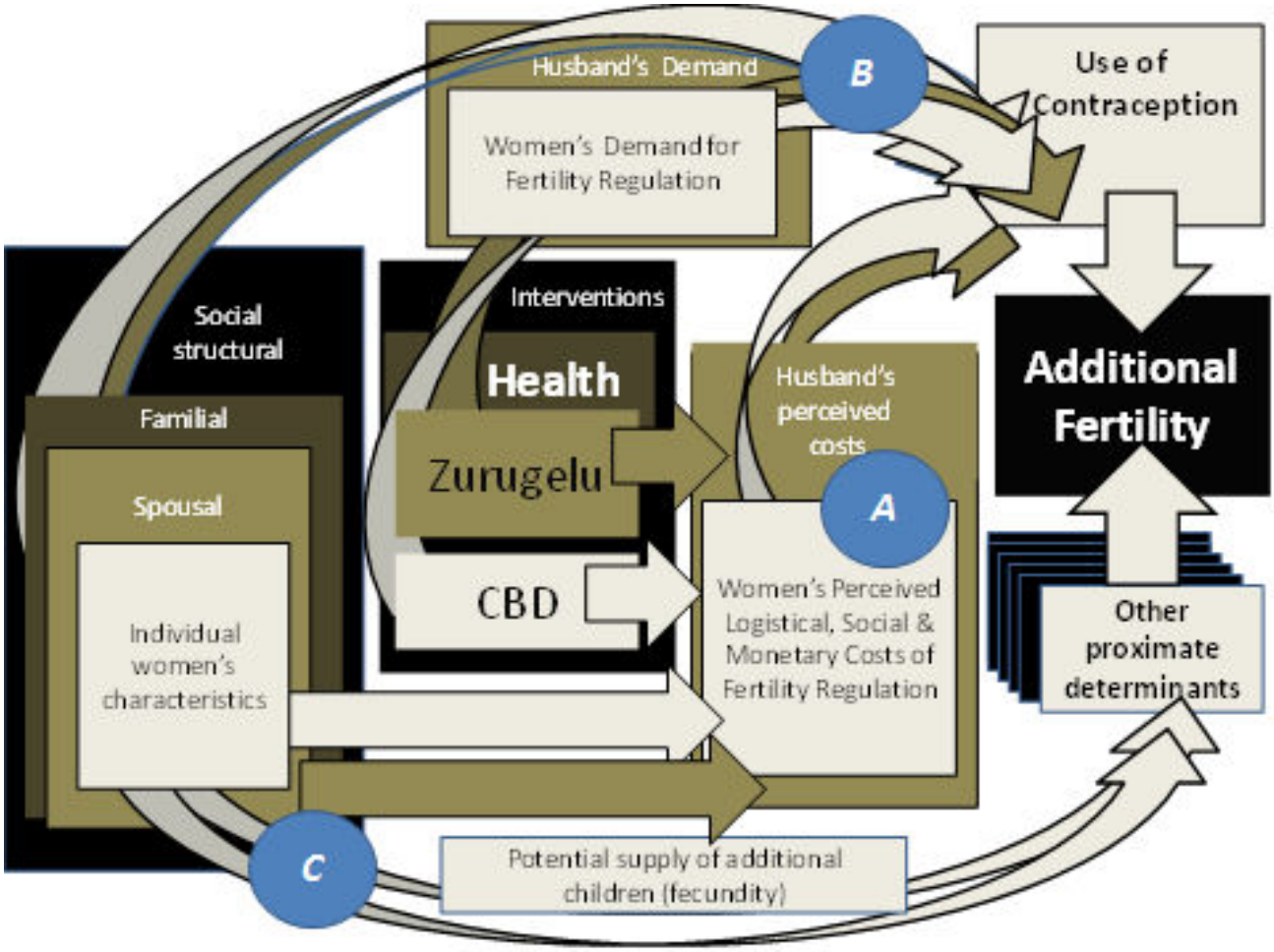
ertility



Legend:

Husband's determinants

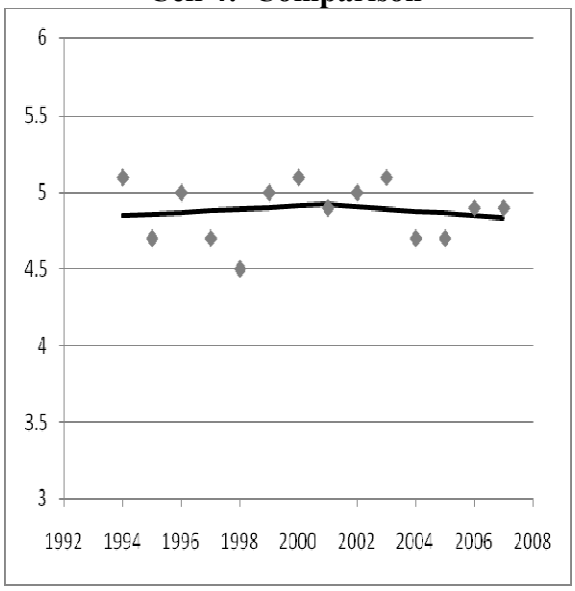
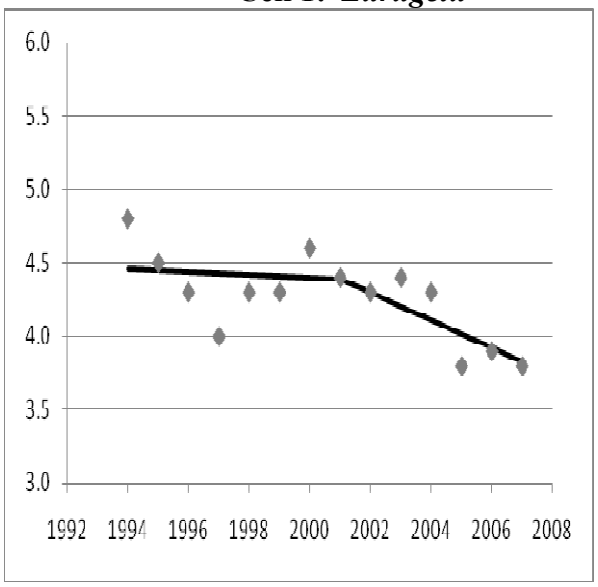
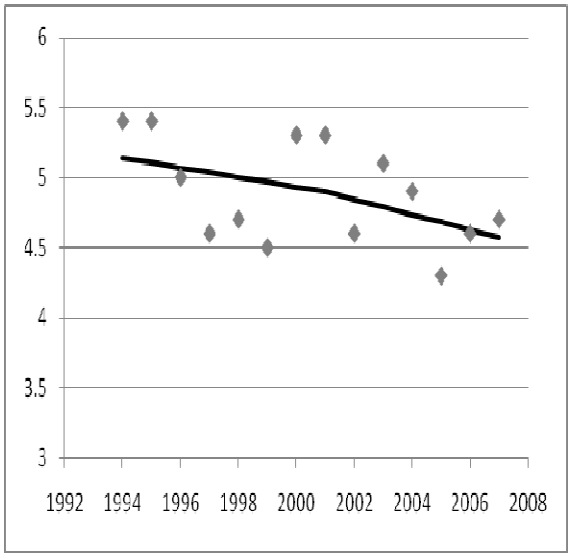
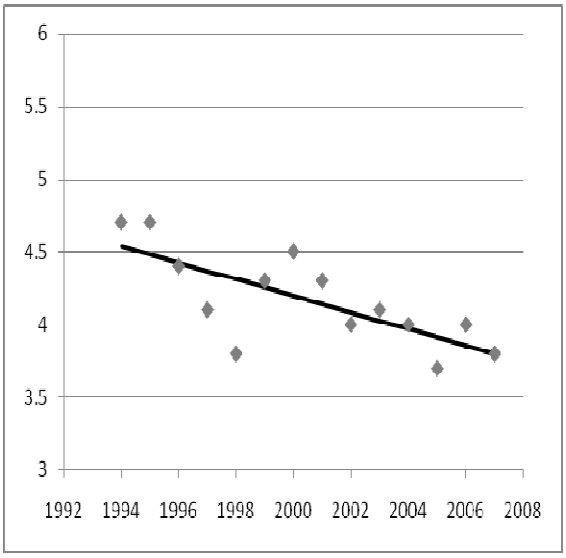
Women's determinants

Source:
Phillips, et al. 2011

Figure 2: Cells in the experimental design

Community Health Officers in Village	**Mobilizing traditional community organization with the *"Zurugelu Approach":***	
	No	***Yes***
No	***Comparison*** **(Cell 4)**	***Zurugelu System only*** **(Cell 1)**
Yes	***Community Health Officers only*** **(Cell 2)**	***Combined:*** **Community Health Officers with the *Zurugelu system*** **(Cell 3)**

Figure 3: Total fertility rates by year and experimental cell, 1994-2007

Posting Community Health Officers to Village Locations:	**Mobilizing traditional community organization and volunteerism with the "*Zurugelu Approach*":**	
	No	***Yes***
No	**Cell 4: Comparison** 	**Cell 1: *Zurugelu*** 
Yes	**Cell 2: CHO in village locations:** 	**Cell 3: Combined** 

Source: Phillips, et al. 2011

Endnotes:

[1] Community engagement components of the Zurugelu approach were designed to sustain access to basic pharmaceutical supplies. Volunteer recruitment and management procedures were adapted from the recommendations of the UNICEF sponsored "Bamako Initiative" which sought to translate social institutions into resources that organize primary healthcare (Knippenberg et al. 1990). Family planning themes and activities were added to Bamako mandated health service strategies.

[2] This approach represented the view promoted by the World Bank at the time which advocated the use of paid professional nurses to impro range and coverage of community health care (World Bank 2003).

[3] Figure 1 is adapted from the "Easterlin Synthesis Framework" (Easterlin1978; Easterlin and Crimmins 1985; Easterlin et al. 1988).

[4] The term "durbar" refers to an event, convened by chiefs and elders, to assemble family heads for making announcements, building conse and gauging community reactions to some event or activity of collective interest. Employed extensively in northern Ghana as an important mechanism for community governance, durbars were utilized in the CHFP to promote health awareness and build understanding of project (see @@@)