

EFFECTS OF COUPLES' CHARACTERISTICS ON CONTRACEPTIVE USE IN SUB-SAHARAN AFRICA: THE GHANAIAN EXAMPLE

YAW OHENEBA-SAKYI* AND BAFFOUR K. TAKYI†

**Department of Sociology, State University of New York, Potsdam, and †Department of African Studies, State University of New York, Albany, New York, USA*

Summary. Using data from the 1988 Ghana Demographic and Health Survey, this study examines couples' demographic and socioeconomic characteristics in the context of their attitudes towards family planning, and the impact of these factors on the use of contraceptives. The characteristics of the husbands and their influence on wives' behaviour illustrate the role of intra-household relations between men and women and their effect on fertility-related behaviour in patriarchal African societies.

Introduction

Since the mid-1960s, birth rates have steadily declined in many parts of the developing world. Except for a few countries such as Botswana, Zimbabwe and Kenya (Arnold & Blanc, 1990; Rutenberg & Diamond, 1991), Africa has yet to witness the transition from high to low fertility. Fertility levels in Africa have remained unchanged for the past three decades and this has baffled policy makers, international donor agencies and researchers, who have drawn attention to the negative effects of uncontrolled population growth in economically poor societies (Goliber, 1989). Ghana's case is among the more baffling. Despite a long history of family planning programmes that dates back to the 1960s, its birth rates have not declined substantially. Indeed, data from the 1993 Ghana Demographic Health Survey (GDHS) show that only in the last 5 years or so have fertility rates declined slightly from 6.4 in 1988 to 5.5 by 1994 (Ghana Statistical Service & Macro International, 1994).

Researchers have offered several explanations for Africa's fertility patterns (Caldwell, 1982; Opong, 1983; Cain, 1984; Boserup, 1985; Isiugo-Abanihie, 1985; Caldwell & Caldwell, 1987; Mason, 1987; Birdsall & Sai, 1988; Bledsoe, 1990; Cochrane & Farid, 1990). Most researchers agree that contraception has a significant effect on birth rates throughout the Third World. While the role of contraception to reduce fertility has been debated (Prichett, 1994), studies have linked some of the reductions in fertility in many parts of the world with increases in contraceptive use, especially of modern contraceptives (Bongaarts, 1995).

In contrast to other parts of the Third World, Africa has one of the lowest

contraceptive use rates (Mamlouck, 1982; World Fertility Survey, 1984; Mauldin & Segal, 1988). Although significant variations have been reported among African women of different socioeconomic status, and contraceptive use may be rising in some countries, overall, contraceptive use among married women is around 7% in the West African region and 15% for Eastern Africa (Population Reference Bureau, 1994). In explaining contraceptive use patterns in Africa, most studies have dealt with the behaviour of women, and there are limited data on the characteristics of men and their effect on fertility differentials and patterns.

Recent studies, however, have shown that the existing gender relations in many parts of Africa may be responsible for the low use of modern contraceptives. This interpretation of fertility-related behaviour focuses on the relationships between men and women, and how they affect social behaviour, through analysis of gender relations, inter-personal communication and the nature of the communication.

While there is the realisation that couples' relations may affect fertility-related behaviour, few studies have examined the role of men in issues relating to contraception (for some exceptions see Ezeh, 1993). The present study examines relations within marriage, and their effect on contraceptive use in Ghana, using data from the GDHS of 1988. The focus is on couples because, in patriarchal societies, the relationship between men and women is based on inequities which subsequently affect wives' contraceptive behaviour. In Africa, for instance, these inequalities can be reflected in the large age differences between couples, the relative deprivation of women in terms of their access to valued resources in society (e.g. political power and social prestige), and the persistence of polygyny.

Theoretical background of contraceptive use patterns in Africa

Theories that attempt to explain the pattern of contraceptive use in Africa tend to be based on cultural or institutional factors, economic, and individual sociodemographic characteristics (e.g. education and age at marriage) (United Nations, 1987).

The cultural theses argue that the prevailing practices and norms encourage large families (Caldwell, 1982; Appiah, 1985; Caldwell & Caldwell, 1987) and reduce the motivation for couples to use contraceptives. While there is some validity to these assertions, the cultural proponents base their interpretations in structural-functional terms. Consequently, they have been criticised for assuming the social system to be static (Lockwood, 1995).

In most African societies, there have been changes in the social institutions because of Western contacts, education, religion and urbanisation, or from within (e.g. the changes in the laws of property inheritance in Ghana). Urban residence has weakened the role of members of the corporate clan in the marriage process (Aryee, 1985). As the transfer of physical property to the clan/lineage becomes less important (Republic of Ghana Gazette, 1985; Awusabo-Asare, 1990), large family sizes may not be necessary to build strong kin networks, thus compelling couples to examine their fertility outcomes. All of these social changes have implications for fertility-related behaviour such as contraception and ultimate fertility outcomes.

The economic argument uses the concepts and assumptions of micro-economic

analysis of human behaviour (Becker, 1960). Its proponents argue that couples would tend to limit their fertility when the economic gains from doing so outweighed the cost of having more children (Caldwell, 1982). In a study of African societies, Boserup (1985), for instance, has argued that the wife may have the greatest interest in sustaining high fertility because large families provide enhancement of status and economic security. Also, for men, children create a firm link to the woman's kinship by helping to increase a family's claim to political positions, land rights, and other economic resources (Bledsoe, 1990). Given the economic benefits of having many children, men in African societies are often warned against marrying infertile women; some men even require proof of fertility before marriage (Bledsoe, 1990). Since infertility is erroneously blamed on modern contraception, avoidance of modern methods in much of Africa may partly be a response to this fear of infertility (Ebin, 1982; Bledsoe *et al.*, 1994).

With regard to the effect of individual sociodemographic characteristics such as educational attainment on contraceptive use, the thesis is that higher education creates opportunities for fertility reduction (Bulatao & Lee, 1983). Formal education for women, for instance, not only delays their entry into marriage, but also socialises them into new behaviour patterns which may undermine the traditional norms of procreation and facilitate the application of scientific knowledge (Cochrane, 1979; Oppong, 1982; Caldwell, 1982; Kasarda, Billy & West, 1986). Furthermore, educated women have the tendency to diagnose illness and seek professional help promptly, thereby reducing infant/child mortality and minimising the motivation to have additional children in the expectation that some will die (Caldwell, 1986).

Gender relations and contraception

Power relations and cultural norms about the position of women in African societies may dictate the nature and patterns of contraceptive use since men's fertility expectations differ from women's. Some studies have suggested that family planning programmes in many African societies were unsuccessful because they failed to take into account the power relations between couples (Ezeh, 1993), and the patriarchal nature of the societies.

Of special interest to the present analysis are questions of a couple's inter-personal communication and sexuality. First, successful practice of contraception is highly influenced by effective communication between couples (Olusanya, 1971; Kar & Talbot, 1980; Kasarda *et al.*, 1986), and where differences exist over attitudes and practice towards family planning, the husband's preferences often dominate (Chaudhury, 1982; Cain, 1984). Additionally, in some African societies, husbands disapprove of their wife's use of effective contraception for fear of infidelity on her part (McGinn, Bamba & Balma, 1989; Bledsoe *et al.*, 1994).

Second, ideas about sexual behaviour and about keeping a spouse happy all fall within the larger context of marital and gender relations perceived as important in maintaining marital harmony (Lockwood, 1995). For instance, with the declining role of polygyny, the only way some men could guarantee a large family may be to pressure their women into more frequent pregnancies (Bledsoe *et al.*, 1994). Because many African wives have few economic resources, they are often tempted to obey the wishes

of their husbands—by exchanging sexual favours for economic returns. Such women would be less likely to practise contraception.

Third, the majority of African women live in rural areas where the patriarchal role of the male in household decisions is less challenged. Also, in many African societies, the extended lineage members may have more say in fertility decisions than the wife. In many activities of daily discourse, the overall decision making processes about family life tend to lie more with the men than with women. Thus, while many women in Africa have been told to reduce their fertility through the use of contraceptives, the goals of marital harmony, preventing a husband from having a second wife and fear of in-laws may not fit into the everyday realities of women's life and their position in African societies.

The major decisions pertaining to fertility-related behaviour, then, could be understood in terms of the dynamic aspects of household power structures. This is supported by anthropological and other ethnographic studies in several parts of Western Africa. In The Gambia, Bledsoe *et al.* (1994) report that women who use contraceptives tend to be older on average, and are more likely to have completed their childbearing. Moreover, contraceptives are used mainly as a mechanism for spacing childbearing and not to restrict births, because there is often a genuine fear on the part of the wives that by restricting their own fertility their husbands may resort to polygynous relations.

To the extent that the actions of husbands can influence wives' fertility-related behaviour, the present study could provide information regarding the intra-household power relations between men and women in African societies and how they have had an impact on the use of contraceptives. Since some of the methods of contraception (especially condom, withdrawal, periodic abstinence or rhythm) require the support and co-operation of the husband, it is imperative to look at his background characteristics as well.

Data and methods

Sample

The analyses are based on nationally representative data of Ghanaian couples who were interviewed as part of the 1988 Ghana Demographic Health Survey (GDHS). The focus of the GDHS survey was on women in their childbearing ages ($N=4488$). However, a sample of eligible husbands who were living with their wives at the time of the survey were also interviewed. Information gathered from the female and male respondents included their background characteristics, contraceptive knowledge and use, attitudes towards family planning, marriage, fertility and fertility preferences.

A major strength of the GDHS data is that the questions were asked of husbands, so their actual responses can be examined, rather than those reported by their wives, which is an approach that had been used by previous surveys. The responses of these men matched with their wives are used as the sample frame ($N=1010$). Since only women exposed to the highest risk of becoming pregnant are more likely to make decisions about contraception, the target population in the final multivariate analysis is limited to fecund, non-pregnant women. Thus, the sample population consists of 812 women and their husbands.

Variables

The dependent variable is current contraceptive use for wives and their husbands, coded as 1 to indicate any modern contraceptive use and 0 for non-use.

Based on prior research, independent variables were selected as follows. The respondent's demographic characteristics were measured by age, age difference between spouses, type of marital union, desire for future births, last birth interval and number of living children. Socioeconomic status was measured by education, occupation, and place of residence. Attitudes towards family planning and communication between spouses were also assessed.

Age. To reflect cohort effect, this continuous variable is coded into three groups: young (under 26 years), middle (26–35 years) and old (36 years and over).

Couple's age difference. Age difference between spouses is grouped into three: (1) wife older than husband or age difference less than 5 years; (2) age difference between 5 and 9 years; and (3) age difference of 10 years or more.

Type of marital union. Based on two main forms of marriage in Ghana, this was coded into a dichotomy: (1) monogamy; (2) polygyny.

Desire for future births. This measures whether or not more children are desired in the immediate future, coded as (1) no more children, and (2) more children.

Last birth interval. This measures the interval between the last birth and the date of the interview. The categories are: (1) up to 2 years, and (2) over 2 years.

Number of living children. This is the sum of all children alive, either living at home or away from home. The categories are: (1) under 2 children, (2) 2–3 children, and (3) 4 or more children.

Education. This is measured in single years, as the number of school years completed, and coded into (1) no schooling, (2) elementary, and (3) higher.

Occupation. This is measured as the type of work performed: (1) non-agricultural, (2) agricultural, and (3) no work.

Place of residence. This is categorised into (1) urban, and (2) rural residence.

Acceptability of media messages on family planning. Wives and their spouses were asked whether they accept family planning messages to be on TV and radio. The codes are (1) yes, and (2) no/unsure.

Approval of family planning. Independently of each other, wives and their partners were asked whether they (1) approve, or (2) disapprove of the use of family planning to avoid pregnancy.

Couple communication. This asks the frequency with which wives discussed family planning with their husbands, and vice versa, in the past year. The categories are (1) never, and (2) some discussion.

Estimation techniques

To examine the probability of contraceptive use or non-use among Ghanaian couples, logistic regression equations were estimated. Because of the need to specify the effects of the wife's characteristics *vis-à-vis* those of the husband's in terms of their contraceptive use, the analyses are performed separately for wives and husbands. Since the dependent variable is dichotomous, logistic regression is the preferred method. The

logistic model relates individual characteristics to the odds of occurrence or non-occurrence of an event or an outcome (Norusis, 1990). This is then transformed into a prediction of an occurrence and treated as a continuous interval, as follows:

$$\log P_i/1 - P_i = a + B_1x_1 + B_2x_2 + B_3x_3 \dots K + e$$

where P_i refers to the probability of an occurrence of an event, and the x_s are independent variables. This formula can be translated into a linear form as follows:

$$\text{Odds of contraception} = a + B_1x_1 + B_2x_2 \dots K + e$$

where the odds refer to the probability of contraceptive use or non-use.

This procedure is an appropriate technique for two reasons. First it assumes the relationships between the dependent variable, contraceptive use, and the independent variables are non-linear. Second, the distribution of contraceptive use among the sampled population is skewed, with many respondents reporting no use. This method, therefore, allows estimation of the probability or odds of contraceptive use or non-use in the population under study while holding all the other independent variables constant.

Results

Table 1 reports the summary characteristics of the respondents. In general, the husbands tend to be older than their wives. This pattern, consistent with other reports about marital patterns in many African societies, is echoed by the large age differences between spouses in the present study. While only about one-third of the couples have age differences of 4 years or less, 40% have age differentials of 10 or more years. The mean age difference for the sample is 9.2 years.

The educational attainment of the couples also differs. Among the men, 40% had no education, but a higher proportion (15%) had some secondary or more education. For the women, a sizable proportion (57%) report no schooling, with very few (4%) having received higher education. While two-thirds of husbands are engaged in agriculture, only 13% of wives work in agriculture, with 44% not currently working.

Regarding the family planning and communication variables, Table 1 shows that an overwhelming number of couples indicated that they accept family planning messages in the media, although slightly more husbands (83%) than wives (73%) did so. Nearly the same numbers (64% of wives and 68% of husbands) said they approved the use of family planning. Additionally, about two-thirds of the couples had discussed family planning in the past year. Although polygyny as an institution still exists in Ghana, nearly 70% of husbands and wives were in monogamous relationships.

In terms of the number of living children, while less than half of wives reported 4 or more children, about 60% of husbands did; the overall mean number of living children for husbands is 5.3 compared to only 3.7 for their wives. This disparity may be a reflection on polygyny and also the fact that while men continue to have children well into old age, childbearing for women ceases around age 50. As regards the desires for future births, about 30% of wives indicated that they do not want any more, compared to 25% of husbands. Around 50% of wives reported a period of over 2 years since their last birth, and a similar percentage reported an interval of less than 2 years.

Table 1. Percentage distribution of couples by variables used in the analyses of contraceptive use in Ghana (GDHS, 1988)

Variable	Couples			
	Wife		Husband	
	%	No.†	%	No.†
Contraceptive use				
Using a method	14.7	148	19.2	194
Using no method	85.3	862	80.8	816
Age (years)				
Under 26	25.9	262	6.9	70
26–35	42.6	430	31.9	322
36+	31.5	318	61.2	618
Educational level				
No education	56.7	573	40.0	404
Elementary	39.6	400	44.9	453
Higher	3.7	37	15.1	153
Occupation				
Non-agricultural	42.5	429	33.3	336
Agricultural	13.2	133	65.5	662
No work	44.3	447	0.6	6
FP advertising acceptable				
Yes	73.4	741	83.2	840
No/unsure	26.6	269	16.8	170
Approve use of FP				
Approves	64.4	650	68.1	687
Disapproves	35.6	359	31.9	322
Discuss FP with partner				
Some discussion	33.2	335	37.2	375
No discussion	66.8	673	62.8	634
Desire for future births				
More children	70.1	680	75.1	757
No more children	29.9	290	24.9	251
Couple's age difference				
Under 5 years	30.1	304	30.1	304
5–9 years	30.9	312	30.9	312
10+ years	39.0	394	39.0	394
Type of marriage				
Monogamy	68.6	693	69.7	704
Polygyny	31.2	314	30.3	306
Place of residence				
Urban	22.9	231	22.9	231
Rural	77.1	779	77.1	779
Last birth interval				
Up to 2 years	49.6	472	‡	‡
Over 2 years	50.4	479	‡	‡

Table 1. *Continued*

Variable	Couples			
	Wife		Husband	
	%	No.†	%	No.†
No. of living children				
Under 2	20.4	206	14.3	144
2–3	31.0	313	25.3	256
4+	48.6	491	60.4	610
Total	100.0	1010 ^b	100.0	1010 ^b

FP = family planning.

†Numbers vary because cases with missing data were omitted.

‡Data unavailable for husbands.

Table 2 gives the distribution of contraceptive use by the characteristics of the couples. On the whole, slightly more husbands (20%) than wives (16%) use contraceptives of any kind. Although there are no marked differences in contraceptive usage by type of marriage, some patterns seem to emerge with regard to age cohorts and usage. Generally, high proportions of older wives and husbands reported using a method than did their counterparts under 26 years of age. However, these cohort differences are more clearly seen among husbands than wives. For instance, only about 14% of husbands under 26 years but almost twice as many (25%) of men aged 26–35 years reported using a method.

As expected, there is a positive relationship between level of education and usage; as the level of education increases so does the proportion of both wives and husbands who use contraception. Other groups who tend to use contraceptives are non-agricultural workers, those couples who accept family planning advertisements, who approve of its usage, who discuss with their partners issues concerning family planning, those wanting no more children, and urban residents.

While the relationship between a couple's age difference and the wife's contraceptive use does not show a clear pattern, there appears to be an inverse relationship between age differential and usage for the husband. As age difference between spouses increases, the proportion of husbands using a method decreases.

The data on birth interval and contraceptive use indicate that slightly more wives with last birth interval of under 2 years reported using contraceptives than those whose last birth interval is over 2 years. Fewer wives and husbands with under two living children indicated that they use contraceptives than their counterparts with more living children. For instance, Table 2 indicates that while the proportions of husbands using a method by parity are slightly higher than the proportions for wives, almost twice as many husbands and wives reported using a method if they had two or more children living than if they had fewer than two children living.

Figure 1 shows the kinds of contraceptives Ghanaian couples are using. The most

Table 2. Percentage distribution of contraceptive use among Ghanaian couples*, by independent variables (GDHS, 1988)

Variable	Couples			
	Wife		Husband	
	No method	Use method	No method	Use method
Age (years)				
Under 26	85.5	14.5	86.3	13.7
26–35	83.1	16.9	75.2	24.8
36 +	83.2	16.8	81.2	18.8
Educational level				
No education	89.9	10.1	91.8	8.2
Elementary	75.9	24.1	75.8	24.2
Higher	70.0	30.0	59.2	40.8
Occupation				
Non-agricultural	78.2	21.8	72.1	27.9
Agricultural	85.7	14.3	83.8	16.2
No work	88.6	11.4	50.0	50.0
FP advertising acceptable				
Yes	79.2	20.8	76.0	24.0
No/unsure	96.7	3.3	97.1	2.9
Approve use of FP				
Approves	76.3	23.7	71.1	28.9
Disapproves	98.2	1.8	97.3	2.7
Discuss FP with partner				
Some discussion	67.3	32.7	60.7	39.3
No discussion	91.7	8.3	91.1	8.9
Desire for future births				
No more children	78.4	21.6	70.9	29.1
More children	85.9	14.1	82.5	17.5
Couple's age difference				
Under 5 years	84.9	15.1	74.7	25.3
5–9 years	80.0	20.0	80.8	19.2
10 + years	85.8	14.2	82.3	17.7
Type of marriage				
Monogamy	82.5	17.5	78.7	21.3
Polygyny	86.6	13.4	81.5	18.5
Place of residence				
Urban	72.8	27.2	70.2	29.8
Rural	87.1	12.9	82.4	17.6
Last birth interval				
Up to 2 years	81.9	18.1	†	†
Over 2 years	84.4	15.6	†	†

Table 2. *Continued*

Variable	Couples			
	Wife		Husband	
	No method	Use method	No method	Use method
No. of living children				
Under 2	89.6	10.4	88.5	11.5
2-3	82.4	17.6	75.6	24.4
4+	82.4	17.6	79.3	20.7
All couples	83.7	16.3	79.6	20.4

*Non-pregnant, fecund, couples only.

†Data unavailable for husbands.

widely used methods by both husbands and wives are periodic abstinence, followed by the pill. As expected, more husbands reported using condoms than wives. The IUD, injections, diaphragm, and foaming tablets are rarely used by Ghanaian couples. Further analysis of the data (not shown here) on the use of periodic abstinence revealed that for both wives and husbands the practice is more prevalent among rural residents compared to urban residents, and among those with no education or elementary schooling compared to their counterparts with post-elementary education. While about one-third of the wives who use periodic abstinence did not use any specific method to determine which days to abstain from sexual intercourse, over half used the calendar method, with the rest using a combination of body temperature and mucus. (Data for the methods of periodic abstinence used by husbands were not available. Also unavailable were data for both wives and husbands on how long they have been using periodic abstinence.)

Determinants of contraceptive use

The determinants of contraceptive use were investigated by modeling six separate logistic regression equations, three each for the wives and husbands. In each of the equations, contraceptive use was used as the dependent variable, holding a set of independent variables constant. Model I first examined the direct effects of the respondent's (wife or husband) characteristics on contraceptive use. Model II included the characteristics of the other spouse. Model III included, in addition to the couple characteristics, the following control variables: couple's age difference, type of marriage, place of residence, and number of living children.

The coefficients are the odds of contraceptive use represented as $\text{Exp}(B)$. If the coefficient is positive, this factor will be greater than 1 indicating that the odds are increased for those in the category; a factor less than 1 indicates that the odds are decreased; a factor equal to 1 leaves the odds unchanged for those in the category (Norusis, 1990).

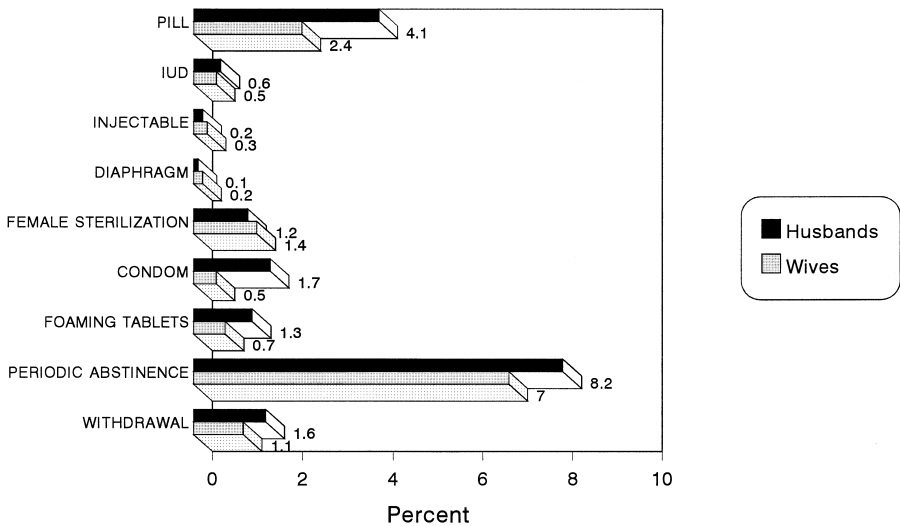


Fig. 1. Contraceptive prevalence among Ghanaian couples, 1988 (GDHS, 1988).

Table 3 displays estimates of the effects of couple characteristics on the odds of contraceptive use for currently married women. In general, the results are consistent with the expectations about the impact of family planning variables on contraceptive use. Approval of the use of family planning services has a strong effect on contraceptive use. For all three models, approval of the use of family planning, and discussion of family planning issues with their partners are found to be significantly related to wives' contraceptive use, even after husbands' characteristics and the other control variables have been taken into account.

Holding all the other variables constant, for instance, women who discuss family planning with their partners are nearly two and half times as likely ($\text{Exp}[B]=2.30$) to use contraceptives compared to those who never engage in any discussion. The biggest impact, however, is found among women who approve of the actual use of family planning services. The coefficient ($\text{Exp}[B]=6.34$), suggests that these women are almost six and a half times as likely to use contraceptives as those who do not approve of family planning.

The inclusion of the husband's characteristics (Model II) does not alter the direction of the coefficients nor the effects of these variables on contraceptive use by the wife. Taking all the other variables into account, husband's approval of the use of family planning ($\text{Exp}[B]=1.69$) and discussion of family planning with his wife ($\text{Exp}[B]=1.94$) increase the likelihood of the wife's contraceptive usage. Indeed, holding all the other variables constant, the coefficient for the husband's discussion of family planning with his spouse is still significant at the 0.05 level. Except for urban residence ($\text{Exp}[B]=2.31$), which significantly increases the odds of contraceptive use for women, most of the explanatory variables (including time since the last birth, and the number of living children) are not significant. These findings are consistent with earlier studies that suggest that family planning programmes as well as urban exposure have positive effects on contraceptive use (Kar & Talbot, 1980; WFS, 1984; Aryee, 1985; Mauldin & Segal, 1988).

Table 3. Logistic regression estimates of the effects of couple characteristics on the odds of contraceptive use among currently married women (GDHS, 1988)

Couple characteristics	Model		
	I	II	III
Wife's characteristics			
Age (years)			
Under 26	1.11	1.16	0.95
26-35	0.92	0.91	0.96
Educational level			
No education	0.68*	0.65	0.68
Elementary	0.98	0.95	0.95
Occupation			
Non-agricultural	1.28	1.25	1.17
Agricultural	1.03	1.05	1.22
FP advertising acceptable	2.04	1.92	1.79
Approve use of FP	6.95**	6.21**	6.34**
Discuss FP with partner	2.67**	2.13**	2.30**
Desire no more children	0.97	1.06	1.10
2+ years since last birth	0.94	0.96	0.95
Husband's characteristics			
Age (years)			
Under 26		0.72	1.00
26-35		1.12	1.18
Educational level			
No education		1.22	1.27
Elementary		1.04	1.08
Non-agricultural		0.99	1.45
FP advertising acceptable		0.97	0.99
Approve use of FP		1.56	1.69
Discuss FP with partner		1.74*	1.94*
Desire no more children		0.75	0.64
Control variables			
Couple's age difference			
<5 years			0.60*
5-9 years			1.28
Whether polygynous			0.82
Whether urban residence			2.31**
Wife's no. of living children			
2-3			1.17
4+			1.05
χ^2	123.01**	10.23	17.33**
(df)	(11)	(9)	(6)
N	759	759	759

* $p < 0.05$; ** $p < 0.01$.

Model I: includes only wife's characteristics.

Model II: includes wife's plus husband's characteristics.

Model III: includes wife's and husband's characteristics plus control

variables.

Table 4. Logistic regression estimates of the effects of couple characteristics on the odds of contraceptive use among currently married men (GDHS, 1988)

Couple characteristics	Model		
	I	II	III
Husband's characteristics			
Age (years)			
Under 26	0.70	0.76	0.99
26-35	1.27	1.31	1.33
Educational level			
No education	0.57**	0.68*	0.67
Elementary	1.05	1.00	1.03
Non-agricultural	1.04	1.14	1.24
FP advertising acceptable	1.98	1.69	1.59
Approve use of FP	6.14**	4.79**	5.14**
Discuss FP with partner	2.89**	2.68**	2.86**
Desire no more children	1.29	1.07	1.07
Wife's characteristics			
Age (years)			
Under 26		0.90	0.82
26-35		1.05	1.03
Educational level			
No education		0.77	0.77
Elementary		0.93	0.92
Occupation			
Non-agricultural		1.20	1.14
Agricultural		0.69	0.73
FP advertising acceptable		0.88	0.87
Approve use of FP		2.87**	2.95**
Discuss FP with partner		1.07	1.11
Desire no more children		1.26	1.40
2+ years since last birth		1.18	1.26
Control variables			
Couple's age difference			
<5 years			0.86
5-9 years			0.84
Whether polygynous			1.24
Whether urban residence			1.38
Husband's no. of living children			
2-3			2.76*
4+			1.63
χ^2	154.75**	19.69*	12.69*
(df)	(9)	(11)	(6)
N	760	760	760

* $p < .05$; ** $p < .01$.

Model I: includes only husband's characteristics.

Model II: includes husband's plus wife's characteristics.

Model III: includes husband's and wife's characteristics plus control

variables.

Although the discussion of family planning on its own may have a positive effect on contraceptive use, husband's characteristics compared to those of the wife appear to decrease slightly the impact of the coefficients in the models. With limited power, the decisions of the husband would be expected to dictate the pattern of family formation and limitation in relationships based on unequal power.

The effects of couple characteristics on the odds of contraceptive use for husbands are shown in Table 4. The logistic regression analysis for the husbands provides results consistent with those reported for the wives. Comparing Tables 3 and 4, it is clear that the family planning and communication variables consistently increase the odds of contraceptive use. Just as in the previous models, most of the family planning measures are significant for the equations on the men.

Among the men, however, the number of living children is a significant predictor of his contraceptive use. Compared to husbands with fewer than two children, those with two or more children are likely to use contraception when all the other background variables are taken into account. In fact, husbands with two–three children are nearly three times as likely to use contraception ($\text{Exp}[B]=2.76$) than their counterparts with fewer than two children, and the effect is statistically significant.

Unlike the results from the wife's models, the effects of age differences between spouses, place of residence and the wife's discussion with her partner are not significant. Approval of the use of family planning by the husband or his wife appears to influence significantly his contraceptive use. Finally, for Model III of Table 4, it is also clear that husbands who discuss family planning are more likely to use contraception than those who do not ($\text{Exp}[B]=2.86$). This suggests that intra-family communication by itself seems to encourage the use of contraception. The frequency of such discussion is thus expected to have a positive effect on contraceptive use.

Conclusions

Despite the widespread knowledge of contraceptives in Ghana and many other African countries, surveys have repeatedly shown that few women actually use contraceptives. The analysis reported here provides some answers to this pattern of contraceptive use. Overall, this analysis of data on women and men in Ghana confirms the assertion that the couple's decision-making process may indeed affect contraceptive behaviour. Much as younger cohorts were less likely to use contraceptive methods than older cohorts, low parity couples were similarly less likely to use methods compared to their counterparts with two or more living children.

The influence of family planning and family limitation measures as well as communication variables were all found to be important predictors of contraceptive use. The discussion of family planning by either the wife or the husband was associated with marked increase in contraceptive use. Also, when couples approve of the use of family planning, they were more likely to be using contraception.

These findings are consistent with the results of previous studies which show that the nature of the household structure, and the nature of communication within such a household invariably influence decisions about reproductive behaviour (Oppong, 1987; Mbizvo & Adamchak, 1991; Ezeh, 1993; Dadoo & Seal, 1994).

The couple data on contraceptive use also indicate that husbands' characteristics

affect wives' fertility outcomes—especially regarding her contraceptive behaviour. While the effects of the husband's characteristics were not as strong as those of the wives, there is evidence to suggest that his input may be needed when it comes to contraceptive use. The present findings appear to confirm observations in The Gambia, namely that contraceptive use entails a series of negotiations (Bledsoe *et al.*, 1994).

Although this study did not ascertain the reasons behind the non-use of contraceptives, the pattern of use may suggest that the decisions on usage perhaps involve more than the wife's desire to limit her fertility, or space her births; the pattern of use may also involve the number of living children. In patriarchal societies such as exists in Ghana where most women have limited autonomy, reproductive decisions and behaviour may involve both partners. The support of the husband, in particular, in reproductive decisions is crucial because he often needs many children, not only to prove his manhood, but also to increase his family's leverage in socio-political networking and economic advancement (Bledsoe, 1990).

As previous studies have also shown, education invariably influences decisions about contraceptive use (Cochrane, 1979; Oheneba-Sakyi, 1992; Takyi, 1993; Martin, 1995). A review of DHS data from 26 countries (Martin, 1995) confirms the education–fertility–reduction hypothesis. Higher education is consistently found to be associated with reduced fertility. There is some evidence from the present analysis to validate the prevailing assertions: both wives and husbands with some education were more likely to use contraceptives than their counterparts without education, although the effects of the wife's or husband's education on her/his contraceptive use were not significant when the effects of other variables are controlled for. The implication is that increased education may continue to help change the fertility behaviour of African women and probably their husbands too.

The results presented here suggest that several measures could be introduced by policy makers in sub-Saharan Africa to encourage couples to use contraceptives. First, there is need for an in-depth understanding of the intra-household dynamics of sexual and gender relations and their effect on couple's decision-making processes. Such knowledge could guide programmes designed to involve both wives and husbands in issues about family limitation since their communication and approval invariably affect contraceptive use.

Indeed, there are compelling reasons to challenge the traditional approach used so far that marginalises men in the formulation and implementation of family planning programmes in most African societies. The study emphasises the need to involve husbands more in family planning programmes because some methods of contraception such as condom use, periodic abstinence or rhythm, require the co-operation and support of the husband.

Second, formal education is expected to increase the demand for contraceptives for the familiar reasons that formal education would transform the traditional norms of procreation, open up communication channels between spouses, usher in more individual parental responsibilities for children, and create more emphasis on the smaller family unit as opposed to the larger lineage or extended family interests. As many previous studies have shown, all these factors are likely to encourage the use of effective contraception, and reduced fertility outcomes, But clearly, more work needs to be done in specifying the measures and mechanisms through which couples' behaviour can be integrated in family planning programmes in Africa.

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References

- APPIAH, R. (1985) Knowledge and use of contraception. In: *Demographic Patterns in Ghana: Evidence from the Ghana Fertility Survey 1979–80*, pp. 97–142. Edited by S. Singh, J. Y. Owusu & I. H. Shah. International Statistical Institute, Voorburg, Netherlands.
- ARNOLD, F. & BLANC, A. (1990) *Fertility Levels and Trends*. Demographic Health Surveys Comparative Studies, No. 2. Institute of Resource Development/Macro Systems, Columbia, Maryland.
- ARYEE, R. (1985) Nuptiality patterns in Ghana. In: *Demographic Patterns in Ghana: Evidence from the Ghana Fertility Survey 1979–80*, pp. 17–48. Edited by S. Singh, J. Y. Owusu & I. H. Shah. International Statistical Institute, Voorburg, Netherlands.
- AWUSABO-ASARE, K. (1990) Matriliney and the new intestate succession law of Ghana. *Can. J. Afr. Stud.* **24**, 1–16.
- BECKER, G. (1960) An economic analysis of fertility. In: *National Bureau of Economic Research, Demographic and Economic Change in Developed Countries*. Princeton University Press, Princeton, NJ.
- BIRDSALL, N. & SAI, F. (1988) Family planning services in sub-Saharan Africa. *Finance Dev.* March, 28–31.
- BLEDSE, C. (1990) Transformations in sub-Saharan African marriage and fertility. *Ann. Am. Acad. polit. social Sci.* **510**, 115–125.
- BLEDSE, C., HILL, A., D'ALESSANDRO, U. & LANGEROCK, P. (1994) Constructing natural fertility: the use of western contraceptive technologies in rural Gambia. *Popul. Dev. Rev.* **20**, 81–113.
- BONGAARTS, J. (1995) *The Role of Family Planning Programs in Contemporary Fertility Transitions*. Research Paper No. 71, The Population Council, New York.
- BOSERUP, E. (1985) Economic and demographic interrelationships in sub-Saharan Africa. *Popul. Dev. Rev.* **11**, 383–397.
- BULATAO, R. & LEE, R. (1983). *Determinants of Fertility in Developing Countries*, Vol. I, *Supply and Demand for Children*. Academic Press, New York.
- CAIN, M. (1984) *Women's Status and Fertility in Developing Countries: Son Preference and Economic Security*. Center For Policy Studies Working Paper No. 10, The Population Council, New York.
- CALDWELL, J. (1982) *A Theory of Fertility Decline*. Australian National University Press, Canberra.
- CALDWELL, J. (1986) Routes to low mortality in poor countries. *Popul. Dev. Rev.* **12**, 171–220.
- CALDWELL, J. & CALDWELL, P. (1987) The cultural context of fertility in Africa. *Popul. Dev. Rev.* **13**, 409–438.
- CHAUDHURY, R. (1982) *Social Aspects of Fertility, with Special Reference to Developing Countries*. Vikas, New Delhi.
- COCHRANE, S. (1979) *Fertility and Education: What Do We Really Know?* Occasional Papers No. 405, World Bank, Washington, DC.
- COCHRANE, S. & FARID, S. (1990) *Fertility in Sub-Saharan Africa: Analysis and Explanation*. Discussion Papers No. 43, World Bank, Washington, DC.
- DODOO, N-A. F. & SEAL, A. (1994) Explaining spousal differences in reproductive preferences: a gender inequality approach. *Popul. Envir.* **15**, 379–394.
- EBIN, V. (1982) Interpretation of infertility: the Aowin of south west Ghana. In: *Ethnography of Fertility and Birth*. Edited by C. P. MacCormarck. Academic Press, New York.

- EZEH, A. (1993) The influence of spouses over each other's contraceptive attitudes in Ghana. *Stud. Fam. Plann.* **24**, 163–174.
- GHANA STATISTICAL SERVICE & MACRO INTERNATIONAL (1994) *Ghana Demographic and Health Survey 1993*. Accra, Ghana, and Calverton, Maryland.
- GOLIBER, T. (1989) Africa's expanding population: old problems, new policies. *Popul. Bull.* **44**, 1–50.
- ISIUGO-ABANIHIE, U. (1985) Child fosterage in West Africa. *Popul. Dev. Rev.* **11**, 53–73.
- KAR, S. & TALBOT, J. (1980) Attitudinal and nonattitudinal determinants of contraception: a cross-cultural study. *Stud. Fam. Plann.* **11**, 51–64.
- KASARDA, J., BILLY, J. & WEST, K. (1986) *Status Enhancement and Fertility: Reproductive Responses to Social Mobility and Educational Opportunity*. Academic Press, Orlando, Florida.
- LOCKWOOD, M. (1995) Structure and behavior in the social demography of Africa. *Popul. Dev. Rev.* **21**, 1–32, 216–217, 219.
- MAMLOUCK, M. (1982) *Knowledge and Use of Contraceptives in Twenty Developing Countries*. Reports on the World Fertility No. 3. Population Reference Bureau, Washington, DC.
- MARTIN, T. (1995) Women's education and fertility: results from 26 Demographic and Health Surveys. *Stud. Fam. Plann.* **26**, 187–202.
- MASON, K. (1987) The impact of women's social position on fertility in developing countries. *Sociol. Forum*, **2**, 718–745.
- MAULDIN, P. & SEGAL, S. (1988) Prevalence of contraceptive use: trends and issues. *Stud. Fam. Plann.* **19**, 335–353.
- MCGINN, T., BAMBA, A. & BALMA, M. (1989) Male knowledge, use and attitudes regarding family planning in Burkina Faso. *Int. Fam. Plann. Perspect.* **15**, 84–87.
- MBIZVO, M. & ADAMCHAK, D. (1991) Family planning knowledge, attitudes and practices of men in Zimbabwe. *Stud. Fam. Plann.* **22**, 31–38.
- NORUSIS, M. (1990) *SPSS Advanced Statistics Student Guide*. SPSS, Chicago.
- OHENEBA-SAKYI, Y. (1992) Determinants of current contraceptive use among Ghanaian women at the highest risk of pregnancy. *J. biosoc. Sci.* **24**, 463–475.
- OLUSANYA, P. (1971) Status differentials in the fertility attitudes of married women in two communities in western Nigeria. *Econ. Dev. cult. Change*, **19**, 641–651.
- OPPING, C. (1982) *Middle Class African Marriage*. Allen & Unwin, London.
- OPPING, C. (1983) Women's roles, opportunity costs and fertility. In: *Determinants of Fertility in Developing Countries*, pp. 439–473. Edited by R. A. Bulatao & R. D. Lee. Academic Press, New York.
- OPPING, C. (1987) *Sex Roles, Population and Development in West Africa: Policy Related Studies in Work and Demographic Issues*. Curry, London.
- POPULATION REFERENCE BUREAU (1994) *World Population Data Sheet*. Washington, D.C.
- PRICHETT, L. (1994) Desired fertility and the impact of population policies. *Popul. Dev. Rev.* **20**, 1–55.
- REPUBLIC OF GHANA GAZETTE (1985) *Intestate Succession Law*. Information Services Department, Accra, Ghana.
- RUTENBERG, N. & DIAMOND, I. (1991) *Fertility in Botswana. Recent Declines and Future Prospects*. Report to USAID, Botswana.
- TAKYI, B. (1993) *The Status of Women and Fertility Behavior in Sub-Saharan Africa: Effects of Female Labor Force Participation and Gender Preferences on Fertility Behavior in Ghana*. PhD thesis, Department of Sociology, State University of New York, Albany, NY, USA.
- UNITED NATIONS (1987) *Fertility Behavior in the Context of Development: Evidence from the World Fertility Survey*. New York.
- WORLD FERTILITY SURVEY (1984) *World Fertility Survey: Major Findings and Policy Implications*. ISI, London.