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ETHNICITY AND CONTRACEPTIVE USE IN SUB-SAHARAN AFRICA: THE CASE OF GHANA

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Summary. Using a sub-sample of ever-married women from the 1993 Ghana Demographic and Health Survey (GDHS), this study examines differentials in contraceptive use in six cultural groups: Ga-Adangbe, Twi, Fante/other Akans, Ewe, Guan/others and Mole-Dagbani. Multivariate analysis is used to explore whether reported ethnic differentials in contraceptive use can be attributed to ethnicity or to other characteristics that distinguish the ethnic groups. Overall, the findings are generally more consistent with the 'characteristics' hypothesis, because contraceptive use differentials by ethnic group is accounted for by differences in socioeconomic and demographic characteristics of these women. However, for the Fante/other Akans, even after the necessary controls, ethnicity continued to emerge as a significant determinant of contraceptive use. Programmatic implications of these results are discussed.

Introduction

Contraceptive use has been cited as an important determinant of fertility transition in developing countries, and particularly sub-Saharan Africa (Bongaarts, 1995; United Nations Population Fund, 1992; Robinson, 1992; Lucas, 1992; Donaldson & Tsui, 1990; Bongaarts, Mauldin & Philips, 1990; Knodel, Havanon & Pramualratana, 1984). The persistent high fertility of sub-Saharan Africa has been blamed, among other things, on low contraceptive use (Page, 1987; Cochrane & Farid, 1985). The region exhibits the lowest level of contraceptive use in the world (United Nations Population Fund, 1992).

Contraceptive prevalence rates in the region mask considerable variations among subgroups (e.g. Tawiah, 1997; Agyei & Migadde, 1995; Bledsoe *et al*., 1994; National Research Council, 1993). For instance, Ghana Demographic and Health Survey (GDHS) data show differences in contraceptive use and fertility among the major ethnic groups in the country (Addai & Trovato, in press; Tawiah, 1997; Addai, 1996). These groups differ with regard to place of residence, educational attainment, religious affiliation, socioeconomic status and region of residence. The question then is: Do ethnic variations in contraceptive use reflect differences in socioeconomic and demographic characteristics or ethnicity (culture) *per se*?

The roles of socioeconomic and demographic characteristics and the cultural label

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of ethnicity in shaping contraceptive use in sub-Saharan Africa have been alluded to in the literature. However, as the National Research Council (1993, pp. 219–220) has pointed out, the relative effects of socioeconomic and cultural factors on contraceptive demand and use in the region need more empirical assessment. For instance, although contraceptive use in Ghana has been well researched (e.g. Tawiah, 1997; Oheneba-Sakyi & Takyi, 1997; Doodo, 1993, 1992; Oheneba-Sakyi, 1992; Appiah, 1985), the relative effect of ethnicity *per se* (culture) independent of socioeconomic and demographic factors on contraceptive use has not been thoroughly probed. Therefore, this study represents one of the few attempts at assessing the relative contribution of socioeconomic and demographic factors and ethnicity (culture) to the explanation of contraceptive use differences in sub-Saharan Africa, and particularly in Ghana.

Given the high rate of population growth, rapid modernization, and the pervasiveness and importance of ethnicity in sub-Saharan Africa, this region provides an ideal setting for the study of ethnic differentials in contraceptive use. Furthermore, although the cultural label of ethnicity remains an important sociocultural element in sub-Saharan Africa, its influence is being challenged by mass media, urbanization, education and changes in social institutions. These factors tend to promote secularism and individualism, and generate material and social expectations that compete with the cultural pronatalist values and practices in the region (Robinson, 1992; Miller *et al*., 1991; Lesthaeghe, 1989; Caldwell, 1982). There have been, for instance, changes in the laws of property inheritance in Ghana, as well as a weakening of the role of members of the corporate clan in the marriage process (Awusabo-Asare, 1990; Aryee, 1985). All these social changes have implications for contraception and, ultimately, childbearing (Oheneba-Sakyi & Takyi, 1997).

To assist policymakers, it is essential to ascertain whether ethnic contraceptive use variations are the result of socioeconomic and demographic disparity among the groups, or whether such differences reflect the values, norms, beliefs, ideals and doctrines of the cultural groups. If ethnic differences in contraceptive use can be attributed to socioeconomic and demographic characteristics rather than to ethnicity itself, then family planning programmes can be targeted to compensate for the differences between groups in traits such as education, employment and age at marriage. If, however, ethnicity itself is an obstacle to contraceptive use, then a culturally based barrier may exist, in which case simply expanding availability of services or altering mode of delivery may do little towards increasing contraceptive use.

The central hypothesis of this paper is that, although Ghanaians have diverse cultural backgrounds and attachments, ethnicity *per se* will not be a strong predictor of contraceptive use after the relevant socioeconomic and demographic characteristics have been controlled.

Theoretical background

Generally, group differences in contraceptive use have been explained from two competing perspectives. One school of thought emphasizes differences in socioeconomic and demographic characteristics as the main cause of observed differences in contraceptive use levels (United Nations, 1987; Goldscheider, 1971). This perspective is called the 'characteristics' hypothesis. The major thrust of this thesis is

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that the effect of ethnic membership on contraceptive use merely reflects socioeconomic and demographic differences between the members of different ethnic groups.

The basic assumption is that irrespective of ethnic background, people who possess the same socioeconomic and demographic characteristics should have similar ideals and practices for fertility limitation. Ethnic differences in contraceptive use are seen as resulting solely from socioeconomic and demographic differences in educational attainment, age at marriage, female labour force participation and other such characteristics (Kasarda, Billy & West, 1986; Bulatao & Lee, 1983; Cochrane, 1979). Therefore, once differences in socioeconomic and demographic characteristics are eliminated through statistical controls, then contraceptive use variations among the ethnic populations should disappear.

An alternative explanation is the 'ethnic' (cultural) hypothesis of human behaviour. This perspective assigns equal importance to the role of ethnicity independent of socioeconomic and demographic factors in explaining ethnic contraceptive use levels (Caldwell, Orubuloye & Caldwell, 1992; Caldwell & Caldwell, 1987; Warwick, 1988; Van de Walle & Ebigbola, 1987). Though accepting the premises of the characteristics thesis, this perspective suggests that the resistance to the means of fertility regulation is partly culturally determined. Thus, the cultural features of the various groups may be the key to understanding variations in contraceptive use and hence fertility levels within groups (Goody, 1990; Caldwell & Caldwell, 1988; Frank & McNicoll, 1987).

The ethnic (cultural) effect on the reproductive behaviour of fertility limitation in sub-Saharan Africa emphasizes the importance of heritage and descent in indigenous religious and social structures. For example, ancestral worship has been suggested as a rationale behind high fertility in sub-Saharan Africa (Caldwell & Caldwell, 1985, 1987, 1988). The need to meet the social demands for procreation as a means of bringing ancestors back to life creates widespread resistance to the use of modern contraception in the region (Caldwell & Caldwell, 1987, p. 417).

The ethnic (cultural) explanation, therefore, assigns predominant importance to group norms on the assumption that members of specific groups share norms, ideals and beliefs that tend to offer potentially powerful sources of resistance to the idea of birth control. Also, the extent of opposition to fertility regulation may be influenced by the degree to which a particular culture is open to outside knowledge and ideas. Since knowledge of modern contraceptive methods is perceived as outside knowledge among cultural groups, the degree of openness to outside ideas and suggestions is critical to their acceptance and hence adoption (Cleland, 1990).

Ethnic differences in openness to outside ideas and contraceptive use may be shaped by the pre- and post-independent regional and urban–rural development policies of the country. Because of the regional and urban–rural distribution of the various cultural groups in Ghana (Ewusi, 1976), disparity in social and economic wealth at the macro level may shape receptivity to birth limitation and accessibility to contraceptive services among cultural groups. For instance, health and contraceptive services are more accessible in urban than rural areas.

Also, regional differences in standard of living, infrastructure, social and health services, level of literacy and modernization tend to influence accessibility to contraceptive methods, advice and services (National Research Council, 1993). In Ghana, the more highly developed regions such as Greater Accra tend to have a higher

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contraceptive prevalence than the least developed regions (Ghana Statistical Service, 1993; Appiah, 1985). Therefore the ethnic variation in contraceptive use may reflect accessibility factors such as current place and region of residence.

The imprint of ethnic affiliation on reproductive behaviour such as fertility regulation in sub-Saharan Africa may also be mediated through unique fertility-inhibiting practices that characterize a particular ethnic group. In sub-Saharan Africa, differences in duration of breast-feeding and post-partum sexual abstinence, prevalence of polygamy, and infertility provide other mechanisms through which subgroup membership may operate to perpetuate differences in reproductive behaviour, including contraception (Benefo, Tsui & Johnson, 1994; Larsen, 1989; Bongaart, Frank & Lesthaeghe, 1984; Schoenmaeckers *et al.*, 1981; Gaisie, 1981; Retel-Laurentin, 1974). For example, Gaisie's (1981) analysis of the World Fertility Survey (WFS) data for Ghana, Cote d'Ivoire, Cameroon and Senegal showed that ethnic differentials in abstinence persist after controlling for socioeconomic and demographic variables.

Data and methods

The data analysed in this study are taken from the Ghana Demographic and Health Survey (GDHS) of 1993. The GDHS is a nationally representative, stratified, self-weighting probability sample of women aged 15–49. Households were identified using a three-stage cluster sampling procedure based on census enumeration areas, ecological zones as well as rural and urban localities. One hundred and fifty census enumeration areas were selected for the survey, with probability proportional to the number of 1984 census households. Ninety-eight per cent of all eligible women (women within the stated age range of the study, who spent the previous night in the selected household) were successfully interviewed, resulting in a final sample of 4562 women (Ghana Statistical Services and Institute for Resource Development/Macro systems, Inc. [GSS and IRD], 1993).

Limitations of the GDHS data collected in retrospective birth histories are well documented (Rutstein & Bicego, 1990) and will not be highlighted here. While the GDHS is considered inferior to the World Fertility Survey (WFS), sociodemographic data compare favourably with information gathered by the WFS (Blanc & Rutenberg, 1990). Rutstein and Bicego's (1990) appraisal of the quality of the GDHS data used to ascertain eligibility and age variables concluded that with the high household response of about 95% there is little possibility that significant bias has occurred in the demographic estimates. Therefore analysis at the individual level does produce valid aggregate measures.

Analysis

The analysis is carried out in three stages. The first stage provides descriptive statistics of the selected characteristics of all ethnic groups to indicate the socioeconomic and demographic disparity between the groups. At the second stage, family planning knowledge, attitudes, past and current contraceptive use distribution and ideal number of children desired among the cultural groups are assessed to serve as background to the multivariate analysis. Finally, logistic regression is used to

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estimate multivariate models of the odds of specific ethnic groups using contraception. The model helps estimate differentials in contraceptive use for different ethnic groups, while simultaneously controlling for other measurable factors associated with contraceptive use. If the characteristics hypothesis is correct, then when other background variables are controlled for by logistic regression, the coefficients for ethnicity should not be significant.

The logistics regression model estimates a linear model of the form:

$$\ln(p_i/[1-p_i]) = b_0 + b_i X_i,$$

where p_i is the estimated probability of a particular event occurring to an individual with a given set of characteristics, X_i; b_0 is a constant that defines the probability p_0 for an individual with all X_i set to zero; and b_i are the estimated coefficients. The ratio $p_i/[1-p_i]$ is the odds ratio of women with the given set of characteristics using versus not using contraception. The estimate of b_i for a particular covariate X_i is interpreted as the difference in the predicted log odds between those who fall within that category of characteristics and those who fall within the reference or omitted category for that characteristic. If each estimated b_i is exponentiated (exp[b_i]), the result can be interpreted as giving the relative odds of using contraception for those individuals with characteristic X_i relative to those individuals in the reference group. All results of multivariate models presented are given as the exponentiated coefficients. The unit of analysis is ever-married women at the time of the survey categorized by ethnic background.

Dependent variables

The log of number of events to non-events is the dependent variable in the logistic models. Two separate analyses with dichotomous dependent variables are performed. The dependent variable in the first analysis is whether or not a woman is currently using any contraception (coded 0 = no, 1 = yes). In the second analysis only women using contraception are included; the dependent variable is the type of method currently used (coded 0 = traditional, 1 = modern).

Independent variable

The independent variable for the study is ethnicity categorized into: Ga-Adangbe, Twi, Fante/other Akans, Ewes, Guan/others and Mole-Dagbani.

Control variables

The socioeconomic and demographic characteristics selected as control variables are:

(a) Respondent's and husband's educational attainment as measured by: (1) no education, (2) primary/junior secondary school (Jss) and (3) senior secondary/higher.
(b) Respondent's occupation, as indicated by: (1) no work, (2) professional/clerical, (3) sales/services, (4) agriculture, and (5) manual – skilled and unskilled.
(c) Place of residence, grouped by: (1) urban, (2) rural.
(d) Region of residence, categorized into: (1) Western/Central, (2) Greater Accra, (3) Eastern/Ashanti/Brong Ahafo, (4) Volta, and (5) Northern/Upper.

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(e) Age of respondent, classified into: (1) 15–24, (2) 25–34, and (3) 35–49.
(f) Age at first marriage, grouped into: (1) under 20 years, and (2) 20 years and over.
(g) Number of living children, categorized into: (1) 0, (2) 1–2, (3) 3–4, and (4) 5+.

Each predictor has been selected for inclusion in the analysis for explicit theoretical reasons and availability in the data set. For example, ethnicity represents the cultural identity of the respondent. For a host of reasons, level of formal schooling is expected to be conducive to use of modern contraceptive methods. While any effect of social identity on access to contraceptive services is indirect, other factors provide more direct measures of access. Current place of residence (urban and rural) and region of residence are included in the analysis as indicators of geographical proximity or accessibility to contraceptive facilities and services.

Results

Descriptive statistics

Table 1 summarizes the socioeconomic and demographic characteristics of the groups under study. In relation to region of residence, the ethnic groups vary on a homogeneity–diversity continuum with the Twi and the Mole-Dagbani being homogeneous and the Fante/other Akans, the Guan/others and the Ewe being more diverse. Because most family planning clinics in the country are concentrated in the Greater Accra region, home of the Ga-Adangbes, this group has an advantage (Appiah, 1985). If regional distribution of family planning clinics is a factor in contraceptive use, then the Ga-Adangbe should be different from the other groups.

The Ga-Adangbes are the most educated, followed by the Twis. The Guan/others and the Mole-Dagbani women are the least educated. Because education is positively associated with contraceptive use, the Mole-Dagbanis, the Ewes and the Guan/others again may be at the greatest disadvantage.

Working in the formal sector is typically associated with contraceptive use. Compared with the Mole-Dagbani and the Guan/others, twice as many women of the Twi and the Ga-Adangbe tend to work in the professional/clerical and sales/service sectors of the economy. Therefore higher contraceptive use by the Ga-Adangbes and the Twis might be expected.

The ethnic differential is marked for residential background. For example, the Ga-Adangbes have about 60% of their population in urban areas as compared with 31% and 38% for the Ewes and the Fante/other Akans, respectively. Area of residence can also be a factor in obtaining contraceptive services. The tropical terrain and lack of roads, especially all-weather motorable roads, in rural areas may act as an obstacle to obtaining contraceptive advice and methods. Therefore, the forest-inhabiting groups such as the Twi, the Guan/others and the Mole-Dagbani are expected to be disadvantaged in obtaining modern contraceptive methods. For example, 81% of the Mole-Dagbanis and nearly three-quarters of the Guan/others live in rural areas.

Irrespective of ethnic background, knowledge of modern contraceptive methods and approval of family planning are very high among the respondents. Current contraceptive use varies among the groups. For instance, whereas about 26% of the Ewe women are currently engaged in some form of contraception, the figures for the

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Table 1. Percentage distribution of selected characteristics of ever-married women aged 15–49 by ethnic groups in Ghana, 1993

Selected characteristics	Ga-Adangbe	Twi	Fante/other Akans	Ewe	Guan/others	Mole-Dagbani
Respondent's education						
No education	28·4	19·0	27·8	31·9	69·4	80·4
Primary/Jss	54·6	71·0	63·5	61·1	25·5	16·6
Secondary/higher	17·0	10·0	8·7	7·0	5·1	3·0
Respondent's age						
15–24	17·3	23·1	23·4	19·3	25·3	20·1
25–34	43·2	43·1	40·5	40·6	43·9	41·0
35–49	39·5	33·9	36·1	40·1	30·8	38·9
Region						
Greater Accra	61·6	6·1	9·9	13·4	4·1	2·0
Central/West	3·3	9·1	48·4	7·4	5·6	1·6
Volta	1·8	1·4	0·6	58·3	9·9	0·9
Eastern/Ashanti/BA	32·1	83·1	38·8	18·4	26·4	14·8
Northern/upper	1·1	0·3	2·3	2·1	54·0	80·7
Residence						
Urban	56·1	39·7	37·9	31·5	25·1	18·4
Rural	43·9	60·3	62·1	68·5	74·9	81·6
No. of living children						
0	5·9	7·1	8·1	7·7	7·0	9·7
1–2	40·6	41·4	39·4	37·9	37·8	33·0
3–4	36·9	27·3	27·9	29·6	29·9	32·7
5+	16·6	24·2	24·6	24·8	25·3	24·6
Age at marriage						
<20 years	65·3	68·0	69·0	66·3	70·8	69·7
20+ years	34·7	32·0	31·0	33·7	29·2	30·3
Husband's education						
No education	17·0	9·3	17·4	14·7	62·2	75·2
Primary/Jss	46·6	65·2	57·9	57·9	23·6	16·2
Secondary/higher	36·4	25·5	24·7	27·4	14·2	8·6
Respondent's occupation						
No work	14·9	15·3	14·0	14·9	19·1	20·7
Professional/clerical	7·1	3·7	4·8	3·7	3·1	1·9
Sales/services	39·8	30·8	25·3	33·1	18·4	13·5
Agriculture	15·6	40·2	41·8	34·8	50·4	48·5
Manual*	22·6	9·9	14·1	13·5	9·0	15·4
Total	100·0	100·0	100·0	100·0	100·0	100·0
n	271	706	1083	517	415	637

*Manual includes skilled and non-skilled workers.

Guan/others and the Mole-Dagbanis are about 11% and 10%, respectively. It is also interesting to note the differences in the percentages of the various ethnic members who have used modern contraceptive against the current users. Such a sharp disparity may

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Table 2. Percentage distribution of contraceptive knowledge, attitude, use, and ideal number of children by ethnicity among ever-married women aged 15–49 in Ghana, 1993

Contraceptive characteristics	Ga-Adangbe	Twi	Fante/other Akans	Ewe	Guan/others	Mole-Dagbani
Knowledge						
None	3·0	5·4	5·4	3·7	17·8	15·4
Traditional	0·7	0·0	0·6	0·6	0·7	0·8
Modern	96·3	94·6	94·0	95·7	81·4	83·8
Method used						
None	40·6	47·2	46·2	40·0	70·8	79·3
Traditional	17·3	16·0	14·4	19·9	8·7	7·5
Modern	42·1	37·0	39·4	40·1	20·5	13·2
FP approval						
Disapprove	7·4	11·5	10·4	12·4	20·0	19·3
Approve	92·6	88·5	89·6	87·6	80·0	80·7
Current use						
None	75·6	79·2	76·8	73·7	87·7	90·4
Traditional	13·7	10·3	10·1	15·3	5·8	4·1
Modern	10·7	10·5	13·1	11·0	6·5	5·5
Ideal no. of children						
1–2	12·5	7·8	9·0	14·3	4·1	2·8
3–4	59·4	63·9	58·8	57·8	31·8	20·7
5–6	17·0	19·7	20·4	18·6	33·0	34·4
7+	11·1	8·6	11·7	9·3	31·1	42·1
Children at use						
1–2	69·1	56·4	54·4	63·4	57·4	60·0
3–4	24·5	25·4	27·7	25·8	27·7	23·8
5+	6·4	18·2	17·9	10·8	14·9	16·2
Total	100·0	100·0	100·0	100·0	100·0	100·0
No. of cases	$n=271$	$n=706$	$n=1083$	$n=517$	$n=415$	$n=637$

be due to people's past unfavourable experience with modern contraceptive methods. More than half of the Twi, the Fante/other Akans, the Ga-Adangbe and the Ewe women tend to desire three to four children.

Table 3 shows the mean number of children ever born per woman, by ethnic group and age of respondent. Mean parity is relatively higher at every age among the Guan/others and lowest among the Ga-Adangbes. The mean parity for women aged 35–49 is highest among the Guan/others (6·09 children per woman) and lowest among the Ga-Adangbes (4·45 children per woman). This finding has been corroborated by earlier studies (Addai & Trovato, in press; Addai, 1996).

Multivariate analysis

Table 4 shows estimates of the effect of ethnicity on odds of contraceptive use (any method) versus non-use (model I) without controls, and with controls (model II) for ever-married women aged 15–49. The Mole-Dagbani is the reference ethnic group. The

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Table 3. Average number of children ever born per woman by ethnic group and age

Ethnic group	Age			
	15–24	25–34	35–49	Total
Ga-Adangbe	1·26	2·87	4·45	3·22
Twi	1·34	2·99	5·52	3·46
Fante/other Akans	1·36	3·11	5·49	3·56
Ewe	1·28	3·04	5·06	3·51
Guan/others	1·50	3·55	6·09	3·81
Mole-Dagbani	1·15	3·24	5·97	3·88

analysis shows that with the exception of the Twi, there are significant differences in contraceptive use among the cultural groups. For instance, the estimated odds of Ewe women using a contraceptive is 1·587 times the odds of their Mole-Dagbani counterparts. As expected, the analysis indicates that other than the Guan/other women, the estimated odds of using a contraceptive method is significantly higher among all the groups compared with the reference group.

To assess the relative effect of ethnicity and selected characteristics variables on contraceptive use in Ghana, controls are introduced. In model II, control variables are added to see if the effect of ethnicity is still significant for use versus non-use of any contraception. The model reveals that holding all the other variables constant, the effect of ethnicity on contraceptive use is no longer evident. However, among Fante/other Akan women the effect of ethnicity on contraceptive use is still significant after appropriate controls are put in place. This is not supported by an earlier study in Ghana (Tawiah, 1997) which found ethnicity to have no significant effect on contraceptive use in this country. This unique finding may be attributed to the kinship system and psychological experience of this minority group.

Table 4 shows that rural residents and people with no education are significantly less likely to be using contraception compared with secondary/higher and urban women respectively. Taking all the other variables into account, husband's education (primary/Jss), number of living children (3–4) and urban residence increase the likelihood of contraceptive use. Most of the characteristics variables have no significant effect on contraceptive use. Some of these findings are consistent with earlier studies in sub-Saharan Africa, particularly in Ghana (Tawiah, 1997; Oheneba-Sakyi & Takyi, 1997; Agyei & Migadde, 1995; Oheneba-Sakyi, 1992; Appiah, 1985; Kar & Talbot, 1980).

Table 5 shows the odds of using modern versus traditional contraceptive methods among the ethnic groups. Model III shows that there is a significant difference in the use of modern and traditional methods between Ewe women and their counterparts in the reference group alone. This suggests that the differences in contraceptive use between the reference group and the other cultural groups, as revealed in model I, may be shaped by variations in the use of traditional methods. This may be attributable to ethnicity-specific, fertility-inhibiting practices.

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Table 4. Relative odds of using versus not using contraception among ever-married women aged 15–49 for different ethnic groups, and controlling for other characteristics in Ghana, 1993

Ethnicity and selected characteristics	Model	
	Model I	Model II
Ga-Adangbe	1·420***	0·917
Twi	1·161	0·872
Fante/other Akans	1·331***	1·252**
Ewe	1·578***	1·269
Guan/others	0·618***	0·910
Mole-Dagbani†	1·000	1·000
Respondent's education		
No education		0·369***
Primary/Jss		1·048
Secondary/higher†		1·000
Occupation		
No work		0·720***
Professional/clerical		1·355
Sales/services		1·151
Agriculture		0·826
Manual: skilled and unskilled†		1·000
Husband's education		
No education		0·742***
Primary/Jss		1·159**
Secondary/higher†		1·000
Residence		
Urban		1·139**
Rural†		1·000
Region		
Greater Accra		1·191
Central/Western		0·748**
Volta		1·098
Eastern/Ashanti/Brong Ahafo		0·956
Northern/Upper East and West†		1·000
No. of living children		
0		0·342***
1–2		0·895
3–4		1·617***
5 and up		1·000
Age at marriage		
<20 years		1·005
20 years and up†		1·000
Respondent's age		
15–24		1·155
25–34		0·995
35–49†		1·000

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Table 4. *Continued*

Ethnicity and selected characteristics	Model	
	Model I	Model II
Model χ^2	90·146	421·163
df	5	24
Probability	0·000	0·000

** $< p < 0{\cdot}05$; *** $p < 0{\cdot}01$. †Reference category. Model I: includes only ethnicity. Model II: includes ethnicity and characteristics.

Although most cultures in Ghana encourage large families, they look down upon a woman who has closely spaced children. Such a woman is said to produce children like a chicken (Akan: '*bo mpoa*'), which is derogatory. A woman is expected to abstain from sexual intercourse after birth for some time. Therefore, a woman should practise traditional methods of family planning such as withdrawal or using certain herbs, to ensure that the children are properly spaced.

However, the length and degree of adherence to such practices varies from one cultural group to the next (see Benefo *et al*., 1994; Gaisie, 1968; Kaye, 1962; Busia, 1954). For instance, while the Ewes are traditionally expected to refrain from sexual intercourse for 156 weeks following birth (Gaisie, 1968), the Akans are expected to refrain for only 12 weeks (Bleek, 1990) and the Ga-Adangbes recommend sexual abstinence until the child is weaned (Kaye, 1962). The expected level of compliance with sexual norms in the post-partum period also varies with ethnic group. For instance, while the Ewe women abstain for 156 weeks, others resume as soon as the nursing mother is capable of sexual activity. The Mole-Dagbani women acknowledge that this sexual taboo is not considered a ritual and expect lapses (Gaisie, 1968). All these have direct implications for contraceptive use.

Model IV (Table 5) also reveals that after controlling for socioeconomic and demographic characteristics the significant effect of ethnicity on use of modern contraceptive methods among Ewe women totally vanishes. Region of residence (Volta and Eastern/Ashanti/Brong Ahafo) and number of living children (0 and 3–4) are the only factors that significantly influence use of modern contraceptive methods.

Discussion and conclusions

This study demonstrates that the high levels of modern contraceptive knowledge among ethnic groups do not translate into equivalent rates of use for modern methods of contraception. Over 80% of all respondents reported knowledge of modern contraceptive methods. On average about 30% of all women reported that they have ever used a modern contraceptive method, but only about 10% of them were using a modern method at the time of the survey. The high contraceptive knowledge may be due to the fact that modern methods are vigorously promoted by health programmes, such as the sexually transmitted diseases (STD) unit, for protection against contracting

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Table 5. Relative odds of using modern versus traditional contraceptive method among ever-married women aged 15–49 for different ethnic groups, and controlling for other characteristics in Ghana, 1993

Ethnicity and selected characteristics	Model	
	Model III	Model IV
Ga-Adangbe	0·768	0·676
Twi	0·993	0·839
Fante/other Akans	1·276	1·031
Ewe	0·707**	1·147
Guan/others	1·102	1·146
Mole-Dagbani†	1·000	1·000
Respondent's education		
No education		0·797
Primary/Jss		1·115
Secondary/higher†		1·000
Occupation		
No work		1·207
Professional/clerical		0·771
Sales/services		1·071
Agriculture		1·107
Manual: skilled and unskilled†		1·000
Husband's education		
No education		0·822
Primary/Jss		1·064
Secondary/higher†		1·000
Residence		
Urban		1·011
Rural†		1·000
Region		
Greater Accra		1·050
Central/Western		1·257
Volta		0·423***
Eastern/Ashanti/Brong Ahafo		1·463**
Northern/upper East and West†		1·000
No. of living children		
0		0·430**
1–2		1·103
3–4		1·451**
5 and up†		1·000
Age at marriage		
<20 years		0·975
20 years and up†		1·000
Respondent's age		
15–24		1·032
25–34		0·909
35–49		1·000

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Table 5. *Continued*

Ethnicity and selected characteristics	Model	
	Model III	Model IV
Model χ^2	10·054	32·436
df	5	24
Probability	0·074	0·117

$^{**}p<0{\cdot}05$; $^{***}p<0{\cdot}01$. †Reference category. Model III: includes only ethnicity. Model IV: includes both ethnicity and characteristics.

STDs such as HIV. Although knowledge of traditional methods is low, their current rate of use is the same as for modern methods.

There are quite impressive approval rates for family planning among the respondents. The high approval rates indicate that people, irrespective of cultural background, may be easily motivated to use modern methods if they have access to them. The low rate of modern contraceptive method use in the country may be attributable to scepticism about the effectiveness of modern contraceptive methods and fear about side-effects. Due to illiteracy, the rural majority may not be able to follow instructions on modern contraceptive techniques such as the pill properly, thereby resulting in unwanted pregnancies.

The findings tend to provide empirical evidence which is partially congruent with the characteristics hypothesis. The analysis indicates that ethnicity (culture) *per se* has a significant effect on contraceptive use among one ethnic group (Fante/other Akans). This suggests that for this group there appears to be a culturally based barrier to contraceptive use. This partially supports the theoretical underpinnings of the cultural hypothesis in Ghana (Caldwell & Caldwell, 1987). However, the present findings support the hypothesis of this paper, that ethnicity is not an important factor in contraceptive use in Ghana.

These findings have important policy implications. To increase contraceptive use, strategies geared towards increasing accessibility should be given priority. This would help translate the high acceptance rate into use. Accessibility can be increased and fear decreased by training local health and fieldworkers in areas of contraceptive prescription and monitoring of clients for side-effects and making referrals. Fieldworkers selected from the cultural communities could play a vital role in reassuring couples about the safety of modern contraceptives, rather than relying on rumours about side-effects.

Also, the differences between ethnic groups in contraceptive use can be addressed by programmes aimed at improving the socioeconomic status of women, especially education and employment opportunities. Finally, ethnographic research aimed at understanding why contraceptive use is considered unacceptable in traditional Fante/other Akans societies may provide policymakers with better information about how to provide family planning services to such populations.

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