

FERTILITY PREFERENCES AND CONTRACEPTIVE PRACTICE IN NIGERIA

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Abstract

Fertility preferences reported by currently married women are analyzed with respect to their characteristics and contraceptive use. Only 36 percent of the women gave numerical responses to the question on desired family size, while 63 percent gave 'up to God' responses. Nigerian women still have a preference for a large family size (6 children), which may be considered moderate relative to family size of 7 to 10 children reported in earlier studies. Only 18 percent of currently married women desired to cease childbearing, a low figure indeed, but much higher than the 5 percent recorded a decade ago by a comparable national survey. The study reveals a high level of consistency between desire for children and whether or not desired family size exceeds the number of living children, and shows that fertility preference reasonably predicts contraceptive use. Desire to cease childbearing is as closely related to contraceptive use as most of other variables considered. There is therefore the need to improve contraceptive accessibility and knowledge of fertility control possibilities for the general public, which are among the objectives of Nigeria's population policy.

Introduction

Fertility preferences have been a subject of interest in Nigeria as in other developing countries. This interest largely derives from the debate about the predictive validity of fertility preference data (Freedman et al. 1975; Hermalin et al. 1979; Bongaarts 1991; Westoff 1991). Starting from the 1960s, fertility surveys in Nigeria have commonly included questions on ideal or desired number of children, as well as whether or not women wanted to have any more children (Ascadi et al. 1972; Caldwell 1976; Farooq and Adekun 1976; Ekanem 1978; NPB, 1984). Answers to these questions revealed that a substantial number of women did not want any more children, which led to the conclusion that there was some need for family planning services to enable such women to achieve their preferred family size.

Nevertheless, a very large number of Nigerian women consider family size as depending on God rather than on individual choice. The characteristic high proportion of women expressing fatalism toward fertility preferences implies that such questions may have little intrinsic meaning to many women, and consequently may have little predictive value with respect to future fertility. In a situation where a reproductive decision typically involves more than one individual, a better prediction of future fertility, and a better assessment of actual demand for children, will be obtained if the preferences of all

the individuals involved are considered, not just that of the woman who bears the child (Pullum 1983).

Of course, on account of the current low levels of contraceptive use in Nigeria many women cannot be said to have used, or to be using family planning to realize their stated family size desire. This, obviously, casts some doubts on the reliability of responses from fertility-preference questions, even among those providing numerical answers. The 1981/82 Nigeria Fertility Survey (NFS) showed that only about 5 percent of married women were using contraceptives, with most of them using traditional methods, mainly prolonged abstinence. In 1990 only 6 percent of married women were using a contraceptive method; almost as many were using traditional as were using modern methods (FOS 1992). The spread of organized family planning in Nigeria since the 1970s would have resulted in higher prevalence of contraception if women or couples who expressed some desired family size indeed intended or strived to achieve their expressed desire.

Westoff (1991) has cautioned that ideal or desired number of children may not be a good predictor of fertility because it contains a strong element of idealization, and is influenced by mother's rationalization of their existing children, who may not have been desired at conception. Yet, continued inclusion and analysis of desired family-size fertility questions receive support from a growing body of evidence that fertility preferences may be as closely related to contraceptive use and fertility as many less controversial predictors, such as educational attainment urban residence, age at marriage, etc. (Palmore and Concepcion 1981). Also, Westoff (1990) has demonstrated that the proportion of women who want no more children is a good short-term predictor of fertility rates. Therefore, both the determinants of this intention and its relation with contraceptive practice are demographically important.

This study examines these variables among currently married Nigeria women aged 20-49 years, using nationally representative data derived from the Nigeria Demographic and Health Survey (NDHS), which was conducted in 1990 in all the states of the country, as part of the worldwide Demographic and Health Surveys Program coordinated by IRD/Macro International Inc. (FOS 1992). Among other topics, the survey provided detailed information on fertility, desired family size and family planning, which are analyzed here.

Desired Family Size

Desired family size is derived from the following question: If you could (go back to the time you did not have any children and could) choose exactly the number of children to have in your whole life, how many would that be? (The phrase in parentheses is excluded for women with no children).

Only 36 percent of currently married Nigerian women gave numerical answers to the question. The rest gave non-numerical responses, especially 'up to God', given by 63 percent of the women. This *large* number of women may not necessarily lack understanding of the question rather as Farooq and Adeokun (1976) have observed, perhaps they are attempting to avoid direct confrontation with an issue that is believed to be beyond their control. Our analysis indicates that those who perceive desired family size to depend 'up to God' are more likely to be older women, rural residents, of Hausa origin, illiterates, of the Muslim faith or other indigenous religions, and in polygynous homes (see Table 1). It is rather interesting to observe that the number of living children does not seem to constitute a significant consideration for women who believed that family size depends on God; the proportion of women giving 'up to God' answers remains fairly stable over the wide spectrum of surviving children as shown in Table 1. Perhaps this is an indication, among such women, of a strong and general belief that children are determined by fate or divine providence rather than by choice. The common wisdom is that children are a gift or blessing *from* God, thus the more one has the more he/she is blessed; others support as many as God gives' with the divine injunction be

Table 1: Percentage Distribution of Currently Married Women who responded Up to God to Desired family Size Question. By Living Children and Selected Characteristics, NDHS 1990.

Number of Living Children Variable	0	1	2	3	4	5	6+	Total
All Women	67.4	62.7	62.1	65.7	61.7	61.5	65.6	63.7 6123
Ethnicity:								
Hausa	38.7	86.6	87.4	86.8	88.4	83.9	84.7	86.8 1873
Yourba	48.9	46.0	46.3	50.6	50.7	50.3	64.7	51.3 1447
Igbo	24.6	50.5	53.4	54.0	52.9	54.0	62.8	54.7 896
Other	60.0	54.9	49.7	58.7	50.4	55.8	56.1	47.7 1907
Resident:								
Urban	51.0	44.1	43.6	49.4	53.1	51.6	61.6	50.8 2236
Rural	77.3	72.9	71.9	74.8	66.7	67.9	67.9	71.1 3887
Current age:								
20-29	58.2	58.1	58.1	64.0	53.1	58.1	55.3	58.6 2653
30-39	81.4	75.7	64.3	61.5	64.5	60.2	63.5	64.5 2216
40-49	91.4	77.0	86.7	83.0	68.8	66.2	68.7	73.0 1254
Education level:								
No schooling	88.3	79.4	81.2	81.9	76.5	72.2	72.4	78.2 3817
Primary	45	57.3	43.3	46.6	35.9	46.6	53.4	47.8 1392
Secondary+	29.8	26.6	22.9	22.1	29.8	26.6	44.8	27.1 914
Religion:								
Protestant	38.9	37.2	35.9	39.0	40.5	44.7	54.4	42.7 1792
Catholic	31.6	42.0	34.2	46.1	46.3	48.3	56.1	54.4 723
Muslim	82.6	77.0	77.3	79.6	78.3	74.1	77.0	78.0 3323
Other	75.6	73.7	65.9	85.7	67.3	80.6	82.8	75.8 285
Type of Marriage:								
Polygny	81.5	69.8	70.1	70.1	65.0	66.0	67.6	69.3 2520
Monogamy	57.8	58.5	56.6	62.6	59.2	58.2	64.0	59.8 3608
Husband's education								
None	86.2	81.0	82.3	84.3	77.8	75.0	75.5	80.1 2375
Primary	54.8	51.8	52.2	53.3	47.6	52.7	54.3	52.4 1535
Secondary+	37.6	34.5	25.9	31.9	34.6	36.8	56.5	35.8 1309

fruitful and multiply and fill the earth'. In all Nigerian cultures, the belief in the virtue of children is current as is evident in names given to children, allegories or proverbs, folk stories and fables, and customs.

Given the large proportion of women who gave non-quantifiable answers to the question on desired fertility, those who gave numerical numbers may not be totally representative of the entire population. Such women are more likely to have departed from the societal belief that children should not be counted lest they die. They are more likely to be potential demographic innovators who may, in time, use family planning to achieve their desired number of children. Expressing opinions about the future in terms of number of children desired may indeed be an innovation.

Table 2 shows the mean number of children desired by the number of living children, with respect to selected characteristics of women. First, the Table shows that desired family size is very high in Nigeria, although it varies considerably among socio-economic groups. Even for those who could be said to have low family size desires - Yoruba women, urban residents, younger women. Christians and women who have, or whose husbands have, some secondary education or above - the desired number of children is generally above 5, more than one child above the number recommended by the National Policy on Population. Yet, desired fertility reported in this study is lower than earlier studies in Nigeria, most of which reported desired family size in excess of 7 children. For instance, the nationally representative 1981/82 NFS recorded a desired family size of 8.4 children among currently married women (NPB 1984). Furthermore, a comparison of desired family size with observed completed family size (computed for women 40-49 years old) indicates that Nigerian women generally desire slightly fewer children than they actually have (see Table 2). Total fertility is also slightly higher than desired number of children. The NFS gave a contrasting result, that of higher desired than completed or total fertility (NPB 1984)

Second, the Table depicts a general pattern whereby the average desired number of children tends to rise with family size. This supports the tendency to rationalize unwanted births as desired. The extent of this phenomenon may be seen in Table 2 from the difference in desired family size between nulliparous women, or those with one surviving child, and those with six or more children. The tendency to rationalize is also borne out by the large proportion of women who reported equal or higher number of surviving children than their desired number. The data reveal that only 7.3 percent of the women reported fewer desired number of children than actual; 14.5 percent desired as many as they have, whereas 78.2 per cent desired more than their actual number of surviving children. The corresponding figures from the 1981/82 NFS are 1.1, 8.0 and 90.0 percent respectively (NPB 1984), another indication of changing fertility preferences, and perhaps behavior, in Nigeria.

In sum, the analysis reveals that the proportion of Nigerian women giving numerical responses to the question on desired fertility remains low. Also, such women

still have a preference for a large family size (6 children), although this may be considered moderate compared with the family size in the range of 7 to 10 children desired in the 1960s and 1970s. To be sure, small-sized families are not considered ideal or desirable in Nigeria yet. This has a serious implication for Nigeria's population policy which is targeted on achieving an average family size of 4 children per woman by 2000.

Table 2: Mean Number of Children Desired among Currently Married Women, by Number of Living Children, and Completed Family Size, by Selected Characteristics, NDHS 1990

Number of Living Children								Completed	
Variable	0	1	2	3	4	5	6+	Total	Fertility
All Women	5.0	5.4	5.5	5.8	6.0	6.6	7.2	6.0 2223	6.4
Ethnicity:									
Hausa	6.5	7.5	7.3	7.7	7.4	7.4	7.6	7.4 428	5.7
Yourba	4.3	4.5	4.6	4.9	5.3	5.9	6.8	5.2 705	6.2
Igbo	5.1	5.7	5.7	5.8	6.2	6.8	7.1	6.3 406	7.3
Other	5.0	5.7	5.7	5.8	6.2	6.8	7.1	6.1 864	6.7
Resident:									
Urban	4.5	4.7	4.8	5.2	5.3	5.9	6.8	5.3 1099	6.1
Rural	5.7	6.2	6.2	6.4	6.6	7.3	7.5	6.7 1124	6.5
Current age:									
20-29	4.9	5.4	5.4	6.0	6.2	5.8	6.6	5.6 1098	-
30-39	5.8	5.6	5.7	5.3	6.0	6.8	7.1	6.2 726	-
40-49	5.0	5.1	5.9	6.6	5.8	6.6	7.5	6.8 339	6.4
Education level:									
No schooling	6.3	6.8	6.4	6.6	7.0	7.4	7.5	7.0 831	6.3
Primary	5.6	5.4	5.6	5.7	5.7	6.2	7.0	6.0 726	7.1
Secondary+	4.3	4.3	4.7	4.0	5.0	5.1	6.7	4.8 666	5.8
Religion:									
Protestant	4.6	5.0	5.1	5.4	5.6	6.1	7.1	5.6 1027	7.1
Catholic	4.4	4.8	5.5	5.4	5.9	6.9	7.6	5.9 395	6.7
Muslim	5.8	6.1	5.9	6.3	6.6	6.8	7.1	6.4 732	5.8
Other	7.8	5.4	5.6	9.0	7.8	8.6	7.4	7.1 69	7.3
Type of Marriage:									
Polygny	5.6	5.6	5.7	6.0	6.2	6.7	6.9	6.2 774	6.2
Monogamy	4.9	5.3	5.4	5.6	5.9	6.5	7.5	5.9 1449	6.5
Husband's education									
None	6.3	6.8	6.5	6.8	7.0	7.5	7.5	7.0 651	6.1
Primary	5.2	5.4	5.7	5.6	6.0	6.3	7.4	6.1 731	7.3
Secondary+	4.4	4.6	4.8	5.2	5.1	5.7	6.4	5.1 840	6.2

Note: Small number of caste encountered; Completed fertility is the mean number of surviving children to women aged 40-49.

Correlates of Reproductive Intentions

Currently married fecund women were asked the following question on reproductive intention:

Would you like to have another child or would you prefer not to have

any more children?

Currently pregnant women were asked the same question with respect to their reproductive intention after the birth of the child being expected

Only 18 percent of currently married women said they would not have any more children, whereas 64 percent said they would; the rest were undecided or reported that they cannot get pregnant. By way of comparison, in 1981/82 only 5 percent of currently married women desired to cease childbearing. 83.7 percent wanted more children, and 11.3 per cent were undecided (NPB, 1984). This rattier steep increase in the number of women who desire to cease childbearing between the two dates, and the lower family size desires (6.0 versus 8.4), may be due in part to the effect of severe economic hardship in Nigeria since mid-1980s, occasioned by downturn in the economy and structural adjustment programs (Isiugo-Abanihe. 1992). Since those who desired no more children are the ones making a break from tradition, they constitute the group of interest in this study.

As expected, the proportion of women who desire no more children increases with the number of living children, as is evident in Table 3 However, in general the proportion desiring no more children does not became substantial until the attainment of

Table 3: Percentage Distribution of Currently Married Women who Desire no More Children, by the Number of Living Children and Selected Characteristics, NDHS 1990.

Number of Living Children									
Variable	0	1	2	3	4	5	6+	Total	
All Women	2.2	4.8	5.2	9.7	19.2	28.5	50.0	18.2	5865
Ethnicity:									
Hausa	2.4	5.7	4.9	4.3	8.9	10.2	25.7	8.4	1765
Yourba	2.3	1.9	3.5	14.3	30.2	40.1	68.5	24.0	1421
Igbo	1.6	4.7	6.1	11.4	17.3	30.3	55.3	23.2	872
Other	2.2	6.3	6.5	11.2	20.5	33.5	50.4	20.8	1807
Resident:									
Urban	1.1	4.2	5.0	13.4	27.1	39.0	57.4	22.5	2178
Rural	3.0	5.1	5.3	7.6	14.4	21.6	45.6	15.6	3687
Current age:									
20-29	0.9	2.6	3.1	5.0	11.8	20.5	34.0	5.4	2624
30-39	6.7	4.3	6.9	10.2	15.5	22.2	42.4	20.0	2150
40-49	2.4	29.5	18.7	27.4	43.8	46.9	59.9	45.3	1091
Education level:									
No schooling	2.3	6.3	5.7	8.0	15.7	20.2	4.8	15.8	3598
Primary	1.5	1.5	4.6	10.5	19.4	37.9	64.5	24.0	1363
Secondary+	2.3	4.7	4.1	15.8	35.0	59.7	85.5	18.8	904
Religion:									
Protestant	2.8	3.3	5.0	14.3	31.7	41.4	63.8	27.8	1749
Catholic	0.0	6.2	4.8	12.5	12.7	38.1	58.8	23.6	687
Muslim	2.1	4.8	4.9	7.2	13.3	18.3	35.3	11.6	3157
Other	7.1	11.1	11.6	8.8	15.7	18.2	39.3	18.8	272
Type of Marriage:									
Polygny	3.4	5.4	5.1	10.8	20.8	26.4	48.9	19.1	2397
Monogamy	1.4	4.4	5.2	8.9	18.5	30.1	50.8	17.5	3468
Husband's education									
None	2.1	6.9	4.9	7.9	13.2	18.7	38.2	13.9	3078
Primary	1.2	1.5	5.8	7.7	18.8	32.5	56.4	22.1	1491
Secondary+	2.9	3.6	5.1	16.8	34.7	49.6	74.2	238	1292

more than 4 surviving children. The implication of this is that the reproductive norm of 4 children per woman, as recommended by the National Population Policy, is a far-fetched reality in the country. Table 3 reveals considerable socioeconomic variation in the proportion of women who desire to cease childbearing.

Among the three major ethnic groups, the Yoruba and the Igbo are about three times more likely than the Hausa to want no more children. Urban women are about 7 percentage points more likely than rural women to desire to terminate childbearing. As expected, the proportion of women desiring to cease childbearing increases with age and the educational levels of women or their husbands, although women with some primary education are more likely to desire no more children compared with those with some

Table 4: Definition of Variables used in the Regression Analysis

Variable	Definition
Age of women	Completed age in years reported by women
Age at marriage	Reported age at first marriage in years
Number of sons	Reported number of Irving sons
Ethnicity	Native language of respondents: Hausa, Yoruba, Igbo and other ethnic groups; dummy variables are created with the Hausa as the reference category.
Residence	Urban-rural residence at time of survey; coded 1 if Urban, and 0 otherwise.
Educational level	Highest level of school attained - secondary and over, primary, and no school, the latter being the reference category
Work place	Binary variable indicating whether a woman works outside the home (coded 1) or at home (coded 0).
Interspousal	Binary variable indicating whether or not a woman has discussed communication family size with husband (coded-1 if discussed, 0 otherwise).
Contraceptive approval	Binary' variable indicating whether or not husband proves of contraceptive use (1 if he approves, 0 otherwise).
Types of marriage	Women in polygynous homes are coded as 1, those in monogamous homes are coded 0
Marital stability	Women whose marriage <i>has</i> never been dissolved are coded 1; those who have entered into more-than one unions are coded 0.
Husband's education	Same as woman's educational level

secondary education and above. Members of the Protestant and Roman Catholic denominations are more likely than Muslims to desire no more children; and women in polygynous unions are slightly more likely to desire to cease childbearing relative to those in monogamous marriages.

Desire to terminate childbearing is further subjected to a multivariate logistic regression analysis in order to assess the simultaneous relationships between it and selected characteristics of women. The independent variables considered in this analysis are given in Table 4. Age and the number of living sons are hypothesized to be strongly related to the desire to cease childbearing. Older women are likely to have attained a large family size, having been exposed to childbearing for a longer time. In Nigeria there is a strong tendency toward son preference. For instance, among currently married women interviewed in the NFS who were decided on or willing to state their sex preference for the next child, two-thirds preferred a boy, while only one-third expressed preference for a girl. Furthermore, among women who did not have a living son, only 5.6 percent preferred their next child to be a daughter, compared with 19 percent of those with no living daughters who preferred their next child to be a boy. Also, 42.2 per cent of women with no living sons prefer their next child to be a son, relative to only 23 per cent of those with no living daughters who prefer their next child to be a daughter. Among those with neither a son nor a daughter, 30.5 per cent prefer their next child to be a boy, and only 9 per cent prefer a daughter (NBP 1984). These figures are indicative of substantial sex preference in Nigeria, favouring boys over girls.

Age at marriage is expected to have an inverse relation with desire to terminate childbearing, since women who married late have a shorter time to achieve their family-size goals. Among socio-economic factors, ascribed characteristics, ethnicity and religion capture major cultural differences in Nigeria, and are therefore expected to be associated with desired fertility. However, because the two variables are highly correlated, only ethnicity is included in the present analysis.

Urban women are hypothesized to be more likely to desire no more children relative to rural women, just as educated women are relative to their illiterate counterparts. Such women are more likely to face family, work, and personal challenges that may be in conflict with having the marginal child. For instance in Nigeria, urban or educated women have a reduced preference for more traditional lifestyles which include a large family size; urban residence and education increase a woman's willingness to accept new ideas, including modern contraceptives; and such women also have high income-earning potential, high career aspirations and high opportunity cost for having additional children. By the same token, women who work away from home are expected to desire no more children relative to those who work at home or homemakers. Having an additional child is a time-intensive activity for women who work away from home; the presence of young children represents a significant cost (both direct or indirect) to them, thus leading to a positive relation with the desire to terminate childbearing.

Inter-spousal communication of family size and family planning is expected to be directly related with desire for no more children. The higher a woman's likelihood of discussing family size with her husband, or the higher a man's likelihood of approving contraceptive, the more salient a couple's fertility preferences, and the smaller their desired family size. Type of marriage may have some effect on desired fertility, in that monogamously married women, and those in intact unions, are expected to desire to cease childbearing relative to women in polygyny and those in multiple marriages respectively. Finally, husband's educational attainment is expected to have the same direct effect on lack of desire for more children as woman's educational level has on such desire.

The dependent variable was categorized into not desiring any more children (coded as 1), and desiring more children or uncertain (coded as zero). The multivariate analysis was first conducted for all currently married women (Model 1). Subsequently, the analysis was repeated with the data disaggregated to control for the number of surviving children, which is an important determinant of whether or not to terminate childbearing. The estimated odds ratio or logit for not wanting any more children by selected characteristics, among currently married women (Model 1), and for women with a small family size (Model 2), and those with a large family size (Model 3), are displayed in Table 5.

The results indicate that current age is positively associated with desire for no more children, this relation holds both for women of low family size (4 children or less), and those with high family size (5 children or more). Older women are more likely to have had a large family size, and thus have more need to avoid the risks associated with further confinements at high parity. They are also more likely to have grown up daughters who may have themselves begun childbearing, and hence the need to avoid conflicts between maternal and grand maternal roles and obligations (Caldwell 1976). Conversely, age at first marriage has a strong inverse relationship with desire to cease childbearing. Women of shorter marital duration tend to desire more children, probably because they generally have lower parity than women who have been married over a longer period.

Table 5 shows that the number of sons a woman already has is strongly positively related with desire for no more children. Sex combination of children is important to Nigerian parents, and there is a strong tendency for son preference, irrespective of cultural or ethnic origin. Sons are preferred over daughters because in the dominant patriarchal and patrilineal systems they bear the family name and perpetuate the lineage. Family property and assets are passed on through sons, who also enhance the image of the family and kinship through title-taking, rituals and maintenance of a large compound and a network of relatives. It is generally taken for granted that a couple with an unfavorable sex combination, essentially more daughters than sons, or no son at all, will very likely desire another child or other children. Indeed, there is hardly any

fecund woman without a son who would not strive to have one; some continue to try even well into an advanced age. Among the Igbo, for instance, the presence of a son in the home is an agent of marital cohesiveness, which also enhances a woman's status and

Table 5: Estimated Odds Ratios for Not Wanting More Children by Selected Characteristics of Currently Married Women, by Family Size, NDHS 1990.

Variable	Model 1	Model 2	Model 3
	All women	<5 children	>4 children
Current Age	1.152***	1.141***	1.120***
Age at Marriage	0.934***	0.953***	0.948***
Number of Sons	1.424***	1.410***	1.217***
Ethnicity:			
Yoruba	1.611***	1.261	1.914***
Igbo	1.792***	1.566**	1.667**
<i>Other</i>	1.701***	1.669***	1.657***
Hausa	1.000	1.000	1.000
Residence:			
Urban	1.155	1.205	1.088
Rural	1.000	1.000	1.000
Educational Level:			
Primary	1.293**	0.890	1.534***
Secondary+	1.098	0.905	2.232***
No school	1.000	1.000	1.000
Workplace:			
Away from home	1.297***	1.173	1.400***
<i>At home</i>	1.000	1.000	1.000
Discussed Family Size:			
Discussed	2.181***	1.643***	2.901***
Not discussed	1.000	1.000	1.000
Spouse Approves Contraception:			
He approves	2.073***	2.254***	1.815***
Disapproves/Don't know	1.000	1.000	1.000
Type of Marriage:			
Polygyny	1.221**	1.200	1.285**
Monogamy	1.000	1.000	1.000
Marital Stability			
In intact unions	1.583***	1.478**	1.731***
In multiple unions	1.000	1.000	1.000
Husband's Education:			
Primary	1.341**	1.201	1.277**
Secondary+	1.822***	1.824***	1.804***
None	1.000	1.000	1.000
Constant	-7.822	-7.684	-6.568
-2LL	4025.962***	766.549***	1851.642***
Model chi-square	1635.663***	446.376***	529.174***
No. of cases	6123	4354	1769

P<05; *P<.01

position in marriage, partly because her inheritance or share of the family wealth comes through her sons (Isiugo-Abanihe 1994b). A woman without a son is miserable, and at the death of her husband may be dispossessed, or forced to return to her natal home in disgrace. A man not having a son, or a sufficient number, has a cogent reason for entering into a polygynous relationship. It is therefore intuitive that the number of surviving sons should be so strongly related to the cessation of childbearing in Nigeria.

Table 5 indicates that ethnicity has a substantial effect on the desire to cease childbearing. The ethnicity variable shows that relative to the Hausa, the Yoruba and the Igbo are 61 percent and 79 percent more likely to desire no more children, when the effect of other variables have been controlled. In another regression equation where religion was substituted for ethnicity, the result shows that Christian-women are much more likely to desire no more children than Muslim women. Ethnic and religious affiliations to a large extent dictate the lifestyle and behavior of many Nigerians, as exemplified in nuptiality patterns, fertility behavior and norms, health-seeking behavior, receptivity to outside influences or change, inheritance and transmission of property, female economic activity and indeed, the status of women (Isiugo-Abanihe 1994a; 1995).

Measures of socioeconomic status and modernity namely, urban-rural residence, female education, and work outside the home, do not appear to be strongly and consistently related with desire to cease childbearing. In fact, urban residence has no effect on whether or not a woman desires to terminate childbearing, and ditto for educational attainment except among women with a large family size (Model 3). Overall, women who work outside the home are more likely to desire no more children than those who work at home. Again, this relationship is not significant among women of low family size. As these three factors suggest, it is only after a fairly large family size that the desire to cease childbearing becomes a meaningful concept in Nigeria. Regardless of a woman's level of modernity, a certain threshold family size, often above 4 children, should be attained before a woman or a couple decides not to have an additional child. In part, couples have such a large family size in an attempt to hedge against high childhood mortality rates. It is, after attaining a large family size that inter-spousal communication on cessation of childbearing and contraception are initiated.

Table 5 (Model 1) indicates that women who have discussed the number of children with their husbands are about three times as likely to want to cease childbearing as those who have not held such a discussion. While women with a low family size (Model 2) who have discussed family size with their spouses are more than one and one-half times as likely, those with high fertility size (Model 3) who have discussed, are 3 times as likely, relative to the comparable groups who have not discussed family size with their husbands. Also, women whose spouses approve of family planning are about 2 times more likely, than those whose husbands do not approve of it, to desire not to have another child. These two variables, together with a third, husband's educational

attainment which depicts the expected positive relationship with desire to cease childbearing, indicate that husband's characteristics are important determinants of fertility in a male-dominated society' like Nigeria. Husband's variables are a proxy for household status or level of well-being, which tends to lower fertility by opening up the possibility of new lifestyles some of which compete with childbearing.

Women in polygynous union are about 22 percent more likely to desire no more children than those in monogamy, a rather unexpected result. Polygynously married women may desire to cease childbearing probably to mitigate the burden of child rearing, which is disproportionately borne by co-wives in a polygynous setting, compared with a monogamous home where the husband is more obliged or disposed to caring and providing for his children. The Table also indicates that women in intact marital unions are more likely to desire not to have more children (58 percent more likely) relative to those who have remarried or entered into more than one union. Following the usual pattern, this relationship is stronger among women with 5 or more children (Model 3), who are about 73 percent more likely to terminate childbearing. Women in intact marital unions are more likely to attain a certain family size faster than those *who* have remarried, and are therefore more likely to desire no more children relative to those who have lost some reproductive time or years between unions. Also, women who have experienced multiple unions have a tendency to desire additional children in each union. In summary, the significance level of the -2 log likelihood for the three models indicate that they do not differ significantly from the perfect model. The goodness of fit statistics lead to a similar conclusion. However, the model chi-square, comparable to overall F tests in linear regression, which tests the null hypothesis that the coefficients for all of the terms in the models, except the constant, are 0, suggest that sample results are more likely among women with a large family size given the parameter estimates (Model 3). This is borne out by the higher number of significant variables among women with 5 or more children relative to those with less.

Consistency of Reproductive Preference Measures

Two measures of fertility preferences have been discussed in this paper namely, desired family size, and whether a woman wanted any more child(ren) or not. Palmore and Concepcion (1981), and Bongaarts (1991) have examined the consistency of these two variables for a number of countries using the WFS and DHS data respectively. Responses are considered consistent if the woman wanted no more children and her desired family size was less than or equal to her number of living children, and if the woman wanted more children and had not attained her desired family size with her present number of surviving children (Palmore and Concepcion 1981). With complete consistency one would expect all women whose

desired family size exceeds the number of living children to report wanting more children, while women who have attained their desired family size would be expected to report wanting to terminate childbearing.

Table 6 shows the percentage distribution of currently married women by desire for no more children, and whether or not desired family size exceeds the number of living children. The Table indicates that 85.3 percent of all women (derived from $67.9 + 17.4$) provided responses that were in agreement on these two preference questions, indicating high consistency. However, most of the consistent responses were from women who wanted more children and whose desired family size is greater than the number of living children. Conversely, most of the inconsistent responses were from women whose desired family size exceeded their actual, but still claimed not to want more children; in other words, they indicated a desire to stop childbearing before reaching their desired family size. As Shah and Palmore (1979) observed, some of these women may be "older or had life circumstances (current economic problems, marital difficulties, and the like) which could lead them to the rationalization that they did not want additional children now but, if they had life to live over again, would have wanted more."

Another explanation for inconsistency in the responses to the two preference questions has been provided by Bongaarts (1991) who observed that surveys only inquire about the total desired family size and not the respondent's preferences regarding the gender composition of her family. Yet "gender composition preferences may be sufficiently important to some women that they would lead to desire to continue childbearing in order to achieve compositional objectives even after the family size has reached the total wanted at the beginning of childbearing year" (Bongaarts 1991:6). At the same time, women who give inconsistent answers may be deliberately expressing two conflicting ideas, how they personally feel and how they think their husbands feel or the societal norm (Isiugo-Abanihe 1994c). In other words, a woman who may want to cease childbearing may also feel that her husband or the society expects her to have more children. In short, responses to preference questions may not be fully reliable, not necessarily because of lack of understanding of the questions, but perhaps because of many considerations playing themselves out in the mind of a woman.

Table 6 also shows the consistency of reproductive preference measures for selected socioeconomic variables. High degree of consistency is evident among these variables, especially among urban women, younger women age 20-34 years, educated women, and Yoruba and Igbo women. In support of Palmore and Concepcion (1981), the highest level of inconsistency is among older women, 35 to 49 years of age, who wish to stop childbearing before having reached their desired family size. Their level of inconsistency (20.3 percent) is more than thrice as high as that for younger women (6.6 per cent), indicating that older women tend to rationalize that they want no more

Table 6: Percent Distribution of Currently Married Women by Desire for More Children and Whether or not Desired Family Size Exceeds the Number of Living Children, by Selected Characteristics. NDHS 1990

Desired Family Size is:		
Desire to Continue Childbearing	Greater than Number of Living Children	Less than or equal to No. of Living Children
<u>All Women</u>		
Want more	67.9	4.3
Want no more	10.4	17.4
<u>Age 20-34</u>		
Want more	80.5	4.5
Want no more	6.6	8.4
<u>Age 35-49:</u>		
Want more	35.0	4.0
Want no more	20.7	40.7
<u>Urban:</u>		
Want more	61.4	4.3
Want no more	8.4	19.9
<u>Rural:</u>		
Want more	68.5	4.3
Want no more	12.4	14.8
<u>Hausa:</u>		
Want more	42.1	4.3
Want no more	10.1	10.7
<u>Yoruba:</u>		
Want more	70.0	4.4
Want no more	8.5	19.6
<u>Ibo:</u>		
Want more	70.0	3.0
Want no more	11.1	15.9
<u>No Schooling:</u>		
Want more	62.1	5.4
Want no more	13.5	19.4
<u>Primary:</u>		
Want more	66.1	4.7
Want no more	9.9	19.3
<u>Secondary:</u>		
Want more	70.0	2.7
Want no more	7.7	11.8
<u>University:</u>		
Want more	70.5	2.9
Want no more	7.0	21.0

children, but may want if they had to live their life over again.

It should be borne in mind that the analysis is confined to women who reported numerical desired family size. By excluding more than 50 per cent of the women who gave non-numerical responses, these results may somewhat over-estimate the level of consistency between the two reproductive preference measures.

Contraceptive Use and Fertility Preferences

The preceding analysis has shown that fertility preference questions are reasonably consistent among women who gave numerical responses. Next, we examine the relationship between fertility preferences and contraceptive use. The procedure adopted is the analysis of variance, with the corresponding multiple classification analysis (MCA). Seven independent variables are included in the model, three of them as covariates, namely, age, age at marriage and number of surviving sons, and the remaining four factors are woman's educational attainment, religion, place of residence and the fertility preference measure, whether or not a respondent wanted any more child(ren). Following Palmore and Concepcion (1981), the hierarchical approach is employed in the analysis, with the fertility preference measure entered as the final independent variable. In this approach, the covariate effects are adjusted only for the covariates already assessed, and the factor main effects are adjusted only for the covariates and main effects already assessed (Norusis/SPSS Inc. 1991). Thus, by entering the fertility preference variable last, it is adjusted for all the covariates and the effect of the preceding three factors. The interactions are not processed hierarchically.

The analysis of variance indicates that a statistically significant relationship exists between fertility preference and current contraceptive use, net of the effect of other independent variables in the model. The other factors, education, religion and residence, also have significant independent effects on contraceptive use. These effects are more clearly revealed by the parameters of the MCA shown in Table 7. The MCA enables us to examine the pattern of change in the effects of a given variable as more variables are introduced as controls. The discussion is concentrated on the fertility preference variable, which is the focus of the analysis.

With a grand mean of 8.5 percent, the unadjusted deviation implies that only 65 per cent of women who want more children are currently using contraceptives, compared with 19.3 percent of those who do not want any more children, a 13-percentage point's difference. Certainly, some of this large difference is due to the confounding effects of other variables. However, after controlling for the effects of age at marriage, education, religion and rural-urban residence, a large and significant effect remains. Following adjustment, the proportion of women using contraceptives among those who desire to cease childbearing is reduced from 19.3 to 16.5 percent, a

Table 7: Multiple Classification Analysis of Factors in the Analysis of Covariance of Current Contraceptive Use/among Currently Married Women, NDHS 1990
Adjusted for Independents and

Variable	N	Unadjusted	Covariate		Beta
		Deviation	Eta	Deviation	
<hr/>					
Educational level					
No school	3598	-0.06	-0.04		
Primary	1363	0,04	0.02		
Secondan	783	0.15	0.13		
Tertiary	121	0.31	0.26		
			0.31		0.25
Religion.					
Protestant	1749	0.06	0.01		
Catholic	687	0.07	0.03		
Muslim	3157	-0.04	-0.01		
Other	272	-0.07	-0.03		
			0.20		0.06
Residence:					
Urban	2178	0.08	0.04		
Rural	3687	-0.05	-0.03		
Want more children.					
Want more	4799	-0.02	0.23		0.12
Don't want more	1066	0.11		0.08	
			0.19		0.14
Grand mean					0.085
Multiple R					0.376
Multiple R squared					0.142

significant 10-percentage point difference with women who desire more children. By comparing the original eta, or simple beta summarizing the bivariate regression of contraception use on fertility preference, with the partial beta resulting from controlling for the other factors and the covariates, there is a decrease from 0.19 to 0.14. This implies that net of the variables in the model, fertility preference alone accounts for

about 2 per cent (β^2) of the variation in contraceptive use among currently married women, second only to educational level among the factors. The overall R indicates that 14.2 percent of the variation in contraceptive use is explained by the additive effects of all the independent variables in the model.

Discussion and Conclusion

This paper has examined fertility preferences or family size desires and related characteristics of currently married Nigerian women. The paper raises a fundamental conceptual and methodological problem, namely that focusing on fertility preferences of women may be misleading in the Nigerian socio-cultural reality (Isiugo-Abanihe 1994c; Pullum 1983). In a developing society, it is not always clear whether women answer fertility preference questions with respect to themselves alone, or whether they consciously or unconsciously modify their responses to reflect their husbands' preferences, or those of third parties, such as their mothers, mothers-in-law, or the expectation of the society or culture. Thus according to Pullum (1983:345), "the greatest single weakness in the available data is an incongruence between those sampled and those responsible for reproductive decision making. This has hampered efforts to validate the responses by comparing them with later behavior; it has also reduced their predictive value."

Perhaps the above reason accounts for the large proportion of women (63 percent) whose desired family size was 'up to God', a way of avoiding direct confrontation with an issue believed to be beyond their control, either through fatalism or through their recognition that reproductive decision making is outside their domain. "Up to God" is indeed a belief system. Our analysis suggests that women who gave 'up to God' responses tended to be more traditional in outlook; they are more likely to be older, rural residents, illiterates, of Hausa ethnic group, Muslims or indigenous religion, and in polygynous homes. One would have expected older women or high parity women to be more certain about their family size goals. Interestingly, however, actual family size does not seem to matter with respect to whether a woman will give an 'up to God' answer or not in the Nigerian culture, it is not only family size that is up to God, but also other essentials of life, such as wealth, whether one will be able to own a home, a road trip to the next city, and indeed even seeing the next day. Perhaps there is the need to focus research on up to God' responses to gain a better understanding of the respondents and their motivation.

Nevertheless, that non-numeric responses have been sustained at a very high level in all demographic survey's in Nigeria over the past three or more decades has adversely affected the quality of demographic data, and the Analysis of fertility in particular, with their attendant adverse effect on policy formulation. This state of affairs is unacceptable as we move into the 21st century, and as social science research continues to flourish, aided by increasing sophistication of electronic gadgets. This calls

for more innovative and culture-sensitive design of research instrument, as well as having a population that is receptive to research. It is clear from this study that the predominance of non-quantifiable responses is partly a function of illiteracy. The need for making primary and secondary education accessible to all, particularly to females as the main target of fertility research and estimation, should not be overemphasized. Apart from empowering women economically and socially, female education will go a long way to improve their self-image, engender better appreciation of the environment, and to disabuse their minds about fatalism, such as the belief that children should not be counted, or that one cannot express preference for a certain family size or have a desire for children because they come from God.

Among women who gave numerical answers, the study found that desired family size remains very high (average of 6 children), which is, however, lower than results of previous national studies, and also lower than the completed family size and the total fertility for Nigeria. There are clear socio-economic variations in desired family size, although the preferred number of children among women who could be said to have low family size desires is generally above 5 children, a far cry from 4 children per woman recommended by the national population policy. The data depict a general tendency for the desired number of children to rise with actual family size, which lends support to large scale rationalization of existing children as desired, even though some may not be desired at the time of conception. This is expected since no child is termed unwanted in Nigeria; every child is welcome, and represents God's blessing.

Only 18 percent of currently married women did not want any more children, a low figure indeed, but much higher than the 5 percent figure given a decade ago by a comparable national survey. A multivariate logistic analysis of the correlates of desired number of children shows the high significance of life-cycle variables such as age, age at marriage and the number of surviving sons, and ascribed characteristics such as religion and ethnicity. Socio-economic variables, woman's educational level, place of residence and husband's education did not appear to be consistently and strongly predictive of fertility desires, once other factors are controlled. However, nuptiality variables, type of marriage and marital stability, and inter-spousal factors, ever discussed the number of children with spouse, and husband's approval of family planning, are strongly associated with desire to cease childbearing.

On the consistency of respondents' preference measures, the study found a high level of consistency between whether or not a woman wanted more children and desired family size vis-a-vis actual number of living children. Overall, 85.3 percent of the women provided consistent responses. However, most of them (67.9 percent) are the category who wanted more children and whose desired family size is greater than their actual number of children. Conversely, most of the inconsistent responses were from women whose desired family size exceeded their actual, but who still desired not to want more children. The highest level of inconsistency is among older women 35-49 years of

age, who wished to stop childbearing before reaching their desired family size. This indicates that older women tend to rationalize that they wanted no more children, but may want more if they had to live their life over again (Shah and Palmore 1979).

Finally, this study shows that fertility preference reasonably predicts contraceptive use in Nigeria. Desire to cease childbearing is as closely related to Fertility contraceptive use as most of other variables included in the analysis. However, the overall result should be kept in context. While the relationship between whether or not more children are desired and contraceptive practice is meaningful, it is also small. Fertility preference explains only 2 percent of the variation in contraceptive use, which is nevertheless significant. The total variance in contraceptive use explained by all the variables in this analysis is low, only 14 per cent, which may be due to the low incidence of contraceptive use in Nigerian generally, and also the use of contraceptives for child spacing, which moderates the association between preferences and current contraceptive use (Palmore and Concepcion 1981).

It bears emphasis that the assertion that fertility preference and contraceptive use are related should be restrained. We observed that a large proportion (80 per cent) of women who wanted no more children were not using contraception at the time of the survey. There is therefore the need to improve contraceptive accessibility and knowledge of fertility control possibilities for the general public which are among the objectives of the population policy. The study suggests that both contraceptive use and desire for no more children will benefit from inter-spousal communication on family size, and male approval and involvement in contraceptive decisions. Perhaps, the severe economic hardship prevailing over some years in Nigeria offers an ideal environment in which both preferences for smaller family size and increasing use of contraceptives would thrive.

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