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## FERTILITY DIFFERENTIALS AMONG MAJOR ETHNIC GROUPS IN NIGERIA: EVIDENCE FROM 2008 NIGERIA DEMOGRAPHIC AND HEALTH SURVEY

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### ABSTRACT

*This study examined desired fertility among the major ethnic groups, determined the effect of education, wealth index, employment status and age at first marriage on the differences in fertility among the three major ethnic groups as well as assessed the relationship between contraceptive use and fertility among the major ethnic groups in Nigeria. The study used secondary data of 10,483 women who have had at least a child within five years preceding the survey in the major ethnic groups was obtained from the Nigeria Demographic and Health Survey (NDHS, 2008). The result showed that the Hausa/Fulani women had the highest fertility (mean CEB, 2.18) followed by the Igbo women (mean CEB, 2.01), while the Yoruba women had the lowest fertility (mean CEB, 1.81). The study concluded that the variations in the socio-economic and demographic variables of the major ethnic groups were the major reasons for the observed fertility differentials.*

**Keywords:** Fertility, Differential, Major ethnic groups, Nigeria

### INTRODUCTION

Nigeria is the most populous country in Africa and it suffers direct and indirect population problem. Uncontrolled fertility has adversely influenced the socio-economic, demographic and environmental development of the country: poverty, war, famine associated with low levels of education and health, a weak infrastructure and low agricultural and industrial production have exacerbated the problem of overpopulation in Nigeria. The demographic significance of Nigeria's population growth on the African continent is substantial. Nigeria has maintained high level of fertility with the growth rate of 3.2% and a doubling period of less than 25 years, contraceptive prevalence rate and total fertility rate of 15% and 5.7 respectively (National Population Commission(NPC) and ICF Macro, 2009). Ethnicity is a powerful factor in Africa that affects all aspects of an individual's life. Ethnicity plays a role in school participation (whether or not one will attend school and which school one attends), employment status and promotion and political participation. Ethnicity also has an influence on spouse selection and recruitment (there is a tendency to marry from the same ethnic group), attitude towards number of children and contraception. In fact, for most Africans, ethnic belonging is definitely a more powerful reference than the wider national identity.

Available data on differentials in fertility (Total fertility rate) in Nigeria are usually on regional basis; North west 7.3; North central 5.4; North east 7.2; South - South 4.7; South west 4.5 and South East 4.8 (NPC and ICF Macro, 2009). In trying to understand why the population growth remained high in Nigeria, one may need to look at how different ethnic groups behave and their fertility outcome. Ethnicity is the basis of social organisation in the traditional context; it encompasses a mosaic of observable and unobservable norms, beliefs and rituals that govern various life events. (Gyimah, 2002). Ethnicity distinguished groupings of people who for historical reasons have come to be seen as distinctive by themselves and others on the basis of location, origins and series of cultural markers (Gyimah, 2001). The most widely used marker is language; people who speak a distinct language having separate terms for that language and/or its speaker saw themselves or were viewed by others as ethnically different. In virtually all societies, ethnic differences are associated with variations in power and material wealth (Gyimah, 2001; Ramesh , 2010)

Ethnicity is one of the keys to understanding Nigeria's pluralistic society. Within the boundary of Nigeria, there are many social groups with distinct cultural traits, which are reflected in the diverse behaviour of the people. The need to study ethnic differentials in fertility is pertinent in a country like Nigeria. Although various studies have been carried out on fertility differentials, there are insufficient explanations of clear-cut ethnic disparities on fertility (NPC and ICF Macro, 2009). Unlike the experience of several developed countries, Nigeria is composed of three major ethnic groups that have struggled against one another for several years to control power at the centre. With populations that have strong affiliation to their ethnic groups and with a return to party politics, numerical strength thus plays a crucial role in the determination of which group controls power at the centre. Politicians are likely to be conscious of the impact of the regional differences in fertility on the populations of their regions as well as the implications for their ability to have access to power at the centre. Population factor accounts for a significant component of the formula for revenue allocation to the states and by implication to the regions. The amount of national resources accruing to a region through the states and local governments depends partially on its population.

High fertility and population growth is an over-arching factor whose effect on the natural environment is profound but difficult to calculate with precision. Undoubtedly, population growth leads to changes in land-use patterns: rural areas become more intensively farmed, grazed, or logged, while at the same time urban growth absorbs formerly rural areas. But the net effect of population growth and population density on deforestation appears to be relatively weak (Angelsen, 2008), and deforestation is a land-use change that is not unambiguously harmful, as it depends on the alternative uses to which the land is put. Use of modern contraception was culturally unacceptable in Nigeria as it violated the natural process of procreation (Feyisetan and Bankole, 2002). Ethnic group with strong

attachment to cultural values and norms in support of high preference show higher fertility and low contraceptive use (Omideyi, 1987).

Brunette (1996) examined fertility differences between the major ethnic groups in Nigeria and Senegal and argues that ethnic differences in fertility in these West African countries, can be best examined by looking at the cultural settings and especially as they affect the direct determinants of fertility. She found that ethnic group influence was more important in Nigeria as compared to Senegal. Caldwell (1987) advanced the argument that men and their lineages rule over reproduction and decide on matters of family size in Nigeria and elsewhere in Africa. The view continues to persist that men are the dominant decision-makers on fertility matters in Nigeria and other African countries (Omideyi, 1983; Caldwell, 1987; Makinwa-Adebusoye, 1994). Several studies show women's subordinate status underlies low contraceptive prevalence and high fertility in Nigeria (Omideyi, 1983, Makinwa-Adebusoye 1994). In 1991 Kritz and Makinwa – Adebusoye conducted a survey on women's status and fertility among married couples in five Nigeria ethnic groups (Hausa, Igbo, Yoruba, Ijaw and Kanuri). The study confirms that the levels of fertility vary sharply across ethnic groups. For instance, spouse from ethnic groups in which women's status is lowest (e.g. Hausa and Kanuri) have higher levels of disagreement on fertility desires than those from ethnic groups in which women's status is higher (Yoruba, Igbo and Ijaw). In their study they found that higher levels of decision-making are recorded among the Yoruba, Igbo and Ijaw in contrast with Hausa and Kanuri. They conclude that women are disadvantaged by lack of education, legal right and inheritance right which reinforce a culture that place very great value on high fertility in Nigeria and other African countries (Omideyi, 1987; Kritz and Makinwa-Adebusoye, 1994; 1997).

In their study, Kritz and Makinwa-Adebusoye (1994) examined variations in fertility preferences among six major ethnic groups in Nigeria. Five of the six ethnic groups differed significantly from each other in their fertility preferences even after controlling for socioeconomic factors. Similarly, Kritz, Makinwa-Adebusoye and Douglas (1997) found that ethnic group differences are strongly shaped by empowerment contexts (such as, resources available to women at the household level and women degree of autonomy). Isiugo-Abanihe's study (1994) shows that preference for large family is very strong among men, although there are considerable ethnic and religious variations. For example, He found that average number of children desired is 4.90 among Yoruba and the Igbo while it is 6.09 and 7.34 among Hausa/Fulani and the Ishan respectively. Similarly, average number of children desired is 6.20 for the Muslims, 5.45 for the Catholics, 4.97 for the Protestant and 6.04 among the people with indigenous belief.

In the qualitative study conducted on the role of desire for number of children in the on-going fertility transition in Nigeria, by Ibisomi (2009) provides an explanation of non-numeric response on the factors associated with desire for high number of children and found that although people desire high number of

children, but the current economic hardship in the country which put constraint on giving quality education, training and care to a large number of children have been forcing them to revise the number of children they are having downwards. The study of Killoehlon (2003) on ethnic fertility differentials in Nigeria found that after controlling for selected socioeconomic and demographic variables ethnicity remains a significant factor responsible for the fertility differential observed. This study examined desired fertility among the major ethnic groups, determined the effect of education, wealth index, employment status and age at first marriage on the differences in fertility among the three major ethnic groups as well as assessed the relationship between contraceptive use and fertility among the major ethnic groups in Nigeria.

## DATA AND METHODS

The quantitative data used for the study was obtained from the 2008 Nigeria Demographic and Health Survey (NDHS), a nationally representative sample of eligible respondents within all regular households in the entire country. The 2008 NDHS collected data on 33,385 women aged 15-49 years and 15,486 men age 15-59 years. The 2008 NDHS is the fourth comprehensive survey conducted in Nigeria as part of the Demographic and Health Surveys (DHS) programme. From the sampling frame of 18,990 (Hausa/Fulani - 9546, Igbo - 4583, and Yoruba - 4861.) after excluding women who have not had at least a child within the last five years preceding the survey among women aged 15-49 years and applying women weighting factors to the sampling frame, we are left with sample size of 10,483 (Hausa/Fulani-6,161, Igbo-1,836, and Yoruba-2,486)

### *Operational definition of variables*

The Dependent variable for the study is fertility and the indicator for measuring fertility in this study is children ever born (CEB). CEB was categorized into two levels: CEB of less than 5 and CEB of greater than or equal to 5. The cutoff point of 5 was taken because the medical and obstetric risk for mothers with a number of CEB greater or equal to 5 is significantly higher compared with those with less than 5 (Yohannes *et al.* 2004). It was also based on the population policy of Nigeria which suggests four children per woman (NPC 2004). Independent variables for the study are the ethnic groups of the women and some selected socio-economic and demographic characteristics (age, religion, employment status, wealth quintile, educational level, partner's educational level and place of residence.). Proximate variables for the study are knowledge of contraception, contraceptive use; age at first marriage, desire for more children, age at first birth and desired number of children.

*Data analysis*

STATA 10 software was used for analysis of the data. At the univariate level, the simple statistics of frequency distribution and tabulation were employed to examine the distribution of respondents and establish the relationship between variables. At the multivariate level, non reference category binary logistic regression analysis was employed to predict the relationship and dimension between the dependent, intervening and independent variables.

**RESULTS**

The Hausa had the youngest population with the mean age of 29.44 years, and 30.94% of the women were between 15-24 years, followed by Yoruba with mean age of 30.95 years, and Igbo women with a mean age of 31.28 years. The study found that the Hausa women had the lowest educational level; about 82.26% of them had no formal education. The Igbo women had the highest educational level. Contrary to expectation, the spouse of (husband) Igbo women in the study had lower educational attainment when compared with their women. This trend also occurred in the In-depth Interview conducted. Hausa women had the lowest wealth index with 67.96% of them in low wealth status and majority of them lived in the rural area (80.9%). The employment status of the Yoruba women was the highest, with 89.03% working at the time of survey (Table 1).

Majority (92.8%) of Hausa women in the study entered into marital union at less than 20 years, this was about double the proportion of Igbo (36.55%) and Yoruba (41.07%) women that entered marital union at less than 20 years. Three quarters of Hausa women (75.78%) had the first birth at ages less than 20 years; which was equally more than double that of Igbo (28.43%) and Yoruba (30.21%) who had their first birth at ages less than 20 years. Knowledge of modern method of contraception was high among the Igbo and Yoruba women, while the Hausa women had none or very low knowledge of contraception, 96.58% of Yoruba women, and of the Igbo women 86.33% had knowledge of modern methods of contraception, while only 45.87% of Hausa women had such knowledge. Half of Hausa respondents (52.02%) had no knowledge of contraception in comparison with 12.47% and 3.98% respectively for Igbo and Yoruba women. Use of Contraception was highest among the Yoruba respondents and lowest among the Hausa women. About half of the Yoruba women (49.03%) had used or were using modern contraception at the time of the survey, while only 39.54% of Igbo women had used or were using, and only 5.53% of Hausa women had used or were using modern contraception in the survey (Table 2)

**Table 1: Percentage distribution of Socio – Economic and Demographic Characteristics of the Respondents by ethnic groups**

Variable	Hausa/Fulani N=6161	Igbo N=1836	Yoruba N=2486
	%	%	%
	58.77	17.51	23.72
<b>Respondents Age</b>			
Age group			
15 – 24	30.94	14.76	15.25
25 – 34	42.10	54.79	56.88
35 – 44	22.40	27.56	25.34
45 – 49	4.56	2.89	2.53
Total	100	100	100
Mean			
<b>Respondent Education</b>			
No Education	82.26	6.32	11.10
Primary	11.90	27.07	28.72
Secondary	4.82	51.14	46.54
Tertiary	1.02	15.47	13.64
Total	100	100	100
<b>Partner's Education Level</b>			
No Education	67.83	6.30	9.98
Primary	14.75	39.78	21.58
Secondary	10.40	40.99	48.32
Tertiary	7.02	12.93	20.12
Total	100	100	100
<b>Religion</b>			
Catholic	0.20	39.77	1.77
other Christians	0.46	56.08	50.91
Muslims	98.79	0.49	46.51
Traditionalist and Others	0.55	3.66	0.81
Total	100	100	100
<b>Employment Status</b>			
Not working	49.44	24.70	10.97
Working	50.56	75.30	89.03
Total	100	100	100
<b>Wealth Status</b>			
Low	67.96	14.65	12.99
Medium	26.98	48.42	40.75
High	5.06	36.93	46.26
Total	100	100	100
<b>Place of Residence</b>			
Urban	19.10	52.45	56.72
Rural	80.90	47.55	43.28
Total	100	100	100

Source: computed by the author from the 2008 NDHS

Hausa/Fulani women in the study had highest desire for children, with 38.71% of the Hausa women desired 10 and above children, this is eight times the proportion of Igbo women who desired same number of children and thirty-eighth times the proportion of Yoruba women who desired more than 10 children. In comparison with other women in the survey, the Hausa women had the highest CEB with 46.10% having 5 children and above, more than doubling that of Yoruba, and about half of Igbo women (Table 2).

**Table 2: Percentage distribution of proximate/reproductive variable of the Respondents by ethnic groups**

Variables	Hausa/Fulani N=6161	Igbo N=1836	Yoruba N=2486
	%	%	%
	58.77	17.51	23.72
<b>Age at first marriage</b>			
Less than 20 years	92.89	36.55	41.07
20 – 29 years	6.78	57.79	55.63
30 years and above	0.33	5.66	3.30
Total	100	100	100
Mean			
<b>Age at first Birth</b>			
Less than 20 years	75.75	28.43	30.21
20 – 24 years	19.59	39.87	44.61
25 years and above	4.66	31.70	25.18
Total	100	100	100
Mean			
<b>Knowledge of contraception</b>			
Knows no method	52.02	12.47	3.98
Knows traditional method	2.11	1.20	0.44
Knows modern method	45.87	86.33	95.58
Total	100	100	100
<b>Contraceptive Use</b>			
Never use	93.46	45.75	42.04
Use traditional method	1.01	14.71	8.93
Use modern method	5.53	39.54	49.03
Total	100	100	100
<b>Desired number of Children</b>			
Less than 5 children	7.11	29.98	50.54
5 – 9 children	27.86	60.30	40.39
10 and above	38.71	5.73	1.89
God's will/choice	26.32	3.99	7.18
Total	100	100	100
<b>Children ever born</b>			
1-2	27.35	35.13	41.48
3-4	26.55	31.77	37.22
5+	46.10	33.10	21.29
Total	100	100	100
Mean CEB			



Source: computed by the author from the 2008 NDHS

The result showed that the Hausa/Fulani women had the highest fertility (mean CEB, 2.18) followed by the Igbo women (mean CEB, 2.01), while the Yoruba women had the lowest fertility (mean CEB, 1.81). (Table2) The result further showed that desired fertility (Hausa, odds ratio=0.8,  $p < 0.05$ ; Igbo, odds ratio=0.4,  $p < 0.05$ , Yoruba, odds ratio=0.5,  $p < 0.05$ ) and age at first marriage were significant predictors of fertility for the three ethnic groups (Hausa, odds ratio=1.7,  $p < 0.05$ ; Igbo, odds ratio=1.8,  $p < 0.05$ ; Yoruba, odds ratio= 1.9,  $p < 0.05$ ). Employment status is a significant predictor of fertility for Hausa/Fulani (odds ratio=0.7,  $p < 0.05$ ) and Igbo women (odds ratio= 0.6  $p < 0.05$ ). Also, there is a significant relationship between wealth status and fertility among Igbo women (odds ratio 1.3;  $p < 0.05$ ), while educational level is a significant predictor of fertility for Yoruba women (odds ratio 1.6;  $p < 0.05$ ). Contraceptive use was not a significant predictor for fertility among the three ethnic groups (Hausa, odds ratio=1.1,  $p > 0.05$ ; Igbo, odds ratio=0.8,  $p > 0.05$ , Yoruba, odds ratio=0.9,  $p > 0.05$ ). Results from logistic regression analysis showed that education, employment status, wealth status and Age at first marriage are predictors of fertility in the study (Table3). The Hausa women had the highest fertility, followed by the Igbo women, while the Yoruba women in the study had the lowest fertility.

**Table 3: Odds ratios from Logistic Regression models examining association between selected Variables and Fertility by Ethnic groups**

Variable	Hausa/Fulani			Igbo			Yoruba		
	Odds Ratio	P-Value	95%Confidence Interval	Odds Ratio	P-Value	95%Confidence Interval	Odds Ratio	P-Value	95%Confidence Interval
Age at First Marriage	1.71	0.003**	1.2077-2.4269	1.86	0.002**	1.2498-2.2754	2.00	0.001**	1.3168-2.9406
Age at First Birth	6.43	0.001**	5.3450-7.7240	4.00	0.001**	2.8698-5.5591	3.06	0.001**	2.2314-4.2078
Knowledge of contraception	0.88	0.003**	0.7999-0.9561	1.11	0.399	0.8672-1.4300	0.96	0.828	0.6807-1.3602
Contraceptive use	1.10	0.296	0.9186-1.3213	0.82	0.062	0.6621-1.0099	0.86	0.088	0.7151-1.0233
Desired number of Children	0.78	0.001**	0.7006-0.8582	0.37	0.001**	0.2664-0.4990	0.50	0.001**	0.4054-0.6095
Employment status	0.70	0.001**	0.5956-0.8214	0.55	.0008**	0.3519-0.8571	1.66	0.093	0.9196-2.973
Educational level	1.06	0.507	0.8893-1.2680	1.29	0.077	0.9728-1.7160	1.63	0.001**	1.2696-2.0941
Wealth Status	1.16	0.146	0.9510-1.4043	1.40	0.046*	1.0053-1.9404	0.96	0.803	0.7177-1.2930

\*\*significant at 0.01 level of significance

\*significant at 0.05 level of significance

## DISCUSSION AND CONCLUSION

In view of the fact that there are ethnic differentials in socio-economic and demographic characteristics of respondents, there are also differentials in the association of the selected variables (education, wealth, status, employment status and Age at first marriage) with fertility of the ethnic groups studied. Age at first marriage is a predictor of fertility for all the entire ethnic groups and is also statistically significant. ( $p < 0.05$ ). Several studies have found that inequalities and difference in socio-cultural and economic position of women (Education, Religion, and Tradition) tend to have a lower rate on contraceptive use, due to their limited knowledge of contraception (Vilaysrook, 2009). Use of modern contraception was culturally unacceptable in Nigeria as it violated the natural process of procreation (Feyisetan and Bankole, 2002). Ethnic group with strong attachment to cultural values and norms in support of high preference show higher fertility and low contraceptive use (Bauni, 2000). It is also important to know that nine out of ten Hausa women in the study had never used any method of contraception and four out of ten, Igbo and Yoruba women had also never used any method of contraception. It is little wonder that the contraceptive prevalence rate (CPR) in the 2008 NDHS is 15%. In the various ethnic groups studied, the proximate and remote determinants of fertility do not operate by the same route. The observed difference in fertility can be understood in the wider context of inequalities and differences in socio-cultural and economic position of the ethnic groups.

The ethnic groups have different demographic characteristics and socio-economic development including education, employment opportunities, culture, reproductive behaviour, migratory behaviour, mortality level and housing. All these affect fertility. Further research is needed on the relationship between ethnic groups reproductive behaviour, cultural practise and beliefs to better understand the underlying reasons for fertility behaviour of the different ethnic groups in Nigeria

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