

DETERMINANTS OF FERTILITY DESIRE AMONG COUPLES IN NIGERIA: EVIDENCE FROM DHS.

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ABSTRACT

Cross-national surveys focus on total fertility of women and men and indicate high total fertility in Nigeria. However, marital fertility contributes more to total fertility compare to non-marital fertility. Hence, this study focused on determinants of fertility desire of couples in Nigeria. The study used couples' recode dataset of the 2008 Nigeria Demographic and Health Survey. The data were analyzed using Kappa statistics and multinomial logistic regression. In all, 43.35 percent of couples had same level of education, 66.35 percent were both working, less than one quarter of couples claimed they communicated effectively and took decision together, 61.79 percent indicated equal fertility desire, 32.73 percent indicated husbands desired more while 5.48 percent indicated wives desired more. The Kappa test for selected socio-demographic factors and fertility desire indicated poor agreement. The study revealed spousal communication/joint decision making as a significant determinant of fertility desire of couples in Nigeria.

Keywords: Couples, Fertility, Fertility Desire, Marital Fertility, Total Fertility

INTRODUCTION

High fertility remains one of the banes of development in sub-Saharan Africa. In fact sub-Saharan fertility rates are among the highest in the world as a result of high fertility desires and unmet needs for contraception. Total fertility in West African countries ranges from 4.0 in Ghana to 7.0 in Niger, though there is evidence of slight decrease in few countries (NPC and ICF Macro, 2004 and 2009). Total fertility comprises of both marital and non-marital fertility. The two are on the high side in most developing countries. Total fertility in Nigeria (5.5) is higher compared to that of Ghana and Liberia that are countries in the same region of West Africa. It was 4.0 in Ghana and 5.2 in Liberia in 2008 and 2007 respectively though the highest were among the countries like Niger (7.0), Mali (6.6) and Burkina Faso (5.9) (NPC and ICF Macro, 1999, 2004, 2009 and 2014).

Fertility desire of men and women is a strong indicator of future childbearing (Morga and Rackin, 2010; Mazharul and Bairag, 2003) and also a factor in population growth of developing countries. Bongaart (1994) stressed that fertility level of couples would not go below fertility desire even if unmet need of couples for contraception were satisfied. Casterline and Roushdy (2007) explained that decline in fertility desire was necessary for further decline in fertility.

The consistently high fertility remains a serious issue in Nigeria. The results of surveys carried out in Nigeria have revealed high fertility for more than 15 years. Evidence revealed a range of between 6.0 births per woman in 1990 to 5.7 in 2008. This figure reduced marginally to 5.5 births per woman in 2013 (NPC/ICF Macro, 2014). Regional variations show that in 1999 the rate was 6.8 in the North East; North

West had 6.5, 4.6 in the South East, 4.5 in the South West and 4.5 in the North Central (NPC and ICF Macro, 1999). While in 2003, North Central had 5.7, North East had 7.0, North West had 6.7 and South South had 4.6. There was a slight decline in 2003 in the South East and South West which recorded 4.1 respectively. In 2008, the rate became 5.4 in the North Central, 7.2 in the North East, 7.3 in the North West, 4.8 in the South East, 4.7 in the South South and 4.5 in the South West.

Large family size in itself portends serious challenges to family welfare and economic survival. In order to improve welfare of people and enhance rate of development, the United Nations developed the Millennium Development Goals. The goals include reducing child mortality rates and improving maternal health. If this goal will be achieved, fertility desire of couples will be one of the considerations. This in turn will definitely affect the fertility level and the welfare of the family.

Marriage provides a sort of coverage for fertility, many of the fertility outcomes in marital-unions are concealed as desired outcomes, even in cases when they are not planned for. Evidence has confirmed that many children even within marriage are not desired or are products of unwanted pregnancies. A child born without plan will definitely pose a problem to the family welfare. Unlike the non-marital fertility, marital fertility has a general acceptance within the society. It is embraced and celebrated. But evidence reveals that many children among couples are products of unwanted pregnancies. What are the determinants of fertility desire of couples? This study examined the factors associated with fertility behaviour of couples in Nigeria.

Effective and healthy fertility behaviour among couples will reduce infant, child, maternal morbidity and mortality as well as mortality as a result of the spread of HIV/AIDS and high-risk pregnancy. The healthy fertility behaviour among couples will also enhance the health of mother, children and general welfare of the family. It will reduce cost expended on antenatal care, postnatal care and the stress on medical facilities. On the part of the family, it will reduce the dependency burden and increase the average income available to the family.

The measures of reproductive health and sexual outcome have been based mostly on report of women in reproductive ages. This method may not be sufficient in revealing partners' knowledge, opinion and experiences about fertility behaviour, it may therefore not represent couples position on fertility behaviour. Focusing on couples offers the opportunity to know the couple centred characteristics that influence fertility behaviour and also the consistency between husbands and wives in their fertility behaviour (Koffi, Adjiwanou, Becker, Olaolorun, and Tsui, 2012). Most studies focused on determinants of fertility desire of women. It has been established that fertility desire of women decrease with wealth, parity, education and labour participation (Costello and Casterline, 2009). Religion has been found to be connected to fertility desire. Christians and Muslims are in support of high fertility (Hayford and Morgan, 2008; Mazharul and Bairagi, 2003). Background characteristics have been found to be very important in shaping fertility behaviour. Sound and deep knowledge of factors in fertility desire of couples will help in formulating programmes and policies that will stimulate fertility reduction. Effective contraception and fertility control require the joint action and cooperation of husbands and wives. Differentials in couples' background may determine both the extent and levels of fertility desire. Few studies have been carried out on the determinants of fertility behaviour of couples. There is therefore the need to consider the determinants of fertility behaviour of couples.

Hypotheses

Couples' socio-demographic characteristics (age, education, work status, wealth status, urban residence, spousal communication/joint decision making) do not influence their fertility behaviour.

Methods

The target population of interest was the matched couples of the Nigeria DHS 2008 recode data set. The dataset was used due to its nationally representativeness. There were 8,731 matched couples. Men and women (couples) data were analyzed and the DHS definition of a couple was adopted: a man and woman who are legally married or living together in a consensual union. Polygamous couples were excluded from the analysis because questions on reproductive and fertility behaviour of husbands were not specific to a particular partner or wife. The data of 4040 eligible couples were considered for data analyses. The study used Kappa Statistic to evaluate the level of agreement between couples' characteristics and fertility desire. This was used to know and ascertain whether the concordance in reports was due to chance alone. Fertility desired had three categories, this informed the use of multinomial logistic regression technique to establish the relationship between couples' characteristics and fertility desire.

Dependent Variable

Dependent variable was derived from the reports of women (wives) on fertility desire of couples. The report of wives on fertility desire of couples was used because that of husbands was not available. Responses on fertility desire of couples were classified as 1= equal desire, 2= Husbands desire more and 3 = Wives desire more.

Independent Variables

The key independent variables employed in the study were age, level of education, work status, wealth status, residence, spousal communication/decision making, Age was group into three: 1= same age, 2= husbands 3 years older and 3 = wives 3 years older. Years spent in schools (education) by couples were collapsed and coded 1= same education, 2= husbands more educated and 3=wives more educated. Residence as reported by DHS needed no further classification, urban was coded one while rural was coded two. Occupations of couples were coded 1 if both were working while other categories were coded 2. Wealth status as reported by DHS was classified into five categories; however, this study reduced the categories to three. The first and the second group (Poorest and Poorer) were classified as poor; the third group (middle) remained as it was while the fourth and the fifth group (richer and richest) were classified as rich. Variable on decision about wives/husbands income was used as a proxy for spousal communication/decision making and was classified into 1 = both take decision together and 2 = others. Check on collinearity of variables revealed low degree of collinearity between wealth index and education, work status and education and work status and wealth index.

Findings

Demographic and Socio-economic Characteristics of Couples

Table 1 showed the demographic and socio-economic characteristics of couples. The table revealed that 17.1 percent of couples had the same age (that is, difference of less than 3 years between wife and husband), while 0.77 percent of women indicated they were three years plus older than their husbands. In most of the eligible couples, husbands (82.1 percent) were found to be older than their wives. In all, 43.35 percent of couples had the same level of education, 39.36 percent reported that husbands were more educated while 17.29 percent indicated wives were more educated. Majority of the couples, 63.23 percent, lived in rural areas as against 36.77 percent who lived in urban areas. Work status of couples as a variable was grouped into two, they were 'Both were working' and 'others'. The information was obtained from husbands and wives who indicated that they worked in the last twelve months preceding the survey, 66.35

percent of the surveyed couples were working (both were working, husbands and wives). Wealth index as a variable was a function of component analysis of household's possessions and the related socio-economic variables. Wealth index (status) was further divided into three groups. They were 'poor' (contained the first two groups - lowest (poorest) and second group of wealth quintile (poorer), 'middle' (also middle group) and 'rich' (contained the last two groups – fourth (richer) and highest (richest) groups of wealth quintile). Overall, 39.21 percent of the couples belonged to poor category, 16.73 percent were in the middle range while 44.06 percent were classified as into rich category.

Table 1: Percentage Distribution of Couples by Demographic and Socio-economic Characteristics

Characteristics	Percent
Age (N=4040)	
Same age	17.11
Wife 3 years plus older	0.77
Husband 3 years plus older	82.12
Education (N=4033)	
Same education	43.35
Husband has more education	39.36
Wife has more education	17.29
Residence (N=4040)	
Urban	36.77
Rural	63.23
Work Status (N=4040)	
Both are working	66.35
Others	33.65
Wealth Index (N=4040)	
Poor	39.21
Middle	16.73
Rich	44.06
Spousal communication/decision making (N=4040)	
Both partners	12.44
Others	87.56
Fertility Desire (N=4040)	
Equal desire	61.79
Husbands desire more	32.73
Wives desire more	5.48
No response category excluded	

Selected Socio-demographic Characteristics by Fertility Desire with Kappa Statistics

Kappa test was used to evaluate the level of agreement between couples' characteristics and fertility desire, to ascertain and assess whether the concordance in reports was due to chance. Table 2 revealed that the overall agreement between age and fertility desire was 15.76 percent (Significant at $P < 0.01$), education and fertility desire was 36.73 percent, work status and fertility desire was 42.47 percent (Significant at $P < 0.001$), wealth index and fertility desire was 28.01 percent, residence

and fertility desire was 50.13 percent (Significant at $P < 0.001$) and spousal communication/decision making and fertility desire was 42.28 percent (Significant at $P < 0.001$). The values of Kappa for the selected independent variables and fertility desire indicated poor agreement.

Socio-demographic characteristics and fertility desire of couples in Nigeria were also examined (Table 2) because they are considered pertinent to explaining the objectives of this study. The selected socio-demographic factors are; age, education, work status, wealth index, fertility preference, number of living children, residence, and children ever born. The bivariate relationships of these factors were also examined in relation to fertility desire by the use of chi-square test.

Equal fertility desire among couples dominated the responses of couples who reported the same age (70.0 percent), followed by couples who reported husband had more desire (24.29 percent) and those who indicated their wives had more desire (5.72 percent). In the category where husbands were older than wives, equal fertility desire had the highest percentage (59.83 percent) followed by husband desire more category, 34.77 percent and then wives desire more category with 5.4 percent. The couples who indicated that wives were older than the husband also followed the same trend with respondents having equal fertility desire, 74.53 percent, husbands desire more, 17.37 percent and wives desire more 8.1 percent. The chi-square test revealed significant relationship age and fertility desire ($P < 0.001$). Level of education is an important factor in fertility desire. This will also affect the way in which couples regard children, whether they are assets or liabilities. Taken all levels of education into consideration (Table 2), preference was given to equal fertility desire among couples (55.93%). This was followed by more desire by husbands (39.6%). They also cut across all levels of education. Ditto the last category, that is, wives desire more (4.47%). The chi-square test showed significant relationship between the two variables ($P < 0.0001$).

Occupation has been found to be a factor in fertility desire. Those who are gainfully employed may tend to plan their fertility with their spouses in order to get the highest benefit from their job. In addition, preference for job or children may also influence fertility desire. For the purpose of the study, work status had two groups, they were, those who were working and others. The responses of couples who were working showed that (Table 2) 65.59 percent had equal desire, 28.71 percent indicated husband desired more while 5.7 percent claimed that wives desired more. The other category (others), 53.19 percent reported equal desire, 41.84 reported husbands desired more while 5.48 percent reported wives desired more. The chi-square test of association between work status and fertility desire of couples revealed there was a significant association between the two variables ($P < 0.001$). It has been established that wealth status is related to fertility desire of people. A negative relationship has been established between wealth and fertility desire. However, this study did not look at the wealth status of individuals but that of couple. As indicated above, wealth Index or status was grouped into three, they were, poor, middle and rich. Considering the couples in the poor category, 46.25 percent had equal desire, 51.18 percent reported husbands desired more while 2.58 percent indicated wives desire more. Among the couples with middle wealth status, 60.98 percent reported they had equal desire, 34.58 percent indicated husbands desired more while 4.44 percent explained wives desired more. The couples in the rich category had the following distribution: 73.64 percent had equal desire and 18.38 percent explained husband desired more and 5.48 percent claimed wives had more desire. In all, equal fertility desire was more pronounce among the rich couples (73.64 percent) compared to other categories of wealth index. The chi-square test revealed significant relationship between wealth status and fertility desire of couples ($P < 0.001$).

The relationship between fertility preference and fertility desire of couples showed that among couples who claimed they had equal desire, 59.56 percent indicated they wanted more children, 77.09 percent indicated they both wanted no more children. Furthermore, among couples who indicated husbands desired more, 35.69 percent wanted more children while 15.34 percent indicated otherwise. Chi-square test showed a significant relationship between the two variables ($P < 0.001$). The investigation of type of residence and fertility desire of couples revealed that equal desire was more prevalent in urban areas

(69.38 percent) as compared to rural areas (56.76 percent). However, husbands desired more in rural areas (38.52 percent) compared to urban areas (24.0 percent). The chi-square test showed a significant relationship between residence and fertility desire of couples ($p < 0.001$). Table 2 also revealed the relationship between spousal communication/decision making and fertility desire of couples. Among the couples who took joint decision, 71.15 percent had equal desire, 60.33 percent of couples who gave other reasons for decision making had equal desire. Moreover 18.46 percent of couples who indicated that both partners took decision together claimed husbands desired more, 34.95 percent of couples who gave other reasons for decision making also indicated husbands desired more compared to that of wives.

Table 2: Selected Independent and Dependent Variables with Kappa Statistics

Couples' Characteristics	Dependent Variable			Couple Agreement (Kappa)
	Fertility Desire			
	Equal Desire	Husbands Desires more	Wives desired more	
Difference in Age				
Same Age	70.0%	24.29%	5.72%	15.76% (0.01)**
Wives more than 3 years older	74.53%	17.37%	8.1%	
Husband more than 3 years older	59.83%	34.77%	5.4%	
Educational Attainment				
Same education	55.93%	39.6%	04.47%	36.73% (-0.07)
Husbands more educated	64.26%	29.61%	06.13%	
Wives more educated	70.64%	22.82%	06.54%	
Work Status				
Both are working	65.59%	28.71%	5.7%	42.97 (0.04)***
Others	53.19%	41.84%	4.97%	
Wealth Index				
Poor	46.25%	51.18%	02.58%	28.01% (-0.07)
Middle	60.98%	34.58%	04.44%	
Rich	73.64%	18.38%	07.98%	
Type of Residence				
Urban	69.38%	24.0%	06.62%	50.13% (0.11)***
Rural	56.76%	38.52%	04.73%	
Spousal Communication/Decision Making				
Both Partners	71.15%	18.46%	10.39%	42.28% (0.06)***
Others	60.33%	34.95%	04.72%	

Source: Author's Work, 2014. (Data from 2008 NDHS) Significant at *** $P < 0.001$ ** $P < 0.001$ * $P < 0.05$.

Note: Data for cross-tabulation (but not for kappa values) were weighted

Estimates of Odd Ratios Predicting Fertility Desire

This section analysed the significant factors predicting fertility desire among couples. Multinomial logistic regression models were simulated for couples (respondents) in order to see how the selected socio-demographic factors of respondents influenced fertility desire of couples (Table 3). Fertility desire of couples was compared along two comparisons. Comparison one compared the probability of husbands desired more versus equal desire for children and comparison two compared the probability wives desired more versus equal desire for children.

In the model, six predictor variables were loaded. Only one predictor variable, spousal communication/decision making was significant in predicting the likelihood of husbands desired more and wives desired more alternative to equal desire for children. For comparison one (probability husbands desired more children) five variables (age, education, work status, wealth status, spousal communication/decision making) were significant whereas for comparison two (probability wives desire more children) only one variable (spousal communication/decision making) was significant.

Table 3: Odds of Fertility Desire by Some Selected Socio-demographic Characteristics

Variables	Husbands desire more		Wives desire more	
	Odd Ratio	95% C. I.	Odd Ratio	95% C. I.
Difference in Age				
Same Age	RC		RC	
Wives more than 3 years older	0.63	0.16, 2.40	1.51	0.27, 8.53
Husbands more than 3 years older	1.47**	1.14, 1.89	1.16	0.67, 1.99
Educational Attainment				
Same education	RC		RC	
Husbands more educated	0.79**	0.64, 0.96	1.16	0.74, 1.81
Wives more educated	1.70*	0.53, 0.93	1.05	0.61, 1.79
Work Status				
Both are working	RC		RC	
Others	0.70***	0.57, 0.85	0.86	0.54, 1.36
Wealth Index				
Poor	RC		RC	
Middle	0.55***	0.43, 0.72	1.26	0.64, 2.49
Rich	0.21***	0.16, 0.29	2.13	1.21, 3.76
Type of Residence				
Urban	RC		RC	
Rural	0.74*	0.56, 0.97	1.22	0.76, 1.95
Spousal Communication/ Decision Making				
Both Partners	RC		RC	
Others	1.80***	1.27, 2.55	0.56*	0.35, 0.88

Source: Author's Work, 2014. (Data from 2008 NDHS) Significant at *** P<0.001 **P<0.01 *P<0.05.

RC – Reference Category

DISCUSSION

The study examined the determinants of fertility desire among couples in Nigeria. Studies had been carried out on fertility desires of men and women so that salient facts that would help in policy intervention, maternal health and family welfare would be unraveled in order to promote the responsible reproductive behaviour (Costello and Casterline, 2009). Women were initially the focus as regards reproductive health. The importance of men in family welfare and reproductive

behaviors of women was emphasized during the 1994 International Conference on Population and Development in Cairo. It was stressed that men had an important role to play in fertility behaviors of women. Therefore for effective family planning, the cooperation of men and women (couples) are important for effectiveness and efficiency. Rather than looking at characteristics of men and women separately as done by many studies, this study examined the socio-demographic characteristics of couples and their fertility desire to ascertain couples characteristics that are important to fertility desire.

Nationally representative 2008 Nigerian Demographic and Health Survey couples' dataset was employed. Weight was used to take care of sampling variability. Men were the older partner in most of the household, this was likely to be a major issue in family decision making. In addition, there were more educated men compared to women. This may also reinforce the importance of men in family decision making. Moreover, majority of couples resided in rural areas, a factor that may encourage high fertility desire. Majority of couples were working. This may discourage high fertility desire most especially in urban areas because of certain characteristics associated with urban life e.g. high exposure to media and accessibility to family planning services. Close to one-third and more than one-third of the couples were in the poor and the rich classification according to wealth index respectively. Evidence abounded that people who were classified as rich demanded for fewer children compared to those who were classified as being poor. There was low spousal communication/joint decision making among the couples. This may hinder effective fertility control. Communication had been established as an important factor in reproductive behaviour. This was of low degree among the couples in Nigeria. However, equal fertility desire among them was high, majority of couples had equal fertility desire and the desire of husbands were more compared to that of wives. This buttressed the importance of men involvement in family reproductive behaviour as earlier emphasized by 1994 ICPD conference. Level of agreement between the characteristics of couples and fertility desire was low. However, fertility desire was significantly related to age of couples, education attainment of couples, work status of couples, residence of couples and spousal communication/decision-making among couples.

Fertility desire may reduce as couples advance in age and also because they might have had so many children. Couples with so many children demanded for fewer children and might consider the use of contraceptive. Education lowered fertility levels and desires. More years of education might reduce the number of years available for childbearing most especially on the part of women. Couples with high level of education might consider children as liability rather than asset and therefore moderate their demand for them. Couples who were working would have fewer children compared to their counterparts who were not working. Career men and women might not want to disrupt their career and therefore would moderate the demand for children to facilitate their career development. Effective communication among couples would definitely affect their demand for children. Literature had it that communication between couples enhances contraceptive use and influences fertility behaviour.

Results of multivariate analysis confirmed the importance of spousal communication as a factor in fertility desire of couples. This characteristic of couples influenced their fertility desire. The finding was in consonance with the findings of Rimal, Ratzan, Amtson and Freitmuth, 2002 and Oladeji, 2008. Communication among couples would reduce their fertility desire, enhance agreement and promote fertility control. The determinants of husbands' fertility desire were age, education attainment, work status, wealth status, wealth index, residence and spousal

communication/ joint decision making while spousal communication/decision making stood out as the only determinant on the part of women.

Conclusion

Spousal communication/joint decision making was established as a major factor in fertility desire of couples in Nigeria. Couples who communicated very well would plan their fertility together. Communication would enhance agreement that would foster effective fertility behaviour of couples and consequently the welfare of children, women and that of the family at large. If fertility is effectively control and manage, it may reduce the stress on prenatal, neonatal, postnatal and maternal health care services and also reduce the population growth rate. In general, the findings from this study confirmed the importance of spousal communication in fertility behaviour of couples. The paper therefore concludes that:

- Policy that would enhance effective spousal communication among couples in Nigeria should be put in place.
- Education, intervention and policy programmes should focus on spousal communication rather than men or women in their messages to encourage responsible reproductive and fertility behaviours.
- Prenatal, Post-natal and Maternal care services should also incorporate couples rather than women alone. It is noted in Nigeria that prenatal, post-natal and maternal health care services are mostly women centred. Men should be more involved. Cooperation and participation of men will surely enhance the services utilization of women and general welfare of the family.

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