

**Title: Desired Versus Actual Number of Children in Nigeria: The Contradiction.**

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**Short abstract:**

Due to various reasons, peoples' desired family size cannot be precisely attained and as such, it is often different from actual family size. Yet, the dynamics of these differences are not well understood. This paper intends to examine the patterns and determinants of the difference between desired number of children and actual number of children in Nigeria using the 2003 Nigeria Demographic and Health Survey (NDHS) data sets of women aged 15-49 years who wanted no more children. Three levels of analysis were done including multinomial logistic regression modeling. Results show that women who have more children than they desired were more likely to be 30 years or above, be from the South West and be current users of contraception while the direction of these factors somewhat differ for women that had less number of children than they desired. Policy, programme and research implications of the findings are discussed.

## **Background**

There is widespread evidence that fertility has been declining in varying degrees across Africa over the last two decades. Although differences exist between and within countries especially by socioeconomic status, the decline has taken place virtually among all the range of social, demographic and economic groupings (Anyara and Hinde, 2006; Feyisetan and Bankole, 2002; APHRC, 2002). Despite this, fertility rates are still higher in the region than in any other major region of the world. Thus continued control of fertility levels still tops the agenda of many African countries' governments as far as reproductive health (RH) issues are concerned. In line with the struggle with overpopulation, research on fertility in the region has largely been focused on fertility levels, its trend and determinants. Research has also examined fertility desires, intentions and or preferences in general, which are believed to impact fertility as well as contraceptive behaviours. However, whether fertility desires or intentions are direct predictors of fertility behavior or are simply mediating the effects of other variables is a subject of debate (Thomson et al, 1990; Thomson, 1997; Schoen et al, 1999; Ibisomi 2007).

Due to various reasons, peoples' desired family size cannot be precisely attained and as such, is often different from actual family size. The desired family size is usually lower than the actual family size in pre-transitional societies (typical of developing countries) while the reverse is often the case in post-transitional ones (Bacci, 2001). While factors associated with actual fertility and desires have been well researched, knowledge of the factors associated with the difference between the two fertility measures and what the

implication of those factors might be for women's reproductive health and welfare are lacking. The gap between desired and actual number of children (family size) is of concern because it shows that people are unable to achieve their fertility desires. On one hand people have more than they desire while on the other hand, some have less than wanted. Unfortunately, the latter group's issues remain largely ignored due to governments' preoccupation with population control. What is clear is that the people at both ends of the divide have 'unmet fertility desires'.

In Nigeria where fertility level is at almost six children per woman and desired number of children is also high (NDHS, 2004), this study seeks to answer the following questions:

(1) what is the profile of these women that are affected (2) what are the factors that could be responsible for the mismatch between desire and achievement and (3) what are the implications those factors might have on women's reproductive health and welfare?

The study will add to the body of knowledge on fertility and reproductive health issues in Nigeria. In addition, it could assist in policy formulation and programme design appropriate or fortification of existing ones with the aim of improving the level at which people achieve their fertility desires.

## **Methodology**

The study uses the 2003 Nigeria Demographic and Health Survey (NDHS) individual women data set for analysis. The 2003 NDHS is a nationally representative (cross-sectional) probability sample survey of women aged 15-49 designed to provide up to date

information on fertility among numerous other issues. For this study, women that wanted no more children, were sterilized or declared infecund and in addition gave numeric response to the question on desired (ideal) number of children constitute the study sample. The total number of women interviewed for the survey was 7,620 but only 6,770 gave numeric number of children desired. Of these 6,770, 80.77% (5,468) still desired to have another child or undecided whether to have or not. This leaves a total of 1,302 women that fulfill the criteria for inclusion in this study. Table 1 presents the fertility preference of the women included in the study.

**Table 1: Fertility Preference of Study Sample**

	<b>Frequency</b>	<b>Percent</b>
No more	988	75.88
Sterilized	13	1.00
Declared infecund	301	23.12
<b>Total</b>	<b>1302</b>	<b>100.00</b>

The dependent variable is the difference between desired and actual number of children. This will be referred to in this sample as **unmet fertility desire**. The variable is created by subtracting the number of living children (herein referred to as actual number of children) of each woman from the number that she desired. The resultant numbers are then grouped into three categories namely: 0 – actual = desired, 1 – actual greater than desired and 2 – actual less than desired. Multinomial regression analysis is thus used because of the three categories of the dependent variable. The study controls for the

following respondents' characteristics: age; type of place of residence; region; highest level of education; religion; household wealth (constructed into three equal parts on the national sample before sub-setting study sample); marital status; occupation and contraceptive behaviour.

As shown in Table 2, none of the never married woman desired less than the number of children that she has, the never married and formerly married groups are thus combined to constitute the “not in union” group to enable higher level analysis. About 99% and 69%, respectively of the never married and the formerly married women desired more children than they actually have while only about 10% of formerly married women had more children than they desired.

**Table 2: Percentage Distribution of Sampled Respondents by Marital Status, NDHS 2003**

<b>Variable</b>	<b>Desired equals Actual</b>	<b>Have more than desired</b>	<b>Have less than desired</b>	<b>Total</b>
<b>Marital status</b>				
Never married	1	0	123	124
Married-monogamy	191	148	330	669
Married-polygamy	78	64	220	362
Formerly married	32	14	101	147
Total	302	226	774	1302

Univariate, bivariate and multivariate analyses are carried out to achieve the study objectives. The univariate analysis gives the distribution of the study population by selected socio-economic and demographic characteristics. The bivariate analysis examined the factors that are individually associated with the dependent variable. The univariate and bivariate analysis examined unmet fertility desires as a whole as well as by the profiles of women that have more and those that have less than they desired. Multinomial logistic regression was then used to identify the predictors of women with unmet fertility desires at the two ends. This is on the premise that the behavior of the two groups of women could actually be different as they are facing different challenges.

## **Results**

Table 3 gives the percentage distribution of the total sample of women (column 6) as well as those that have unmet fertility desires (column 5) among other categories of women. In the total sample of women for this study, 23.2% have the same number of living children as they desired. 17.4% have more while 59.4% have less than desired. This implies that about 77% of the women in the sample have unmet fertility desires (do not have the number of children that they desired). From the age of 30 years, the percentage of women with unmet fertility desires increases with age. The percentage of these women is highest in the North West and lowest in the South Western region of the country. Expected, the women are more in the rural areas and their percentage decreases as level of education increases. The majority of the women are Christians and they are almost equally distributed in the wealth categories. Less than 10% of the women are in formal employment with majority being in sales and agricultural businesses and over one-fourth

unemployed. Almost a quarter of the women are not in union and less than one-fifth use any method of contraception. The distribution of the women that have the same number of children as desired; those that have more than desired and those that have less than desired are shown in Columns 2, 3 and 4 of Table 3, respectively.

**Table 3: Percentage Distribution of Sampled Respondents by Selected Characteristics, NDHS 2003**

<b>Variable</b>	<b>Desired equals Actual</b>	<b>Have more than desired</b>	<b>Have less than desired</b>	<b>Desired not equal to Actual</b>	<b>Total</b>
<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>	<b>Column 5</b>	<b>Column 6</b>
<b>Age group</b>					
<30	9.60	2.65	21.45	17.20	15.44
30-34	13.58	11.50	8.01	8.80	9.91
35-39	25.17	25.22	12.92	15.70	17.90
40-44	23.51	34.07	23.00	25.50	25.04
45-49	28.15	26.55	34.63	32.80	31.72
<b>Region</b>					
North Central	25.83	27.88	15.37	18.20	19.97
North East	9.27	15.93	19.38	18.60	16.44
North West	7.95	4.42	26.23	21.30	18.20
South East	17.88	21.24	15.12	16.50	16.82
South South	14.57	18.14	11.24	12.80	13.21
South West	24.50	12.39	12.66	12.60	15.36
<b>Residence</b>					
Urban	51.32	41.59	41.21	41.30	43.63

Rural	48.68	58.41	58.79	58.70	56.37
<b>Education</b>					
None	34.44	33.63	51.55	47.50	44.47
Primary	28.15	36.73	24.16	27.00	27.27
Secondary	23.84	21.24	19.25	19.70	20.66
Tertiary	13.58	8.41	5.04	5.80	7.60
<b>Religion</b>					
Catholics	18.87	23.89	18.26	19.54	19.38
Other Christians	55.30	53.54	33.42	37.98	42.00
Muslims	23.18	21.68	43.65	38.68	35.08
Traditionalist/Other	2.65	0.88	4.66	3.81	3.54
<b>Wealth Status</b>					
Poor	23.18	28.32	35.14	33.60	31.18
Middle income	30.46	29.65	35.40	34.10	33.26
Rich	46.36	42.04	29.46	32.30	35.56
<b>Marital status</b>					
Not in Union	10.93	6.19	28.94	23.80	20.81
Married-monogamy	63.25	65.49	42.64	47.80	51.38
Married-polygamy	25.83	28.32	28.42	28.40	27.80
<b>Occupation</b>					
Not working	15.23	13.72	30.88	27.00	24.27
Formal employment	13.91	12.39	5.43	7.00	8.60
Sales	39.40	45.13	35.92	38.00	38.33
Agriculture	24.50	26.11	21.96	22.90	23.27
Other	6.95	2.65	5.81	5.10	5.53
<b>Current contraceptive use</b>					
No method	68.54	70.80	86.82	83.20	79.80
Traditional method	7.95	6.64	5.04	5.40	5.99



Modern method	23.51	22.57	8.14	11.40	14.21
<b>Total</b>					
Number	302	226	774	1000	1302
Percent	23.2	17.4	59.4	76.8	100.00

The bivariate results in Table 4 show that all the nine independent variables (age, geographic region, residence, education, religion, wealth, marital status, occupation and current contraceptive use) are individually associated with unmet fertility desires. When the women are further classified by whether they have more or less than desired (as highlighted in columns 3 and 4, respectively) all the independent variables are also associated with the women that have less children than they desired while being aged 40-44 years, being from the South West and rural residence are associated with the women that have more children than desired.

**Table 4: Unadjusted Odds Ratios (OR) of Factors Associated with unmet fertility desire, NDHS 2003**

<b>Variable</b>	<b>Desire not equal to Actual</b>	<b>Have more than desired</b>	<b>Have less than desired</b>
<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>
<b>Age group</b>			
<30	1.00	1.00	1.00
30-34	0.39*	3.14	0.28*
35-39	0.30*	3.14	0.18*
40-44	0.58	4.49*	0.43*
45-49	0.61	3.10	0.51*

<b>Region</b>			
North Central	1.00	1.00	1.00
North East	2.79*	1.81	3.25*
North West	3.44*	0.58	4.78*
South East	1.24	1.85	0.96
South South	1.05	1.09	1.03
South West	0.62*	0.40*	0.72
<b>Residence</b>			
Urban	1.00	1.00	1.00
Rural	1.65*	1.68*	1.64*
<b>Education</b>			
None	1.00	1.00	1.00
Primary	0.64*	1.48	0.50*
Secondary	0.54*	1.10	0.45*
Tertiary	0.29*	0.70	0.22*
<b>Religion</b>			
Catholics	1.00	1.00	1.00
Other Christians	0.60*	0.53	0.64
Muslims	1.55	0.59	2.11*
Traditionalist/Other	1.84	0.43	2.67*
<b>Wealth Status</b>			
Poor	1.00	1.00	1.00
Middle income	0.69	0.72	0.68
Rich	0.43*	0.65	0.37*
<b>Marital status</b>			
Not in Union	1.00	1.00	1.00
Married-monogamy	0.35*	1.32	0.26*
Married-polygamy	0.52*	1.32	0.45*

<b>Occupation</b>			
Not working	1.00	1.00	1.00
Formal employment	0.30*	1.21	0.19*
Sales	0.49*	1.20	0.40*
Agriculture	0.43*	1.06	0.35*
Other	0.42*	0.48	0.42*
<b>Current contraceptive use</b>			
No method	1.00	1.00	1.00
Traditional method	0.49*	1.06	0.35*
Modern method	0.46*	1.01	0.31*

\*p<0.05

As shown in Table 5, the women that have more children than they desired are in general more likely to be older than 30 years of age; be in the North East and South East regions; reside in the rural areas; have primary or secondary levels of education; be Catholics; poor; in formal employment or sales business; and be current users of contraceptives. The relationship is however only significant for age, primary level of education and being in the South West region (where the women are less likely to have more children than desired). On the other hand, the women that have less than they desired are more likely to be under 30 years of age; be from other regions of the country compared to the North Central; reside in rural areas; have less than secondary level of education; be traditionalist or from other religion (not Christianity or Islam); poor; unmarried; unemployed and non contraceptive users. These latter results are significantly more likely in the other parts of northern Nigeria and significantly less likely among women aged 35-39 years and among married women.

**Table 5: Adjusted Odds Ratios (OR) of Factors Associated with unmet fertility desire, NDHS 2003**

Variable	Have more than desired		Have less than desired	
	Odds Ratio	SE of OR	Odds Ratio	SE of OR
<b>Age group</b>				
<30	1.00		1.00	
30-34	3.19	0.68	0.56	0.40
35-39	3.50*	0.63	0.35*	0.38
40-44	5.46*	0.62	0.62	0.36
45-49	3.78*	0.65	0.73	0.36
<b>Region</b>				
North Central	1.00		1.00	
North East	1.64	0.41	3.09*	0.34
North West	0.52	0.54	3.52*	0.36
South East	1.42	0.42	1.15	0.34
South South	0.87	0.36	1.41	0.32
South West	0.35*	0.39	1.38	0.29
<b>Residence</b>				
Urban	1.00		1.00	
Rural	1.72	0.29	1.24	0.25
<b>Education</b>				
None	1.00		1.00	
Primary	1.96*	0.34	1.05	0.28
Secondary	1.83	0.42	0.86	0.31

Tertiary	0.74	0.59	0.63	0.46
<b>Religion</b>				
Catholics	1.00		1.00	
Other Christians	0.67	0.34	0.61	0.27
Muslims	0.98	0.45	0.82	0.35
Traditionalist/Other	0.47	0.93	1.40	0.52
<b>Wealth Status</b>				
Poor	1.00		1.00	
Middle income	0.62	0.35	0.71	0.29
Rich	0.83	0.42	0.61	0.38
<b>Marital status</b>				
Not in Union	1.00		1.00	
Married-monogamy	0.92	0.51	0.33*	0.32
Married-polygamy	1.00	0.53	0.46*	0.36
<b>Occupation</b>				
Not working	1.00		1.00	
Formal employment	1.67	0.51	0.68	0.45
Sales	1.23	0.34	0.75	0.27
Agriculture	0.82	0.41	0.52	0.35
Other	0.51	0.66	0.58	0.40
<b>Current contraceptive use</b>				
No method	1.00		1.00	
Traditional method	1.18	0.48	0.87	0.35
Modern method	1.06	0.30	0.61	0.26
<b>Constant</b>	0.20*	0.76	15.26*	0.54
$\chi^2_{(52)}$	223.22		p<0.001	
<b>R<sup>2</sup></b>	0.1497			

\*p<0.05

## **Discussion**

This paper examined patterns and determinants of unmet fertility desires (not having the same number of children as desired) among women in Nigeria. Results showed that about 77% of the women in the sample had unmet fertility desires (17.4% had more while 59.4% had less than desired). This suggests high desired number of children among majority of women in Nigeria. Other studies and reports have equally documented this among women in Nigeria (Makinwa-Adebusoye, 2001; Feyisetan and Bankole, 2002; NDHS, 1991; 2000; 2004). A high percentage of the women are from the North, the rural areas, have less than secondary level of education, married, employed in informal sector and are not using any method of contraception.

Results further showed that the women that had more children than desired were significantly more likely to be older than 30 years of age and have primary level of education while they are less likely to be from the South West. On the other hand, the women that had less number of children than desired are significantly more likely to be from the North East and North West while they are less likely to be aged 35-39 years or married. Consistency was found in the two panels of results in respect to women who were older than 30 years. They were found to be more likely to have more children than desired while the same group of women was less likely to have fewer children than desired.

Findings showed that women that have less number of children than desired are more likely to be from other regions of the country compared to the North Central, which houses the Federal Capital Territory (FCT). This finding depicts the cosmopolitan and heterogeneous characteristics of the FCT, which is inhabited by people from all walks of life. The rural residents and the poor were found to have unmet fertility desires in both cases (having more than desired as well as having less than desired). A somewhat similar situation was also found among women with lower levels of education. The lack of access to services by the poor; the rural residents and the less educated are well documented. Unmet fertility desires in terms of having more than desired number of children was more likely among Catholics. This may be due to the traditional stance of the church in relation to contraceptive use.

Understandably, the women that were not in union were more likely to have less number of children than desired. Probably because their fertility desires were premised on marriage for the never married women and on stable marriage for the formerly married women. The women that were not in any employment were more likely to have less number of children than they desired. This finding suggests rational fertility behavior on the part of the women vis-à-vis their economic reality. How true this could be can however not be ascertained in this study. Contraceptive use is more likely among women that have more children than they desired while it is less likely among the women that have fewer than they desired. The finding seems to make perfect sense in relation to the hindrances each group is facing in achieving their fertility desires.

## Conclusion

A high percentage of Nigerian women have unmet fertility desires. While some have more children than they desired, others have less children than they desired. There is no doubt that the two groups have different challenges and resolving them requires different strategies. The poor, the rural residents and the less educated women are the most affected. These factors no doubt are great threats to the reproductive health and general well-being of these women. Policies and programmes thus, need to further address the plights these women to enable them have a fulfilling reproductive life.

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