

## **Male fertility preference and contraceptive use in Nigeria: A multilevel analysis**

### **1. Significance/background.**

Many previous family planning policies have principally been geared towards educating women. The policies stressed women's role in contraceptive use and family planning. Increasing women's labour force participation and educational attainments are considered as key means of lowering fertility in many countries. Researchers (e.g. Rindfuss, Morgan, & Offutt, 1996; Smith-Lovin & Tickamyer, 1978) suggest that men should be the target of family planning programs, particularly in societies with a patriarchal structure (Zhang, 2011). In those societies, without the involvement of men in family planning, policies which merely involve females may well be futile. Therefore, African men play an important role in fertility decisions and in matters affecting marriage and family life.

Meanwhile, a number of studies have been conducted on male fertility preference and contraceptive use, but many of those studies have studied men's reproductive behaviour at individual level and essentially failed to encompass the role of household and community-level characteristics in influencing fertility preference and contraceptive use, particularly in Nigeria. Hence, this study aims to employ a multilevel model approach, to identify the underlying contextual factors for the choice of contraceptive use and fertility preference among men.

### **2. Main question**

- (i) What are the contextual factors influencing male fertility preference in Nigeria?
- (ii) To what extent do community contexts influence contraceptive use among males in Nigeria?
- (iii) What is the effect of fertility preference on contraceptive use among males in Nigeria?

### **3. Methodology**

The study employed secondary data which was extracted from the male data of 2013 Nigeria Demographic and Health Survey (NDHS). The 2013 NDHS data sets is a nationally representative data collected from men aged 15-49. The sample sizes are 17,359. The variables at the community level include; region of residence, place of residence, ethnic

diversity, community level of education, community media access, community poverty level, community family size norm. The secondary data was analysed using appropriate descriptive and inferential statistics with Stata software (version 12.0). The descriptive analysis presented the community characteristics of respondents by examining one variable at a time. This involved the use of tables. The inferential statistics is a multi-level analysis which was based on binary logistics regression models. Model 1: the contextual determinants and fertility preference; Model 2: this model considered the community-level variables in order to examine the effect of community-level factors on contraceptive use; Model 3: full model, fertility preference and contraceptive use.

#### **4. Results/key findings**

##### **4.1. Community-level characteristics**

Table 1 described the community level variables. The indicators of community-level influences, which were selected based on the research literature and data availability, are listed as follows; region, place of residence, ethnic diversity, community poverty, community level of education, proportion with high family-size norm in the community and community media access. Region of residence as shown in the table, 29.9% were from North West region of Nigeria whilst, only 9.7% from the survey were from South East. More than half of the respondents were rural dwellers (56.2%) while 43.9% were residing in the urban. An examination of ethnic diversity showed that the study sample were fairly heterogeneous as almost 2 in 5 men (34.9%) were men residing in heterogeneous communities while 31.2% were men residing in homogeneous communities.

The table also revealed that 31.2% were men residing in communities with low proportion of men who had secondary or higher level of education while about 2 in 5 men (39.8%) were men residing in communities with high proportion of men who had secondary or higher level of education. As table 1 show, 40.8% were men residing in the community with high proportion of men who had high family size norm while 23.9% were men residing in the community with low family size norm.

A consideration of community poverty indicates that 40.1% were men residing in communities with high concentration of poor households while 29.5% were men residing in communities with low concentration of poor households. Finally for community level variables, the survey indicated that 27.8% were men residing in the

community with proportion of men with low media access whilst, 38.1% were men residing in the community with proportion of men with high media access.

A bulk of the respondents (87.4%) desired child(ren) either now or after two years while about one out of ten men, 12.6% do not want child(ren) at all. This is illustrated in figure 1. Furthermore, only about one-fifth of the respondents (20.3%) were using contraceptives as shown in figure 2.

To address objectives 1: the influence of community contexts on fertility preference depicted in table 2 shows that in year 2013, region, ethnic diversity, proportion with high family-size norm in community and community poverty were significant with fertility preference ( $p < 0.05$ ) while place of residence, community media access and community education were not significant with fertility preference. Considering the influence of region of residence on fertility preference the result indicated that in comparison, men from the Northern region greatly prefer to have additional children more than men from the Southern part. The result showed that 1.94 (North-East) and 2.98 (North-west) more than residents in the North central to prefer a (another) child. In contrast, it was 0.42 in 2013 (South-east), and 0.64 (South-south) and 0.53 in 2013 (South-west) as likely as men from North-central to want additional children.

In year 2013, fertility preference for men residing in the rural community was 0.4% significantly more for those dwelling in the urban community. The result showed a slight difference between fertility desire of rural dwellers and urban dwellers. This means that irrespective of where men are living, men usually have a strong desire to have more children. Ethnic diversity is another variable considered. Those respondents in the heterogeneous community are 0.64 as likely as men living in homogeneous community to desire a (another) child. Community poverty shows that men living in community with high number of men that are poor were 0.67 as likely as men residing in the community with low proportion of men that are poor.

Moreover, men residing in the community with high proportion of men that have at least secondary level of education were 0.68 as likely as men residing in the community with low proportion of men that have at least secondary level. Besides, Men living in the community with high proportion of men with high family size were 1.34 more likely than men in a community with low proportion of men that desire high family size. Lastly, in the first model, the result showed that men living in the community with high proportion of men that have

access to media such as listening to radio, watching television and reading newspaper / magazines were 0.91 as likely as men that were living in the environment with few number of men who have access to media.

Objective two which is being represented by the second model showed the influence of community context on contraceptives use. All the community level variables were significant except community level of education which was not significant. Moreover, North east, North west and South east were less likely to use contraceptives while it was 24% in South south and 9% in the South west more likely than respondents in the North central to use contraceptives. With regards to place of residence, rural dwellers were 30% less likely than urban dwellers to use contraceptives.

Regarding to ethnic diversity, respondents in heterogeneous environment were 39% more likely than men in homogenous environment to use contraceptives. With respect to community poverty, men living in the community with high proportion of men that are poor were 31% more likely to use contraceptives. As for community level of education, which was significant at 5% level of significant showed that education, indeed have impact on contraceptives use. Men who have a high proportion of educated men living around them were 40% more likely than men with few educated ones living with them to use contraceptives.

Talking of community family sized norm, the result showed that men residing in the community with high proportion of men that desire high number of children were 58% less likely than men residing in the community with few number of men that desire high family size. Finally under the second model, community media access showed that, respondents living in the community with high number of men that have access to media were 47% more likely than men living in the community with low number of men that have access to media to use contraceptives. Access to media has significant effect on contraceptives use.

With respect to objectives three, which observed the distributions of the community-level characteristics and examined by fertility preference in order to assess how much of the observed fertility preference in contraceptives use. The 2013 NDHS data revealed that all the community variables and fertility preference had significant relationship with contraceptive use ( $p < 0.05$ ). As far as fertility preference is concerned, men who do not want child were 51% significantly lower than men who want child to use contraceptives. Talking of regions of residence, Southerners were more likely to use contraceptives than the

Northerners. Men from the South west were 45% more likely than men in the North central to use contraceptives. Regarding place of residence, rural dwellers were 39% less likely than for men residing in the urban setting to use contraceptives.

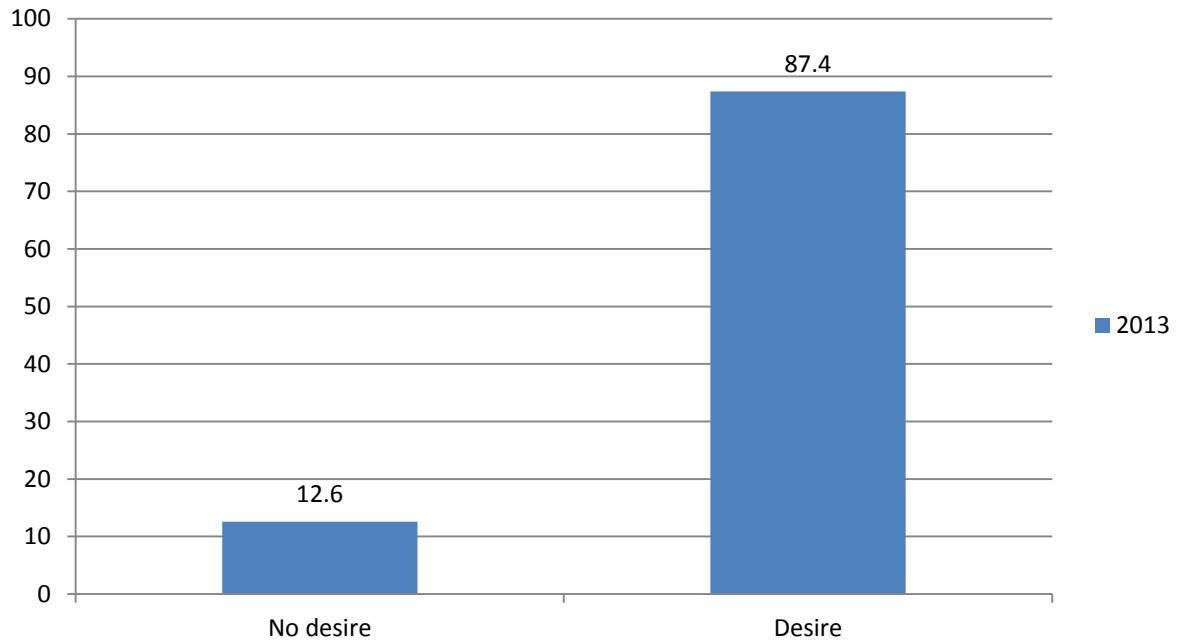
As for ethnic diversity, men in heterogeneous environment were 36% significantly more for those residing in homogenous community to use contraceptives. Regarding community poverty, the result showed that men living in the community with high proportion of men that are poor were 38% more likely than men living in the community with low proportion of men that are poor to use contraceptives. As regards community level of education, the use of contraceptive for men residing in communities with a high proportion of men who had secondary or higher education were 63% less likely than those residing in communities with a low proportion of men who had no or primary education. More so, community family size norm play a significant role too. Men living in the community with high proportion of men that desire high family size were 51% significantly more likely than for those living in the community with few men that desire high family size. Last of all, in the third model, considering community media access, therefore, men residing in the community with high proportion of men than have access to media were 3% more likely than respondents residing in the community that have few men that have access to media.

## **5. Knowledge contribution**

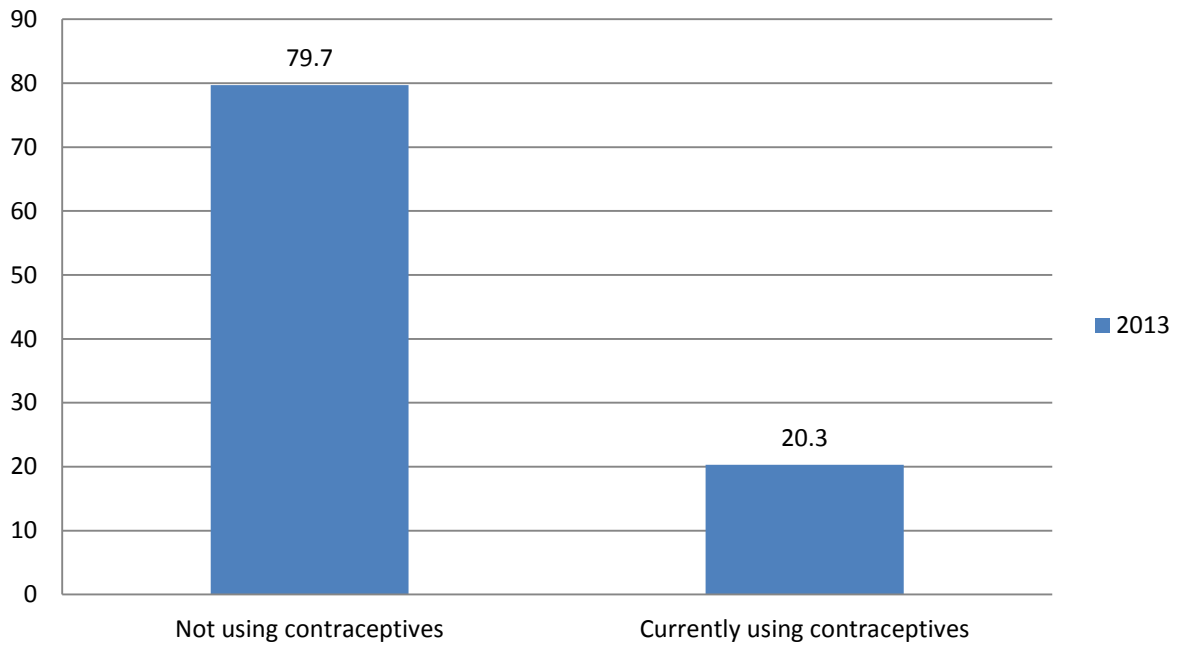
This study has made valuable contributions to the body of knowledge. In addition it has particularly deepened our understanding on the influences of the broad socio-economic, environmental and cultural contexts on fertility preference and contraceptives use among men in Nigeria. It has shown the importance and influence of factors associated with contraceptives use in Nigeria. Thus, it provides highly policy-relevant results.

Moreover, it is important to focus research efforts on male contraceptives use in order to generate new scientific evidence on how best to tackle its determinants. However, Nigerian studies on male contraceptives use have rarely examined the influence of key determinants of male contraceptives use at various levels (individual-, household-, and community-levels). As a matter of fact, given the rate of population growth which has grave implications for sustained economic growth and development, this study is very timely in providing useful data and information on how it will enable men to achieve their contraceptive and reproductive intentions. Such data becomes handy in population planning decision making.

**Figure 1: Percentage Distribution of Men by Fertility Preference**



**Figure 2: Percentage Distribution of Men by Contraceptives Use**



**Table 1: Percentage Distribution of Study Sample by Community-Level Characteristics**

<b>Variables</b>	<b>Year 2013</b>	
	17,359	
<b>Number of respondents</b>	<b>N</b>	<b>%</b>
<b>Regions</b>		
North Central	2685	15.5
North East	2515	14.5
North West	5185	29.9
South East	1686	9.7
South South	2445	14.1
South West	2844	16.4
<b>Place of residence</b>		
Urban	7611	43.9
Rural	9748	56.2
<b>Ethnic diversity</b>		
Homogenous	5630	31.2
Mixed	5670	32.7
Heterogeneous	6059	34.9
<b>Community poverty</b>		
Low	5123	29.5
Medium	5274	30.4
High	6962	40.1
<b>Community level of education</b>		
Low	5417	31.2
Middle	5040	29.0
High	6902	39.8
<b>Proportion with high family-size norm in community</b>		
Low	4143	23.9
Middle	6132	35.3
High	7084	40.8
<b>Community media access</b>		
Low	4832	27.8
Middle	5919	34.1
High	6608	38.1

**Table 2: Fertility preference associated with contraceptives use in Nigeria**

Characteristics	2013		
	Model 1	Model 2	Model3
<b>Fertility preference</b>			
Wants			1
Don't wants			0.49*
<b>Regions</b>			
North Central	1	1	1
North East	2.94*	0.30*	0.35*
North West	3.98*	0.35*	0.56*
South East	0.42*	0.99	0.77
South South	0.64*	1.24*	0.81
South West	0.53*	1.09	1.45*
<b>Place of residence</b>			
Urban	1	1	1
Rural	1.04	0.70*	0.61*
<b>Ethnic diversity</b>			
Homogenous	1	1	1
Mixed	0.73*	1.07	1.00
Heterogeneous	0.64*	1.39*	1.36*
<b>Community poverty</b>			
Low	1	1	1
Medium	0.80	1.46*	1.64*
High	0.67*	1.31*	1.38
<b>Community level of education</b>			
Low	1	1	1
Middle	0.91	1.09	1.12
High	0.68	1.40	0.37*
<b>Proportion with high family-size norm in community</b>			
Low	1	1	1
Middle	1.31*	0.67*	0.76*
High	2.34*	0.42*	0.49*
<b>Community media access</b>			
Low	1	1	1
Middle	0.80	1.34*	1.43*
High	0.91	1.47*	1.38

\*p<0.05



## References

Rindfuss, R. R., Morgan, P., & Offutt, K., 1996. Education and the changing age pattern of American fertility: 1963–1989. *Demography*, 33(3), pp. 277–290.

Smith-Lovin, L., & Tickamyer, A. R., 1978. Non recursive models of labour force participation, fertility behaviour and sex role attitudes. *American Sociological Review*, 43(4), pp. 541–557.

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