

# Correlates of Contraceptive Use and Desire for less Children in Nigeria

Turnwait O. Michael<sup>1</sup>  
Grace A.T. Scent<sup>2</sup>

Department of Sociology  
University of Ibadan  
Ibadan, Nigeria<sup>1</sup>

Department of Sociology  
Niger Delta University  
Bayelsa, Nigeria<sup>2</sup>

**Corresponding author:** turnwaitmichael@gmail.com

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## **Abstract**

*The negative consequences of non-use of contraceptives on reproductive health are well documented. The role of contraceptive use in attaining the desired number of children in Nigeria is yet to receive adequate academic investigation. The central concern of this paper was to examine how socio-cultural and economic variables influence contraceptive use and desire for less number of children among currently married women of reproductive age (15-49) in Nigeria. The data were derived from the 2013 Nigeria Demographic and health Survey (NDHS). The NDHS collected data on current background characteristics, contraceptive methods, desire for more children, and number of living children, among others. The 23,933 currently married women respondents who had provided responses to questions on contraceptive use methods and desire for more children constitute the sample. The study found large disparities among correlated variables as factors determining contraceptive use and desire for more children. The study revealed that while 16% of the sampled population used contraceptive methods, 78% acknowledged desire for more children. The regression analysis showed that current contraceptive use and desire for more children significantly varied by selected background characteristics. Thus, there is an urgent need to reach out to women of reproductive age on the need for contraceptive use in marital union to limit childbearing and the concomitant negative effects in Nigeria.*

**Keywords:** Contraceptive use, socio-cultural and economic variables

## **Introduction**

The use of contraceptives and the desire for less number of children are challenges confronting the reproductive health of women in Nigeria. In spite of the gains of modernity and the wide spread knowledge of contraceptives, Nigeria still records disproportionate high fertility rates across its multi-ethnic groups (Mberu & Reed, 2014). Nigeria has over 250 ethnic groups with 521 languages (Jegede, 2014). It is the seventh most populous country in the world with an estimated population of 183 million people which is projected to reach

285 million people by 2050 (United Nation, 2013). The country has a population growth rate of 3.2% and a total fertility rate (TFR) of 5.5. These rank among the highest in the world (National Population Commission & ICF International, 2014).

Several studies have examined the reason for the sustained high fertility rates in Nigeria (Caldwell, 1976; Ekanem, 1978; Makinwa-Adebusoya & Feyisetan, 1994; Isiugo-Abanihe & Ezebunwa, 2008). These studies revealed that high fertility rates in Nigeria are sustained by socio-cultural and economic factors. According to these studies, the specific reasons why Nigeria still records high fertility rates are because few couples practice family planning, while those who use contraceptives do so to meet their desired family size through birth spacing rather than to limit the number of children they actually have. Further research shows that couples sustain high fertility in Nigeria because they can easily foster their children to relatives or community members who can provide care for the number of children whom they could not cater for (Isiugo-Abanihe, 1985; Nwokocho & Michael, 2016).

Although high fertility rates in Nigeria are related to urbanisation and education, which are the generalised keys to fertility reduction (Akpotu, 2008; Fluckiger & Ludwig, 2017), it should be noted that, long term breastfeeding and postpartum abstinence were common traditional practices in Nigeria and many other African countries in the time past (Van der Wijden & Manion, 2015; Ekpenyong, Daniel, Uwah, Ettebong & Ibu, 2013). It was a common belief among the people that a husband should not have sexual intercourse with his breastfeeding wife to avoid the sperm being transferred to the baby through breast milk (Ekpenyong *et al.* 2013). They also believed that child intelligence correlates with the duration of breastfeeding; high intelligence was believed to accompany long breastfeeding and vice versa. These traditional beliefs and practices they believed controlled fertility in the past, in spite of the absence of modern contraceptives.

Today, the reverse is the case. A nationwide survey revealed that an increased number of women, especially the educated and those who dwell in urban areas have largely deviated from the traditional beliefs and practices related to long term breastfeeding and postpartum abstinence while ignoring contraceptives or other methods of birth control (NPC & ICF International, 2013). As a matter of fact, this seemingly common deviation has largely contributed to Nigeria's high fertility rates. Indeed, Bongaarts, Frank and Lesthaeghe (1990) predicted that, if the fertility-inhibiting acts of breastfeeding and postpartum abstinence are removed, the fertility rates in Africa would increase by 72 percent. Currently, the fertility rate in Nigeria is substantially high and the government population policy of 1988 and its revised version of 2004 have not checked this trend (Michael & Odeyemi, 2017).

It should also be noted that in Nigeria, some women who do not desire to have more children cannot use contraceptives because of their subordinated position in the family, and certain religious and cultural constraints

(Obasohan, 2015). Although Easterlin (1975) has suggested that fertility rates will decline only if couples are encouraged to use contraceptives and if the psychological and market costs of use are low, insofar as couple have fewer surviving children than they desire, they will probably lack motivation to use contraceptive to stop childbearing (Zaki & Johnson, 1993).

This study aims at examining the influence of socio-cultural and economic variables on contraceptive use and the desire for less number of children as well as the association between the non-use of contraceptives and the desire for more children by Nigerian women. A proper delineation of these will enhance the design and implementation of effective policies and programmes that deal with fertility rates in Nigeria.

### ***Data and Methods***

The analysis is based on the Nigeria Demographic and Health Survey (NDHS) conducted in 2013 in all the states of the country, as part of the worldwide Demographic and Health Survey Program. Among other topics, the survey provided detailed information on fertility, contraceptive use, desired family size, desire for more children, and ideal number of children. The NDHS was a nationwide representative self-weighting sample survey of 38,948 individual women of aged 15-49 years. From this survey, a sample of all currently married women aged 15-49 years who had responded to contraceptive use and desire for more children were taken for analysis. Of the 38,948 women aged 15-49, 26,403 were currently married, while 23,933 were both currently married as well as responded to the contraceptive use and the desire for more children questions. The last constitutes the data analysed in this paper. The inclusion of married female aged below 18 years is intentional and the authors are aware of this overlap which is as a result of the fact that some females marry earlier than others in Nigeria, thus including those age categories in the analysis is relevant to this study. The data were analysed at univariate, bivariate and multivariate levels. See table 1 for definition of variables as used in the multivariate-regression analysis.

**Table 1: Definition of variables used in the Regression Analysis**

<b>Variable</b>	<b>Definition and Coding</b>
Residence	Urban-rural residence as reported at time of survey. Coded Urban =1, Rural=2. Rural is used as a reference category (RC).
Age of respondents	Respondents' current age in years as reported at time of survey. Coded 15-19 =1, 20-29=2, 30-39=3, 40-49=4. ≤19 is used as RC.
Ethnicity	Native language of respondents: Coded Hausa =1, Yoruba=2, Igbo=3. Hausa is used as RC.
Wealth index	Household wealth index (poor=1, middle=2, rich=4). Middle used as RC.
Marriage type	Type of marriage (monogamy=1, polygyny=2). Polygyny is used as RC.
Education	Highest educational level of respondents (none=0, primary=1, secondary and more=2). None is used as RC.
Religion	Religion of respondents (Catholic=1, Other Christian=2, Islam=3, Other=4). Other is used as RC.
Husband's education	Highest educational level attained (none=0, primary=1, secondary and more=2). None is used as RC.
Age at first birth	Age of respondent at first birth (less than or equal to 19 years=1, 20-29 years=2, 30 years and more=3). ≤19 years is used as RC
Number of living children	Respondent's number of living children (1-2 children=1, 3-4 children=2, 5 children and more=3). 1-2 children are used as RC.
<b>Dependent Variable:</b>	
Contraceptive use	Coded as: Not using contraceptive=0, Using contraceptive (pill, IUD, injections, Diaphragm, condom, sterilization, withdrawal, lactational amenorrhea and other forms of contraceptives use were recode into a different variable)=1
Desire for children	Coded as: Want no more children=0, Want more children=1
<b>Note:</b>	
Modern contraceptives:	Female sterilisation, male sterilisation, the intrauterine device (IUD), the pill, injectables, implants, the diaphragm , male condoms, female condoms, the lactational amenorrhoea method (LAM), foam/jelly, and emergency contraception.
Traditional contraceptives:	Withdrawal methods and rhythm (periodic abstinence).

## Results

Table 2 shows selected socio-demographic characteristics of currently married respondents who use contraceptives, have at least one living child, and want more children. The subtraction of each variable's percentage from 100 gives the proportion with non-contraceptive use and no desire for more children.

Overall, 16% of the women use contraceptives. Urban women are more likely to use contraceptive than rural women (61% versus 39%). Contraceptive use is highest among women aged 30-39, followed by women aged 40-49 (28%) and 20-29 (27%), but lowest among women aged 15-19. Contraceptive use is highest among women who identified with ethnic groups other than Hausa, Yoruba and Igbo; the three major ethnic groups in Nigeria (38%). This is followed by the Yoruba (36%) and the Igbo (22%), but lowest being the Hausa (4%).

Contraceptive use increases as wealth increases. For instance, contraceptive use is highest among the rich (72%) and lowest among the poor (10%). Contraceptive use is higher among women in monogamous relationship than women in polygynous relationship (18% vs. 19%). Contraceptive use increases as education increases. It is highest among women with at least secondary education (65%), followed by primary education (26%) and lowest among women with no education (9.4%). It is also highest among Muslim women (64%), followed by Other Christian (28%), but lower among Catholic (7%) and women affiliated with other religions (2%). Contraceptive use is higher among working women than non working women (86% vs. 14%). Contraceptive use is highest among women whose age at first birth is 20-29 and lowest among those whose age at first birth is 30 or more (56% vs. 5%).

Overall, 78% of the respondents desire for more children. Rural women desire more children than urban women (68% vs. 32%). According to the survey, the desire for more children is highest among respondents aged 20-29 (44%) and lowest among respondents aged 15-19 (5%). The desire for more children is also highest among Hausa women (36%) and lowest among Igbo women (9%). It is highest among women with poor wealth index (49%) and lowest among women with middle wealth index (18.6%). Women in monogamous relationship desire for more children than women in polygynous relationship (65% vs. 35%). The desire for more children is inversely related to educational attainment. For instance, the desire for more children is highest among women with no education (52%), followed by primary education (18%) and lowest among those with secondary education or more (28%). The desire for more children is highest among Islamic women or Other Christian (64% and 27%) than Catholic or other religion (7% and 2%). Working women desire more children than non working women (70% vs.30%). The desire for more children is highest among women whose age at first birth is 19 years or below (61%) and lowest among women whose age at first birth is 30 or more (2.9%).

**Table 2: Percentage distribution of respondents by selected background characteristics, by contraceptive use and desire for children**

Characteristics	N	Use a contraceptive method	Want more Children
<b>All women</b>	<b>23,933</b>	<b>16.0</b>	<b>78.0</b>
<b>Residence</b>			
Urban	8,374	61.4	31.6
Rural	15,559	38.6	68.4
<b>Current age</b>			
15-19	957	0.9	5.1
20-29	8,498	26.9	44.0
30-39	8,481	43.9	35.1
40-49	5,997	28.3	15.8
<b>Ethnicity</b>			
Hausa	7,172	4.3	35.6
Yoruba	3,248	35.8	10.3
Igbo	2,538	22.1	8.6
Other	10,740	37.8	45.5
<b>Wealth index</b>			
Poor	10,448	10.0	48.7
Middle	4,611	17.8	18.6
Rich	8,874	72.2	32.7
<b>Marriage type</b>			
Monogamy	15,619	81.1	64.6
Polygyny	8,314	18.9	35.4
<b>Education</b>			
None	11,184	9.4	51.9
Primary	5,018	25.7	18.4
Secondary+	7,731	65.0	29.7
<b>Religion</b>			
Catholic	1,977	7.0	6.9
Other Christian	7,877	27.8	27.4
Islam	13,695	63.5	64.1
Other	384	1.7	1.6
<b>Occupation</b>			
Not working	6151	13.6	29.7
Working	17,782	86.4	70.3
<b>Age at First Birth</b>			
>19	14,217	39.7	60.7
20-39	9,041	55.7	36.4
30+	675	4.6	2.9

Table 3 shows the percentage distribution of married women who desire for more children and currently use a contraceptive method (traditional or modern) by selected characteristics, according to their place of residence. Among the urban women, the results show that ethnicity, marriage type, religion and age at first birth significantly varied by contraceptive methods, by residence. It also indicates that wealth index and husband's education

significantly increase by contraceptive methods, by residence. The use of traditional contraceptive method is highest among the Igbo women (43%) and lowest among the Hausa women (2%), whereas the use of modern contraceptive is highest among the Yoruba women (51%) and lowest among the Hausa women (5%).

Both traditional and modern methods of contraceptive use increase as wealth index increases. Traditional contraceptive use is highest among the rich (87%) and lowest among the poor (4%). Similarly, modern contraceptive use is highest among the rich (91%) and lowest among the poor (2%). Traditional and modern contraceptive use methods are higher among women in monogamous relationship (91% and 82%) than those in polygynous relationship (9% and 19%). Traditional contraceptive use methods is highest among Other Christian (57%), followed by Catholic (22%), but lower among the Muslim (19%) and members of other faith (2%). While modern contraceptive use is low among the Catholic (10%), it remains highest among the Other Christian (57%), followed by Muslim (32%). The higher the husbands' education, the higher the contraceptive use among women. For instance, women whose husbands have secondary education or more are the highest users of traditional or modern contraceptive method (71% vs. 78%). Traditional or modern contraceptive use method is highest among women whose age at first birth is 20-29 (63% vs. 61%), and lowest among women whose age at first birth is 30 or more (8% vs. 5%).

On the other hand, those rural women who hailed from ethnic groups other than the three major ethnic groups in Nigeria (Hausa, Yoruba and Igbo) recorded the highest use traditional or modern contraceptives (44% vs. 64%). The rural Igbo women are more likely to use traditional contraceptive methods than their Yoruba counterparts (39% vs. 15%). The Hausa women have the least traditional or modern contraceptive use (2% vs. 4%). Traditional or modern contraceptive use is highest among the rich rural women (56% vs. 41%) and lowest among the poor rural women (13% vs. 23%). Rural women who are in monogamous relationship use more traditional or modern contraceptive (84% vs. 75%) than their polygynous counterparts (17% vs. 25%).

Traditional or modern contraceptive use is highest among rural women who have attained secondary education or more (64% vs. 50%) and lowest among those who have no education (9% vs. 15%). Rural women whose husbands have secondary education or more are the highest users of traditional or modern contraceptives (65% vs. 60%), whereas those whose husbands have no education are the least users (6% vs. 12%). Traditional or modern contraceptive use increases as the number of living children increases. Rural women who have 5 or more living children are the highest users of traditional or modern contraceptive method (37% vs. 44%), while those with 1-2 children are the least users (24% vs. 21%).

**Table 3: Married women who desire more children and currently used a contraceptive method (traditional or modern) by selected characteristics, according to their place of residence**

Characteristics	Urban N=23,933			Rural N=23,933		
	Traditional	Modern	$\chi^2$	Traditional	Modern	$\chi^2$
<b>Current age</b>						
≤19	0.8	0.5	1.016	1.9	1.1	1.637
20-29	25.5	26.1		28.0	28.3	
30-39	45.4	45.4		43.7	42.7	
40+	28.3	28.0		26.4	28.0	
<b>Ethnicity</b>						
Hausa	1.8	4.9	201.271***	1.4	4.1	141.547***
Yoruba	36.8	50.5		15.7	20.6	
Igbo	43.1	16.0		39.4	11.2	
Other	18.3	28.6		43.5	64.1	
<b>Wealth index</b>						
Poor	3.7	1.8	11.101**	13.3	23.4	28.137***
Middle	9.0	6.9		30.7	35.3	
Rich	87.3	91.3		56.0	41.3	
<b>Marriage type</b>						
Monogamy	90.9	81.5	34.323***	83.5	75.1	11.015**
Polygyny	9.1	18.5		16.5	24.9	
<b>Education</b>						
None	4.4	5.8	5.461	9.1	14.9	22.505***
Primary	18.3	21.4		27.2	35.3	
Secondary+	77.3	72.8		63.7	49.8	
<b>Religion</b>						
Catholic	22.2	9.8	94.214***	25.3	14.8	29.667***
Other Christian	57.4	57.2		63.7	65.5	
Islam	18.8	32.4		10.7	18.9	
Other	1.6	0.7		0.3	0.8	
<b>Husband's Education</b>						
None	3.4	5.0	20.774***	6.4	12.2	9.607**
Primary	25.2	17.4		28.7	27.6	
Secondary+	71.4	77.6		64.9	60.2	
<b>Age at first birth</b>						
≤19	29.0	34.0	14.569**	42.7	53.5	37.972***
20-39	63.1	61.4		49.9	44.9	
30+	8.0	4.6		7.5	1.6	
<b>Number of Living Children</b>						
1-2	26.6	26.6	1.812	24.3	21.4	6.414*
3-4	46.0	43.5		38.9	34.2	
5+	27.4	29.9		36.8	44.4	
<b>Number of sons at home</b>						
0	18.7	16.9	5.060	16.0	18.1	1.322
1	37.9	34.6		29.9	31.0	
2+	43.5	48.4		54.1	50.9	

Chi-square values are significant at  $p < 0.05^*$ ,  $p < 0.01^{**}$  and  $p < 0.001^{***}$

### ***Multivariate Analysis***

Table 4 shows results of the multilevel analyses involving logistic regression. The multivariate technique assists in the simultaneous assessment of relationships between contraceptive use/desire for more children and the selected set of factors. It assists to examine the association between

contraceptive use/desire for more children and each specific independent variable in the model net effect of other variables. The strength of association between the independent variables and contraceptive use/desire for more children is measured using the odds ratio. Odds ratio significantly greater than one indicate that respondents with the attribute(s) are likely to use contraceptive or desire for more children than their reference category, while a relatively odds ratio significantly less than one indicates that respondents with the attributes are not likely to use contraceptive or desire for no more children than their reference category.

The results in Table 4 indicate that the odds that currently married women use contraceptives varies significantly by residence, ethnicity, marriage type and religion. It further show that, the odds that the women use contraceptives increases significantly by wealth index, education, husband's education, age at first birth and number of living children. On the other hand, the odds that the women desire for more children varies by residence, ethnicity and religion, while the odds that the women desire for more children decreases significantly by age, wealth index, education and number of living children, but significantly increases by age at first birth.

As expected, residence has a substantial positive relationship with contraceptive use as well as desire for more children among currently married Nigerian women. The relations are expected, having been well established in many populations. Women who reside in the urban area are more likely to access and use, especially, modern contraceptive methods than their rural counterparts. Married women in the urban are 1.3 times as their rural counterparts to use contraceptives. The urban married women are less likely to desire more children than their rural counterparts. This is because urban residence is generally associated with low family size, and modernisation plays a significant determinant role (Morgan, 1976; Isiugo-Abanihe, 1999).

Women aged 30 years or above are less likely to desire more children. In fact, women aged 30-39 are 0.3 times less likely to desire more children than women aged 19 or below. Women who identify with the Yoruba, Igbo and other ethnic groups other than the Hausa ethnic group are more likely to use contraceptive than those who identify with the Hausa. The results show that the Yoruba has the highest contraceptive use, followed by the Igbo, before the others. For instance, Yoruba married women are 6.5 times as likely as their Hausa counterparts to use contraceptives, while the Igbo married women are 3.6 times as likely as their Hausa counterparts to use contraceptives. Married women from other ethnic groups in Nigeria are less likely to desire for more children than the Hausa women. For example, the Igbo married women are 0.4 times as likely as their Hausa counterparts to desire more children.

The use of contraceptives by married women increases along with their wealth index. The rich are 1.4 times as likely as the middle wealth category to use contraceptives. The poor are less likely than the rich or the middle wealth categories to use contraceptives, and are more likely to desire more children than the rich or the middle wealth category. For example, the poor are 1.3

times as likely as the middle wealth category to desire for more children. Women in monogamous marriage are more likely to use contraceptive than those in polygynous marriage. The results show that married women in monogamous marriage are 1.4 times as likely as those in polygynous marriage to use contraceptives. This may be related to lower coitus frequency associated with polygynous relationship. Men in polygynous marital union have more than one wife at a time to have sex with. Polygyny encourages men to have affairs with more than one woman. It influences contraceptive use, because married women in these relationships see no reason for contraceptive use, since they may not have sex frequently.

Education has an increased positive relationship with contraceptive use. This implies that the higher the educational level, the higher the contraceptive use. For example, the results show that married women with secondary education are 2.6 times as likely as those with no formal education to use contraceptive. This is because an extension of educational opportunities to women provides a substitute to ignorance and wrong perception about contraceptives. Married women with formal education are less likely to desire more children compared to their non-educated counterparts. This is expected because education provides different perspectives for women, thus allowing them to perceive themselves as more than just vessels for childbearing.

The results show that married women who identify with Catholic or Other Christian religious bodies are more likely to use contraceptives (modern or traditional) than those in other religions. For non-catholic Christians, modern contraceptive use is likely to be higher than it is for Catholic as earlier shown in table 2. This is because the Catholic faith discourages modern contraceptive use. The results generally reflect the influence of modernity on religious practices. They show that Catholics and Other Christians desire less number of children than the Muslims. For example, the married women who identify with Islamic religion are 1.6 times as likely as women in 'Other' religion to desire more children.

Women who have their first birth at aged 20-29 are 1.2 times more likely than women who have their first birth at aged 19 or below to use contraceptives. The results show that, the more the age of married women at first birth, the more their desire for more children. For example, married women who have their first birth at aged 30 or more are 2.3 times more likely than those who have their first birth at age 19 or below to desire more children. This is expected and may be related to the fact that women who begin reproduction later in life are likely to give birth to a lesser number of children, probably because they are already close to menopause. For women who are aware of this, the fear of not having children due to this advancement in age could stimulate their desire for more children. This is true, especially in Nigeria where women are perceived incomplete if they are unable to give birth to a significant number of children.

The results show that married women who have 3-4 children are 2.2 times as likely as women who have 1-2 children to use contraceptives. Contraceptive

use increases as the number of living children increases. For instance, women who have 5 or more children are 3.1 times as likely as those in the reference category to use contraceptives. This is expected. In Nigeria, high fertility is a common practice and married women who use contraceptive often do this when they have attained their desired family size. As such, the desire for more children decreases as the number of living children increases. For example, women who have 5 or more living children are less likely as women who have 1-2 living children to desire for more children.

**Table 4: Odds ratio for currently married women logistic regression models showing Non-contraceptive use and desire for more children, by selected background characteristics**

Characteristics	Non-contraceptive use	Desire for more children
	Odds ratio	Odds ratio
<b>Residence</b>		
Urban	1.278***	0.902*
Rural(RC)	1.00	1.00
<b>Current Age</b>		
≤19(RC)	1.00	1.00
20-29	1.070	1.007
30-39	1.052	0.290***
40+	0.858	0.077***
<b>Ethnicity</b>		
Hausa(RC)	1.00	1.00
Yoruba	6.538***	0.173***
Igbo	3.578***	0.370***
Other	2.762***	0.506***
<b>Wealth index</b>		
Poor	0.556***	1.308***
Middle(RC)	1.00	1.00
Rich	1.400***	0.809***
<b>Marriage type</b>		
Monogamy	1.352***	0.990
Polygyny(RC)	1.00	1.00
<b>Education</b>		
None(RC)	1.00	1.00
Primary	1.915***	0.810**
Secondary+	2.556***	0.724***

Characteristics	Non-contraceptive use	Desire for more children
	Odds ratio	Odds ratio
<b>Religion</b>		
Catholic	1.873**	0.593**
Other Christian	1.585*	0.675*
Islam	0.997	1.584**
Other(RC)	1.00	1.00
<b>Husband's Education</b>		
None(RC)	1.00	1.00
Primary	1.594***	0.878
Secondary+	1.649***	0.908
<b>Age at first birth</b>		
≤19(RC)	1.00	1.00
20-39	1.206***	1.362***
30+	1.204	2.315***
<b>Number of Living Children</b>		
1-2(RC)	1.00	1.00
3-4	2.232***	0.195***
5+	3.080***	0.079***
Model chi-square	5233.439***	8984.466***
Nagelkerke R Square	0.329	0.478
-2 Log Likelihood	16400.902	16402.456

Significant at p<0.05\*, p<0.01\*\*, p<0.001\*\*\*, RC - reference category

### Discussion

This paper has explored non-contraceptive use and the desire for more children based on the background characteristics of currently married women in Nigeria. The general findings include that the higher the number of living children, the higher the use of contraceptives, and the higher the number of living children, the lower the desire for more children. This demonstrates the consistent association between contraceptive use and attainment of fertility desires. Overall, contraceptive use was low among women, while desire for more children was high (16% versus 78%). These suggest an inversely proportional association between contraceptive use and desire for more children.

Place of residence, ethnicity, wealth index, marriage type, education, religion, age at first birth and number of living children jointly determine contraceptive use and desire for more children. While husband's education significantly determines women contraceptive use, it has no significant effect on women desire for or against having more children. This suggests the influence of spouse on contraceptive use. The finding corroborates those of existing studies which showed that men played a major role on women's contraceptive use in Nigeria (Isiugo-Abanihe, 2003; Orji, Ojofeitimi & Olanrewaju, 2007).

Although, the study shows that the number of living children significantly determines contraceptive use, the number of sons does not indicate a significant effect on contraceptive use. This challenges the hypothesis of Chowdhury and Bairagi (1990) that the effect of sex preference on fertility will be greater in a population where contraceptive use is low or non-existent. This finding is incongruent with the observation of Isiugo-Abanihe (1997) that women's education and place of residence did not appear to be consistently and strongly predictive of fertility desires, once other factors are controlled. The findings of this study suggest that factors other than spousal educational levels play significant roles in women's use of contraceptives.

The study shows that while marriage type significantly predicts contraceptive use, it did not significantly determine women's desire for more children. This finding indicates that monogamous marriage influences a woman's use of contraceptive but does not necessarily determine her desire for or against more children. This further suggests that the predictor of women desire for more children in Nigeria is slightly different from the predictor of fertility in the West where husbands and wives monogamously wed, live separately from their biological parents and invest on their children without expecting much in return (Caldwell, 1980).

While the age of women is a determinant of desire for more children, it does not determine contraceptive use. The study found women's contraceptive use to being predicted by other variables other than age. This finding implies that age plays a significant role on women's decision to have or not to have any more children in Nigeria. The desire to have more children decreases as the age of women increases. This suggests that in Nigeria, a woman is expected to bear her desired number of children as quickly as possible after marriage. However, her ability to do this may not depend solely on how many children she desires but how long she has been in marriage. Thus, a population policy that tends to control fertility in Nigeria must consider this as an essential factor.

The educational level of women significantly determined contraceptive use and the desire for more children in Nigeria. This finding supports earlier studies that posit that education is a strong predictor of contraceptive use and fertility (Zaki & Johnson, 1993; Blackstone & Iwelunmor, 2017). This suggests that there is a need for fertility control initiatives to design strategies targeted at improving the educational level of women of reproductive age.

### **Conclusion**

The findings from this study have essential policy implications which could be applied to improve the current policies on population as they relate to contraceptives and fertility rates. The study concludes that non-contraceptive use and the desire for more children in Nigeria remains an issue that needs policy attention. Thus, it is suggested that a well implemented programme that will be sensitive to the varying socio-cultural milieus in Nigeria is imperative in order to make contraceptives attractive in different contexts. That way, most

couples in Nigeria especially in rural communities may be able to embrace effective family planning options for fertility reduction.

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