

Inter-spousal communication: A means for achieving concordant fertility goals

Adebanke Olawole-Isaac, Gbolahan A. Oni, Muyiwa Oladosun
& Emmanuel O. Amoo

¹Demography and Social Statistics, College of Business and Social Sciences,
Covenant University, Ota, Nigeria

Email:adebanke.olawole-isaac@covenantuniversity.edu.ng

Abstract

Background:Spousal communication strategy has gained attention as an effective means of reducing couple's fertility preferences, its continuous measurement cannot be overemphasised in literature

Objective:This study examined concordance and discordance in the desired number of children among couples in Nigeria.

Methods:The study used the 2013 Couple dataset of Nigeria Demographic and Health Survey. The method of data analyses involved univariate, chi-square and binary logistic regression.

Results:The result showed that 34% of couples agreed on common fertility desires, while 66% disagreed. The logistic regression analysis using Likelihood Ratio test, showed that couples communication significantly explained the indirect effects of background variables on concordant fertility desire ($P < 0.001$).

Conclusion:We therefore, recommend that couples' communication on family size preferences be encouraged by programs geared towards achieving SDG-3,5 aimed at improving women and child health and gender equality in decision making.

Keywords: Inter-spousal communication, couple, concordance, fertility, SDG, Nigeria

Introduction

Couples' communication and agreement on the number of children desired are important determinants of reproductive health and of major consideration towards achieving sustainable development in developing countries. Couples communication allows husband and wife to time and space the next birth, reduce the risk of low birth weight in the next pregnancy and gives the woman the time, energy and resources to breast feed their infants. This also allows the infant to grow healthy and reduce the risk of malnutrition. While fertility is declining in some sub-Saharan African countries, like Kenya, Lesotho, Ghana, Cape-verde, with a total fertility rate of 3.9, 3.3, 4.2, 2.9 respectively the rates of decline is more rapid than expected in some countries (PRB 2017, 2016; Bongaarts, 2008). Nigeria still remains one of the countries with highest fertility level in the world. As at 2017, Nigeria had a population of over 191 million, and a total fertility rate of 5.5 (Population Reference Bureau, 2017).

Over the years, spousal communication strategy has gained attention as an effective means of reducing gender inequality in couple's fertility preferences in developing and under-developed countries (Lakshmi, Neetha and Rai, 2013; Adeyemo, Asabi and Adedotun, 2012; Link, 2011; Derose, Dodoo, Ezeh

and Owuor, 2004). Esere, Yussuf and Omotosho (2011) observed that the majority of the unsuccessful unions are often influenced by severe lack of communication between spouses. For one to have or enjoy a long, strong and lasting relationship with someone, one is required to have exceptional communication skills. Esere *et al.*, (2011) and Sarwatay and Divatia (2016) found that communication is extremely crucial in stabilizing a marriage. Communication and decision-making play vital role in assuring informed choice of family planning and reproductive health behaviour in order to reduce rapid population growth.

Communication and decision-making empower couples to seek what is best for their reproductive health, in terms of planned parenthood and to exercise their right to good quality family health care (Esere, 2011; Adewuyi & Ogunjuyigbe, 2003). Since husband and wife play a vital role in reproductive health, inter-spousal communication regarding desired fertility is important for making good health decisions, especially in socio-cultural and patriarchal social settings like Nigeria. In the absence of this, high fertility could persist in Nigeria (Oduşina *et al.*, 2015; Oyediran & Isiugo-Abanihe, 2002; Kulczycki, 2008).

This correlates with the findings by Sarwatay & Divatia (2016). Also, in (2011) Ibisomi & Odimegwu in their study on understanding resolution of

differential fertility preferences among couples in Nigeria, where it was observed that there are differences in the number of children that the couples wish to have. For instance, if it is the woman that desires additional child or children than the husband, disagreement and mistrust between husband and wife is common in such households or families.

This study is anchored on the diffusion of innovation theory, as developed by Ryan and Gross's in 1943. This theory proposed the hypothesis which traces the procedure by which a fresh thought or practice is communicated through convinced medium over time between members of a social system. The theory asserts that the acceptance or adoption of a new behaviour is based on a premise that the idea was suggested to them by someone they trust. The theory is based on four mechanisms which are: social system, innovation, communication, and time. This observation is also supported by studies from a psychologist's perspective that communication forms the basis for the stability of marital union and plays a key role in ensuring positive relationships between partners. In a marital union, communication and its worth show how glowing the couples are in harmony with one another's desires and whether their bond has any effect on the type of parenthood they practice (Heavey, 1996). In the course of communication numerous issues are raised, sorted and decisions are made.

It is therefore pertinent at this juncture to ask the following questions: Does inter-spousal communication influence fertility desire in Nigeria? Are there any discordant in couple's fertility goal in Nigeria? Studies have identified the socio-economic predictors of high fertility in Nigeria like education, age at marriage, religion, cultural factors (Amoo, 2017; Odusina *et al* 2015; Anyanwu *et al.*, 2013; Olalekan & Olufunmilayo, 2012; Odusina, 2012; Ogunjuyigbe, 2009; Wusu & Amoo, 2016) despite these factors identified, fertility level in Nigeria still remains high. This study, therefore, examines the extent to which couple's communication influence concordance in reporting desired fertility among couples in Nigeria.

Data and methods

The study used the 2013 Nigeria Demographic and Health Survey (NDHS) (NPC and ICF Macro 2014) Couple dataset. The data consist of men and women of reproductive age. Prospective respondents that were not married, separated or divorced were excluded from the data. The selection for the 2013 NDHS was countrywide representative and the survey used as a sampling frame, the record of Enumeration Areas (EAs) maps prepared for the

2006 Population Census of the Federal Republic of Nigeria, provided by the National Population Commission. Sample designed used in the collection of the data was a multi-stage sampling technique which involves the division into states and further divided into Local Government Areas (LGAs) and each local government was further divided into different census enumeration areas. Each EA was further classified into rural or urban and sample was selected using a stratified three-stage cluster design consisting of 904 clusters, 372 in urban areas and 532 in rural areas. The study population consists of 8,608 couple women aged 15-49 and their spouses aged 15-59 interviewed during the 2013 survey.

Data measurements

The dependent variable in this analysis is whether or not a couple had a common fertility goal. It is a dichotomous variable (Yes = 1 and No = 0). The independent variables are age, level of education, number of living children, religion, occupation, place of residence, region, wealth index, and type of union (i.e., monogamous or polygamous). Communication on desired number of children was included as the proximate variable. All the variables used were as classified in the NDHS, except for wealth index and occupation variables which were reduced to three categories in this study: wealth index (poor status, middle and rich status); Occupation (civil servant, self-employed and not working).

Data analysis procedure

The method of data analyses involved univariate, bivariate and multivariate statistical techniques. The descriptive analysis used frequency distributions; the bivariate analysis employed the chi-square statistic to test for a significant relationship between selected variables and couple communication on the desired number of children. At multivariate level, two models were fitted to adjust for the independent effect of the variables. The multivariate analysis adopted the use of binary logistic regression and the level of significance used is 0.05. The first model used binary logistic regression technique to explore the socio-demographic determinants of concordance in couples desired fertility goal. The second model was fitted to determine the extent to which communication on desired fertility (i.e., desired number of children) helped to explain the indirect effect of background factors on concordance in the couples' fertility goals. Data were analyzed using STATA 13, and the model is denoted as follows:

The description of logistic regression model used for this study is:

$$\log\left(\frac{p}{1-p}\right) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + e_0 \dots \dots \dots (i)$$

Where the P is the probability that couples would have a concordance fertility goal given the covariate X_i's and 1-P is the probability of discordant given the same covariates, then the "odds" of occurrence of the event against its non-occurrence is p_x/q_x or $p_x/(1-p_x)$. In the logistic model above the natural logarithm of the Odds Ratio called the "log odds" are related to a set of explanatory variables. Where the X₁ through X_n are the independent variables which include(s) individual and shared (joint) background variables such as (age, religion, education, number of living children, type of union, work status, region, wealth index and β through β_n are the regression coefficients, α is the regression constant and e is the error term. Binary regression model was used in this study to predict the odds of concordance in fertility goal, among couples, controlling for their background variables.

Results

Socio-demographic characteristics are important determinants of reproductive health behaviour and practices. The age characteristics revealed the mean age of the women as 29 years with a standard deviation of 7.0 years while the mean age of their spouses was 37 years with a standard deviation of 9.0 years. The result in Table 1 indicates that almost half of the female respondents were between 25-34 years old while majority of their spouses make up 31-40 years old representing approximately 46% and 42% respectively. Three out of every ten female and male respondents were between 15-24 years (30%) and age 41 years and above (32%) respectively. In addition, female respondent 35 years and over make up 23% of the sampled population and 26% of the respondent husbands make up ages 31 and less. The distribution by level of education shows that 50% of the female respondents and 35.3% of their spouses had no education. Among the proportion of couples with formal education, 19% of the women and 21.4% of the men had primary education.

The shared characteristics profile indicates that seven out of every ten studied populations are in

monogamous union (70%) while the remaining are in polygamous union. Furthermore, the result shows that majority of the respondents live in rural areas (67%) compared to urban areas (33%). Distribution of respondents (couples) by religious affiliation shows that, Islam is the dominant religion. Approximately 64% of the couples are Muslims, while 1.8% and 33.6% of couples constitute other religious groups. In terms of regional variation in the interviewed couples across the six-geopolitical zones of Nigeria, about 40% were from the North West region of Nigeria, 17% from North East, 15% were from North Central, and 13% were from South West and 8.4% and 5.8% were from South-South and South Eastern part of Nigeria. The distribution of wealth status base on the classification criteria shows that approximately 47% of the couples fell into the low wealth quintile index.

Distribution of background characteristics and concordant fertility

Table 2, shows the bivariate relationship between background characteristics and couples fertility goal. The result indicates that individual age, education, occupation and number of living children and shared variables Place of residence, religion, region, the type of union and their wealth status had significant relationship with couple's concordant fertility goal P<0.001. The result shows that at least 30% of respondents across different levels of age group had concordant fertility desire. The result further shows that the level of concordance in terms of couple's fertility desires is higher among women in the age group 25-34 years and men in the age group 31-40 years. About 70.9% of women between ages 15-24 years had discordant fertility desire with their spouses. Among men, those in age group 40 years and above almost 68% of them had a discordant fertility desire. The result further shows that age is statistically significant with couple fertility desire (P<0.001).

Table 1: Percentage distribution of couples by socio-demographic characteristics

Variables	Wife Characteristics		Husband Characteristics		
	Freq (8797)	Percentage	Age group	Freq (8797)	Percentage
Age group			< 31 years	2249	26.0
15-24 years	2710	30.8	31-40 years	3699	42.0
25-34 years	4030	45.8	40+ years	2849	32.0
35+ years	2057	23.4	Mean =37, Std dev = 9		
Mean =29, Std dev = 7			Education		
Education			No education	3103	35.3
No education	4373	49.7			

Primary	1667	19.0	Primary	1883	21.4
Secondary	2141	24.3	Secondary	2628	29.8
Tertiary	615	7.0	Tertiary	1183	13.5
CEB			CEB		
≤2 children	4129	46.9	≤2 children	3138	35.7
3-5 children	3563	40.5	3-5 children	3220	36.6
6 or more	1105	12.6	6 or more	2439	27.7
Occupation			Occupation		
No occupation	2850	33.8	No occupation	109	1.2
Civil servant	415	4.9	Civil servant	1114	12.7
Self employed	5172	61.3	Self employed	7573	86.1
Shared Background Characteristics					
Religion			Region		
Christians	2962	33.7	North central	1337	15.2
Muslim	5674	64.5	North east	1522	17.3
Tradition/others	159	1.8	North west	3535	40.2
Place of residence			South east	513	5.8
Rural	5856	66.6	South south	738	8.4
Urban	2941	33.4	South west	1152	13.1
Wealth index			Type of union		
Low	4127	46.9	Monogamy	6221	70.7
Medium	3025	34.4	Polygamy	2576	29.3
High	1644	18.7			

Source: NDHS, 2013

Education is believed to be an important variable accounting for many aspects of demographic behaviour. As education remains a strong explanatory variable in demographic research, the result in Table 2 shows that as the wives and husbands educational level increases, there is also a significant increase in agreement on desired fertility. Among women with no education, 21.1% of them had concordant fertility goal. Result further shows that, 35.1% of women with primary education, 49.5% with secondary education and 59.7% with tertiary education had concordant fertility desire with their spouses. A similar trend was observed in the relationship between the husband's level of education and concordant fertility desire $P < 0.001$.

Furthermore, Table 2 shows that couples with fewer number of children had concordant fertility goal when compared with others. The result shows that 35.6% of women with two or fewer children and 40.5% of men in this category had concordant fertility goal with their spouse. The result of the relationship further shows that as the number of children ever born increases the level of concordance with the couple's fertility desires reduces. Hence there is a statistically significant relationship between

children ever born and a couple fertility goal at ($P < 0.001$).

Table 2 further examined the relationship that exists between the type of occupation and couple's fertility goal. The result shows a wide variation in the level of concordant in fertility goal, among wives that are civil servant compared with those in other groups. The result shows that 29.3% of wives who are not working had concordant fertility desire with their spouse while 57.9% of those that are civil servant and 33.4% who are self-employed had concordant fertility desire with their spouses. Among the husbands, the result shows a slight change in the level of concordance in terms of fertility desire and type of occupation. According to Table 2, 36.3% of husbands who are civil servant and 23.4% who are self employed had concordant fertility goal with their spouses.

In addition, result shows that almost half of couples who live in urban areas have a concordant fertility goal (45.7%) as oppose to 54.3% who do not have concordance in terms of their fertility desire. Three quarter of the couples who live in rural areas did not have concordance in terms of fertility goal representing 71.4%.

Table 2: percentage distribution of background socio-demographic characteristics, and couples fertility desire

Wife Characteristics			Husband Characteristics			
	Concordant (%)	Discordant (%)	Chi-square	Concordance (%)	Discordant (%)	Chi-square
Age group						
15-24 years	714 (29.1)	1736 (70.9)		701 (34.1)	1315 (65.9)	
25-34 years	1411 (36.3)	2479 (63.7)		1270 (35.6)	2302 (64.4)	
35+ years	735 (35.8)	1319 (64.2)	37.565***	889 (32.1)	1879 (67.9)	8.206*
Education						
No education	831 (21.1)	3098 (78.9)		545 (19.8)	2205 (80.1)	
Primary	598 (35.1)	1104 (64.9)		608 (32.4)	1267 (67.6)	
Secondary	1057(49.5)	1079 (50.5)		1089 (43.0)	1444 (57.0)	
Tertiary	374 (59.7)	253 (40.3)	701.397 **	618 (50.0)	618 (50.0)	480.317***
CEB						
≤ 2 children	1368 (35.6)	2473 (64.4)		1173 (40.5)	1723 (59.5)	
3-5 children	1183 (34.2)	2271 (65.8)		1129 (36.3)	1982 (63.7)	
6 or more	309 (28.1)	790 (71.9)	21.476***	558 (23.4)	1829 (76.6)	181.711***
Occupation						
No occupation	775 (29.3)	1868 (70.7)		34 (32.1)	72 (67.9)	
Civil servant	247 (57.9)	180 (42.1)		496 (44.3)	623 (55.7)	
Self employed	1659 (33.4)	3304 (66.6)	134.512***	2330 (32.5)	4839 (67.5)	60.4351***
Place of residence						
Rural	1625 (28.6)	4064 (71.4)				
Urban	1235 (45.7)	1470 (54.3)	238.433***			
Religion						
Christians	1606 (51.2)	1528 (48.8)				
Muslim	1210 (23.7)	3892 (76.3)				
Tradition/others	44 (27.9)	114 (72.1)	657.733***			
Wealth Index						
Poor	836(21.9)	2987 (78.1)				
Intermediate	1208 (39.7)	1838 (60.3)				
Rich	816 (53.5)	709 (46.5)	552.277***			
Type of union						
Monogamy	2434 (40.9)	3523 (59.1)				
Polygamy	426 (17.5)	2011 (82.5)	420.821***			
Region						
North central	557 (39.8)	844 (60.2)				
North east	424 (24.8)	1287 (75.2)				
North west	604 (21.2)	2243 (78.8)				
South east	300 (61.2)	190 (38.9)				
South south	426 (48.3)	456 (51.7)				
South west	549 (51.7)	514 (48.3)	681.869***			

Source: NDHS, 2013

In addition, Table 2 reveals that concordance in terms of couples fertility goal is higher among couples who are Christians (51.2%) when compared with other groups while, the level of discordant in terms of couples fertility desire is higher among couples who are Muslims representing 76.3%. Of those

couples who live in Northern region of the country, almost three quarter of them did not have concordance in terms of fertility goal representing 60.2% for North central, 75.2% for North East and 78.8% in North west. In the southern part at least five out of every ten couples had concordance in

terms of fertility goal representing 61.2% for South East, 51.7% in South west and 48.3% for South South.

Concordance in terms of couple's fertility goal was also evaluated by type of union. The result surprisingly shows that six out of every ten couples in a monogamous union did not have concordance in terms of couple's fertility goal as oppose to four out of every ten who had concordance in terms of fertility goal. Over 80% of couples in a polygamous union did not have a concordance in terms of their fertility goal as oppose to 17.5 % with concordance. The wealth status of the couple was used to examine its relationship with fertility goal. The study reveals that among couples who belong to the rich wealth quintile 53.5% had concordance in terms of fertility desire as oppose to 46.5% who did not. Among those in the intermediate wealth quintile 60.3% did not have a concordance in terms of fertility desire as oppose to 39.7% with concordance fertility desire. Among couples who belong to the poor wealth index 78.1% did not have concordance in terms of fertility goal as oppose to 21.9% with a concordance fertility goal. Hence the result shows that couples wealth status is significantly related to concordance fertility desire ($P < 0.001$).

Background characteristics and communication on desired number of children

The result in Table 3 shows that there is a significant relationship between couples communication on desired number of children and individual age, education, occupation and number of living children, religion, place of residence, type of union, region and wealth index ($P < 0.001$). Table 3 shows that majority of the respondents across the different levels of age group did not communicate with their spouses on desired number of children. Only 23.9% of women aged 35 years or more communicated with, their spouse on desired number of children. Table 3 shows that as wives educational level increases, there is also a significant increase in the proportion of women who communicated with their spouses on desired number of children. A similar trend was observed in

the relationship between communication on desired number of children and husband's level of education.

The result further shows that 6.2% of wives who were not working communicated with their spouses on their desired number of children while 58.1% of those that were employed (civil servants) and 17.5% who were self employed discussed with their spouses on their desired number of children. Among wives with two or less children, the majority of them (85.8%) did not communicate with their spouses on desired number of children. A similar trend was observed for those with 3-5 children and those with 6 or more ($P < 0.001$). Table 3 further shows that almost three quarter of couples who lived in urban areas did not communicate on desired number of children (71.9%). Table 3 further reveals that 42.7% of Christian's couples communicated on desired number of children while 57.3% did not. Majority of the Muslim couples did not communicate with their spouses on the desired number of children (94.6%). Of those couples who lived in Northern region of the country, majority of them did not communicate with one another on desired number of children representing 83.0% for North Central, 91.1% for North East and 96.9% for North West. In the southern part of the country more than three out of every ten couples communicated on the number of children representing 34.8% for South East, 44.0% for South West and 58.2% for couples in South South.

Communication on number of children was also evaluated by type of union. Almost all the couples in a polygamous union did not communicate with one another on desired number of children representing 94.7%. With respect to the association between communication on the number of children and wealth status, the proportion of communication tends to be higher for couples who are in the rich wealth status at the time of the survey (44.1%), compared to those in the intermediate (19.5%) and those who were poor (4.6%). Hence, there is a significant relationship between couples communication on desired number of children and wealth status ($P < 0.001$).

Table 3: Couples' Communication on Desired Number of Children and Individual Background Characteristics

Variable	Communication on number of children		Chi-square	P-value
	Yes (%)	No (%)		
Wife Characteristics				
Age				
15-24 years	132 (7.0)	1784 (93.0)		
25-34 years	440 (17.3)	2097 (82.7)		
35 ⁺ years	300 (23.9)	954 (76.1)	174.1099	<0.001

Education				
No education	127 (3.9)	3149 (96.1)		
Primary	217 (21.4)	796 (78.6)		
Secondary	356 (32.0)	755 (68.0)		
Tertiary	173 (56.0)	136 (44.0)	935.5975	<0.001
Occupation				
No occupation	129 (6.2)	1956(93.8)		
Employee	110 (58.1)	79 (41.9)		
Self employed	567 (17.5)	2672 (82.5)	400.7504	<0.001
CEB				
≤ 2	377 (14.2)	2283 (85.8)		
3-5	403 (17.7)	1878 (82.3)		
6 or more	93 (12.1)	675 (87.9)	17.4103	<0.001
Husband Characteristics				
Age				
<31 years	141 (9.1)	1409 (90.9)		
31-40 years	425 (18.0)	1942 (82.0)		
41 ⁺ years	307 (17.1)	1485 (82.9)	60.4615	<0.001
Education				
No education	72 (3.0)	2323 (97.0)		
Primary	184 (16.3)	942 (83.7)		
Secondary	397 (26.0)	1127 (74.0)		
Tertiary	219 (33.2)	443 (66.8)	546.0846	<0.001
Occupation				
No occupation	8 (10.6)	69 (89.4)		
Employee	181 (29.2)	439 (70.8)		
Self employed	684 (13.6)	4328 (86.4)	97.8861	<0.001
Number of living children				
≤ 2	326 (16.7)	1636 (83.3)		
3-5	392 (19.0)	1668 (81.0)		
6 or more	154 (9.1)	1532 (90.9)	70.2392	<0.001
Place of residence				
Rural	413 (10.2)	3658 (89.8)		
Urban	459 (28.1)	1178 (71.9)	272.5136	<0.001
Couples religion				
Christian	642 (42.7)	863 (57.3)		
Muslim	221 (5.4)	3894 (94.6)		
Traditional/Others	9 (10.4)	78 (89.6)	1116.9341	<0.001
Region				
North central	143 (17.4)	680 (83.0)		
North east	91 (8.9)	931 (91.1)		
North west	84 (3.1)	2584 (96.9)		
South east	84 (34.8)	157 (65.2)		
South south	207 (58.2)	149 (41.8)		
South west	263 (44.0)	335 (56.0)	1222.2818	<0.001
Type of union				
Monogamy	773 (20.3)	3043 (79.7)		
Polygamy	99(5.3)	1793 (94.7)	207.0821	<0.001
Wealth Index				
Poor	141 (4.6)	2912 (95.4)		
Intermediate	347 (19.5)	1436 (80.5)		
Rich	385 (44.1)	488 (55.9)	802.8600	<0.001

Source: NDHS, 2013

Relationship between Communication on Desired Number of children and Concordant Fertility

Table 4 shows the relationship between couples communication on desired number of children and concordant fertility. The result shows that couples communication on desired number of children had significant relationship with fertility goal ($P < 0.001$). As shown in the Table 4 more than four out of every

ten couple that communicated on number of children had concordant fertility (43.5%) while 30.8% who did not communicate on desired number of children had concordant fertility years preceding the survey. Result also shows that 69.2% of couples who did not communicate on desired number of children had discordant fertility.

Table 4: Bivariate association between couple's communication on desired number of children and concordant fertility goal

Variable	Concordant (%)	Discordant (%)	Chi-square	P-value
Couples communication on desired number of children				
Yes	943 (43.5)	1227 (56.5)		
No	1917 (30.8)	4307 (69.2)	114.7341	<0.001

Source: NDHS, 2013

Logistic Regression estimating the odds ratio of concordant fertility controlling for background characteristics

Table 5 gives the odds ratio of concordance with respect to the background variables, using two logistic regression models. In model I, communication variable was not included, but was included in model II. The difference in the results will enable us to determine the extent to which communication has helped to explain the indirect effects of the background factors on fertility goal concordance. In other words, whether or not communication on desired fertility by couples is a major channel through which concordance is achieved. Model I look at the odds of concordant fertility for each control variable independently as shown in the model I. Model II examined the adjusted effect of the variables when a proximate variable (communication on the number of children) was introduced into the model to account for the significant indirect effect of background factors on concordant fertility goal.

The result shows that wives who are between ages 25-34 years and husbands who are 31 years or less are 1.14 times and 1.00 times more likely to report concordant fertility goal. Also, wives with higher education and husbands in the same category are 1.46 and 1.51 times more likely to have a concordant fertility goal. Husband with six or more children are .92 times less likely to have a concordant fertility goal. Couples who reside in the urban areas are 1.16 times more likely to have an agreement in terms of their fertility goal.

The result in model II shows that wives secondary education and husband's tertiary education had 27% and 71%, significantly increased likelihood of concordant fertility goal compared to the reference group (Model I: OR= 1.27; Model II: OR=1.71). The

likelihood of contraceptive use for mothers who were self employed was reduced in the model I, in that wives who were self employed had 1.17 times likelihood of using contraceptives. Conversely, the likelihood of contraceptive use was significantly higher for wives who were self employed compared to the reference group (Model I: OR= 1.17; Model III: OR=1.41)

Furthermore, couples who lived in urban areas, had 1.16 times higher likelihood of concordant fertility goal in the unadjusted model I than those who lived in rural areas (Model I: OR=1.16 $P < 0.05$). Among couples who lived in the North West region there was 73%, significantly lowered likelihood to have concordant fertility in the unadjusted model I compare to the reference category. A similar trend was observed in the adjusted model II where there was 76%, significantly lowered likelihood of couples to have a concordant fertility goal compared to the reference group (Model I: OR=0.73; Model II: OR=0.76 $P < 0.05$). With respect to couples in South East, the result shows that there were 55%, significantly increased likelihood of concordant fertility in the unadjusted model I compared to the reference group. A similar trend was observed in model II where a 54%, significantly increased likelihood of concordant fertility was observed among the South East region compared to the reference category (Model I: OR=1.55; Model II: OR=1.54 $P < 0.05$).

Furthermore, there was reduced 60% and 62%, significantly reduced likelihood of concordant fertility among Muslim couples in the model I and model II compared to the reference group (Model I: OR=0.60; Model II: OR=0.62 $P < 0.001$). As indicated in the Table 5, the likelihood of concordant fertility goal is significantly reduced in model I for

couples in a polygamous union (OR=0.53, P<0.001), compared to the reference group.

The result in the model I show a Log-likelihood ratio [LLS] = -4589.6643 and Chi-square= 1051.52 on 29 degrees of freedom (refer to Table 5), while for model II, [LLS] = -2821.6755 and Chi-square= 672.59 on 30 degrees of freedom (refer to Table 5). The extra 1 degree of freedom in model II came from the 1 parameter of the proximate determinants used in the study. The reduction of 378.93 on 1 d.f; which makes the reduction by the communication variable to be highly significant, i.e. P<0.001. The significance

of the model was determined through the proximate variables. The difference in the Log likelihood Chi-square in model I (unadjusted) and model II (adjusted) had a chi-square distribution with degrees of freedom equal to a number of additional parameters in the full model. The significance of the model was determined through the proximate variable. Therefore, couples communication on number of children helps to explain the indirect effect of background factors concordant fertility goal .

Table 5: Logistic Regression estimating the odds of concordant fertility goal by socio-demographic characteristics of couples

Variables	Model I	Model II
Wife Characteristics		
Age		
15-24 years	R.C	R.C
25-34 years	1.14	1.11
35 ⁺ years	1.10	1.09
Education		
No education	R.C	R.C
Primary	1.04	.94
Secondary	1.25**	1.27*
Tertiary	1.46*	1.28
Occupation		
No occupation	R.C	R.C
Civil servant	.99	1.13
Self employed	.92	.89
CEB		
<= 2 children	R.C	R.C
3-5 children	.95	.94
6 or more	.92	.89
Husband Characteristics		
Age		
<31 years	R.C	R.C
31-40 years	.93	.92
41 ⁺ years	.87	.85
Education		
No education	R.C	R.C
Primary	1.11	1.22*
Secondary	1.19**	1.27*
Tertiary	1.51***	1.71***
Occupation		
No occupation	R.C	R.C
Civil servant	1.07	1.25
Self employed	1.04	1.01
CEB		
<= 2 children	R.C	R.C
3-5 children	.97	.90
6 or more	.88	.88
Residence		
Rural	R.C	R.C
Urban	1.16***	1.10

Table 5 (cont.): Logistic Regression estimating the odds of concordant fertility goal by socio-demographic characteristics of couples

Variables	Model I	Model II
Wife Characteristics		
Region		
North Central	R.C	R.C
North East	.78**	.83
North West	.73***	.76**
South East	1.55***	1.54 **
South South	.92	.89
South West	1.18*	1.19
Religion		
Christians	R.C	R.C
Muslim	.60***	.62***
Traditional/Others	.59**	.83
Type of union		
Monogamy	R.C	R.C
Polygamy	.53***	.62***
Wealth Index		
Poor	R.C	R.C
Intermediate	1.25**	1.24*
Rich	1.30**	1.35*
Communication on number of Children		
No	Na	R.C
Yes		1.41***
Log likelihood	-4589.6643	2821.6755
LR chi2	1051.52 (d.f=29)	672.59 (d.f=30)
Prob > chi2	<0.001	<0.001

Source: NDHS, 2013 Note: RC= Reference Category; * $P < 0.05$; ** $p < 0.01$; *** $P < 0.001$; na = not applicable; Prob > F = <0.0010; OR= Odds Ratio

Discussion

The study investigated the effect of couple's communication on concordance in reporting desired fertility. This segment presents the interrelationships between inter-spousal communication and concordant fertility goal in Nigeria. The findings are, in no doubt, reflecting the current perspective on the issues that are vital for decision making on safe motherhood, fertility regulation, and policy formulation on women reproductive health concerns. One of the major contributions of the study is that couples in the younger age categories are more likely to have a concordant fertility goal compared with older couples. The models utilized also revealed both direct and the indirect effects of the individual and shared socio-demographic characteristics of couples in influencing concordant fertility after introducing the proximate variables. In addition, the influence of socio-demographic interplay with fertility is re-echoed by this study, confirming several past findings (Amoo, 2017; Wusu & Amoo, 2016). More importantly is the relevance of education as a predictor of concordant fertility goal which was highlight in this study, as current revalidation of existing pre-SDGs studies (Esere et al., 2011;

Adewuyi & Ogunjuyigbe, 2003; Odusina et al., 2015; Ugal & Ushie, 2013; Oni & Mccarthy, 1991; Anyanwu et al., 2013; Olalekan & Olufunmilayo, 2012; Odusina, 2012; Ogunjuyigbe, 2009).

The study portrayed couple communication as a tool of family planning and means to keep marriage intact devoid of rancor of children number. This finding is in line with Orji, Adegbenro, Ogunbayo & Oyebadejo (2007) that affirmed that spousal communication as a tool of family family planning could raise men's involvement in safe motherhood. This study observed that communication among couples enables them to be on familiar terms with one another's attitudes towards their desired number of children and adoption of contraceptives provides understanding between the couple on their reproductive health concerns (Islam, 2014; Karman et al., 2011). It also reconfirmed Esere, Yussuf & Omotosho (2011) that aligned with the summation that the majority of the unsuccessful unions are influenced by lack of communication among spouses and that spousal communication is extremely crucial in stabilizing a marriage (Esere et al., 2011; Sarwatay & Divatia, 2016). In order to have long and lasting relationship with someone therefore, communication

skills might be essential. Where such is absent, it could engender irresolvable conflicts or difficult to grow mutual corporation.

The fact that the study found that both husband and wife's education have both direct and indirect effects on the concordant fertility goal does not suggest only couples with education can marry. However, a reasonable enlightenment could be required where such circumstance prevails. The findings also corroborate studies by (Oduşina et al., 2015; Olawole-Isaac, Oni, Oladosu, Amoo & Adekola 2017; Oyediran & Isiugo-Abanihe, 2002; Kulczycki, 2008) where it was stated that inter-spousal communication in desired fertility goal is important for making good health decisions, especially in socio-cultural and patriarchal social settings like Nigeria. Precisely one reason why it is difficult for most women who desire no more children not to be pregnant again is the husband desire for additional children (Amoo, Omideyi, et al, 2017; Wusu & Amoo, 2016). Mason & Smith, 2000). Thus, the findings from this study could engender husband-wife effective communication and mutual understanding that stimulate achievement of the desire fertility with no negative consequences either to the marital relationship or the health and wellbeing of the family.

Conclusion and recommendations

The study concludes that there are low levels of communication on the number of children to have and higher proportion of couples do not have concordance (agreement) in terms of their fertility goal. Findings from this study suggest that communication on number of children among couples enhances concordance in their fertility desires. Where the couple agreed on a limited number of children, they may opt for appropriate fertility control methods to moderate their fertility achievement. Ending preventable maternal and child deaths and achieving relative parity in meeting the planned parenthood of couples, through communication on desired fertility can accelerate the achievement of Goal 3 (Target 3.7) of ensuring universal access to sexual and reproductive health-care services and Goal 5 which is aimed at achieving gender equality and empower all women and girls of the sustainable development goals in Nigeria.

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