

## Understanding the Awareness-Utilization Gap in Family Planning among Nigerians

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### ABSTRACT

*Family planning (FP) usage among reproductive-aged Nigerians continues to be low despite strong advocacy and awareness programmes by the government and non-governmental organizations (NGOs), which translate into increased maternal and child mortality, high fertility rate, etc. Therefore, we seek to have an in-depth understanding of the gap between awareness and utilization of FP. Cross-sectional data was collected between June and August 2022 with 1938 males and 4703 females of reproductive age successfully interviewed. Univariate, bivariate, and multivariate analyses using a binary logistic regression model were carried out to model the Awareness-Utilization Gap. The findings indicated a high level of awareness (62.8%) and low utilization (42.5%) among the populace. Two out of every five (41.0%) of the respondents had an awareness-utilization gap (AU-GAP). The highest percentage of AU-GAP was found among younger adults aged 15- 24 years, Muslims, those living in rural areas, and those who had no education. The AU-GAP increased with the number of male children and parity while education, media exposure, and partners' FP approval reduced the proportion of AU-GAP. Therefore, policymakers should promote educational and economic empowerment, prioritize spousal involvement, and consider religious practices and age when designing intervention programs for FP utilization in Nigeria.*

**Keywords:** Family Planning, Media, Maternal and Child Mortality, Religion, Reproduction Age.

### INTRODUCTION

Family planning (FP) is used by individuals to control the number of children, interval, and timing of pregnancies and births by interrupting the reproductive cycle, in so doing reducing both child and maternal morbidity which leads to Improvement in the health of the mother as well as the child. Besides health objectives,

FP has been linked with human rights and population planning objectives.<sup>1</sup> According to the World Health Organisation (WHO),<sup>2</sup> Family planning is a conscious effort made by couples to either limit or space the number of children they desire to have through the use of contraceptive methods, thus promoting the health of the family group and contributing to the social development of the nation.<sup>3</sup> The involvement of people of all social and demographic strata in reproductive health matters is crucial to achieving the maximum benefit of FP and Sustainable Development Goals (SDGs). These led to a global commitment by the International Conference on Population and Development (ICPD) and Beijing Platform for Action declaration that men should be included in family planning and reproductive health programs for more coverage and utilization.<sup>4-5</sup>

As it is well known, FP services bring a large number of benefits to the welfare of women and society. These

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Date manuscript was received: 18/3/24

Date manuscript was accepted: 9/5/24

services help in reducing the number of unwanted pregnancies and abortions. Family planning and reproductive health programs significantly contribute to improving child and maternal health by reducing fertility and can be useful in bringing down the maternal mortality rate in developing countries.<sup>6</sup> Despite the significant implications of FP programs on economic, maternal, and child health, the unmet need for family planning (UMNFP) still exists particularly in developing countries.<sup>7</sup> In Nigeria, contraceptive use and unmet need for family planning remain low as 12% of married women were estimated to use modern contraceptives in the country, while 17% was the prevalence rate for any method with 19% unmet need for contraceptive being reported by 19% of currently married women. Furthermore, variations in contraceptive usage exist across the various regions of the country ranging from 21.3% in North Central, 15.4% in North East, 8.8% in North West, 18.1% in South East, 25% in South-South to 38.7% in South West.<sup>9</sup> Some of the contributing factors that influence contraceptive use around the world have been identified to include; age, marital status, place of residence, religion, level of education, knowledge about contraceptives, family wealth index, family size, number of male children, parity, age at marriage, years of marriage, family setting and attitude towards family planning.<sup>10-12</sup> Other factors reported to have influenced contraceptive usage were issues related to male partners like; partners/spousal approval of use or support, and level of education.<sup>12-13</sup>

Though previous studies identified several contributing factors associated with contraceptive use, little has been done to study the existing gap between awareness and utilization of FP about these identified sociodemographic factors. Furthermore, most studies on FP focused mainly on women while their male counterparts have been largely ignored. To have an in-depth and better understanding of the gap existing between awareness and utilization of FP in

Nigeria and the associated driving socio-demographic factors, it is critical to involve both women and men. This research therefore seeks to fill this lacuna.

## MATERIALS AND METHODS

### *Sample Design*

The dataset used for this study was collected through a stratified multi-stage sampling design with probability proportional to size. A nationwide representative sample of women and men of reproductive age were interviewed using structured questionnaires in all selected households. Two States were selected from each of the six (6) geo-political zones in the country at the first stage. In the second stage, data was collected from rural and urban communities from each earlier selected state, giving a total of twenty-four (24) data collection points. Lastly, at the third stage, households were randomly selected using a systematic sampling procedure, and in each of the selected households, every eligible person of reproductive age 15 – 49 years for females and 15 – 59 years for males were surveyed till the estimated sample size of at least 250 was reached. Subsequently, 2,817 households were selected and from these households, 1938 male and 4703 female respondents were randomly selected to form a nationally representative sample for this study.

### *Measures*

***Outcome variable:*** The response variable used for this study is the Awareness-Utilization Gap (AU-GAP) measured as “*the proportion of participants who are aware of family planning procedures, want no more children, and are not using any of the family planning procedures*” coded with responses: “0 = No gap” or “1 = Gap exist”.

***Explanatory variables:*** The predictor variables used in explaining the gap between awareness and utilization include; gender, religion, age, geo-political zone, place of residence, educational level,

employment status, wealth index, age at first sex, multiple sexual partners, marital status, marriage type, age at marriage, years of marriage, number of male children, number of living children, parity, parents' parity, exposure to media and partner FP approval.

### Statistical analysis

The analyses for the collected data were carried out at three stages namely, univariate, bivariate, and multivariate. The univariate analysis involved the distribution of the respondents by background and sociodemographic characteristics expressed as frequencies, and percentages and presented in graphs and charts. At the bivariate stage, the Pearson Chi-square test of association was carried out to measure the degree of association between the sociodemographic characteristics and AU-GAP of FP using a p-value < 0.05 as the criterion for significance. Lastly, significant variables at the bivariate level are then used to model FPAU-GAP using multivariate logistic regression. A variable is identified as a significant contributor of AU-GAP if the Odds Ratio (OR) is < 0.05. To construct the binary logistic regression model for the explanatory variables with p-sociodemographic factors and the outcome variable (Awareness-Utilization Gap) with k(two) categories. Let  $\pi_j$  denote the binary probability of any observation being in the  $j_{th}$  category, finding the association between this probability, and the p-sociodemographic factors,  $X_1, X_2, \dots, X_p$ , the binary multivariate logistic regression model employed is:

$$\log \left( \frac{\pi_j(x_i)}{\pi_k(x_i)} \right) = a_{0i} + b_{1j}x_{1i} + b_{2j}x_{2i} + \dots + b_{pj}x_{pi}$$

where  $j = 1, 2$  and  $i = 1, 2, \dots, n$ . All statistical analyses were performed using SPSS 27 to achieve the stated research objectives.

### Ethical clearance

All respondents gave their signed/written informed consent for inclusion before they participated in the study and where the participants were minors, consent was sought from their guidance/parents. The research and data collection were conducted by approved protocol by the Ethics Committee of the Centre for Research and Development (CERAD) at the Federal University of Technology, Akure, Nigeria. The ethical number assigned is FUTA/ETH/22/94. Respondents participated in the survey voluntarily and participants were allowed to leave at any time if they felt uncomfortable with the survey.

## RESULTS

### The Univariate Analysis

#### *Sociodemographic characteristics of respondents*

Table 1 shows the distribution of the sample characteristics of the study. In general, females constituted the majority (70.8%) of the sample. Approximately four in ten (37.8%) were respondents aged 15-24 years (emerging adults), 31.9% were young adults aged 25-34 years while the rest (30.4%) were older adults aged 35 years and above. Almost half (48.7%) practiced Christianity, and three in ten (30.6%) practiced Islam. The North-West region of Nigeria had the highest (20.8%) representation while South-South had the least. More (52.5%) respondents lived in the urban areas. Four-in-nine (45.4%) of the respondents had secondary education while only 8.6% had tertiary education. Slightly more than half (53.4%) of them were employed with most (67.9%) living in middle-wealth index households. Fewer (4.5%) participants had early sexual debut before 14 years and 45.7% of those who were sexually active had multiple sexual partners. More than half (53.6%) were ever married while 33.8% of those who were married lived in polygamous homes. Around 34% of the married participants had been in the union for  $\leq 5$

years, 42.3% had been married for 6-15 years and 23.4% had been married for 16 years and above. About 19% of them had an early marriage before the age of 18 years while 48.0% got married at 25+ years.

Approximately 9% of the participants had no male child, while 32.6% had 3+ male children.

**Table 1: The distribution of Sociodemographic characteristics of respondents**

Explanatory Variables	Frequency	Percent
Age		
15 - 24years	2507	37.8
25 - 34years	2116	31.9
35yrs and above	2018	30.4
Gender		
Male	1938	29.2
Female	4703	70.8
Religion		
Christianity	3231	48.7
Islam	2033	30.6
Others	1377	20.7
Geo Political Zone		
North Central	1119	16.8
North East	1055	15.9
North West	1383	20.8
South East	1030	15.5
South South	1021	15.4
South West	1033	15.6
Place of Residence		
Urban	3488	52.5
Rural	3153	47.5
Level of Education		
No Education	780	11.7
Primary	2280	34.3
Secondary	3012	45.4
Tertiary	569	8.6
Wealth Index		
Poorer	1482	22.3
Middle	4512	67.9
Richer	647	9.7
Employment Status		
Employed	3548	53.4
Unemployed	3093	46.6
Age at First Sex		
> 14 years	6342	95.5
≤ 14 years	299	4.5
Multiple Sexual Partners		
No	645	54.3
Yes	543	45.7
Marital Status		
Never married	3081	46.4
Ever married	3560	53.6
Marriage Type		
Monogamy	1753	66.2
Polygamy	894	33.8
Years of Marriage		

≤ 5years	1033	34.3
6 – 15years	1274	42.3
16years and above	705	23.4
Age at marriage		
< 18years	676	19.0
18 – 24years	1177	33.1
25+ years	1708	48.0
Number of male children		
None	226	8.9
1 Child	717	28.3
2 Children	763	30.1
3+ Children	826	32.6
Number of living children		
1 - 2 Children	793	31.3
3 - 4 Children	968	38.2
5+ Children	771	30.5
Parity		
1 - 2 Children	773	30.5
3 - 4 Children	942	37.2
5+ Children	817	32.3
Parents' parity		
≤ 3 Children	1261	19.0
4 - 5 Children	2311	34.8
6 - 7 Children	1629	24.5
8+ Children	1440	21.7
Exposure to media		
No	3322	50.0
Yes	3319	50.0
Partner FP Approval		
No	1156	44.5
Yes	1444	55.5

### ***Awareness and Utilization of Family Planning***

The sources of information on FP by respondents are presented in Figure 1. This shows that the most common (51.0%) source of information about FP was the radio, while the least explored medium was the town crier (4.2%). In Figure 2, the most popular method of contraception among the respondents was the condom (74.0%), pills and implants also had 65.7% and 52.3% awareness rates among the respondents, respectively. Most (67.2%) of the

respondents obtained FP methods from government hospitals, 57.1% from health centres, and a few (13.7%) obtained them through NGO health facilities. The most used method of contraception among the respondents was the condom as it was used by 42.9% of them. The least used methods were the lactational amenorrhea method (1.7%) and rhythm method (1.7%) (see Figure 3).

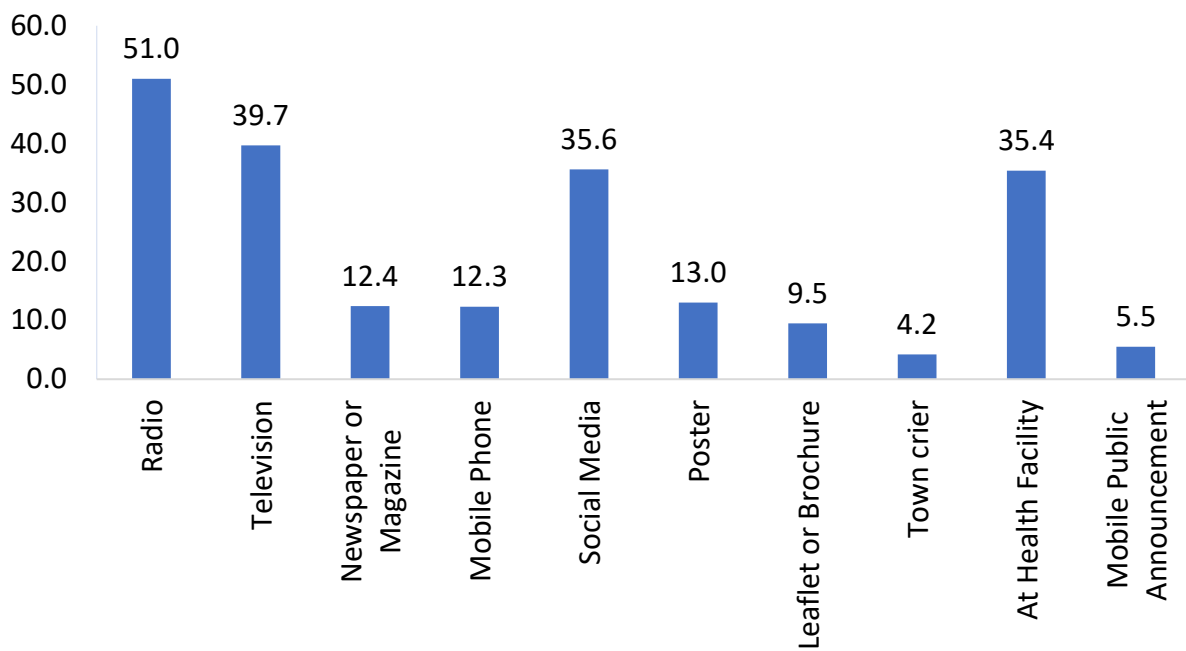


Figure 1: Source of Family Planning Information

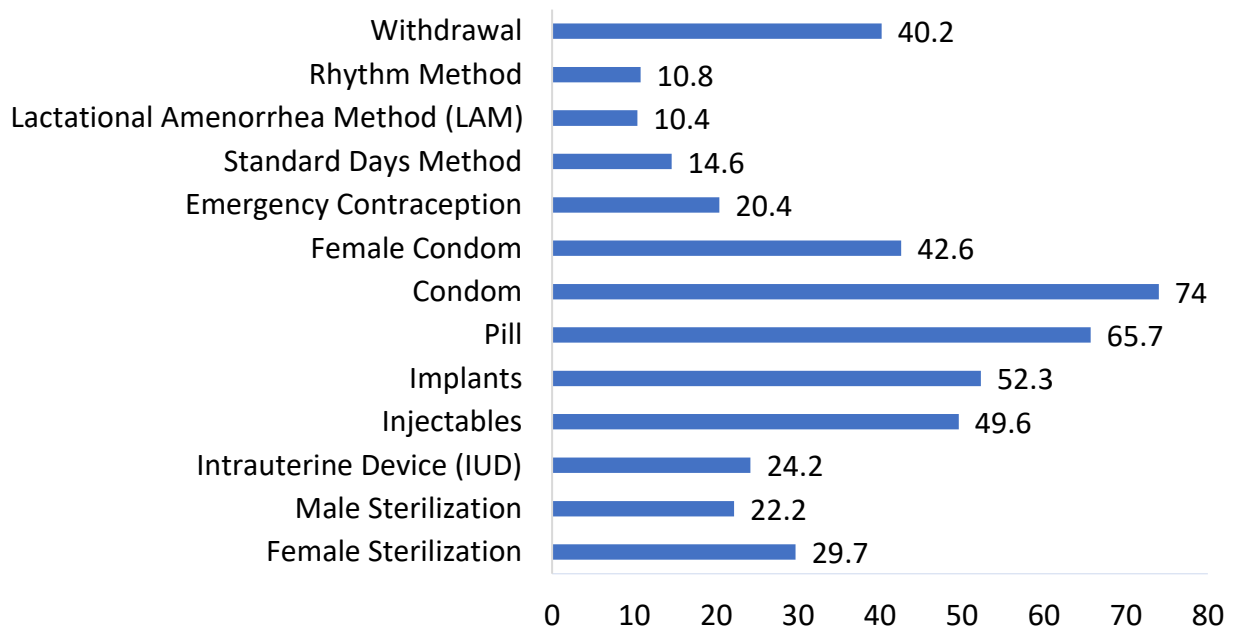


Figure 2: Distribution of Known Methods of Family Planning

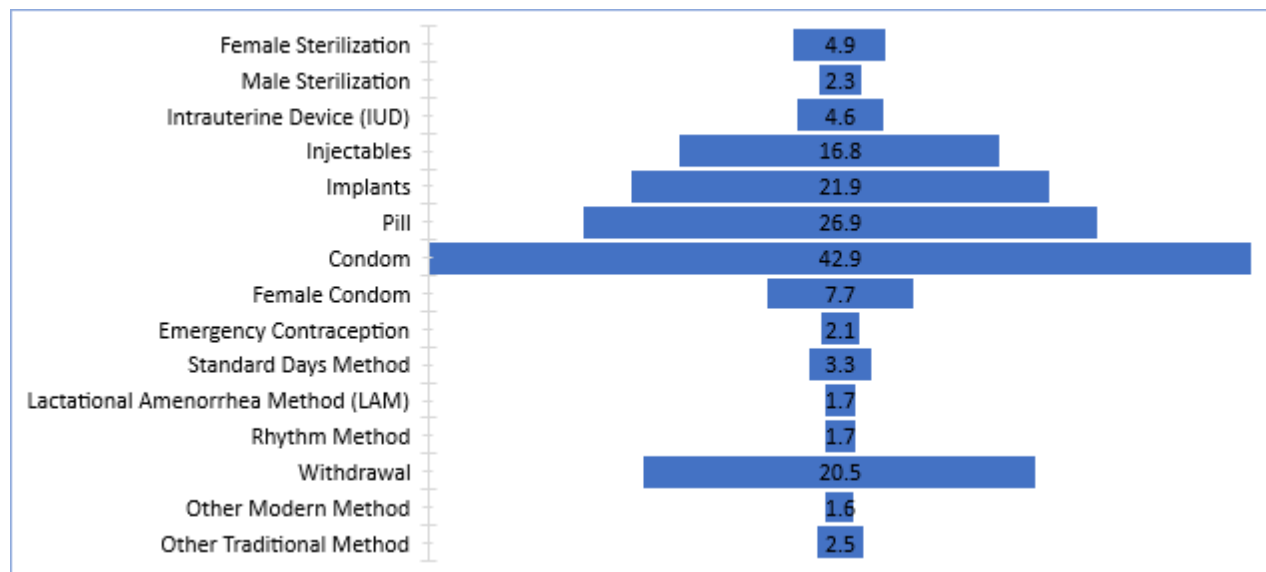


Figure 3: Utilization of family planning among the respondents

### The Bivariate Analysis

Table 2 shows the association between the AU-GAP and the different sociodemographic characteristics. It also shows the percentage distribution of AU-GAP according to the sociodemographic characteristics among the respondents. Age, religion, geo-political zone, place of residence, level of education, wealth index, employment status, marriage type, years of marriage, age at marriage, number of male children, number of living children, parity, parents' parity, exposure to media and partner's FP approval are shown to be significantly associated with AU-GAP among the respondents. One in every three (34.7%) emerging adults had a family planning AU-GAP, one in five (20.9%) of the young adults had AU-GAP while three in ten (30.1%) of the older adults had AU-GAP. Participants who practiced Islam had more (30.8%) AU-GAP than those who practiced

Christianity (28.4%). South-Westerners had more (42.7%) gap compared to other geo-political zones while South-Easterners had the least (17.6%) gap. Those who lived in the rural areas had more (31.1%) AU-GAP than those living in the urban areas (25.4%). Uneducated participants had the highest gaps of 42.2% and these reduced as the level of education increased among participants. Wider (34.5%) AU-GAP was seen among the unemployed compared to those who were employed (24.8%). The gap was more (30.8%) pronounced among those who lived in polygamous homes. The AU-GAP also increased as the number of years in marriage, male children, living children, and parity increased among the respondents. Furthermore, exposure to media and partners' FP approval reduced the AU-GAP among the respondents

**Table 2: Association between AU-GAP and different sociodemographic factors**

Variables	Number	Percent	p-value
<b>Age</b>			< .001
15 - 24years	384	34.7	
25 - 34years	318	20.9	
35years and above	464	30.1	
<b>Gender</b>			0.994
Male	331	28.0	
Female	835	27.9	
<b>Religion</b>			0.001
Christianity	644	28.4	
Islam	327	30.8	
Others	195	23.1	
<b>Geo-political zone</b>			< .001
North Central	159	30.1	
North East	165	29.6	
North West	173	20.2	
South East	103	17.6	
South South	189	24.8	
South West	377	42.7	
<b>Place of Residence</b>			< .001
Urban	581	25.4	
Rural	585	31.1	
<b>Level of Education</b>			< .001
No Education	109	42.2	
Primary	328	30.6	
Secondary	612	26.1	
Tertiary	117	23.4	
<b>Wealth Index</b>			< .001
Poorer	223	32.6	
Middle	780	26.1	
Richer	163	32.9	
<b>Employment Status</b>			< .001
Employed	698	24.8	
Unemployed	468	34.5	
<b>Age at First Sex</b>			0.636
> 14 years	1125	28.0	
≤ 14years	41	26.3	
<b>Multiple Sexual Partners</b>			0.196
No	109	22.3	
Yes	74	18.8	
<b>Marital Status</b>			0.071
Never married	486	30.9	
Ever married	680	26.2	
<b>Marriage Type</b>			< .001
Monogamy	299	23.1	
Polygamy	190	30.8	
<b>Years of Marriage</b>			< .001
≤ 5years	108	15.2	
6 – 15years	211	20.5	
16years and above	189	35.5	
<b>Age at marriage</b>			< .001
< 18years	132	31.4	



18 – 24years	224	28.4	
25+ years	316	22.7	
<b>Number of male children</b>			< .001
None	29	15.9	
1 Child	111	18.9	
2 Children	177	27.4	
3+ Children	249	39.3	
<b>Number of living children</b>			< .001
1 - 2 Children	119	18.7	
3 - 4 Children	201	24.4	
5+ Children	246	42.0	
<b>Parity</b>			< .001
1 - 2 Children	117	18.8	
3 - 4 Children	197	24.7	
5+ Children	252	40.1	
<b>Parents' parity</b>			0.01
≤ 3 Children	248	32.8	
4 - 5 Children	382	26.6	
6 - 7 Children	288	26.4	
8+ Children	248	27.9	
<b>Exposure to media</b>			< .001
No	194	22.7	
Yes	972	29.3	
<b>Partner FP Approval</b>			< .001
No	421	36.4	
Yes	259	17.9	

### The Multivariate Analysis

In Table 3, the significant predictors of AU-GAP were identified as geo-political zone, place of residence, level of education, employment status, years of marriage, exposure to media, and partners' FP approval. The gap significantly reduced among North-West and South-East participants compared to those in the North Central. Those who lived in urban areas were more likely (OR = 1.582; CI = 1.138 – 2.201) to have AU-GAP compared to their counterparts who lived in rural areas. The odds for participants who were unemployed (OR = 1.607; CI = 1.078 – 2.396) were higher than those who were employed. Those who had spent 16 years or more in marriage were more likely (OR = 1.708; CI

= 0.980 – 2.977) to experience AU-GAP compared to those who had just been married. The odds for those exposed to at least one form of media was higher (OR = 2.178; CI = 1.502 – 3.159) than those not exposed to any form of media. However, participants who had primary (OR = 0.408; CI = 0.238 – 0.700) and secondary (OR = 0.523; CI = 0.308 – 0.889) education were less likely to have AU-GAP than those without any education. Also, those who had the approval of their spouse/partners on FP were less likely (OR = 0.314; CI = 0.229 – 0.431) to have AU-GAP among the respondents compared to those who did not have approval.

**Table 3: Multivariate logistic regression modelling of AU-GAP by sociodemographic factors**

	Exp(B)	95% Confidence Interval for Exp(B)	
		Lower Bound	Upper Bound
<b>Age</b>			
15 - 24years	1.000		
25 - 34years	0.965	0.523	1.781
35years and above	1.283	0.647	2.545
<b>Religion</b>			
Christianity	1.000		
Islam	0.781	0.473	1.290
Others	0.761	0.479	1.209
<b>Geo-political zone</b>			
North Central	1.000		
North East	1.201	0.650	2.220
North West	0.270***	0.159	0.457
South East	0.497*	0.253	0.977
South South	0.813	0.440	1.502
South West	0.949	0.533	1.688
<b>Place of Residence</b>			
Urban	1.582**	1.138	2.201
Rural	1.000		
<b>Level of Education</b>			
No Education	1.000		
Primary	0.408**	0.238	0.700
Secondary	0.523*	0.308	0.889
Tertiary	0.688	0.347	1.365
<b>Wealth Index</b>			
Poorer	1.000		
Middle	0.784	0.528	1.163
Richer	0.652	0.353	1.204
<b>Employment Status</b>			
Unemployed	1.607*	1.078	2.396
Employed	1.000		
<b>Marriage Type</b>			
Monogamy	0.834	0.586	1.186
Polygamy	1.000		
<b>Years of Marriage</b>			
≤ 5years	1.000		
6 - 15years	1.035	0.660	1.624
16years and above	1.708*	0.980	2.977
<b>Age at marriage</b>			
< 18years	1.000		
18 - 24years	0.897	0.578	1.393
25+ years	0.841	0.518	1.364
<b>Number of male children</b>			
None	1.000		
1 Child	1.184	0.616	2.276
2 Children	1.366	0.696	2.681
3+ Children	1.708	0.823	3.545
<b>Number of living children</b>			
1 - 2 Children	1.000		
3 - 4 Children	0.915	0.304	2.760
5+ Children	1.480	0.454	4.822
<b>Parity</b>			
1 - 2 Children	1.000		
3 - 4 Children	1.402	0.459	4.282
5+ Children	1.019	0.308	3.369
<b>Parents' parity</b>			
≤ 3 Children	1.000		
4 - 5 Children	1.159	0.673	1.996
6 - 7 Children	1.186	0.690	2.040
8+ Children	1.064	0.609	1.856
<b>Exposure to media</b>			
No	1.000		
Yes	2.178***	1.502	3.159
<b>Partner FP Approval</b>			
No	1.000		
Yes	0.314***	0.229	0.431

\* Significant at 0.05 level, \*\* Significant at 0.01 level, \*\*\* Significant at 0.001 level and 1.000 is the reference category.

## DISCUSSION

This study examined the awareness-utilization gap in family planning in Nigeria. The findings indicated a high level of awareness of some FP methods and low utilization in line with an earlier study.<sup>14</sup> The major source of information on FP was the radio, and the most popularly known FP methods were condoms, pills, and implants. However, the condom also appeared to be the most utilized method of FP. Most respondents accessed family planning methods through government hospitals and health centres. These findings corroborate other studies in Nigeria and India.<sup>1,15</sup> Despite the high level of awareness, less than half of the respondents (42.9%) used condoms and other FP methods. The low utilization of FP methods found in this study could indicate that awareness of FP methods does not in the actual sense translate to utilization of FP in Nigeria.

Consistent with previous studies,<sup>9,16</sup> the findings of this study also showed that the highest percentage of AU-GAP was found among younger adults aged 15- 24 years, Muslims, those living in rural areas, and those who had no education. The high AU-GAP among Muslim women may be related to Islamic religious practices, which encourage large family sizes and restrict access to reproductive health care services. Similarly, the gap was higher for those from polygamous homes, and this could be related to the tendency and competition to have many children. The result further showed that the AU-GAP increased with the number of male children and parity. The plausible explanation could be the high regard placed on male children in African societies and the perception that children are gifts from God, hence birth control is a violation of natural law.<sup>17-18</sup> Meanwhile exposure to media and partners' FP approval by spouses reduced the proportion of AU-GAP. These findings are supported by studies elsewhere<sup>19-20</sup> and could reflect the importance of the mass media in creating awareness and subsequent use of FP methods.

This study also found that the region of residence was an important predictor of AU-GAP in FP. The result of the multivariate analysis showed that participants from the North-West and South-East regions of Nigeria were statistically significantly less likely to have AU-GAP compared to North Central. The reduction of the AU-GAP in the two regions could be attributed to increased education and knowledge of family planning. The higher likelihood of AU-GAP among those who live in the urban areas found in this study is surprising and contrasts with other studies.<sup>21-22</sup> Albeit urban dwellers are supposed to be more exposed to information on family planning due to access to different media outlets and proximity to FP facilities. This finding is contrary to expectation and could be attributed to unobserved characteristics. The result could also reflect the problem of low contraceptive use and unmet need for FP, which is common in Nigeria, despite the high level of awareness.

Increased odds of AU-GAP were observed among those who were unemployed compared to those who were employed and lower odds for those exposed to some level of mass media. These results were expected and are in tandem with those from other studies.<sup>23-24</sup> These findings could reflect the role played by socio-economic status and access to mass media in empowering people and exposing them to information on FP methods. Being unemployed could mean that such categories of people are not empowered to access information, pay for, and use FP services even when they do not want to have more children. In Nigeria, FP services are supposed to be relatively free, but people still have to pay out-of-pocket.<sup>25</sup> The plausible explanation for lower AU-GAP for those exposed to at least one form of mass media could be exposure to knowledge and information on FP benefits which may lead to utilization.

The likelihood of AU-GAP among those who have spent 16 years or more in

marriage compared to those who were newly married is expected and could be attributed to their long period of experience in childbearing and contraceptive practices. The findings also indicated that educated people were less likely to have AU-GAP than people without education. Higher educational attainment could lead to greater knowledge of the need for smaller family sizes and the benefits of using FP methods. The lower odds for those who have the approval of their spouse/partner on FP indicate that spousal support and involvement are critical in the utilization of FP and intervention programmes. Furthermore, this is particularly important in a patriarchal society like Nigeria where men make decisions on reproductive health issues.

## CONCLUSION

This study has demonstrated that there is a high level of AU-GAP in FP in Nigeria and this phenomenon was associated with younger age, rural-urban residence, number of male children, employment status and no educational attainment, religion, and geopolitical zone of residence. The findings also showed that the key factors associated with low AU-GAP were mass media, higher educational attainment, marriage duration longer than 16 years, and spousal/partner approval of FP. These factors are important in understanding FP awareness and utilization and should be prioritized in programmes and interventions aimed at reducing AU-GAP in FP in Nigeria.

## Policy Implications Recommendations

- There is a need for educational and economic empowerment through job creation to enable people to access information and pay for FP services.
- Spousal involvement should be prioritized in family planning policies.
- Age and religious practices inimical to the use of FP should be taken into consideration in designing an

intervention programme on FP usage in Nigeria.

## Limitations of the study

This study admits limitations that may occur due to the sensitive nature of some of the questions as respondents may have not felt comfortable disclosing certain information on their sexual lives. Also, the national sex ratio for Nigeria is approximately 50.6% males to 49.4% females, but the data collected for this study shows a ratio of 29.2% males to 70.8% females. This implies that the sample may not be a true reflection of the population characteristics as far as gender is concerned, however, this was allowed because family planning issues are female-gender biased. Finally, this study is cross-sectional, which makes it impossible to measure causal relationships that are useful for policy development.

## Funding

This work was supported by a grant from the TETFUND National Research Fund (NRF/TETFUND) research grant (No: TETF/ES/DR&D-CE/NRF2020/HSS/42)

## ACKNOWLEDGEMENTS

The authors are grateful to the Tertiary Education Trust Fund (TETFUND) unit of the Federal Republic of Nigeria for funding this research as part of the 2020 TETFUND National Research Fund (NRF/TETFUND) research grant.

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