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Research Article

Appraisal of Practice, Knowledge and Utilization of Family Planning Methods in Nigeria

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ABSTRACT

Family planning method is technique and instrument used by individuals or couples to anticipate attain their desired number of children, spacing and timing of their births. Balance in a population size and social amenities are essential for maximizing potentials in any society. Effective family planning can improve quality of life and standard of living by decreasing number of dependents requiring basic necessitates if life. This study utilizes data from NDHS, 2018 to appraise level of knowledge and utilization of family planning technic among residents of South-west Nigeria. Despite very high knowledge rate observed, utilization is quite lower. Variations are observed in knowledge and utilization among respondents with different literacy level, residence, age group, and wealth status. Television and radio are found to be the best source of information for respondents for family planning. Personally decision not to use and infrequent sex are major reason given for non-utilization. Urban residents and literate and older respondents utilizes the method more.

Keywords: Family planning; Contraceptives; Literacy level; Wealth status

INTRODUCTION

Increasing population in developing countries has been a major limitation towards maximizing economic potentials, limiting access to basic essentials like power, water, education, and infrastructure [1]. Lack of access to quality reproductive health and family planning cares is among major challenges in developing countries in general and Nigeria in particular. Statistics from the 2008 Nigeria Demographic Health Survey (NDHS) showed that less than 10% of married women used a modern method of contraception in Nigeria with about 20% of those willing to use having an unmet need for family planning services [2].

Family planning has been defined as "instruments that allow couples and individuals to anticipate and attain their desired number of children, spacing and timing of their births" [3]. Family Planning Method (FPM) can be adopted voluntarily through the practice of contraception or other methods of birth control on the basis of knowledge, attitude and responsible decision by individuals and/or couples with an objective of promoting health welfare of the family and contribute to the social and economic development of the country. The practice is among most cost-effective ways to prevent maternal, infant, and child mortality. Efficient and effective practice can reduce maternal mortality since it reduces the number of unintended pregnancies, the number of abortions, and the proportion of births at high risk. [4]. About 57% of women of reproductive age in developing countries are sexually active but do not want child and therefore are in need of contraception. Of these, about 26% do not have access to modern methods of contraception, resulting in significant unmet need [5]. Many socio-demographical factors like religion, number of sons, age of married men and women, educational status of husband and wife, residence of couples control acceptance of contraception. Usage of contraception has been a century long practice [6], with modern contraceptive methods offering many advantages in health and economy of couples. In recent years, family planning policies and methods are becoming increasingly important as a result of various socio-economic problems influencing rapid population growth.

Improvement of maternal and child health services is a prerequisite for family planning. As a result, child spacing using any contraception is an essential factor which affects the outcome of pregnancy. Child spacing gives more opportunities for nurturing individual child and hence provide the possibility of preventing complications such as gastrointestinal infections and malnutrition during infancy and early childhood [7]. Effective family planning can as well improve quality of life and improve the standard of living by decreasing number of dependents

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requiring intensive personal care, education, food, shelter, and clothing, among others [8].

MATERIALS AND METHODS

Data

The study utilizes data from the 2018 NDHS (Nigeria Demographic Health Surveys). Demographic Health Surveys is a survey with indicators on various social indicators conducted in every five-year intervals among developing countries. The Nigeria data utilized in this study have several socio-demographic variables with special attention to women of child bearing age (15-49 years) and data related to Family Planning Methods (FPM).

Study area

South-West of Nigeria Figure 1 has six states comprising of majorly Yorubas. The region is majorly agrarian community with exception of Lagos state which is a major cosmopolitan state in the country.

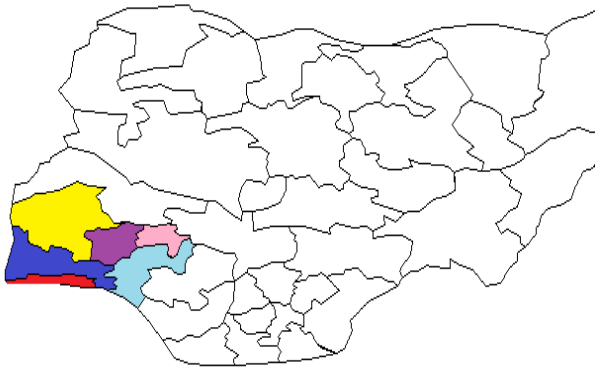

Figure 1: Map of Nigeria showing states in South-West.

Methods

The study utilizes descriptive statistics to explore and appraise practice relating family planning among residents in South-West Nigeria. Among appraised variables are age, educational status, religion, ethnic, and wealth status of respondents. Similar sets of variables were considered in an Ethiopian study [9]. Relationships between the selected variables and both knowledge about FPM and utilization of contraceptives are examined using Chi-square while binary logistic regression is used to predict odds of knowledge and utilization. In analyzing binary response (Yes/No, Dead/Alive, etc.), binary logistic regression is most utilized [10,11]. In this study, response variables are defined as:

$$\zeta = \begin{cases} 1, \text{ Knowledge of FPM / Utilization of contraceptives} \\ 0, \text{ Otherwise} \end{cases}$$

RESULTS AND DISCUSSION

The study utilizes data on 5630 women of children bearing age (15-49) among six states in South-West of Nigeria with an average age of 30.37 years and standard deviation of 9.522. As observed from Table 1, the age group of participants in the survey is well spread among women of child-bearing age (15-49). Lagos state with over 25.7% of all respondents has highest participants across the six states in South-West region while Ekiti state (state with the least population) has the least. In the original data, the Wealth Index of respondents was categorized into five groups (Poorest, Poorer, Middle, Richer and Richet), to ease interpretation and classification of wealth groups, this has been redefined to three groups (Poor, Middle, and Rich) accordingly. About three quarter of respondent belongs to the rich wealth index with almost the same number residing in urban areas.

Table 1: General Socio-demographic background of respondents.

Characteristics	Frequency (Percentage)
Age Group	
15-19	917 (16.3%)
20-24	810 (14.4%)
25-29	967 (17.2%)
30-34	898 (16.0%)
35-39	871 (15.5%)
40-44	600 (10.7%)
45-49	567 (10.1%)
State	
Oyo	918 (16.3%)
Osun	832 (14.8%)
Ekiti	774 (13.7%)
Ondo	863 (15.3%)
Lagos	1445 (25.7%)
Ogun	798 (14.2%)
Wealth index	
Poor	646 (11.5%)
Middle	921 (16.4%)
Rich	4063 (72.2%)
Residence	
Urban	4064 (72.2%)
Rural	1566 (27.8%)
Religion	
Catholic	210 (3.7%)
Other Christian	3513 (62.4%)
Islam	1895 (33.7%)
Traditionalist	9 (0.2%)
Other	3 (0.1%)
Educational level	
No Education	453 (8.0%)
Primary	858 (15.2%)
Secondary	3197 (56.8%)
Post-Secondary	1122 (19.9%)
Literate	
No	1100 (19.5%)
Yes	4530 (80.5%)
Reading newspaper	
Not at all	4392 (78.0%)
Less than once a week	964 (17.1%)
At least once a week	274 (4.9%)
Listening to radio	
Not at all	1247 (22.1%)
Less than once a week	1830 (32.5%)
At least once a week	2553 (45.3%)
Watching television	
Not at all	943 (16.7%)
Less than once a week	1492 (26.5%)
At least once a week	3195 (56.7%)

Majority of respondents in the research are Christian (more than 60%) and over 70% have at least Secondary Education, making room for a very high literary responses (80.5%). Among means of information, those who watch television are significantly higher in comparison to those who read newspaper and those who listen to radio.

As earlier observed in Table 1 that most of respondents are literate and reside in urban centers, Table 2 shows that a significantly higher percentage of respondents (over 97%) have knowledge of contraceptives. Surprisingly, despite a very high knowledge rate, only 42.8% of respondents have ever utilized contraceptives. The knowledge rate in this study is found to be significantly higher than observations in similar study in Fiji [12] where only 9.5% of the total participants are involved in utilization of contraceptives. Finding in this study is however supported by another study among women in reproductive age in Ethiopia with very high knowledge rate [13]. Similarly, Semachew Kasa et al. also reported a knowledge rate of about 50% among another sampled population in Ethiopia.

Table 2: Knowledge about family planning and contraceptives.

Characteristics	Frequency (Percentage)
Knowledge of any contraceptive	
No	128 (2.3%)
Yes	5502 (97.7%)
Ever utilized any contraceptive technique	
No	3221 (57.2%)
Yes	2409 (42.8%)
Current contraceptive method	
Not using	4232 (75.2%)
Pill	102 (1.8%)
IUD	120 (2.1%)
Injections	226 (4.0%)
Male condom	242 (4.3%)
Female sterilization	10 (0.2%)
Periodic abstinence	64 (1.1%)
Withdrawal	248 (4.4%)
Other traditional	55 (1.0%)
Implants/Norplant	217 (3.9%)
Lactational amenorrhea (LAM)	74 (1.3%)
Female condom	2 (0.0%)
Emergency contraception	29 (0.5%)
Other modern method	6 (0.1%)
Standard days method (SDM)	3 (0.1%)
Brand of pill used	
Duofemconfidence	32 (0.6%)
Microgynon	11 (0.25%)
Lofemenal	17 (0.3%)
Neogynon	1 (0.0%)
Combination	18 (0.3%)
Other	14 (0.2%)
Don't know	9 (0.2%)
Brand of condom used	
Gold Circle	130 (2.3%)
Durex	32 (0.6%)
Rough Rider	10 (0.2%)
Twin Lotus	1 (0.0%)
Go Flex	5 (0.1%)
Other	34 (0.6%)
Don't know	30 (0.5%)

Among methods of contraceptives utilized by current users, withdrawal, male condom, injections, and implants have higher patronage when compared to other methods. Duofemconfidence is the most utilized pill for contraceptives, while Gold Circle is the most utilized condom.

Source of obtaining instrument of contraception has always been an issue. Results obtained in this research Table 3 shows that government hospitals has the highest patronage with more than half of the users obtaining contraceptives from government clinics and hospitals.

Table 3: Source of contraceptives.

Last source of contraceptive for current users	Frequency (Percentage)
Government clinic/pharmacy	491 (51.3%)
Government home/community delivery	7 (0.7%)
NGO	2 (0.2%)
Private clinic/delivery	278 (29.0%)
Pharmacy	116 (12.15)
Shop, church, friend	56 (5.9%)
Other	7 (0.7%)

As indicated in Table 4 among considered source of information about family planning, radio is ranked first, followed television while mobile phone is ranked last. This is supported by Kasa, et al. with more than 40% of respondents receiving information about family planning on radio.

Table 4: Medium of hearing about family planning in last few months.

Medium	Yes (%)	No (%)	Rank
Radio	2424 (43.1%)	3206 (56.9%)	1
TV	1985 (35.3%)	3645 (64.7%)	2
Newspaper/Magazine	368 (6.5%)	5262 (93.5%)	3
Text message on mobile phone	272 (4.8%)	5358 (95.2%)	4

When asked "reason for no utilization" by those not using contraceptives, those who personally opposed utilization are ranked first. Having infrequent sex is ranked second while lack of access and lack of known source are ranked last. This implies that respondents are well aware of source of obtaining contraceptive and access to the instrument is not barrier. In a Cameroonian study [14] reported lack of adequate information, uselessness and fear of side effects as major reasons for not utilizing any contraceptive while another African study Kasa, et al. related cost to the reason for non-utilization [15].

To explore different dependencies of considered socio-demographic variables of respondents on knowledge about family planning, Table 5 reveals the result of chi-square tests of dependency. The Table 6 shows that all considered socio-demographic variables have significant relationship to the knowledge about family planning method.

Table 5: Reason not using contraceptives.

Factor	Yes (%)	No (%)	Rank
Not married	30 (2.4%)	1199 (97.6%)	9
Not having sex	22 (1.8%)	1207 (98.2%)	10

Infrequent sex	243 (19.8%)	986 (80.2%)	2
Menopausal/hysterectomy	92 (7.5%)	1137 (92.5%)	5
Subfecund/Infecund	43 (3.5%)	1186 (96.5%)	8
Postpartum amenorrheic	19 (1.5%)	1210 (98.5%)	12
Breastfeeding	96 (7.8%)	1133 (92.2%)	4
Fatalistic	77 (6.3%)	1152 (93.7%)	6
Personally opposed	249 (20.3%)	980 (79.7%)	1
Husband/partner opposed	179 (14.6%)	1050 (85.4%)	3
Other people opposed	14 (1.1%)	1215 (98.9%)	13
Religious prohibition	20 (1.6%)	1209 (98.4%)	11
Knows no methods	9 (0.7%)	1220 (99.3%)	15
Knows no source	5 (0.4%)	1224 (99.6%)	18
Fear of side effects/health concerns	53 (4.3%)	1176 (95.7%)	7
Lack of access/too far	3 (0.2%)	1226 (99.8%)	19
Costs too much	8 (0.7%)	1221 (99.3%)	16
Inconvenient to use	10 (0.8%)	1219 (99.2%)	14
Interferes with body's processes	6 (0.5%)	1223 (99.5%)	17

Table 6: Socio-demographic characteristics of respondents on Knowledge on family planning method.

Characteristics	Family planning method knowledge		Chi-Square
	No	Yes	P-value (α=0.05)
	128 (2.3%)	5502 (97.7%)	
Age group			
15-19	73 (8.0%)	844 (92.0%)	0.000*
20-24	8 (1.0%)	802 (99.0%)	
25-29	9 (0.9%)	958 (99.1%)	
30-34	12 (1.3%)	886 (98.7%)	
35-39	14 (1.6%)	857 (98.4%)	
40-44	4 (0.7%)	596 (99.3%)	
45-49	8 (1.4%)	559 (98.6%)	
State			
Oyo	30 (3.3%)	888 (96.7%)	0.000*
Osun	29 (3.5%)	803 (96.5%)	
Ekiti	21 (2.7%)	753 (97.3%)	
Ondo	22 (2.5%)	841 (97.5%)	
Lagos	15 (1.0%)	1430 (99.0%)	
Ogun	11 (1.4%)	787 (98.6%)	
Wealth index			
Poor	50 (7.7%)	596 (92.3%)	0.000*
Middle	21 (2.3%)	900 (97.7%)	
Rich	57 (1.4%)	4006 (98.6%)	
Residence			
Urban	52 (1.3%)	4012 (98.7%)	0.000*
Rural	76 (4.9%)	1490 (95.1%)	
Ethnicity			
Hausa	4 (4.1%)	94 (95.9%)	0.000*
Yoruba	86 (1.9%)	4540 (98.1%)	
Igbo	6 (1.7%)	353 (98.3%)	
Other	32 (5.9%)	515 (94.1%)	
Religion			
Catholic	8 (3.8%)	202 (96.2%)	0.000*
Other Christian	61 (1.7%)	3452 (98.3%)	
Islam	57 (3.0%)	1838 (97.0%)	
Traditionalist	1 (11.1%)	8 (88.9%)	
Other	1 (33.3%)	2 (66.7%)	
Educational level			
No Education	28 (6.2%)	425 (93.8%)	0.000*
Primary	24 (2.8%)	834 (97.2%)	
Secondary	75 (2.3%)	3122 (97.7%)	
Post-Secondary	1 (0.1%)	1121 (99.9%)	
Literate			
No	55 (5.0%)	1045 (95.0%)	0.000*
Yes	73 (1.6%)	5502 (98.4%)	

* Significant factors at α=0.05

The table further reveals distribution of knowledge among each characteristic. Among the age-group, the older respondents tend to be more informed about family planning in comparison with the younger ones. Residents in Osun and Oyo states have lower knowledge rate when compared with those from other states. Rural settlements in Nigeria generally are mostly characterized with low and poor living standards. The table reveals that knowledge is higher among the rich and urban dwellers. Respondents with low level of education and literacy are also found to have lower knowledge when compared with those who are more educated. Knowledge is found to be higher among the Igbos and Yorubas and among the two major religions (Christian and Islam).

Knowledge is also found to be higher among those watching television and listening to radio when compared to those who read newspaper (Table 7). This implies that newspaper as a means of advertisement to provide information about family planning is not as effective as the other methods.

Table 7: Source of information of respondents on Knowledge on family planning method.

Characteristics	Contraceptive Utilization		Chi-Square
	No	Yes	P-value (α=0.05)
	3321 (57.2%)	2409 (42.8%)	
Age group			
15-19	848 (92.5%0	69 (7.5%)	0.000*
20-24	525 (64.8%0	285 (35.2%)	
25-29	485 (50.2%)	482 (49.8%)	
30-34	393 (43.8%)	505 (56.2%)	
35-39	384 (44.1%)	487 (55.9%)	
40-44	283 (47.2%)	317 (52.8%)	
45-49	303 (53.4%)	264 (46.6%)	
State			
Oyo	632 (68.8%)	286 (31.2%)	0.000*
Osun	526 (63.2%)	306 (36.8%)	
Ekiti	378 (48.8%)	396 (51.2%)	
Ondo	637 (73.8%)	226 (26.2%)	
Lagos	586 (40.6%)	859 (59.4%)	
Ogun	462 (57.9%)	336 (42.1%)	

Wealth index			
Poor	456 (70.6%)	190 (29.4%)	0.000*
Middle	609 (66.1%)	312 (33.9%)	
Rich	2156 (53.1%)	1907 (46.9%)	
Residence			
Urban	2174 (53.5%)	1890 (46.5%)	0.000*
Rural	1047 (66.9%)	519 (33.1%)	
Ethnicity			
Hausa	60 (61.2%)	38 (38.8%)	
Yoruba	2685 (58.0%)	1941 (42.0%)	0.000*
Igbo	153 (42.6%)	206 (57.4%)	
Other	323 (59.0%)	224 (41.0%)	
Religion			
Catholic	134 (63.8%)	76 (36.2%)	
Other Christian	1956 (55.7%)	1557 (44.3%)	0.013*
Islam	1123 (59.3%)	772 (40.7%)	
Traditionalist	7 (77.8%)	2 (22.2%)	
Other	1 (33.3%)	2 (66.7%)	
Educational level			
No Education	303 (66.9%)	150 (33.1%)	
Primary	490 (57.1%)	368 (42.9%)	0.000*
Secondary	1896 (59.3%)	1301 (40.7%)	
Post-Secondary	532 (47.4%)	590 (52.6%)	
Literate			
No	679 (61.7%)	421 (38.3%)	0.001*
Yes	2542 (56.1%)	1988 (43.9%)	

* Significant factors at α=0.05

Table 8 shows various characteristics of respondents with utilization of contraceptives. All considered factors are significant to utilization of contraceptives. Utilization of contraceptives is highest among older respondents. Among the states under investigations, utilization is found to be highest in Lagos state, followed by Ekiti state while residents in Ondo state have the least contraceptive utilization. 42.8% of respondents are using contraceptives. This is lower than over 60% reported by Beekle et al., Ahmed et al.,

Table 8: Binary Logistic Regression of Knowledge on FPM on some factors.

Factor	P-value	Odds Ratio (OR)	95% CI for OR
Age group			
15-19	0	0.117	(0.050, 0.273)
20-24	0.795	0.87	(0.305, 2.483)
25-29	0.707	0.823	(0.298, 2.276)
30-34	0.398	0.657	(0.248, 1.741)
35-39	0.28	0.598	(0.235, 1.520)
40-44	0.535	1.484	(0.426, 5.171)
45-49 (ref. category)	-	1	-
State			
Oyo	0.202	0.572	(0.243, 1.350)
Osun	0.045	0.415	(0.175, 0.980)
Ekiti	0.174	0.554	(0.237, 1.297)
Ondo	0.496	1.343	(0.575, 3.138)
Lagos	0.624	0.786	(0.300, 2.057)
Ogun (ref. category)	-	1	-
Wealth index			
Poor	0.081	0.822	(0.459, 0.473)
Middle	0.51	1.591	(0.879, 2.882)
Rich (ref. category)	0.125	1	-
Residence			
Urban	0	2.837	(1.743, 4.617)
Rural (ref. category)	-	1	
Ethnicity			
Hausa	0.004	1.437	(0.424, 4.871)
Yoruba	0.561	2.525	(1.395, 4.571)
Igbo	0.002	1.486	(0.519, 4.260)
Other (ref. category)	0.461	1	-
Religion			
Catholic	0.699	611168.704	-
Other Christian	0.983	826971.503	-
Islam	0.983	616412.748	-
Traditionalist	0.983	480672.91	-
Other (ref. category)	0.983	-	-
Educational level			
No Education	0.272	0.144	(0.017, 1.226)
Primary	0.076	0.124	(0.015, 1.015)
Secondary	0.052	0.142	(0.019, 1.061)
Post-Secondary (ref. category)	0.057	1	-
Literate			
No	0.001	0.343	(0.184, 0.642)
Yes (ref. category)	-	1	-
Reading newspaper			
Not at all	0.554	1.758	(0.621, 4.973)
Less than once a week	0.288	1.782	(0.563, 5.638)
At least once a week (ref. category)	0.326	1	-
Listening to radio			
Not at all	0.048	0.71	(0.442, 1.141)
Less than once a week	0.157	1.452	(0.777, 2.715)
At least once a week (ref. category)	0.243	1	-
Watching television			
Not at all	0.074	0.599	(0.342, 1.050)
Less than once a week	0.073	1.179	(0.622, 2.234)
At least once a week (ref. category)	0.613	1	
Constant term	0.983	541606.589	-

Adejumo et al. [13,14,16] and another study carried out in Nepal [17]. Findings in this study are however closer to the one reported by Semachew Kasa et al. with about 50% of women in productive age utilizing FPM.

Higher wealth index is found to support more utilization with those in rich category and those residing in urban areas having highest utilization. Utilization of contraceptives is also found to be highest among the Yorubas and respondents with Post-Secondary (higher literacy level) education also utilize contraceptives more.

The odds of knowledge of FPM are highest among respondents age 40-44 and least among the younger group. The odds of knowledge for those in age group 45-49 is more than five times for those in age group 15-19 as shown in Table 8. Older people

had earlier been reported to practice family planning more than younger ones [9]. The utilization is higher among older respondents with those in 35-39 having highest odds of utilization as shown in Table 9.

Table 9: Binary logistic regression on utilization of contraceptives on some factors.

Factor	P-value	Odds Ratio (OR)	95% CI for OR
Age group			
15-19	0	0.063	(0.046, 0.087)
20-24	0	0.519	(0.409, 0.659)
25-29	0	0.97	(0.774, 1.215)
30-34	0.79	1.237	(0.985, 1.554)
35-39	0.067	1.263	(1.006, 1.585)
40-44	0.045	1.167	(0.914, 1.491)
45-49 (ref. category)	0.216	1	-
State			
Oyo	0	0.511	(0.399, 0.653)
Osun	0	0.651	(0.504, 0.840)
Ekiti	0.001	1.497	(1.177, 1.904)
Ondo	0.001	0.469	(0.370, 0.595)
Lagos	0	1.647	(1.309, 2.073)
Ogun (ref. category)	0	1	-
Wealth index			
Poor	0.144	0.804	(0.632, 1.022)
Middle	0.075	0.872	(0.723, 1.051)
Rich (ref. category)	0.15	1	-
Residence			
Urban	0.082	1.149	(0.982, 1.344)
Rural (ref. category)	-	1	-
Ethnicity	0.011		
Hausa	0.185	0.705	(0.420, 1.183)
Yoruba	0.494	0.919	(0.722, 1.170)
Igbo	0.212	1.245	(0.882, 1.758)
Other (ref. category)	-	1	-
Religion			
Catholic	0.002	0.269	(0.019, 3.827)
Other Christian	0.332	0.527	(0.038, 7.347)
Islam	0.634	0.491	(0.035, 6.856)
Traditionalist	0.597	0.174	(0.008, 4.005)
Other (ref. category)	0.274	1	-
Educational level			
No Education	0.054	0.822	(0.592, 1.141)
Primary	0.242	1.024	(0.804, 1.304)
Secondary	0.849	1.154	(0.978, 1.362)
Post-Secondary (ref. category)	0.089	1	-
Literate			
No	0.434	0.92	(0.746, 1.134)
Yes (ref. category)	-	1	-
Reading newspaper			
Not at all	0.358	1.06	(0.789, 1.423)
Less than once a week	0.699	1.185	(0.872, 1.611)
At least once a week (ref. category)	0.277	1	-
Listening to radio			
Not at all	0.592	0.915	(0.763, 1.099)
Less than once a week	0.344	0.994	(0.845, 1.171)
At least once a week (ref. category)	0.947	1	-
Watching television			
Not at all	0	0.728	(0.589, 0.900)
Less than once a week	0.003	0.677	(0.569, 0.804)
At least once a week (ref. category)	0	1	-
Constant term	0.621	1.967	-

Among states in the zone, Ondo state has the highest odds of knowledge while Osun state has the least. Odds of utilization are found to be highest among residents of Lagos state, a major cosmopolitan state in the country while it is lowest in Oyo state.

The three considered source of information for knowledge about FPM (Newspaper, Radio, and television) are found to have no significant relationship. However, those who listen to radio and those who watch television are found to have higher odds of knowledge in comparison with those who do not.

Poorer respondents have the least knowledge about FPM in comparison to those on other wealth groups. Knowledge about FPM will ultimately assist families in adopting any contraceptives towards reducing unwanted pregnancy. Researches had earlier showed that richer families have fewer children. Table 9 also shows that utilization is higher among the richer respondents and those residing in urban areas. The odd of knowledge about FPM is more than twice for those residing in urban areas in comparison with those living in rural areas. This finding is supported by a study by Semachew Kasa et al. where respondents from urban areas were reported to utilise FPM (71.4%) than those from rural set up (28.1%). This is also supported by findings from Ethiopian DHS [18]. This may be unconnected with the fact that urban residents are more aware of importance of family planning.

Knowledge among Yorubas is almost twice in comparison to the Hausa and Igbo but the odds of utilization are highest among the Igbos while the traditionalists have the least odds of utilization. Religion of respondent is found not to have significant relationship with knowledge about FPM [19].

Literate respondents have almost three times odds of knowledge when compared to the illiterate. Knowledge is quite higher amongst respondent with Post-Secondary education in comparison with those with other levels of education. Importance of education on effective family planning especially among females has been documented [20-22]. Educated women of child bearing age have better information about FPM and their availability [23-25]. This is also supported by another Ethiopian report [26]. In a recent study by Binu et al. illiterates were reported to have very low awareness of FPM [23]. This results into a very low utilization among the respondents. In Table 9, literacy and educational level of respondents is found not to have non-significant relationships with utilization.

CONCLUSION

The research had identified practice, awareness, and utilization level of different family planning techniques among states in South-West Nigeria. Most results reveal same trend in findings in similar studies.

In this study, higher percentage of respondents who have knowledge about FPM and utilizing contraceptives are older. It is therefore imperative for agencies of government and non-governmental organizations to increase awareness to the younger populace. It will be beneficial if the concept of family planning can be introduced into senior secondary school education so that students will be equipped with all essentials of FPM early in life.

As reported, television is the major source of information for knowledge on FPM, educative programme on FPM can therefore be introduced to generality of audience to make the practice more popular.

Educated respondents who majorly reside in urban centers are also reported to have higher knowledge and utilization; more attention should therefore be given to those in rural setup. It is highly pertinent to target this population for more health education interventions relating to family planning in order to achieve the desirable level of practices and utilization.

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DECLARATION OF CONFLICTING INTERESTS

The authors declare no conflict of interest.

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REFERENCES

1. Mbizvo MT, Phillips SJ. Family planning: Choices and challenges for developing countries. Best Pract Res Clin Obstet Gynaecol. 2014;28(6):931-943.
2. National Population Commission (NPC) and ICF Macro. Nigeria demographic and health survey 2008 preliminary report. 2009.
3. Sedgh G, Ashford LS, Hussain R. Unmet need for contraception in developing countries: Examining women's reasons for not using a method. 2016.
4. Lule E, Hasan R, Yamashita-Allen K. Global trends in fertility, contraceptive use and unintended pregnancies, in Fertility Regulation Behaviors and Their Costs: Contraception and Unintended Pregnancies in Africa and Eastern Europe & Central Asia, Health, Nutrition & Population Discussion Paper, Washington, DC: World Bank, 2007:8-39.
5. Sultan S. The effects of education, poverty, and resources on family planning in developing countries. Clin Mother Child Health. 2018;15(1):1-6.
6. Edwards SR. The role of men in contraceptive decision-making: Current knowledge and future implications. Fam Plan Perspect. 1994;26(2):77-82.
7. Wani RT, Rashid I, Nabi SS, Dar H. Knowledge, attitude, and practice of family planning services among healthcare workers in Kashmir a cross-sectional study. J Family Med Prim Care. 2019;8(4):1319-1325.
8. Doctor HV, Findley SE, Afenyadu GY, Uzondu C, Ashir GM. Awareness, use, and unmet need for family planning in rural northern Nigeria. Afr J Reprod Health. 2013;17(4):107-117.
9. Kasa AS, Tarekegn M, Embiale N. Knowledge, attitude and practice towards family planning among reproductive age women in a resource limited settings of Northwest Ethiopia. BMC Res Notes. 2018;11(1):577.
10. Manandhar N, Amatya I, Gautam A, Kumar G, Ahlawat H, Adhikari N, et al. Knowledge, attitude and practice regarding family planning among the reproductive age women of Khopasi, Kavrepalanchowk. J Chitwan Med College. 2020;10(3):53-56.
11. Nansseu JR, Nchinda EC, Katte JC, Nchagnouot FM, Nguetsa GD. Assessing the knowledge, attitude and practice of family planning among women living in the Mbouda health district, Cameroon. Reprod Health. 2015;12(1):1-7.
12. Decreasing Birth-rate, Increasing Wealth. International Conference on Family Planning. 2013.
13. Beekle AT, McCabe C. Awareness and determinants of family planning practice in Jimma, Ethiopia. Int Nurs Rev. 2006;53(4):269-276.
14. Saied NH. Family planning methods knowledge, attitude and usage among married women in reproductive age in mosul city. Sys Rev Pharm. 2021;12(1):891-896.
15. Ahmed AA, Mohamed AA, Guled IA, Elamin HM, Abou-Zeid AH. Knowledge translation in Africa for 21st century integrative biology: The "know-do gap" in family planning with contraceptive use among Somali women. J Integr Biol. 2014;18(11):696-704.
16. Adejumo AO, Adetunji AA. Application of ordinal logistic regression in the study of students' performance. Math Theory Model. 2013;3(11):10-19.
17. Adetunji AA, Ademuyiwa JA, Alo NG. Insecticide treated net usage among under-five children in South-West Nigeria. Math Theory Model. 2020;10(6):10-18.Nepal demographic and health survey 2016. Nepal: Ministry of Health, Nepal, New ERA; and ICF. 2017.
18. Ethiopian Demographic and Health Survey. Central Statistical Agency, Addis Ababa and Maryland, Ethiopia. 2016.
19. Nigeria Family Planning Blueprint (NFPB: Scale-Up Plan). 2014
20. Salisbury P, Hall L, Kulkus S, Paw MK, Tun NW, Min AM, et al. Family planning knowledge, attitudes and practices in refugee and migrant pregnant and post-partum women on the Thailand-Myanmar border a mixed methods study. Reprod Health. 2016;13(1):94.
21. Mohanan P, Kamath A, Sajjan BS. Fertility pattern and family planning practices in a rural area in Dakshina Kannada. Indian J Com Med. 2003;28(1):15-28.
22. Singh S, Darroch JE. Adding it up: Costs and benefits of contraceptive services. Guttmacher Institute and UNFPA. 2012:1269-1286.

23. Binu KM, George D, Francis G, Ponnachan P, Thomas S, Doddayya H. Knowledge, attitude, and practice towards family planning among married women of reproductive age group-a hospital based study. Manipal J Pharm Sci. 2021;7(1):40.

24. UNESCO. The effect of girls' education on health outcomes: 2011 UNESCO Fact Sheet 2011.

25. Wallace HM, Gold EM, Dooley S. Relationship between family planning and maternal and child health. Am J Public Health. 1969;59(8):1355-1360.

26. Lincoln J, Mohammadnezhad M, Khan S. Knowledge, attitudes, and practices of family planning among women of reproductive age in Suva, Fiji in 2017. J Women's Health Care. 2018;7(3):1-6.