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POSTPARTUM CONTRACEPTIVE PRACTICE AND BARRIERS TO ITS USE AMONG MOTHERS FROM A TERTIARY HOSPITAL IN ABUJA, NIGERIA

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ABSTRACT

Introduction: Nigeria is the 4th highest contributor to global maternal mortality; many postpartum mothers do not initiate contraceptives early and are at increased risk of unplanned pregnancy and abortion. Understanding the barriers is thus vital. This cross-sectional quantitative study carried out at a tertiary hospital in Abuja to determine the contraceptive practice level, identify barriers to use among mothers with infants less than 12months. **Methodology:** Questionnaires were administered on 220 consenting mothers. Descriptive analysis included frequencies and percentages, the inferential statistical techniques used are binary logistic regression to establish the relationship between the variables. **Results:** 200 questionnaires were retrieved; the mean age of the respondents was 31; most had tertiary level education, were in monogamous union and Christians. Over-half is within 3months postpartum and desired to have below four children. The commonly used methods are the condom, IUD, pills and implant. 48% are currently on a method, and 1% less have good contraceptive practice. Identified barriers are personal information and health system barriers. Barriers associated with the health system found to impact on the use of contraceptives ($p=0.028$). Contraceptive use was dependent on respondent's religion ($p=0.050$) and child's age ($p=0.038$). **Conclusion:** Contraceptive practice level of respondents is less than average and child's age and religion determined it, the mothers are indifferent on personal information and family/cultural barriers, but concerned on health system barriers. Tackling health system barriers in the postpartum period through early education, counseling, opening and equipping more family planning clinics and health facilities can improve contraceptive use.

Keywords: Contraceptive practice, Barriers, Measures

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INTRODUCTION

Family planning involves a conscious decision by persons in the reproductive age group to control space or limit childbirth. Globally, the challenge associated with high birth rate is enormous. International reports show that 190 million women of reproductive age do not want to get pregnant yet do not employ any modern contraceptive method. Meeting the Sustainable development goal (SDG) 3.1 and 3.7 of reducing maternal mortality and increasing proportion of women with satisfied contraceptive need plus increased access to reproductive health service might be a mirage with non-use of contraceptives^{1,2}.

Increased access to contraceptives in the post-delivery period can increase the gains of reduced maternal mortality, unintended pregnancies, associated induced abortions and the proportion of high-risk pregnancies. It is also capable of reducing the already heightened pressure on Nigeria's resource and produce direct benefit on social, health and financial investment^{3,4,5}.

The estimates (2000-2017) shows Nigeria is the 4th highest contributor to maternal mortality rate (MMR) in the world after Sierra Leone, Chad and Sudan at 917 per 100,000 live births and has witnessed a marginal 24% change in MMR between 2000 and 2017; this reflects the quality of maternal and child care provided^{6,7}.

The Federal Ministry of Health Nigeria set 2014-2018 as the period to double the contraceptive prevalence to 36%. There appeared marginal increase in the west (Lagos) and north (Kaduna) howbeit only 15.6% of women within 15-49 years use any method of contraception, 23% of women in the north

central zone have an inter-pregnancy interval of less than 23months, yet 23% do not want to have more children^{8,9,10}.

Moreover, research done in Abuja revealed contraceptive use among women is below average (38-42%) whereas there are reports of unintended pregnancy (16%) with 80% having misconception and fears about the modern methods^{4,11,12}. There appear a widespread fear of side-effects, misconception and social restriction regarding contraceptive use among women. They desire to make a rational decision about family size and timing of pregnancy, however, are constrained by lack of spousal consent, cultural, religious and educational inhibition^{13,14}.

Thus, the need to investigate and delineate contraceptive practice level and barriers associated with input from the mothers in a health facility that offers this service in Abuja. This study aims to investigate the contraceptive practices, specific barriers to utilization of contraceptives among women within 12months after delivery.

METHODOLOGY

This study is a descriptive, cross-sectional study to evaluate the practices, barriers, to contraceptive use among mothers attending the immunization clinic of the University of Abuja Teaching Hospital (UATH), Gwagwalada. The accessible population is about 1,960 Nigerian mothers 18-49 years with an infant below 12months attending the immunization clinic of UATH, based on the average yearly register of the clinic.

The sample size determined used formula ^{15]} for a single proportion $n = \frac{z^2 p(1-p)}{d^2}$

The contraceptive prevalence rate of 15% obtained from the Nigerian national demographic health survey was used to obtain the sample size for the study (196). Additional 10% of the calculated size added to take care of non-response, bringing the total sample to 220 mothers ¹⁰.

The systematic sampling method was applied to draw a representative random sample. The immunization register served as the sample frame for every 9th mother. Subjects comprise women within 18-49 years with infants below 12 months who gives consent and is willing to participate in the study. The study had a 90% return rate from 200 properly filed and returned questionnaires.

A structured questionnaire pretested and validated with reliability determined at Cronbach's alpha 0.79 elicited responses on demographic variables, reproductive history, current and past contraceptive practice, barriers to use.

The tool had a total of 48 items in 4 sections. The data collection was by self-administered questionnaire method by the researcher with the help of 1 trained assistant for one month.

After data cleaning, sorting and coding, the analysis was by Statistical Package for Social Sciences (SPSS) Version 25.0. Descriptive analysis and binary logistic regression to establish the relationship between variables — the p-value set at 5% level, thus $p < 0.05$ is termed significant.

Ethical approval obtained from the review board of the UATH, the participants were educated, giving assurances of anonymity and confidentiality of their response and required to tick the consent form indicating consent for the study

RESULTS

Characteristics	Frequency	Percentage (%)	Mean (SD)
Age-group	(200)	(100)	31.2 (4.849)
18-22	8	4.0	
23-27	41	20.5	
28-32	72	36.0	
33-37	63	31.5	
38-42	12	6.0	
43-47	4	2.0	

Type of Marriage			
Monogamous	179	89.5	
Polygamous	21	10.5	
Level of Education			
Vocational	4	2.0	
Primary	6	3.0	
Secondary	55	27.5	
Tertiary	135	67.8	
Occupation			
Student	19	9.5	
Unemployed	37	18.5	
Housewife	7	3.5	
Self-employed	83	41.5	
Private employee	24	12.0	
Government employee	30	15.0	
Ethnic Group			
Gbagyi	7	3.5	
Ganagana	4	2.0	
Bassa	1	0.5	
Hausa	19	9.5	
Igbo	22	11.0	
Yoruba	36	18.0	
Others	111	55.5	
Religion			
Muslim	58	29.0	
Christianity	142	71.0	

Table 1: Socio-demographic characteristics of Mothers attending UATH Abuja

Table 1 presents the socio-demographic characteristics of the 200 respondents; the mothers had a mean age of 31.12. Two-third of the mothers (67.5%) were within the ages of 28-37years, many of the respondents were in a

monogamous marriage (89.9%) above two-third had tertiary level of education (67.8%), while about 41% of the mothers were self-employed. 71.4% were Christians and over a quarter (28.6%) were Muslims.

Reproductive History of the Mothers attending UATH Abuja

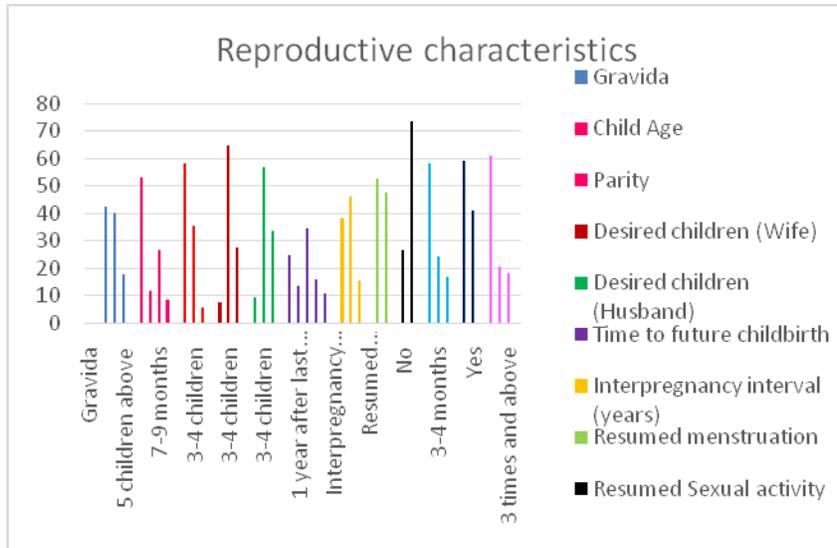


Figure 1: Reproductive characteristics of the mothers attending UATH

Figure 1 presents the reproductive history of the subjects. A majority (83.5%) have been pregnant between below four times while 17% have had above five pregnancies. About two-fifth (n=82) reported having a history of abortion, while four-fifth (81.7%) have had 1-2 abortions, and above half of the infant (53.3%) were 1-3months old, more than half (58.8%) of the subjects had 1-2 children while 6% had above 5.

On the number of children desired by the women, about two-third wanted 3-4 children, 27.5% desired above 5, whereas one-third

(33.5%) reported their husbands desired above five children. One-fourth (25%) of the subject does not want to have more children while 34.5% would wait for two years after last delivery to have another child, close to two-thirds of the subjects gave an ideal inter-pregnancy interval.

Over half of the respondents (52.5%) indicated that they had not resumed their menstrual cycle after the last delivery while 73.5% have commenced sexual activity after last delivery, of which more than half (58.5%) commenced 1-2 months after delivery.

Statements	Responses	F	(%)	Mean	SD
Ever used any contraceptive method?	No	59	29.5	0.71	0.457
	Yes	141	70.5		
	Total	200	100		
n=141					
Ever used Method	Oral pills	22	15.6		
	ECS pills	29	1.4		
	Injectable	10	7.1		
	IUD	14	9.9		
	Implants	9	6.4		

	Female condoms	8	5.7		
	Calendar/Safe period	20	14.2		
	LAM	5	3.5		
	Male condom	29	20.6		
	Withdrawal	1	1.4		
	Multiple method option	21	14.8		
Duration of Ever use	About 1year	79	56.0	2.38	1.387
	2 years	31	22.0		
	3 years	15	10.6		
	4 years and above	16	11.3		
Use between all pregnancies	No	73	51.8	0.48	0.501
	Yes	68	48.2		
Current Use	No	104	52.0	0.48	0.501
	Yes	96	48.0		
n=96					
Current method in use	Oral pills	8	8.3	6.64	3.146
	ECS pills	1	1.0		
	Injectable	5	5.2		
	IUD	16	16.7		
	Surgical method (BTL)	4	4.2		
	Implants	7	7.3		
	Calendar/Safe period	13	13.5		
	LAM	9	9.4		
	Male condom	33	34.4		
Time commenced contraceptives after delivery	Within1-2 month	47	49.0	1.937	1.220
	3-4 months	27	28.1		
	5-6 months	11	11.5		
	7-8 months	3	3.1		
	9 months above	8	8.3		
Consistency of current use	Never	14	14.6	3.23	1.551
	Rarely	13	13.5		
	Occasionally	11	11.5		
	Consistent	24	25.0		
	Very Consistent	34	35.4		
Consistency of exclusive breastfeeding to prevent pregnancy	Never	21	21.9	3.38	1.611
	Rarely	12	12.5		
	Occasionally	10	10.4		
	Consistent	16	16.7		
	Very Consistent	37	38.5		

Table 2: Contraceptive practice of the mothers attending UATH Abuja

The analysis on table 4 revealed 70.5% (n=141) of the respondents had used a form of contraception in the past, over half (56%) used the method about one year whereas 51% did not use it between all pregnancies. Of the 200

mothers, less than half 48% are currently using a method of contraception.

Of the 96 mothers currently using a method over one-third (34.4%) are using a condom,

16.7% use IUD, while 13.5% practice calendar/safe period. Almost half of the mothers (49%) started their method of contraception within 2 months of delivery, three-fifth (60.4%) are consistent with practice while more than half (55.2%) consistently

breastfeed to prevent pregnancy. Less than half of the mothers (47%) classified as having a good level of practice following analysis of their reported practice while over half (53%) have a poor level of practice.

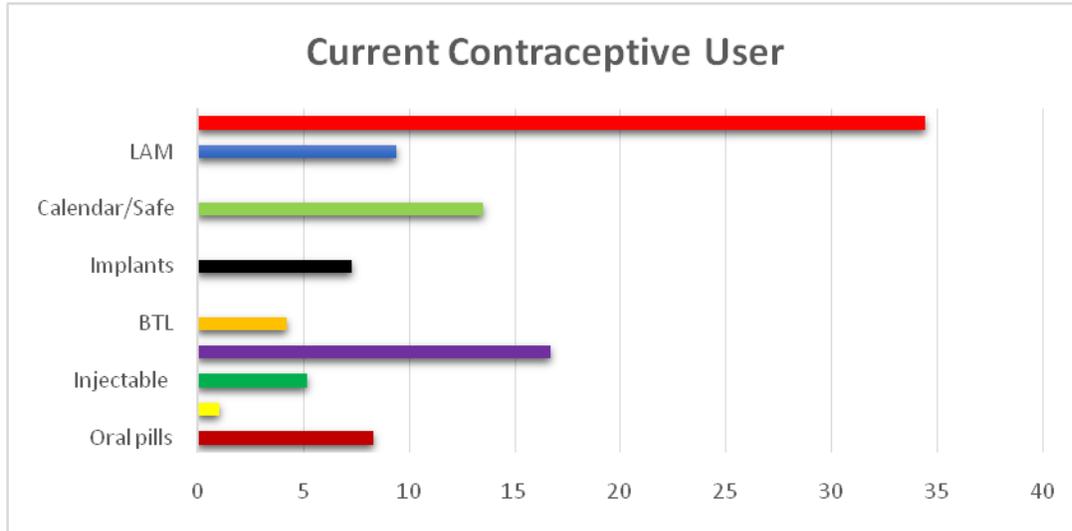


Figure 2: Current contraceptive type by use

Binary Logistic Regression Model showing association between contraceptive practice level with socio-demographic characteristics of mothers attending UATH

		B	S.E. of mean	Wald	df	Sig.	Exp(B)
Step 1 ^a	Respondent Age	-.017	.035	.223	1	.636	.984
	Type of Marriage (Monogamous and Polygamous)	.629	.533	1.393	1	.238	1.875
	Level of education (Vocational Education)			1.395	3	.707	
	Level of education (Primary)	-.963	1.233	.610	1	.435	.382
	Level of education (Secondary)	.355	.893	.158	1	.691	1.427
	Level of education (Tertiary)	-.280	.361	.603	1	.437	.755
	Respondents Occupation (student)			3.278	5	.657	
	Respondents Occupation (Unemployed)	.126	.655	.037	1	.847	1.134

Respondents Occupation (House wife)	.025	.558	.002	1	.964	1.025
Respondents Occupation (Self-employed)	1.823	1.201	2.303	1	.129	6.188
Respondents Occupation (Private Employee)	.176	.463	.145	1	.703	1.193
Respondents Occupation (Government Employee)	-.272	.595	.208	1	.648	.762
Ethnic group (Gbagyi)			1.916	6	.927	
Ethnic group (Ganagana)	-.511	.900	.323	1	.570	.600
Ethnic group (Bassa)	.771	1.257	.376	1	.540	2.162
Ethnic group (Hausa)	21.758	2.970	.023	1	.870	5.086
Ethnic group (Igbo)	-.394	.585	.453	1	.501	.674
Ethnic group (Yoruba)	.391	.515	.579	1	.447	1.479
Ethnic group (Others)	.151	.422	.128	1	.720	1.163
Respondents Religion (Muslim and Christian)	.751	.391	3.693	1	.050	2.119
Constant	-.453	1.424	.101	1	.751	.636

a. Variable(s) entered on step 1: Respondent Age, Type of Marriage, Level of education, Respondents Occupation, Ethnic group, Respondents Religion.

Table 3: Test Results

The Wald statistic has chi-square distribution which is significant at $p < 0.05$. Therefore, any predictor variable that has p-value less than 0.05 is significant. Looking at the equation, it showed that the predictors except for religion are all not significantly predicting contraceptive practices among mothers in UATH since its p-value exceeded the 5% level of significance.

Only the predictor Respondent Religion of Muslim and Christian had a significant impact on contraceptive practices among mothers in UATH with p-value of 0.050. However, since the Respondents religion is significantly impacting

on the use of contraceptives by women, the Exp (B) or the Odd ratio will be meaningful, implying that the Christian mothers have odds of using contraceptives that are 2.119 of the odds of the Muslims mothers. It means that the Christian respondents are more likely than Muslim mothers to use contraceptives since the Odd ratio of 2.119 is greater than 1 ($2.119 > 1$). Consequently, rejecting the assertion there was no significant relationship between socio-demographic characteristics of mothers and their use of contraceptive.

Binary Logistic Regression Model showing the relationship between Contraceptive practice level and some reproductive characteristics of mothers attending UATH Abuja

		B	S.E. of mean	Wald	df	Sig.	Exp(B)
Step 1 ^a	Age at Menarche	-.021	.098	.046	1	.830	.979
	No. of times Pregnant	.280	.422	.440	1	.507	1.323
	History of Miscarriage/Abortion (No and Yes)	1.147	.626	3.360	1	.067	3.149
	Number of Missed abortions	.522	.312	2.793	1	.095	1.685
	Child Age	.137	.066	4.324	1	.038	1.147
	Number of Living Children	-.002	.226	.998	1	.994	.998
	Desires children by wife	-.407	.222	3.370	1	.066	.666
	Desired children by Husband	.168	.161	1.086	1	.297	1.183
	Time to Future childbirth	.092	.154	.359	1	.549	1.097
	Inter-pregnancy interval	-.040	.099	.166	1	.684	.960
	Resumed menstruation (No and YEs)	-.026	.384	.005	1	.945	.974
	Resumed Sexual Activity (No and Yes)	-.582	.413	1.985	1	.159	.559
	Time resumed Sexual Activity	-.696	49224.582	3.890	1	.900	.499
	Constant	-22.620	40193.222	.000	1	1.000	.000
a. Variable(s) entered on step 1: Age at Menarche, No. of times Pregnant, History of Miscarriage/Abortion, Number of Missed abortions, Child Age, Number of Living Children, Desires children by wife, Desired children by Husband, Time to Future childbirth, Inter-pregnancy interval, resumed menstruation, Resumed Sexual Activity, time resumed Sexual Activity.							

Table 4: Test Results

The Wald statistics results provided an index of the significance of each predictor variable in the equation. Wald statistics have chi-square distribution which is significant at $p < 0.05$. Therefore, any predictor variable that has p-value less than 0.05 is significant. The equation showed that the only the predictor “age of the child” that has a significant impact on CP since the p-value of 0.038 is less than 0.05. Hence, one can conclude by saying that the age of the child is responsible for the use of contraceptives by mothers attending UATH.

All other variables are all not significantly predicting CP among mothers in UATH since its p-value is higher than 5% level of significance. However, History of Miscarriage/Abortion, Number of Missed abortions and Desires children by the wife are statistically significant at 0.1 (10% level of significance) since there p-value is less than 0.1.

Consequently, the assertion that there is no significant relationship between the reproductive characteristics of mothers and the use of contraceptive is not accepted.

Statement	Response Freq. (%)									Sectional mean
	SD	D	N	A	SA	FX	n	mean	SD	
Personal information barrier										
Contraceptive information from hospital hard to follow	78 (39.0)	61 (30.5)	18 (9.0)	28(1 4.0)	15 (7.5)	441	200	2.205	0.14	3.04
Mass media information is clearer	22 (11.0)	59 (29.5)	36(18. 0)	54(2 7.0)	29 (14.5)	609	200	3.045	0.08	
Disturbs sexual life	30 (15.0)	27(13 .5)	43(21. 5)	50(2 5.0)	50 (25.0)	663	200	3.315	0.05	
Contraceptive difficult to use	36 (18.0)	47 (23.5)	31(15. 5)	48(2 4.0)	38 (19.0)	605	200	3.025	0.04	
Concerned of side-effects	31 (15.5)	22 (11.0)	15 (7.5)	61(3 0.5)	71 (35.5)	719	200	3.595	0.12	
Influenced by friend's experience	57 (28.5)	28 (14.0)	16 (8.0)	43(2 1.5)	56 (28.0)	613	200	3.065	0.09	
Family/cultural factors										
Decision solely by husbands	22(11. 0)	32(16 .0)	26(13. 0)	55(2 7.5)	65(32 .5)	709	200	3.545	0.09	2.62
Husband does not support	65(32. 5)	5(29. 0)	14(7.0)	38(1 9.5)	24(12 .0)	389	146	2.66	0.16	
Husband does not finance contraceptive	52(26. 0)	51(25 .5)	27(13. 5)	33(1 6.5)	38(18 .5)	557	201	2.77	0.05	
Family do not support	68(34. 0)	54(27 .0)	35(17. 5)	21(1 0.5)	22(11 .0)	475	200	2.375	0.10	
Friend and community do not support	70(35. 0)	67(33 .5)	27(13. 5)	22(1 1.0)	14(7. 0)	443	200	2.215	0.13	
Culture does not support	71(35. 5)	54(27 .0)	28(14. 0)	26(1 3.0)	21(10 .5)	472	200	2.36	0.11	
Religious prohibition	72(36. 0)	52(26 .0)	23(11. 5)	25(1 2.5)	28(14 .0)	485	200	2.425	0.11	
Healthcare system Barriers										
Preferred methods always available	16(8.0)	16(8. 0)	38(19. 0)	82(4 1.0)	48(24 .0)	730	200	3.65	0.14	3.71
Alternative choices available	36(18. 0)	21(10 .5)	52(26. 0)	63(3 1.5)	28(14 .0)	626	200	3.13	0.09	
Can afford preferred choice	8 (4.0)	12(6. 0)	27(13. 5)	102(51.0)	51(25 .5)	776	200	3.88	0.19	
Clinic easily accessible	19(9.5)	12(6. 0)	13(6.5)	97(4 8.5)	59(29 .5)	765	200	3.825	0.19	
Nurses available for enquiry	8(4.0)	8(4.0)	15(7.5)	98(4 9.0)	71(35 .5)	816	200	4.08	0.21	

Table 5: Perceived barriers of mothers attending UATH Abuja

As seen from the percentage table above, one-fifth (21.5%) of the respondents agree that information provided in the clinic on contraceptives in the hospital is hard to follow, half (50%) indicated contraceptives disturbs their sexual life, two-third (66%) are concerned about side-effects, the experience of friends influenced nearly half. In contrast, over two-fifth (42%) are not.

From the sectional mean on the variable “Personal information barrier” (PIB) obtained is 3.04 (Neutral), this strongly suggests that the respondents are somewhat indifferent about the challenges associated with personal information on contraceptive use and practices.

Furthermore, on the barriers associated with family and cultural factors, over half (57.5%) of the mothers reported their husband takes

contraceptive decisions, more than one-third (35%) do not get financial support from the husband. In comparison, 23.5% and 24.5% indicated they do not have cultural and religious support to use contraceptives. The sectional of 2.62 (neutral) suggest that the respondents are indecisive. Thus, making the barriers from family and culture are not too much a determinant of contraceptive use or practices.

However, 16% indicated preferred method was not always available; one-tenth (10%) could not afford preferred choice, family planning clinic was not accessible 15% subjects, and 28.5% cannot access alternative contraceptive choices. The sectional mean obtained from the variable “Health system barrier” (HSB) is 3.71 (Agree), implying that barriers associated with the health system strongly impact on the use of contraceptives by the respondents.

Omnibus Tests of Model Coefficients					Model Summary		
		Chi-square	df	Sig.	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
Step 1	Step	7.698	3	.053	268.840 ^a	.380	.500
	Block	7.698	3	.053			
	Model	7.698	3	.053			

Source: SPSS OUTPUT, V25

Table 6: Binary Logistic Regression Model showing the Relationship between contraceptive practices and the barriers to contraceptive practices among mothers attending UATH Abuja

The analysis showed that logistic regression was significant ($\chi^2=7.698$, $df=3$, $p=0.053$); this implies that PB, FCB, and HSB influenced the contraceptive practices (CP) at 5% level of significance. Nagelkerke R Square result revealed that 50% (0.500) of the variability in the contraceptive practices that was explained by PB, FCB, and The results in the model

summary showed that the predictors used to predict contraceptive use by mothers are effective. Also, the result of the overall percentage accuracy value of 70.4% exceeded the standard limit of 56.6%, which implies that the logistic regression model was instrumental in the explanation of the CP and factors influencing it.

		B	S. E. Mean	Wald	df	Sig.	Exp(B)
Step 1 ^a	PB	.252	.175	2.090	1	.148	1.287
	FCB	-.056	.180	.098	1	.754	.945
	HSB	.527	.241	4.799	1	.028	1.694
	Constant	-2.679	1.126	5.658	1	.017	.069
a.		Variable(s) entered on step 1: PB, FCB, HSB.					

Table 7.3: Test Results

The Wald statistics results provided an index of the significance of each predictor variable in the equation. Wald statistic has chi-square distribution which is significant at $p < 0.05$. The results showed that only HSB ($\chi^2 = 5.658$, $p < 0.028$), significantly predicted the CP. Other predictor variables in the model did not contribute significantly to CP ($p > 0.05$), thereby rejecting the hypothesis.

DISCUSSION

The results showed that over 80% of the respondents were in the 23-37 age groups and had a mean age of 31, a standard deviation of 4.849. This result is similar to previous studies and another covering six states in the south of Nigeria^{12, 11, 16, 17}. Reproductive activity is highest in this group with the heightened expectation for contraceptive usage¹⁸. However, the mean age of respondents in Sudan^[19] appeared higher compared with lower age reported in this study¹⁹.

There were more Christians (71.4%) in monogamous marriages (89.9%), over two-thirds (67.8%) had tertiary level of education whereas two-fifth are self-employed. The higher mean age and level of education shows more women are taking to education, thus delaying the age childbearing. Mothers in this

study have a higher level of education compared to findings in various parts of Nigeria^{20, 17, 21}. It confirms the rising educational attainment of women in the country as seen in the demographic health survey¹⁰.

Most mothers (94%) had below four children; this is higher compared to 59% in the Southeast but lower compared to 57.8% with above five children in Northwest Nigeria^{17, 16}. The mean number of children is also lower compared to that obtained in Kenya and Malawi^{22, 23}. The mean parity in this study is lower than the national total fertility rate of 5.5, and that of the north central zone of 5.3 signifying a downward reduction in childbirth in the zone¹⁰.

The parity of the respondents seems to correspond with their desired number of children; this is a welcomed development when women begin to adopt a way of "living" and "thinking" that supports responsible decisions to promote their health and wellbeing. On the other hand, they might not have reached the saturation point to want to stop childbearing, thus providing evidence of contraceptive need.

While more than half of the respondents (52.5%) indicated that they had not resumed their menstrual cycle after the last delivery, 73.5% indicated they had started the sexual

activity. The finding appears higher compared to 67.9% who resumed in 8 weeks in Kano-Nigeria, 65.1% in Ethiopia after two weeks but lower compared with 80% resuming in 2-3 months without contraceptives in Malawi^{21,22,24}.

Over half of the mothers are below three months postpartum, above half gave an ideal inter-pregnancy interval with a quarter have no intention for future childbirth while 61% wish to space for above 2 years. The real need for contraception is for those who have no future intention and those needing to delay pregnancy.

Moreover, of 82 (41%), mothers with a history of abortion, almost two-third (61%) have had one abortion, nearly two-fifth (39%) reported 2-3 incidences, this finding is higher compared to a study where 24% had an unintended pregnancy, and 19.2% had a history of abortion²⁵. There is evidence of contraceptive usage gap. The implication is the increased pregnancy and abortion risk; this confirms the 16% cases of unwanted pregnancy reported in the same centre is yet to receive the needed attention, and the figure is rising⁴.

The analysis of results revealed that below half current users (47%) had right contraceptive practice level compared to above average (53%) with poor practice. Findings indicated that less than half the mothers (n=96, 48%) currently apply a method although almost three-quarter (n=141, 70.5%) have used a method of contraception in the past. This result is similar to that in Ethiopia and Ghana^{14, 26} but higher compared to findings (45.8%) of Berta et al²⁴, howbeit one study in South-western Nigeria report higher percentage²⁰. This study's subjects with good practice level contrast with 11% two reported as only 22.9%

are current users. Consistent contraceptive use complemented by exclusive breastfeeding increases practice level, benefits the mother, baby, family and the community^{6, 25}.

This research's practice level (47%) is higher than the national average of 15% this could be explained by the setting; facility-based, urban-setting which might influence the use or intention to use a contraceptive. Observation during the period of the study showed that more women visited the family planning clinic after filling the questionnaire; the study served as a source of information and reminder for those who had forgotten.

The most common method used by the respondents is the condom (34.4%), though 42.7% use a modern method; one-fifth of the mothers use the natural method. The commonly used modern methods are IUD, oral pills and implants. Close to half of the mothers confirmed the use of condoms by their husbands which corresponds with the mother's method (condom), a good observation that the men are participating in family planning. Attention should be paid proper use for maximum dual benefit. Some authors corroborate the results and that more women use the condom^{17, 20}.

The logistic regression analysis for contraceptive practice and all the social-demographic characteristics of the mothers was not significant, except for the respondent's religion. This finding is consistent with studies in the north and west of Nigeria where religion, marriage and ethnicity showed association with contraceptive use^{16, 20}.

It is noteworthy that only 18.6% of the cumulative reproductive characteristics of the mothers' contraceptive use/practice. Only the

predictor “child’s age” had a significant impact on contraceptive practices among mothers in UATH ($p=0.038$). One-fourth with infants less than six months are current users, more (37.7%) are not. It is conspicuous that those with younger children use long-acting reversible contraceptive and four mothers had a bilateral tubal ligation. These methods offer the highest protection against unplanned pregnancy in addition to reduced menstrual bleed and cancer protection.

On the other hand, history of Miscarriage/ Abortion, Number of Missed abortions and desired children by the wife are statistically significant at 0.1 (10% level of significance).

Children desired by wife had a significant relationship with contraceptive use ($\chi^2=3.370$, $p<=0.066$). More mothers have an average of 3 children and most (with their husbands) desire 3-4 children, this contrast with a Malawian study with more women desiring more than five children²². A study in Nigeria confirms the independence of parity with use; a decline in fertility could be responsible for the trend. The desire for fewer children in this study shows an unprecedented decline from the previous findings 5.7 between 2003-2008, 5.5 in 2014 (5.3 in Abuja)¹⁰.

Comparatively, history and number of abortions revealed a statistical relationship with contraceptive use ($p=0.067$ and $p=0.095$) Signifying as the history of abortion increased, a corresponding increase in the number of abortions and contraceptive usage occurs. Howbeit, over one-third mothers with a history of abortion are current users. Women do not have to experience an abortion before adopting contraceptives.

Two-third (66%) of the respondents confirmed they had fear concerning side-effects, about half agreed to been influenced by experiences of friends and neighbors. Fear of side-effects, as reported in literature across Nigeria, ranged from 14.6% in Western to 50.3% in the South and 58.8% in the Northern region^{16,17,20}. On the contrary, this population expressed more fears and a better understanding of contraceptives compared to those references above. About 43% respondents in Ethiopia indicated fear of side-effects prevent their use of contraceptives, but a more recent study in Ethiopia presented lower results 24% and 34.6% in Egypt²⁴.

Concerns about side-effects could be related to contraceptive knowledge, level of education and understanding of the information given by the healthcare practitioner. Albeit 71% affirmed they understood contraceptive information given at the clinic. A study reported the opposite; the subjects had a less contraceptive phobia. The mothers have a higher level of education but seem to be more apprehensive using contraceptives¹⁴.

About two-third pinpoint, the decisions are taken solely by their husbands; over a third had financial support for its use while 21.5% of family members do not support contraceptive use. In like manner, 33.3% of participants in Abakalike,¹⁷24% in Ethiopia,²⁴ 25% in Sudan¹⁹ indicated a lack of spousal consent as a barrier. Howbeit 81.9% of respondents in Ghana got financial support from their husbands, while 5.2% think the contraceptive decision should lie with the husband.^[26] Though three-quarter of the mothers reported they could afford contraceptives, one-third are not empowered (unemployed, house-wife and student), when the husbands do not finance contraceptive use,

it is a subtle barrier that is downplayed by the respondents.

Over one-fifth and 26.5% of the mothers agree that their culture and religion prohibit the use of contraceptives and religion determined ($p=0.050$) contraceptive use results are close to this study with 18% and 15% having cultural and religious barriers. However, a higher report 39% and 50.6% have reported for the socio-cultural and religious barrier. Impliedly, religion, community, and cultural affiliations determine the reproductive activity of mothers.

The majority (96%) think the HSB was not strong enough to prevent the use of contraceptive. Unavailability of choice with having to return for refill by of the participants is a significant constraint. Same was reported in a facility-based study, while adding information gap and provider attitude as a challenge. Though health providers may give required information during health talk, the ability to elicit responses about clarity may be a crucial factor preventing uptake. Some participants identified problems of having to interact with the source of information, the pattern of presentation and health literacy as a hindrance¹³. Therefore, it is not surprising as this study population were reluctant in identifying health professionals as a barrier been that the researcher is one of them.

In summary, the respondents appear indifferent about the challenges associated with personal information on contraceptive use and practices. The sectional mean reflected as neutral (3.04), while the mothers appeared undeceive regarding family/cultural factors (2.62). However, the sectional mean obtained from the variable "Health system barrier" is 3.71 (Agree), implying that barriers associated with health system strongly impacts and

determine the use of contraceptives by the respondents. Report of many authors confirms this finding^{13, 26}. To conclude, the regression analysis confirmed HSB strongly determine contraceptive use ($X^2=5.658$, $p<0.028$). Other predictor variables in the model did not contribute significantly to CP ($p>0.05$), thereby rejecting the hypothesis.

Ethical Clearance: Ethical clearance has obtained from University of Abuja, Teaching hospital, Nigeria, West Africa, to conduct this study with reference number: UATH/HREC/PR/2019/005, Dated 20/08/2019.

Conflicts of Interest

The author declares that there is no competing interest on conduct of this study and in publishing this article.

Fund for the study: This is self-funded study.

CONCLUSION

This research has shown that 48% (96) of the women are currently using a form of family planning out of which only 41.7% use modern contraceptives and 19.1% follow the natural method. The most common method used by women is the condom.

Majority of the mothers reported being concerned about side-effects but were not bothered by the concerns of family and neighbors; they confirmed understanding and knowledge of contraceptive education given in the hospital. The mothers were indifferent on personal information barriers; howbeit, the health system strongly impact on the use of contraceptives by the respondents.

The contraceptive practice is not dependent on any of the social characteristics of the mothers

except for religion; Child's-age predicted contraceptive use; an important feature is that women with younger children use long-acting contraceptives. Therefore, encouraging women early in postpartum will likely produce more compliant contraceptive users.

Practice Implications: Healthcare providers have to provide contraceptive education at every contact with all women of reproductive age. Nurses must avoid judging the level of contraceptive knowledge based on the educational attainment of their client. Nurses must elicit the method-specific knowledge from each client during counseling in order to give accurate information, dispel misconception and advice on how to seek help for side effects. To achieve this, health workers must take part in training and retraining to remain competent providers.

The reduced fertility desires recorded in this study is a welcomed development, effort must be intensified on the part of the government and health providers to sustain it with more facilities for family planning and trained staff.

Limitations of the study: The researcher observed the following limitations to the study:

This study set does not allow sampling of more indigenous mothers in the city. The researcher recommends future study with a larger sample from various settings to increase its generalizability.

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