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CONTRACEPTIVE PRACTICE BARRIERS AND SUGGESTED MEASURES TO IMPROVE CONTRACEPTIVE USE AMONG MOTHERS FROM A TERTIARY HOSPITAL IN ABUJA, NIGERIA

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ABSTRACT: ***Introduction****: Ill-timed, unspaced births and high birth rates put Nigeria infamously as the 4th highest contributor to global maternal mortality. The period following childbirth provides a window of opportunity to reduce this through improved contraceptive use. This cross-sectional quantitative study carried out at a tertiary hospital in Abuja to identify contraceptive practice barriers and measures to improve use among mothers with infants less than 12months.* ***Methodology****: Questionnaires were to administered on 220 consenting mothers; data analyzed using SPSS software version 25. Descriptive analysis and the inferential statistical techniques used are binary logistics regression and the paired-sample T-test to establish the relationship between variables — the p-value set at 5% level, thus $p<0.05$ is termed significant.* ***Results****: 200 questionnaires were retrieved; the mean age of the respondents was 31; most had tertiary level education, were Christians and in monogamous union. Most mothers desired and had below four children. The commonly used methods are the condom, IUD, pills and implant. 48% are currently on a method. Contraceptive use was dependent on respondent's religion ($p=0.050$) and child's age ($p=0.038$). Identified barriers are personal information and health system barriers. There appeared a statistical difference in the perception of barriers and measures to improve contraceptive use. PB and HEM [$t(199) = -11.456$, $p=0.000$]. FCB and FCM [$t(199) = -4.608$, $p=0.000$]. HSB and HSM [$t(199) = -8.173$, $p=0.000$].* ***Conclusion****: Less than half of postpartum women use any form of contraceptive and child's age and religion determined it, the mothers are indifferent on personal information and family/cultural barriers, but concerned on improving health system measures. This study reaffirmed the place of health education and drawing attention to improving method availability, counselling, opening, and equipping more family planning facilities can improve contraceptive.*

KEYWORDS: Contraceptive Practice, Health System Barriers, Mothers, Hospital, Nigeria

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LIST OF ABBREVIATIONS

BTL Bilateral tubal ligation
CP Contraceptive practice
FCB Family cultural barriers
F/CM Family/Cultural measures
FMOH Federal Ministry of Health Nigeria
FP Family planning
HEM Health education measure
HSB Health system barriers
HSM Health system measures
IUD Intrauterine device
LAM Lactation amenorrhoea method
NBS National Bureau of statistics
NPC National population commission
PIB Personal information barriers
SDG Sustainable development goals
UATH University of Abuja teaching hospital
WHO World Health Organization

INTRODUCTION

"Contraceptives are products or medical procedure that impede reproduction from acts of sexual intercourse" (Hubachera and Trussell 2015). Ill-timed, unspaced births and high birth rates are associated with enormous threats worldwide. Timely initiation of contraception is essential to actualizing the rights and health of women and girls to avoid consequences of unplanned, un-spaced pregnancy and abortion to fulfil the universal health coverage goal. (WHO 2018; Kyei-Nimakoh et al. 2017).

Globally, about 190 million women of reproductive age do not want to get pregnant yet do not employ any modern contraceptive method. Though the United Nations reported a 64% increase in contraceptive use among married women in other regions of the world. Over three-quarters of postpartum women in developing countries do not use contraceptives in contrast, 95% might desire to defer pregnancy in the next 24 months. Africa witnessed a 33% rise in contraceptive usage, but Nigeria has less than 20% practice rate (United Nations 2015; Radoloff and Tsui 2019). There appears to be fertility decline in other parts of the world, that of Nigeria has remained around 5 for the last 15years.

Consequently, this has affected the life expectancy of women in Nigeria, being 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 (WHO 2019). Additionally, there appears a slow decline in infant mortality rate (128 deaths per 1,000 live births) (Wollum et al. 2015), 59 per1000 unintended pregnancy, 56% resolved by abortion while the north-central region contributes 12% MMR from unsafe abortion (Bankole et al. 2015; Wekesah and Izugbara 2017). Despite that, many women become sexually active early after delivery, yet only a few initiate contraceptives early (Iliyasu et al. 2018; Olugbenga-Bello et al. 2017).

The period following childbirth provides a window of opportunity to scale-up contraceptive uptake, increasing the gains of reduced maternal mortality, unintended pregnancies, associated induced abortions and the proportion of high-risk pregnancies (Chola et al. 2015; Agida et al. 2016). Howbeit, studies in Nigeria indicate many women preferring/using the natural Method and male condom while a few use modern contraceptives (Durowade et al. 2017). Researches done in Abuja shows 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 (Sale et al. 2018; Onuorah and Jamda 2017; Agida et al. 2016).

Moreover, there is widespread fear of side-effects from contraceptives, with lots of myths and misconception regarding its use. Postpartum women face barriers to uptake of family planning methods. The cultural practice of male dominance and religious beliefs leaves women in a subjugated position (Ogboghodo et al. .2017; Adeniran et al. 2018).

There is a paucity of data on measures to adopt in overcoming these barriers among postpartum women. Thus, the need to investigate and delineate contraceptive practice barriers and suggested measures to improve use from the perspective of mothers within 12months after delivery in a health facility that offers this service in Abuja.

Conceptual Framework

The conceptual framework for this study is the health belief model developed in the 1950s by the social psychologist (Hochbaum, Leventhal, Kegeles, and Rosenstock) The model seeks to explain the behaviour of people to programs targeted to prevent disease and other health-related events. Barriers prevent the adoption of practices that promotes health and enjoyment of its benefits. The concept behind the model is health promotion and the prevention of adverse consequences on the health of the woman.

Adoption of the Model

- **Perceived susceptibility**: describes the belief in the likelihood of been affected by a condition. In this case, postpartum women are at risk of pregnancy and related complications without the use of contraceptives.
- **Perceived severity** is awareness of the severity of the impact of the condition. The impact includes unplanned pregnancy, risk of abortion and sepsis, maternal mortality, short-interpregnancy interval, preterm delivery, increased infant mortality rate.
- **Perceived Benefits**: awareness of the benefits from engaging in behaviour change either because of realizing the threat, susceptibility or severity of the condition. Women benefits by being healthy, have healthy babies and families, they are better able to contribute to the family and nation, the nation benefits as the demographics become manageable and better provision for the citizens.
- **Perceived barriers**: is the impediments or negative factors that prevent a health-benefiting action. Impediments/pull factor to the use of contraceptives include inadequate knowledge, lack of support from husband and significant others and health systems.
- **Cue to action**: Are those actions that can set-up or push factor for the desired action, which are internal and external (healthcare measures and educational factor)

Methods

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

The sample size determined by Lemeshow et al. (1990) formula 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 (NPC2014) 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.

The systematic sampling method used; recruited every 9th mother from the immunization register from August to September 2019. Subjects comprise women within 18-49 years with infants below 12months 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, contraceptive practice, barriers, and measures to improve use. The tool had a total of 51 items in 5 sections. The data collection was by self-administered questionnaire method by the researcher with the help of 1 trained assistant. After data cleaning, sorting, and coding, the analysis was by Statistical Package for Social Sciences (SPSS) Version 25.0. Descriptive analysis included frequencies and percentages; the inferential statistical technique was binary logistics regression and T-test 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

Table 1: Sociodemographic characteristics of Mothers attending UATH Abuja

Characteristics Age-group	Frequency (200)	Percentage (%) (100)
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

Two hundred questions retrieved of the 220 distributed representing 90.9% response rate. Table 1 revealed two-third of the mothers (67.5%) were within the ages of 28-37years (Mean age 31.12 years, SD 4.849). 89.9% were in a monogamous marriage, above two-third had tertiary level of education (67.8%), while about 41% were self-employed. The ethnic groups represented in the study showed Gbagyi (3.5%), Yoruba, (18%) others accounted for 55.8% (n=111), 71.4% were Christians and over a quarter (28.6%) were Muslims.

Table 2: Reproductive History of the Mothers attending UATH Abuja

Characteristics	**Frequency 200**	**Percentage (%)**
No. of times pregnant (Gravida)		
1-2	85	42.5
3-4	80	40.0
5 and above	35	17.5
Child Age		
1-3 months	106	53.0
4-6 months	24	12.0
7-9 months	53	26.5
10-12 months	17	8.5

No. of Living Children (Parity)		
1-2	117	58.5
3-4	71	35.5
5 and above	12	6.0
Desired children (Wife)		
1-2	15	7.5
3-4	130	65.0
5 and above	54	27.5
Desired children (Husband)		
1-2	19	9.5
3-4	114	57.0
5 and above	67	33.5
Time to future childbirth		
No more childbirth	50	25.0
1 year after last delivery	27	13.5
2 year after last delivery	69	34.5
3 year after last delivery	32	16.0
4 years and above	22	11.0
Interpregnancy interval (years)		
0-1 year	77	38.5
1-2	92	46.0
3 and above	31	15.5
Resumed menstruation		
No	105	52.5
Yes	95	47.5
Resumed Sexual activity		
No	53	26.5
Yes	147	73.5
Time resumed Sexual Activity	Freq.=147	
1-2 month	86	58.5
3-4 months	36	24.5
5 months above	25	17.0
Hx of Abortion		
No	118	59.0
Yes	82	41.0
No. of Abortion	Freq (n=82)	
1	50	61.0
2	17	20.7
3 and above	15	18.3

Table 2 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 (41%) 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.

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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% plan to wait for two years after last delivery to have another child, close to two-thirds of the subjects gave an ideal interpregnancy 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, 58.5% commenced 1-2 months after delivery.

Table 3: Contraceptive practice of the mothers attending UATH Abuja

Statements	Responses	F	(%)
Ever used any contraceptive method?	No	59	29.5
	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 years	31	22.0
	3 years	15	10.6
	4 years and above	16	11.3
Use between all pregnancies	No	73	51.8
	Yes	68	48.2
Current Use	No	104	52.0
	Yes	96	48.0
n=96			
Current Method in use	Oral pills	8	8.3
	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
	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
	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
	Rarely	12	12.5
	Occasionally	10	10.4
	Consistent	16	16.7
	Very Consistent	37	38.5

Table 3 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 2months of delivery, three-fifth (60.4%) are consistent with practice while more than half (55.2%) consistently breastfeed to prevent pregnancy.

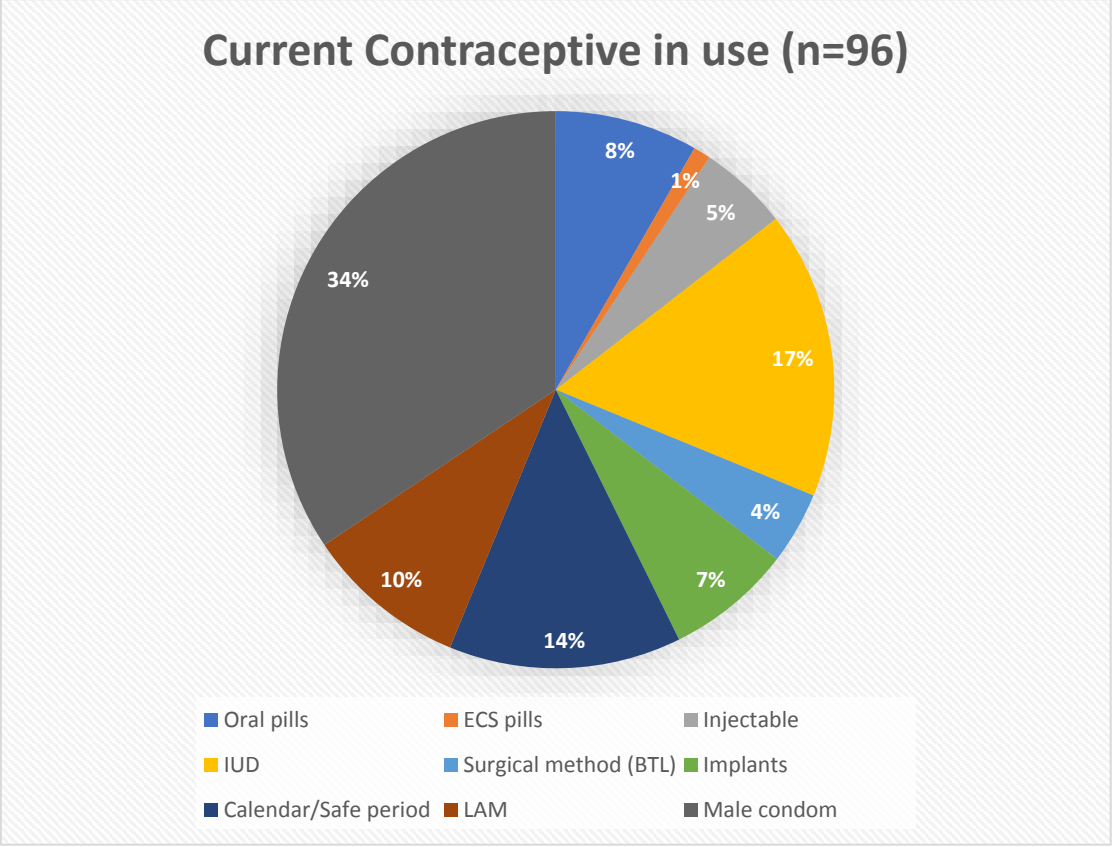

Figure 1: Current Contraceptive Type by Use

Table 4: Binary Logistic Regression Model showing association between contraceptive practice level with sociodemographic characteristics of mothers attending UATH

Test Results

		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.

The Wald statistics results provided an index of the significance of each predictor variable in the equation. The equation showed that the predictors are all not significant except religion. Only the predictor Respondents Religion (Muslim and Christian) that has a significant impact on contraceptive practices among mothers in UATH since its p-value of 0.050 is equal to 0.05

(5% level of significance). 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 that there is no significant relationship between sociodemographic characteristics of mothers and the use of contraceptive.

Table 5: Perceived barriers of mothers attending UATH Abuja

Statement	Response Freq. (%)									
Personal information barrier	**SD**	**D**	**N**	**A**	**SA**	**fx**	**n**	**mean**	**sd**	**Sectional mean**
Contraceptive information from hospital hard to follow	78 (39.0)	61 (30.5)	18 (9.0)	28(14.0)	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(27.0)	29 (14.5)	609	200	3.045	0.08	
Disturbs sexual life	30 (15.0)	27(13.5)	43(21.5)	50(25.0)	50 (25.0)	663	200	3.315	0.05	
Contraceptive difficult to use	36 (18.0)	47 (23.5)	31(15.5)	48(24.0)	38 (19.0)	605	200	3.025	0.04	
Concerned of side-effects	31 (15.5)	22 (11.0)	15 (7.5)	61(30.5)	71 (35.5)	719	200	3.595	0.12	
Influenced by friend's experience	57 (28.5)	28 (14.0)	16 (8.0)	43(21.5)	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(27.5)	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(19.5)	24(12.0)	389	146	2.66	0.16	
Husband does not finance contraceptive	52(26.0)	51(25.5)	27(13.5)	33(16.5)	38(18.5)	557	201	2.77	0.05	
Family do not support	68(34.0)	54(27.0)	35(17.5)	21(10.5)	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(11.0)	14(7.0)	443	200	2.215	0.13	
Culture does not support	71(35.5)	54(27.0)	28(14.0)	26(13.0)	21(10.5)	472	200	2.36	0.11	
Religious prohibition	72(36.0)	52(26.0)	23(11.5)	25(12.5)	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(41.0)	48(24.0)	730	200	3.65	0.14	3.71
Alternative choices available	36(18.0)	21(10.5)	52(26.0)	63(31.5)	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(48.5)	59(29.5)	765	200	3.825	0.19	
Nurses available for enquiry	8(4.0)	8(4.0)	15(7.5)	98(49.0)	71(35.5)	816	200	4.08	0.21	

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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, the sectional of 2.62 (neutral) suggest that the respondents are indecisive. Thus, making the barriers from family and culture not too much a determinant of contraceptive use or practices.

However, 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.

Table 6: Perceived Measures to improve contraceptive use

The following table presents the suggestion of Nigerian mothers on the measures to improve contraceptive use.

Statement	Response Freq. (%)					Freq	n	mean	Sectional Mean
Health education measures	**Not Important**	**Low importance**	**Moderately Important**	**Important**	**Very Important**				
Avoid medical words in communication	21(10.5)	9(4.5)	32(16.0)	76(38.0)	62(31.0)	749	200	3.75	4.10
Provide opportunity for questions	18(9.0)	15(7.5)	15(17.5)	85(42.5)	67(33.5)	768	200	3.84	
More information through Pamphlet/Brochure	7(3.5)	8(4.0)	12(6.0)	86(43.5)	86(43.0)	833	199	4.19	
Make information easy to understand	5(2.5)	5(2.5)	11(5.5)	85(42.5)	94(47.0)	858	200	4.29	
Teach how to manage side effect	4 (2.0)	4(2.0)	7(3.5)	73(36.5)	112(56.0)	885	200	4.43	
Family/community measures									
Integration men in counselling	18(8.0)	1(3.0)	7(3.5)	62(31.0)	109(54.5)	834	197	4.23	3.82
Support cultural-sensitive methods	13(6.5)	7(3.5)	18(9.0)	78(39.0)	83(42.0)	808	199	4.06	
Increase awareness through community leaders	15(7.5)	15(7.5)	15(7.5)	79(39.5)	76(38.0)	786	200	3.93	
Create awareness through religious leaders	23(11.5)	16 (8.0)	16 (8.0)	67 (33.5)	78 (39.0)	761	200	3.81	
Enforce child limit/reduce laws	51(25.5)	31(15.5)	20(10.0)	44(22.0)	54(27.0)	619	200	3.10	

Healthcare system measures									
Ensure Availability	10(5.0)	2(1.0)	11(5.5)	93(46.5)	84(42.0)	839	200	4.20	
Free contraceptives	20(10.0)	6(3.0)	9(4.5)	83(41.5)	82(41.0)	801	200	4.01	
Subsidize cost for surgical methods	17(8.5)	10(5.0)	10(5.0)	77(38.5)	86(43.0)	805	200	4.03	
Open and equip more facility	6(3.0)	1(0.5)	7(3.5)	85(42.5)	101(50.5)	874	200	4.37	4.20
Update care provider Skill/training	5(2.5)	1(0.5)	6(3.0)	80(40.0)	108(54.0)	885	200	4.43	

Furthermore, the Likert table above shows the sectional mean for the variable "health education measures" (HEM) as to the extent it affects the contraceptive practices among women observed to be 4.10 (agree). It shows that the respondents perceived that all the HEM identified in the study strongly influence the use of contraceptives among mothers in UATH.

A sectional mean value of 3.82 (Agree) obtained for the variable "family/community measure" (FCM) indicates that the respondents strongly believed that FCM stated are instrumental to their use of contraceptives. While the sectional mean value of 4.20 (Agree), a measure of how the respondents perceived the impact of HSM on the use of contraceptives by mothers.

Table 7: Paired Sample T-Test showing the r**elationship between the barriers and measures to improve the use of contraceptive among** others attending UATH Abuja.

Paired Samples Test

		Paired Differences			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	S. E.of Mean			
Pair 1	PB - HEM	-.95500	1.17895	.08336	-11.456	199	.000
Pair 2	FCB - FCM	-.37000	1.13558	.08030	-4.608	199	.000
Pair 3	HSB - HSM	-.49500	.85653	.06057	-8.173	199	.000

A paired sample t-test performed as observed in the table above to determine whether there was a statistically significant difference in the mean ratio of the respondent's perception on the "barriers to use of contraceptives" and "measures to improve contraceptives". From the analysis, the null hypothesis for PB and HEM is rejected [t(199) = -11.456, p=0.000]. Also, the null hypothesis for FCB and FCM is rejected [t(199) = -4.608, p=0.000]. And lastly, the null hypothesis for HSB and HSM is rejected [t(199) = -8.173, p=0.000] because the p-value is less than the 5% level. Conclusively, there is a significant difference between the perception of the respondents on the barriers and measures to improve contraceptive use among mothers attending UATH Abuja, rejecting H_{03}.

DISCUSSION

Sociodemographic Characteristics of Respondents

The analysis showed that over 80% of the respondents were in the 23-37 age group and had a mean age of 31. This result similar to the findings of two authors in Abuja (Onuorah and Abubakar 2017, and Sale et al. 2018). Other authors confirm this average age of childbearing in Nigeria (Eluwa et al. 2016; Mohammed-Durosinlorun et al. 2016; Esike et al. 2018). However, Abedellah and Jamda (2017) reported a higher mean age among their respondents.

Mothers in this study have a higher level of education compared to findings in various parts of Nigeria (Durowade et al. 2017, Esike et al. 2017 and Iliyasu et al. 2018). It confirms the rising educational attainment of women in the country, as seen in the demographic health survey (NPC 2014). Also, there were more Christians (71.4%) in monogamous marriages (89.9%).

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 (Mohammed-Durosinlorun et al. 2016; Durowade et al. 2017).

The contraceptive practice level (47%) is higher than the national average of 15%. 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 (Demie et al. 2018; Asamoah 2015) but higher compared to findings (45.8%) of Berta et al. (2018), howbeit one study reported higher percentage (Durowade et al. 2017). This study's subjects with good practice level contrast with 11% reported by Kador et al. (2017) and that of Tebeje and Workneh (2017) as only 22.9% are current users.

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). It is noteworthy that the men are participating in family planning. Method of use reported by many authors varied depending on characteristics of the women, culture and religion, suitability, cost, availability of method and programme implementation (Abdalla and Ahmmed 2017; Jarvis et al. 2018; Onifade et al. 2017; Mohammed and Bhola 2019).

Two-third (66%) of the respondents expressed concerns about side-effects, about half agreed to been influenced by experiences of friends and neighbours. 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 (Durowade et al. 2017; Esike et al. 2018; Mohammed-Durosinlorun et al. 2016). On the contrary, these respondents expressed more fears and a better understanding of contraceptives compared to those references above. A recent study in Ethiopia presented lower results of 24% (Berta et al. 2018) and 34.6% in Egypt (Elsayda et al. 2018). The mothers have a higher level of education but seem to be more apprehensive using contraceptives.

Meanwhile, two-third pinpoint the decisions are taken solely by their husbands, over a third gets financial support, while 21.5% of family members do not support contraceptive use. In

like manner, 33.3% of participants in Abakalike, 24% in Ethiopia, 25% in Sudan indicated lack of spousal consent as a barrier (Esike et al. 2018; Berta et al. 2017; Abdalla and Ahmmed 2017). 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 (Asamoah 2015). Nevertheless, three-quarter of the mothers reported they could afford contraceptives, and one-third are not empowered (unemployed, housewife 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. Religion determined ($p=0.050$) contraceptive use, Ngatu et al. (2018) reported similar. However, Yidana and Sharif (2018) population gave a higher report (39% and 50.6%) for the socio-cultural and religious barrier. Impliedly, religion, community, and cultural affiliations determine the reproductive activity of mothers.

Some participants identified problems of having to interact with the source of information, the pattern of presentation and health literacy as a hindrance (James et al. 2018; Yidana and Sharif 2018). It might therefore not be 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 undecisive regarding family/cultural factors (2.62), which is contrary to the submission of Elsayda et al. (2018) with Tebeje and Workneh (2017) that stress the importance of cognitive contraceptive knowledge; Unumeri et al. (2015) seeking empowerment of women. 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 (Jalango et al. 2017; James et al. 2018; Yidana and Sharif 2018; Kador et al. 2018).

The suggested measures showed that almost all (95%) the women indicated addressing the health education/information needs could help overcome their information barriers. On family/community measures, over four-fifths of the mothers propose the integration of men in family planning counselling, education at clubs and offices. Mohammed and Bhola (2019) corroborate this finding. James et al. (2018) support the proposition for meaningful engagement of spouses and male partners in contraceptive counselling. Women value accessibility to authentic source of contraceptive information, being able to interact with the provider, presentation style, as well as clarity of information, affects uptake.

The mothers suggest enabling women to choose culturally sensitive contraceptives; now this is very tricky as there is no contraceptive made for any particular culture, little wonder many adopt the natural Method and one-quarter of the mother's report withdrawal as husband method. The odds for contraceptive usage will be low for women who have religious leaders or are followers where the leaders see the practice as disobediences to God or against the religious injunction and cultural norm. (Ali et al. 2019). Whereas only a few of the participants consider child limit laws as an option to overcome family/community barrier, more investigation into the workability and benefit of such measure is needful.

Most mothers in this study highly perceive addressing healthcare system measure can tackle barriers to contraceptive usage. On the contrary, Dona et al. 2018 pinpoint only 15% perceive this measure as helpful. Mohammed and Bhola (2019) propose the use of teaching aid and proper training to improve the dissemination of contraceptive information and uptake. Method-specific training of nurses and other providers can bestow confidence in the staff to give quality service.

A paired samples t-test performed to determine the existence of a statistical difference in the mean ratio of the respondent's perception on the "barriers to use of contraceptives" and "measures to improve contraceptives, the result showed a statistically significant relationship ($p<0.050$). When providers can give method-specific education, clarify doubts, it could overcome personal information barriers. Method specific information can increase the uptake of contraceptives (Demie et al. 2018).

Similarly, there was a significant statistical relationship between family/cultural barriers and Family/cultural Measures, although the mothers appeared undecisive on the influence of family/culture. [$t(199) = -4.608$, $p < 0.00$]. Berta et al. (2017) and Dona et al. (2018) facility-based study confirmed the association. Empowering women to decide their reproductive life gives room for educational and economic empowerment of women.

Furthermore, Health system barriers had significant statistical relationship with Health system Measures [$t(199) = -8.173$, $p < 0.05$]. The role of health system measures has remained pronounced in this study reaffirms the importance of these measures. Improved provider skill, good attitude and opening of more equipped client-friendly centres have a strong chance of influencing positive contraceptive behaviour. Abdalla and Ahmmed (2017) corroborate this relationship between method availability and use.

Implication of Research to Practice

The findings re-echo the role of health workers, especially nurses and health education to the use of contraceptives in the postpartum period. Early contraceptive education during antenatal and postnatal period can prevent unplanned pregnancy and abortion.

CONCLUSIONS

This study found that less than half of postpartum women use any form of contraceptive, with many preferring the condom and natural methods. A few more takes to more effective methods early in postpartum. Shows that men are beginning to participating in family planning; they might not be against contraceptive use after all when they are given meaningful recognition in the process. With more support, it could enhance early initiation of postpartum contraceptive use.

Providing individual specific and method-specific contraceptive information is a robust way to curb fears, misconception and misinformation around contraceptives use. Similarly, empowering women to take charge of their reproductive lives would enable them to overcome family/cultural barriers. Finally, the mothers suggest confronting health system barriers like ensuring method availability, affordability, accessibility, equipping more client-friendly centres could support their increasing use of contraceptives.

This study is reaffirming the place of health education and drawing the attention of health professionals and managements to update knowledge and skill in the face of rising consumer demand and knowledge.

Limitations of the study

Since the study consisted of one health facility, involving more health facilities from urban and rural areas would give the study more generalizable. Next is the limitation of using a new structured tool; the researcher recommends its use in other regions/zones on more respondents

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