Family Planning Practice in a Nigerian Tertiary Hospital: A Five Year Review

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Authors' contributions

This work was carried out in collaboration between both authors. Author JOA designed the study, wrote the protocol and wrote the first draft of the manuscript. Authors JOA and COJ did the statistical analysis and literature searches while analyses of the study was done by author COJ. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Background: Globally, there is an increasing unmet need for safe and effective family planning services. Most women in Africa, just like in many parts around the world, desire to control both the number and timing of births but lack an effective contraceptive method. Utilization of family planning services in developing countries has been found to prevent unintended pregnancies, reduce maternal and child mortality, however, its uptake still remains low.
Objectives: To determine the prevalence and pattern of contraceptive use, and to identify factors influencing use of modern contraceptive methods.
Materials and Methods: A retrospective study of 1,060 new clients who accepted a modern contraceptive method at the family planning clinic of the University of Port Harcourt Teaching Hospital, (UPTH) Nigeria, was conducted between January 1, 2011 and December 31, 2015. Information on socio-demographic characteristics, reasons for contraception, and their current method of contraception was obtained from the clinic registers, client cards and theatre records. Data obtained was analysed using the Statistical package for the social sciences SPSS version 20.

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Results: Over the 5-year period under review, a total of 1,060 clients accepted a family planning method. The contraceptive prevalence rate was 8.5%. The mean age of clients was 34.22 ± 5.42 years while the mean parity was 3.51±1.47. About half of the clients sought contraception within 6 months of delivery. Implants were the most common method used (38.2%), followed by intrauterine contraceptive device (32%). Information on family planning was mainly from health personnel (39.4%). The contraceptive discontinuation rate was 13.8%, and it was mainly due to the desire for another pregnancy (39.7%). Age, Parity and marital status of the clients were significantly associated with discontinuation of a method ($P<0.05$). The contraceptive prevalence rate markedly increased over the five year period.
Conclusion: The uptake of family planning services in Port Harcourt, South-South Nigeria is relatively low. There is a need for promotion of family planning methods through female education and dissemination of information by health practitioners and the media.

1. INTRODUCTION

Family planning is defined as the ability for individuals and couples to attain their desired number of children and plan the spacing and timing of their births through use of contraceptive methods [1]. The benefits of family planning have become increasingly recognized worldwide especially in developing countries. These benefits include improved health, economic, and social outcomes for women and families, as well as public health, economic, and environmental benefits. The health benefits for women and infants include the prevention of pregnancy related health risks and deaths in women, reductions in infant mortality and the rate of unsafe abortions, the prevention of the transmission of HIV/AIDS from mother-to-child (PMTCT), and prevention of sexual transmission of HIV and sexually transmitted infections (STI) between partners [1]. Family planning also has significant economic benefits for families and the society as a whole [2]. By slowing the growth of a population, women have more earning potential and families are able to devote more resources to each child, resulting in reductions of poverty [2,3].

However, despite the known benefits of family planning, globally more than 120 million women aged 15 to 49 who are married or in a union have an unmet need for family planning [4].

An unmet need for family planning refers to women capable of reproducing who are not using contraception, but wish to postpone their next birth or to stop childbearing all together. According to the Guttmacher Institute [5], meeting the unmet need for family planning and maternal and newborn health care in sub-Saharan Africa is estimated to result in a 69 percent reduction in maternal deaths and 57 percent drop in newborn deaths [5]. Women in developing nations are disproportionately affected by an unmet need for family planning, with the highest need in sub-Saharan Africa.

Nigeria has one of the highest maternal mortality ratio worldwide [6] and also the second highest number of maternal deaths in the world, [7] with illegal and unsafe abortions contributing 20-40% of the 60,000 maternal deaths recorded each year [8,9,10]. Contraceptive prevalence rates have a direct correlation with maternal mortality indices and it has been shown that countries with low contraceptive prevalence rate also have a high maternal mortality ratio [11,12]. Effective contraception would prevent unwanted pregnancies and abortion-related complications and deaths. Many women in developing countries would want to delay their subsequent pregnancies or even stop childbearing but do not have access to modern contraceptive methods. Low contraceptive usage may be due to lack of access or barriers to contraceptive use. These barriers include ignorance, socio-cultural factors, religious beliefs, lack of support from their partners or family members, fear of subsequent fertility and health risk, and also possible side effects [13,14].

National data states a contraceptive prevalence rate of 10% for modern methods and an additional 5% for traditional methods among married women. The unmet need for contraception in Nigeria is about 16%. Of these, 12% are in need of spacing and 4% are in need of limiting their family size. This is despite a population of 170 million with a total fertility rate (TFR) as high as 5.5 [15].

Furthermore, an estimated 1.5 million pregnancies in Nigeria are unexpected or unplanned [15]. It is estimated that one in ten women with unwanted pregnancy would have an abortion, suggesting up to 760,000 abortions annually [16].

Therefore, the purpose of this study was to determine the uptake of contraceptive services, the characteristics of contraceptive acceptors and the trends in the pattern of contraceptive use among women attending the family planning clinic of the University of Port Harcourt Teaching Hospital (UPTH), South-south, Nigeria.

2. MATERIALS AND METHODS

2.1 Study Site

The family planning clinic of the UPTH was established in 1986 and is headed by consultant gynaecologists, with rotating residents and family planning nurse practitioners as supporting staff. It draws its clients from the post-natal clinic, general out-patient clinic and the general public within and outside Port-Harcourt and its catchment states. It has, since its inception, been providing contraceptive services including the barrier methods, spermicides, oral contraceptives, injectable contraceptives, implants, intra uterine contraceptive device, and bilateral tubal ligation to its clients.

At presentation in the clinic, each client is counseled on the various methods, with emphasis on the benefits, side effects and contraindications of each, and allowed to choose an appropriate contraceptive method. A detailed health history is taken and thorough physical examination and appropriate investigations are done. The client is then given the chosen contraceptive and placed on appointment depending on the method used.

At each return visit, all the complaints volunteered by the client are documented and thereafter clinically re-assessed. A client was considered lost to follow up if she defaulted more than twice from scheduled visit.

2.2 Methods

This was a retrospective study of all new acceptors of a modern family planning method at the University of Port Harcourt Teaching Hospital over a five year period (January 1, 2011-December 31, 2015). The cards of the clients were retrieved and entered into a proforma designed for this purpose. Also retrieved were the theatre records of patients who had bilateral tubal ligation during the period under review. The variables included clients' age, marital/educational status, religion, parity, source of information on contraception, current method used, and reason for discontinuation. The proforma for each client was checked for completion before it was entered into a spreadsheet and analysed.

2.3 Statistical Analysis

The Statistical package SPSS 20 was used for data analysis. Proportions were expressed as simple percentages and compared using Chi square to establish relationships among the variables. Regression and correlation analysis were also done. Trend in contraceptive prevalence rate was expressed as a bar chart. The confidence interval was set at 95% (i.e. P-values <0.05). The contraceptive prevalence rate was determined as the proportion of women using a method of contraception relative to the total live births in UPTH.

Approval for the study was given by the Ethics Committee of the University of Port-Harcourt Teaching Hospital.

3. RESULTS

There was a total of 954 new clients at the family planning clinic, 79 clients had bilateral tubal ligation, making a total of 1060 clients accepting contraception over the period under review. There were 12,421 deliveries during the same period, giving a contraceptive rate of 8.5%.

The majority (65.4%) of the clients were aged 31-40 years, most of them were married (99.4%) and had tertiary education (65.4%). They were mainly multiparous women (68.4%) and were predominantly Christians (96.4%). This is shown in Table 1.

About half (52.3%) of the clients were breastfeeding at the time of visit and 41.4% had delivered within the six months prior to the clinic visit while 21.9% had their last delivery more than 24 months prior to the visit. The mean interval between the last pregnancy and the commencement of a contraceptive method was 22.6 months. About half of the clients had not used any form of contraception. Barrier method

(male condom) and injectable had been used in the past by 31.2% and 22.3% respectively.

The most commonly accepted method of contraception was the implant (38.2%), followed by copper T intrauterine contraceptive device used by 32% of the clients while the barrier method was the least chosen (2.5%). Only 7.5% of the clients had bilateral tubal ligation as illustrated in Table 2.

Table 3 depicts the source of information on contraception. Of the 1060 clients, 39.4% heard about family planning from health personnel, 25.1% from friends, 15.1% from family while 14.3% of the clients got the information from the media. Although, the majority of the clients had obtained information about family planning from health personnel, 13.8% discontinued the contraceptive method chosen.

Table 1. Socio-demographic characteristics

Variables	Frequency (n=1060)	Percentage (%)
Age		
<20	2	0.2
21-30	229	21.6
31-40	693	65.4
41-50	127	12.0
>50	9	0.8
Parity		
0	6	0.6
1	63	6.0
(2-4)	725	68.4
≥5	266	25.0
Religion		
Christianity	1022	96.4
Islam	38	3.6
Marital status		
Married	1054	99.4
Single	4	0.4
Widow	2	0.2
Educational status		
Primary	62	5.8
Secondary	305	28.8
Tertiary	693	65.4

The main reason for discontinuation was the desire for another pregnancy (39.7%), followed by menstrual irregularity (21.4%). Other reasons given were menopausal symptoms, complications of IUD, weight changes and pelvic pain. This is shown in Table 4.

Table 2. Contraceptive method used by clients

Current method used	Frequency	Percentage (%)
Implant	405	38.2
IUD	339	32.0
Injectable	178	16.8
BTL	79	7.5
COCP	32	3.0
Condoms	27	2.5
Total	**1060**	**100.00**

Table 3. Source of information

Source of information	Frequency	Percent (%)
Health personnel	418	39.4
Friends	266	25.1
Family	160	15.1
Mass media	152	14.3
Seminars/lectures	44	4.2
Other sources	20	1.9
Total	**1060**	**100.00**

Table 4. Reasons for discontinuation of contraception

Reason for discontinuation	Frequency	Percentage (%)
Pregnancy desire	52	39.8
Menstrual irregularity	28	21.4
Menopause	7	5.3
Weight changes	7	5.3
Pelvic pain	6	4.6
Displaced IUD	5	3.8
Husband's decision	5	3.8
Others	21	16.0
Total	**131**	**100.00**

The age, parity and marital status of the clients' were significantly related to the likelihood of discontinuation as shown in Table 5.

Table 6 illustrates the relationship between clients' age and type of contraceptive used. Most of the women aged 31-40 years used implants, (68.6%), followed by IUD (64.6%) and injectables (60.7%). There was a significant relationship between clients' age and the contraceptive method used.

There was a significant association between clients' parity and type of contraceptive used as shown in Table 7. Most of the multiparous clients

used implants (40.4%), IUDs (34%) and injectables (17.6%), while only 2.9% and 1.2% of them used oral contraceptive pills and barrier method respectively. Only 3.9% of them had tubal sterilization. About a third (34.6%) of the clients with 5 or more children had implants while 27.8% had IUDs. Only 19.2% of them had tubal sterilization.

Over the five-year period, there was a surge of client demand for implants and tubal sterilization. Conversely, the uptake of barrier method and oral contraceptive pills remained low. The demand for IUDs and injectable remained fairly constant. This is shown in Fig. 1.

Fig. 2 showed an increase in the number of family planning acceptors over the period under review. This however did not translate to an increase in the contraceptive rate which declined to 8.5% when the total number of live birth was considered.

4. DISCUSSION

The value of the effective use of contraceptive methods in preventing unwanted pregnancy and enhancing child spacing as a means of reducing the complications following unplanned pregnancy and its adverse effects on the mother has been highlighted in previous studies [17,18].

Table 5. Socio-demographic factors affecting discontinuation of contraception

Variables	Discontinued (N=131)	X2	P value
Age			
<20	1		
21-30	41		
31-40	67	54.13	**0.001**
41-50	14		
>50	8		
Parity			
0	0		
1	15	8.77	**0.03**
3-4	92		
≥ 5	24		
Education			
Tertiary	69		
Secondary	51	5.06	0.08
Primary	11		
Marital status			
Married	129	13.21	**0.001**
Widowed	2		
Religion			
Christianity	127	0.006	0.981
Islam	4		

Table 6. Relationship between age and contraceptive method used

Age	Current contraceptive method used						Chi-square, χ2 (*p-value*)
	COCP	Condoms	Implant	Injectable	IUD	BTL	
<20	0 (0.0)	0 (0.0)	1 (0.3)	0 (0.0)	1 (0.3)	0 (0.0)	
21-30	10 (31.3)	10 (37.0)	100 (24.7)	51 (28.7)	58 (17.1)	0 (0.0)	
31-40	20 (62.5)	10 (37.0)	278 (68.6)	108 (60.7)	219 (64.6)	58 (73.4)	44.2
41-50	2 (6.3)	7 (25.9)	25 (6.2)	18 (10.1)	54 (15.9)	21 (26.6)	(0.001)*
>50	0 (0.0)	0 (0.0)	1 (0.3)	1 (0.6)	7 (2.1)	0 (0.0)	
Total	**32**	**27**	**405**	**178**	**339**	**79**	

Statistically significant (p<0.05)

Table 7. Relationship between parity and contraceptive method used

Parity	Current contraceptive method used						Chi-square, χ2 (*p-value*)
	COCP	Condoms	Implant	Injectable	IUD	BTL	
0	1 (3.1)	0 (0.0)	5 (1.2)	0 (0.0)	0 (0.0)	0 (0.0)	
1	6 (18.8)	5 (18.5)	15 (3.7)	18 (10.1)	19 (5.6)	0 (0.0)	
(2-4)	21 (65.6)	9(33.3)	293 (72.4)	128 (72.0)	246 (72.6)	28(35.4)	30.4
≥5	4 (12.5)	13 (48.2)	92 (22.7)	32 (17.98)	74 (21.8)	51 (64.6)	(0.002)*
Total	32	27	405	178	339	79	

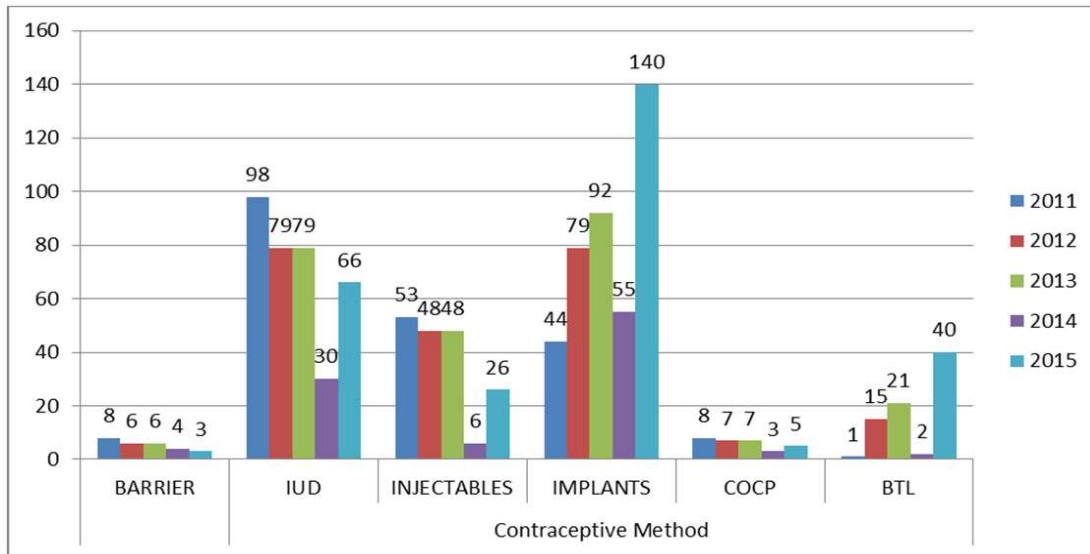*Statistically significant (p<0.05)*

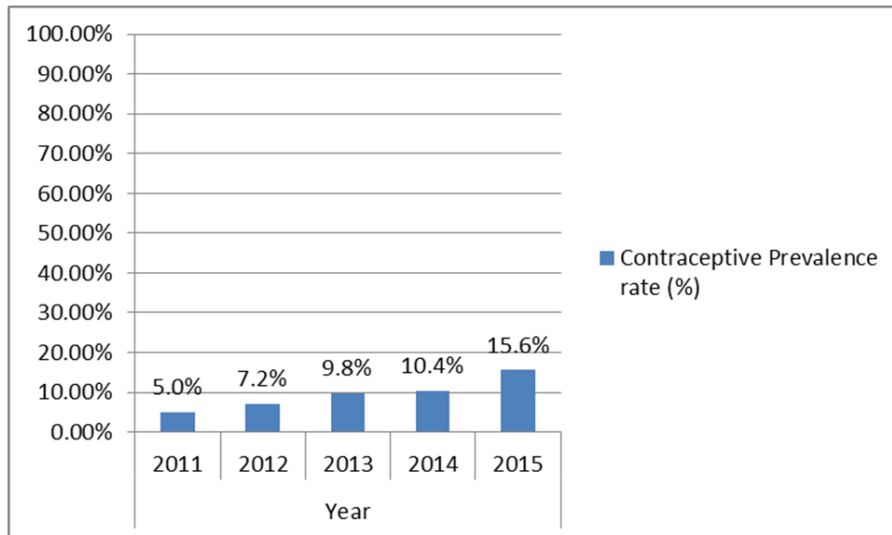**Fig. 1. Trend in contraceptive method chosen**

Fig. 2. Trend in contraceptive prevalence rate

The findings from this study showed that contraceptive practice is still low with a prevalence rate of 8.5%. This is much lower than the current prevalence rate for contraceptive use in Nigeria which is approximately 11%–13% [19]. It is also lower than that reported by previous studies [13,20,21,22]. This may be due to the fact that family planning is still a controversial issue in our environment because of religious, traditional and cultural beliefs. The most frequent users of contraception in this study were the 31-40 years age group, followed by the 21–30 years group in keeping with reports of other investigators [20,21,22]. This is a reflection of the need for family planning during the active reproductive years. The fact that most of our clients were married is not surprising because in our environment most parents discourage pre-marital sex and therefore use of contraceptives by single ladies [23].

The majority of the women in our study were Christians because Port Harcourt is a predominantly Christian populated area. However, the different denominations were not recorded in the case notes, as these would have helped to clarify the contraceptive distribution amongst the different Christian denominations.

Previous studies have shown that educated women tend to use contraception more than the less educated. Similar results were obtained in this study as most of the acceptors had at least secondary education [9,13,22,24]. It is probable that career pursuit and academic advancement may account for such difference.

The predominant choice of contraceptives by the clients was the implants. This differs from earlier studies that reported injectables and IUDs as the most common contraceptive methods chosen [13,20,21,22,25,26]. The variation in the contraceptive method chosen could be attributed to the varying locations of the studies which may influence the type of family planning methods available as well as the availability of competent staff for insertion of implants and IUDs. This changing trend may also be as a result of the belief that IUCD might reduce their husbands' sexual satisfaction and the inconvenience of intramuscular injections with injectables. However, the surge in demand for implants may be because it is less invasive with a shorter pregnancy spacing interval and also less weight gain compared to IUCD and injectables respectively.

The least method of contraception was male condom used by only 2.5% of the clients. This very low patronage rate of condom has been reported in previous studies done in Nigeria [25,26,27]. It may be a reflection of the fact that most of our clients were married and condoms are mostly used by single women who use it for protection against unwanted pregnancies and sexually transmitted infections. The low usage of condoms in this study may not reflect its actual usage in the general population, as it is not health care giver dependent and is usually available in super markets and hotels.

In contrast to a previous study in which the mass media played an important role in the dissemination of information concerning contraception, [10] in our study majority of the clients derived their information from health personnel. Similar findings were reported by earlier researchers [20,22,28,29]. The impact of mass media was rather low. The variations in the sources of information may be attributed to differences in the age group studied or marital status. Since most women only receive information regarding family planning in the course of attending antenatal or child immunization clinics at health facilities, there is therefore need to intensify publicity through the mass media in our region. In addition, female education will increase the uptake of family planning services which will eventually have a positive effect on our health indices and the economy in general.

The discontinuation rate in this study was 12.4%, the major reason being the desire for more children. This is not surprising as most of the women expressed the desire for more children at the time of uptake of a contraceptive method. Similar findings have been reported [22]. The age, parity and marital status were significantly associated with discontinuation of contraception. This may be because majority of the patients were in the 31-40 years age group, this is the age at which most women get married and start bearing children in our environment due to career pursuit and academic advancement, thereby increasing the likelihood of discontinuation of a method. These women accepted contraception for child spacing rather than for limiting their family size.

5. CONCLUSION

In conclusion, despite the increase in the annual uptake of family planning services in our centre

over the five year period, the overall contraceptive prevalence rate was low. Efforts should therefore be made to improve the utilization of this service by improving female education and public enlightenment through the mass media on the benefits and importance family planning to the family, community and the country at large.

CONSENT

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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