

Original Article

Pattern of contraception among users in a Nigerian Public Family Planning Unit

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النمط من وسائل منع الحمل بين المستخدمين في نيجيريا وحدة تنظيم الأسرة الجمهور

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المستخلص

الفكرة: تعتبر نيجيريا من الدول النامية، وبها معدل خصوبة عالي مع ارتفاع مضاعفات الحمل غير المرغوب فيه. وتعتبر وسائل تنظيم الأسرة من الوسائل المهمة لتنظيم الخصوبة وخفض المضاعفات المصاحبة للحمل غير المرغوب. يعتمد استخدام وسائل تنظيم الأسرة على مدى قبولها لدى مجتمع المستخدمين والذي بدوره يتأثر بالعوامل المجتمعية.

الهدف من الدراسة: تحديد معدل استخدام وسائل تنظيم الأسرة الحديثة بواسطة النساء اللاتي يطلبن خدمات تنظيم الأسرة في مستشفى من المستوى الثالث بنيجيريا، ومن ثم إيجاد معدل القبول لدى المستفيدات الجدد.

منهجية الدراسة: دراسة وصفية راجعة باستخدام ومراجعة بيانات مستخدمات وسائل تنظيم الأسرة بمستشفى هورين الجامعي في الفترة من يناير 2000 إلى ديسمبر 2009. تم جمع البيانات الشخصية والديمقراطية المتعلقة بكل مستخدمة بالإضافة لتاريخ الاستخدام الاسبق لوسائل تنظيم الأسرة، نوع الوسيلة، مدة الاستخدام، الغرض من الاستخدام، أي مضاعفات سابقة ان وجدت والغرض من الاختيار الحالي. كل المترددات القدامى والجدد تمت مراجعة بياناتهن. **نتائج الدراسة:** تمت مراجعة بيانات 5503 من المستفيدات من خدمات تنظيم الأسرة، 59,8% من المستخدمات الجدد لوسائل تنظيم الأسرة. كان معدل قبول المستفيدات الجدد في العام 31,7 – 51,9%, وقد كان اللولب هو الأكثر قبولا وسط المستفيدات القدامى والجدد، بغرض المباشرة بين الولادات وليس لتحديد حجم الأسرة (المعدل المعيارى اقل من ١...), بينما كان الاستخدام الجراحي، ربط قناتي فالوب، هو الأدنى بين وسائل تنظيم الأسرة. معظم المستفيدات الجدد تم تحويلهن من مراكز خدمة اخرى بواسطة كادر طبي.

الخلاصة: يعتبر معدل قبول وسائل تنظيم الأسرة بواسطة المستفيدات الجدد في مستشفى هورين الجامعي في الفترة من 2000-2009 عاليا، كما يعتبر اللولب هو الوسيلة الأكثر اختيارا بين الوسائل، بينما يعتبر التنظيم الجراحي هو الأدنى اختيارا.

Abstract Background: Nigeria is a developing country with high fertility rate and complications of unwanted pregnancies. Contraception is vital for fertility regulation and prevention of complications associated with unplanned pregnancy. The use of available methods depends on their acceptability by people in a community which may be determined by their social characteristics.

To determine the uptake of modern contraceptive methods among women seeking family planning services in a Nigerian Tertiary Hospital and document the acceptability of methods by new clients.

Materials and Methods: A retrospective review of contraceptive users that attended the family planning clinic of the University of

Ilorin Teaching Hospital, Ilorin, between January 2000 and December 2009 was done. Data on socio-demographic characteristics, previous method(s) of contraception, duration of use, reasons for discontinuation, side effects and reasons for current contraceptive choices were obtained from the documented case notes. Old and new users were compared. Statistical analysis used was descriptive and inferential statistics.

Results: Five thousand, five hundred and three clients' records were reviewed, 59.8% of all attendees were new acceptors of modern contraceptive methods in the facility. The percentage of new acceptors per year was 31.7-51.9%. Intrauterine contraceptive device (IUCD) was the commonest method among the new and old clients and most of them

required contraception for child spacing rather than completion of family size ($P < 0.001$). Bilateral Tubal Ligation and condom were the least common methods (0.1% respectively). Most of the new clients (67%) were referred by health personnel.

In conclusion, the acceptability of modern contraceptive methods by new clients at U.I.T.H between 2001 and 2009 was high. IUCD was the commonest method chosen. Use of surgical contraception was low.

Keywords: contraceptive uptake, new users, acceptors, Ilorin.

Key Messages:

Intrauterine device was the commonest contraceptive among new clients in Ilorin. Use of surgical method was very low among them probably because more required contraception for child spacing than for completion of family size. More contraceptive methods should be made available to increase choices for new clients in Nigeria.

Introduction

The regulation of fertility is a function of contraception among sexually active individuals. The availability and use of modern contraceptive methods are therefore determinants of total fertility rate and expected modern population transition from a high fertility to a low fertility population. Benefits of contraception include reduction of maternal mortality/morbidity, unsafe abortions and improvement in child survival. The acceptability of a new family planning method depends on the people and services, technologies, policies and institutional capacities⁽¹⁾.

The sub-Saharan Africa, where Nigeria is located is characterized by high fertility rate, decline/low contraception uptake, stagnant population transition, high maternal and infant mortality^(2,3). In Nigeria, only 10% of married women of reproductive age use contraceptives. This is lower than the current Sub-Saharan Africa average of 17%. Contraceptive prevalence rate in Nigeria is 14.6%⁽⁴⁾. It is the percentage of current contraceptive users among women of reproductive age who are in marital or

consensual union⁽⁵⁾. Globally, uptake of contraception has been immensely influenced by accessibility, cost and affordability^(2,3).

Family planning clinics are set up to assist couples and individuals in child spacing, prevent unintended pregnancies and improve their reproductive health as a whole. In Nigeria, contraceptive agents are made available in pharmacies, medicine stores and all levels of a health care.

To measure contraceptive use in our environment requires determination of percentage of new acceptors of modern contraceptives in a family planning facility and continuation/discontinuation of methods by old users. The latter has been described in the literatures but there is scanty information on pattern of contraception and acceptability by new clients viz-a-viz rate of uptake, reasons for contraception, methods chosen by individuals and their bio-social characteristics. The objective of this study was to determine the uptake of modern contraceptive methods among women seeking family planning services in a Nigerian Tertiary Hospital and document acceptability and determinants of methods clients.

Materials and Methods

A retrospective review of contraceptive users that attended the family planning clinic of the University of Ilorin Teaching Hospital, Ilorin, Nigeria, between January 2000 and December 2009 was done. The case records of the clients that attended the clinic during the period were retrieved for data collection. Their bio-statistics, obstetric history, past history of miscarriages, contraception, medical disorders, surgical interventions, as well as social and family history were collected. The history of contraception included current and previous method(s) of contraception, duration of use, reasons for discontinuation, side effects and reasons for current contraceptive choices.

The University of Ilorin Teaching Hospital, Ilorin in Nigeria is located in the North-Central Geopolitical zone of the country. The family planning unit of the Hospital was established 31 years ago in collaboration with

Ford Foundation. The unit provides available methods of contraception and serves as referral centre for surgical contraception and other family planning services. The unit is saddled solely with the responsibility of family planning and related services.

At presentation, clients are seen and counseled by the nursing staff on available contraceptive methods. Individual counseling is given and following the WHO recommended medical eligibility criteria, clients are assessed for fitness and safety of chosen method. They are followed up and reviewed based on standard operation procedures. Surgical contraception and insertion of hormonal implants are handled essentially by the medical staff while others are administered by the nursing staff in the unit.

The counseling method in the centre is standard and follows the principles and steps contained in the essentials of Contraceptive Technology, a handbook for clinic staff⁽⁶⁾ in order to ensure uniformity in the choice process of clients.

Records of all women who received family planning services during the study period either as new acceptors or those on follow-up were studied. To avoid duplicating information, the first visit records of clients during the period were analyzed for these data. Data were retrieved from hand written case notes and not as soft copies from computerized record systems. Records of all women during the period of review were available and reliably recorded; however, missing data of some clients as a result of incomplete documentation in individual case notes were excluded from analysis. These are indicated in the results.

Available contraceptive methods during the period (2001-2009) were combined oral contraceptive pills, progestin only pills, male condoms, Depo Medroxy-Progesterone Acetate, Norethisterone Enanthate, Norplant/Jadelle, Copper T 380A Intrauterine Contraceptive Device, bilateral tubal ligation, Vasectomy. All commodities and services are provided at subsidized rates to clients.

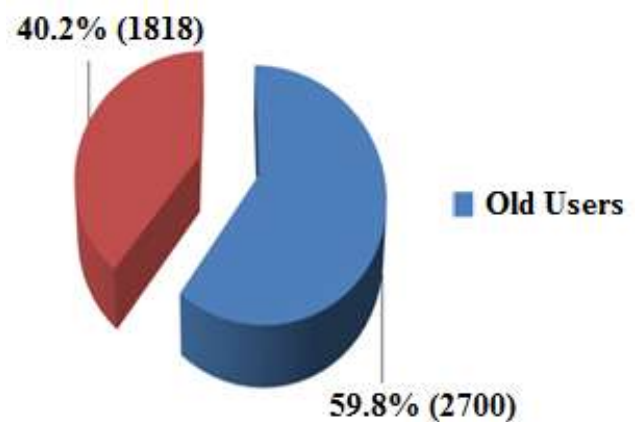
Data input was done on excel sheet and then analyzed using SPSS version 20, statistical software. Descriptive, inferential and comparative statistical methods were used. Data were expressed as absolute numbers and percentages, or mean and standard deviation. Chi-square (χ^2) test was used for comparison of categorical variables. P values less than 0.05 were considered significant.

Ethical approval for this study was obtained from Ethical Review Committee of University of Ilorin Teaching Hospital, Ilorin. In view of the retrospective nature of this study, individual informed consent was not required; rather the institutional ethical protocol for use of data and not specimen collection was followed. The records were solely used for research purposes and strict confidentiality was adhered to.

Results

Five thousand, five hundred and three clients' records were reviewed. Missing data were excluded from analysis and from the charts and tables. A chart showing the distribution of new acceptors and old users during the period is displayed as Figure 1. Over the nine year period, 59.8% of all attendees were new acceptors of modern contraceptive methods in the facility, giving a ratio of 1:1.49 (old users: new acceptors). New acceptors ranged from 148 to 270 women per year, old users ranged between 250-360 women per year. The percentage of new acceptors per year was 31.7-51.9%.

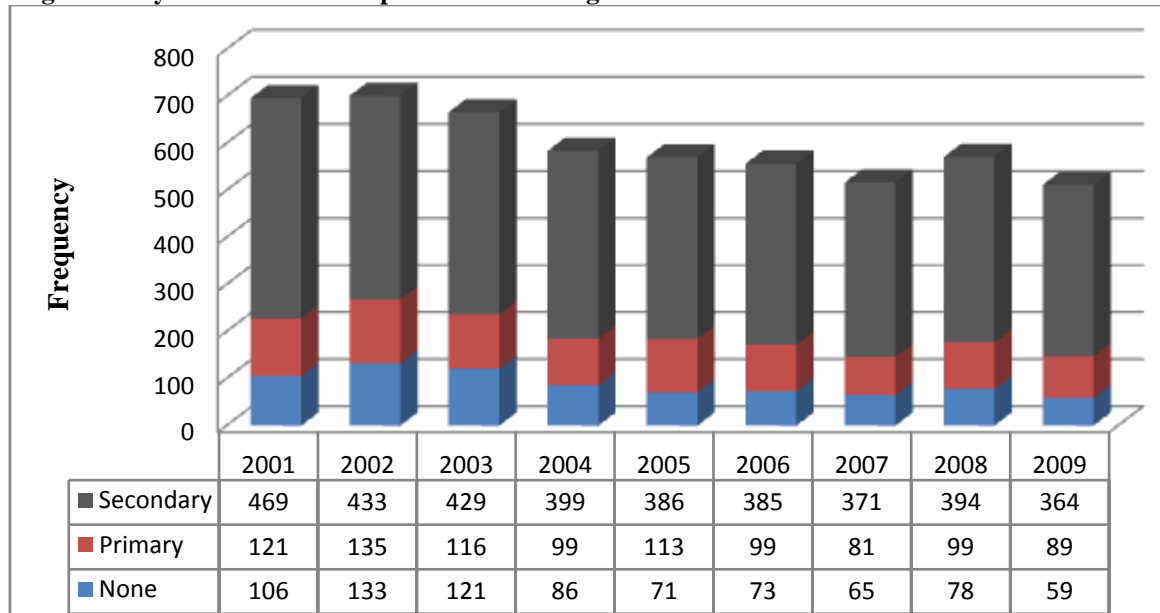
Fig 1: Old and new users of contraception at U.I.T.H (2001-2009)



Analysis of the yearly trends of contraceptive use according to educational status is depicted in Figure 2. This shows the decreasing number of uneducated women over the period

of review, And the percentage of women with high level of education was consistently higher than other groups over the years.

Fig 2: Yearly trends of contraceptive use according to educational levels at UITH



The socio-demographic variables of the clients are shown in Table 1a and compared with their reasons for contraception; comparisons were found to be statistically

significant ($P < 0.05$). Most of the clients required contraception for child spacing rather than completion of family size, and this was statistically significant ($P < 0.001$). (Table1b).

Table 1a: Relationship between reasons for contraceptive use and socio-demographic variables

	Desire more child				χ^2	<i>p</i> value
	No n (%)	Yes but spacing n (%)	Uncertain n (%)	Total n(%)		
Age (years)						
≤ 19	5(12.8)	34(87.2)	0(0.0)	39(100.0)	1081.332	<0.001*
20-24	32(12.1)	232(87.5)	1(0.4)	265(100.0)		
25-29	129(12.7)	867(85.2)	22(2.2)	1018(100.0)		
30-34	427(26.8)	1111(69.6)	58(3.6)	1596(100.0)		
35-39	578(44.7)	659(51.0)	55(4.3)	1292(100.0)		
40-49	523(67.7)	229(29.6)	21(2.7)	773(100.0)		
≥ 45	299(78.5)	80(21.0)	2(0.5)	381(100.0)		
Educational Status						
None	367(48.0)	375(49.0)	23(3.0)	765(100.0)	58.507	<0.001*
Primary	376(40.2)	535(57.2)	24(2.6)	935(100.0)		
Secondary	1204(24.0)	2232(63.0)	107(3.0)	3543(100.0)		
Religion						
Islam	772(32.8)	1504(64.0)	75(3.2)	2351(100.0)	30.382	<0.001*
Christianity	1176(40.2)	1666(57.0)	83(2.8)	2925(100.0)		
Parity						
Primiparous	37(7.0)	486(91.7)	7(1.3)	530(100.0)	808.467	<0.001*
Multiparous	763(27.3)	1941(69.5)	88(3.2)	2792(100.0)		
Grand multiparous	1071(62.5)	610(35.6)	32(1.9)	1713(100.0)		

χ^2 : Chi square; *: p value <0.05

Table 1b: Relationship between the reasons for contraceptive use; source of referral and educational status

	Educational status				χ^2	<i>p</i> value
	None n (%)	Primary n (%)	Secondary n (%)	Total n(%)		
Desire more child						
No	367(48.0)	376(40.2)	1204(34.0)	1947(37.2)	58.507	<0.001*
Yes	375(49.0)	535(57.2)	2232(63.0)	3142(59.9)		
Uncertain	23(3.0)	24(2.6)	107(3.0)	154(2.9)		
Source of referral					52.083	<0.001*
Clinic Personnel	502(63.9)	574(61.1)	2407(67.0)	3483(65.5)		
Outreach	8(1.0)	20(2.1)	63(1.8)	91(1.7)		
Radio	93(11.8)	136(14.5)	371(10.3)	600(11.3)		
Multiple	24(3.1)	18(1.9)	133(3.7)	175(3.3)		
Television	7(0.9)	16(1.7)	53(1.5)	76(1.4)		
Print media	113(14.4)	129(13.7)	367(10.2)	609(11.4)		
Friends/Relative	17(2.2)	20(2.1)	62(1.7)	99(1.9)		
Other clinic	17(2.2)	26(2.8)	107(3.0)	150(2.8)		
CHW	5(0.6)	1(0.1)	30(0.8)	36(0.7)		

χ^2 : Chi square; *: *p* value <0.05

In addition, most of the clients had at least secondary education and were referred by clinic personnel. The commonest source of referral or information on family planning/contraception was from health personnel, this was followed closely by the electronic and print media (11% each). All sources of referrals were significantly related to levels of education.

Intrauterine contraceptive device (IUCD) was the commonest method chosen during the period among the new clients as well as the old users. This was closely followed by use of hormonal injectables and combined oral pills; this is depicted on Table 2. There was no difference between the choice of contraception and level of education (P=0.084).

Table 2: Relationship between educational status and the types of contraceptives

	Educational status				χ^2	<i>p</i> value
Contraceptive selected	None n (%)	Primary n (%)	Secondary n (%)	Total n(%)		
BTL	4(40.0)	1(10.0)	5(50.0)	10(100.0)	19.183	0.084
Condom	0(0.0)	3(37.5)	5(62.5)	8(100.0)		
Implants	4(14.8)	0(0.0)	23(85.2)	27(100.0)		
Injectables	278(13.9)	355(17.8)	1363(68.3)	1996(100.0)		
IUCD	421(14.7)	505(17.7)	1933(67.6)	2859(100.0)		
OCP	11(9.6)	16(14.0)	87(76.3)	114(100.0)		
Vasectomy	0(0.0)	0(0.0)	1(100.0)	1(100.0)		

χ^2 : Chi square BTL= bilateral tubal ligation, IUCD =Intrauterine contraceptive device, OCP= Oral contraceptive pills

Discussion

This study describes a typical family planning centre in Urban Nigeria between 2001 and 2009. The ratio of old clients to new clients was 1: 1.49, indicating increasing number of new acceptors over older ones. Similarly, the new clients constituted 59.8% of all attendees

over the period. One may therefore say that new clients accessed family planning services in the centre over the study period and therefore made choices of modern contraceptive methods available in the centre. However, it was difficult to calculate the contraceptive uptake rate in the centre because

of the inability to determine the total number of sexually active women in the reproductive age group who should used contraception in the community.

The trend in percentage of educational status of clients per year is shown on Figure 2. There was no clear cut pattern except that new users were usually less than the old users except in the last year of analysis (2009), but reason for this cannot be clearly identified in this study. New acceptors in this study were young, educated and multiparous women; similar observation was made by Abasiattai et al⁽⁷⁾ at Uyo Teaching Hospital among the new acceptors of modern contraceptive methods. More educated women in our society are beginning to embrace available and reliable contraceptive agents with an expected transition of population growth and decline in fertility in the nearest future.

The commonest method chosen by the all clients was IUCD and this was followed closely by the injectables - Noristerat and DMPA. The third commonest method was Oral Contraceptive Pills. This pattern was not statistically related to the educational status. Intrauterine device available during the study period was Copper T 380 A and was also the commonest method in a tertiary health facility in Southern Nigeria, while hormonal injectable was the commonest method chosen in another tertiary hospital in North-Western Nigeria followed by IUCD (CUT 380A)^(7,8). Hormonal Injectable was the second commonest method chosen by both old and new clients in this study.

The similarities in the choices of these methods may be related to the health system characteristics, mode of administration, long term effectiveness and reversibility. Both IUCD and Injectables need to be administered by the health workers and may explain the high contraceptive uptake in this health facility.

The low uptake of OC pills and condoms could be related to their availability outside as over-the-counter agents without any special expertise for administration. Indeed a 2005 study did show that OC Pills was the

commonest in a comprehensive study of pattern of acceptors and the reason might have also been because the method does not require additional expertise and the facility was close to the community⁽⁹⁾. Their (clients') low uptake of hormonal implants probably suggests inadequate counseling or trained experts/personnel for insertion. Another factor may be the cost and availability of such commodities. It is worthy to note that, during the study period contraceptive commodities were still made available to clients at subsidized rates and it was not until recently that they became free.

Low uptake of Bilateral Tubal Ligation and vasectomy is not surprising as most clients wanted contraception for child spacing and not for completion of family size. Hence the choices of long acting reversible agents like IUCD and hormonal Injectable. This was also described by Cohen in 1998, where the African cultural preference for spacing rather than limiting births was documented⁽¹⁰⁾.

Furthermore, most clients had information on contraception from health personnel and many were referred for contraception by clinic personnel. This also explains why most of them chose user-independent but health-worker administered methods like IUCD, Injectable. Also, referral from other clinics' and outreach personnel was also significant. Most of the new clients (67.8%) were either referred by clinic personnel or informed about contraceptive by health workers; this is comparable with findings from other studies^(11,12). This is because our centre is the only tertiary facility in the area and referrals would be expected from other primary and secondary levels of care. In addition, antenatal and postnatal cases managed in the centre that required family planning services were counseled and offered afterwards. Probably because of stigmatization, culture and poor education, some women do not access family planning services in medicine stores and pharmacies within the community. They prefer health facilities where they may not come in contact with known persons as health facilities are often located away from local

communities. Others may be afraid of complications and wish to have reliable methods that can afford child spacing without putting a permanent hold on childbearing.

The high level of literacy among clients in this study probably contributed also to the high level of acceptance of the methods as 70.7% of the new acceptors and 65.5% of old acceptors had at least secondary education. Their high educational levels influenced other factors like sources of referral, reasons for contraception and the upward trend in the annual uptake of contraception. Most of the clients were also multiparous (both old and new users), and were eligible to have long acting reversible methods to meet their need of child spacing and in the minority; limitation of birth.

We still advocate that more public enlightenment and education and modern contraceptive methods should be made available through the print media and television houses keeping in mind the role of radio messages/jingles in this study.

More counseling, education and supply of other various methods to help make better informed choices for clients that require contraception are imperative to acceptability. Capacity building on administration of implants and other hormonals in other forms of preparation will contribute significantly to uptake of more reliable methods.

In conclusion, the uptake/acceptability of modern contraceptive methods by new clients at U.I.T.H between 2001 and 2009 was high. IUCD was the commonest method chosen followed by hormonal injectables. The need for contraception was more for child spacing than completion of family size. The use of implants as a long acting method for this purpose was low, probably because of cost,

availability and inadequate/few trained personnel for its administration. More options for better informed choices of acceptable contraceptive methods should be made available in our family planning units to sexually active women in reproductive age group. The high literacy level of the women was a significant determinant of contraceptive use.

The University of Ilorin Teaching Hospital Family Planning Clinic was established 31 years ago and the possibilities of having accurate figures of acceptors new to modern methods are slim. Nevertheless, the increase in the number of new clients in the health facility is very welcome, it means that more women from the community present for modern methods of contraception which are more reliable and effective than traditional fertility awareness methods and coitus interruptus.

Authors' contributions

Concept, design, definition of intellectual content by (IF Abdul, KT Adesina, AO Olarinoye, GG Ezeoke, R Saidu), literature search by (KT Adesina, AO Olarinoye, GG Ezeoke), Clinical studies by (KT Adesina, AG Jimoh, R Saidu), data acquisition, analysis and statistical analysis by AG Jimoh, KT Adesina, R Saidu, GG Ezeoke, AO Olarinoye, manuscript preparation, manuscript editing by KT Adesina, IF Abdul, AG Jimoh, AO Olarinoyeh, GG Ezeoke, R Saidu, and manuscript review by (KT Adesina, IF Abdul, AG Jimoh, AO Olarinoyeh, R SAidu, GG Ezeoke).

The manuscript has been read and approved by all the authors the requirements for authorship as stated earlier in this document have been met, and each author believes that the manuscript represents honest work.

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