The Choice of Contraceptive Method among New Clients attending Aminu Kano Teaching Hospital, Kano State, Nigeria

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Abstract

Background

Nigeria is Africa's most populous state with a low rate of contraceptive use. Factors affecting the method of contraception chosen vary widely across different parts of the country. We studied the preferred methods and characteristics of new clients attending a family planning clinic in a teaching hospital in northern Nigeria.

Method

Retrospective review of the records of new clients to the family planning clinic of the Aminu Kano Teaching Hospital, Kano (AKTH) between January 1997 and December 2007.

Results

Of the 3,842 new clients (38.3%) chose injectables, while intrauterine contraceptive devices (IUCDs) were chosen by 1,330 (34.6%) clients. All the other methods were accepted by less than 30% of the new clients. The number of new patients who opted for contraception increased steadily from 164 in 1997 to 624 in 2007 with slight decreases in 2001 and 2004 [χ^2_{trend}=7.4 P<0.01]. Younger clients with low parity chose injectables, IUCDs and oral contraceptives while older women of higher parity preferred female sterilization, IUCD and injectables in that order.

Conclusion

The use of family planning services can be enhanced through strategies directed at the males, youths and multiparous women. The use of media and client friendly services will serve a complementary role.

Key Words: *Contraceptive choice, new clients, Kano, Nigeria*

Introduction

Nigeria is the most populous country in sub-Saharan Africa with an estimated population of 140,003,542 in 2006. [1] Kano is the commercial nerve center of northern Nigeria and is the capital city of the most populous state in the country[1] with over 9 million inhabitants. Nigeria's high rate of population growth has been driven by high fertility rates with a modest decline in Total Fertility Rate (TFR) from 6.3 during 1981-82 to 5.7 in 2003. [2] Despite the high fertility rate, utilization of modern family planning methods is low, currently at 9 percent. [2] This national figure hides wide regional variation in fertility pattern. For instance, the 2003 Nigeria Demographic and Health Survey (NDHS) [2] reported a TFR of 6.7 for the North West including Kano state.

The persistence of high fertility rates has been the subject of considerable investigation in the past decade. [3] Various factors have been advanced for this fertility level. The desire for many children is driven largely by economic, socio-cultural, religious and egoistic factors. [4,5] The specific contraceptive methods that women use vary substantially from country to country and even within one country from region to region.

The range of methods used in a country is a reflection of many factors which include the availability of the various methods; the people's awareness of them; the cost implications; and accessibility of the centers where such methods can be obtained. In addition, personal preferences, social norms, gender preferences, women's education and perceived acceptability of family planning affects contraceptive choices. [6-9]

Review of contraceptive use among new clients attending family planning clinics have been reported from different parts of the country mainly from teaching hospitals in Maiduguri, [10] Zaria, [11] Jos,[12] Ibadan[13] and Enugu. [14] All reported high preference for injectables and intrauterine contraceptive device for reasons ranging from confidentiality, reliability and tolerable side-effect profile. The least popular methods include condoms, oral contraceptives, vasectomy and implants. There was no such report from our center since its establishment over a decade ago. Our hospital's catchment population is culturally distinct and suspicious of family planning services considering them as part of a ploy for population control. This view is particularly strong among the uneducated. Being a teaching hospital, clients come from different social backgrounds but are

predominantly Hausa-Fulani Muslims. Nevertheless, other Nigerian ethnic groups are well represented.

The main objective of this study is to describe variations in the use, the characteristics and the contraceptive choice of new clients attending the family planning clinic of Aminu Kano Teaching hospital over an eleven year period. The information will be useful for advocacy, programme management and provision of client friendly and culturally acceptable family planning services to the catchment population.

Methods

Setting

Established in 1988, the AKTH began to offer clinical services in 1994 at a temporary site in the Murtala Mohammed Specialist Hospital, Kano and later moved to its present, permanent site in 1997. Situated in Kano, the largest commercial center of northern Nigeria, with over 9 million people,[14] this 500-bedded hospital receives patients from Kano, and from the neighboring states of Jigawa, Katsina, Kaduna, Bauchi, and Zamfara. The majority of patients are indigenous Hausa-Fulani, although the Igbo and Yoruba ethnic groups are also well represented. Most patients are farmers, traders, businessmen, or civil servants. The present study population included clients seen at the family planning clinic of AKTH from 1997 to 2007

Study design

The study was a retrospective review of the new clients register at the family planning clinic.

Data collection

This was a retrospective study conducted at the Family Planning clinic of AKTH, Kano, Nigeria. Data were extracted from the new clients' register kept at the clinic. Age, parity and occupation of new clients accepting a method at the clinic from January 1997 to December 2007 were obtained. New acceptors were determined for oral contraceptive pills (OCPs), injectables, male condoms, intrauterine devices (IUCDs), Norplant

implants, vaginal foaming tablets, diaphragm, vasectomy and female sterilization. Ethical clearance was obtained from the AKTH Institutional Review Board.

Data analysis

The data were cleaned and analyzed using the SPSS (Statistical Package for Social Sciences) version 14.[15] Quantitative variables were summarized using range, mean, and standard deviation. Categorical variables were tabulated using frequencies and percentages. Chi-square test for trend was used for testing the significance of observed trends in new clients flow over time. The level of significance was set at $P < 0.05$ for all tests of significance.

Results

There were a total of 3,842 new clients who accepted a modern contraceptive method namely the oral contraceptive pills (OCPs), injectables, male condoms, Intrauterine devices (IUDs), Norplant implants, vaginal foaming tablets, vasectomy and female sterilization in the family planning clinic of AKTH, Kano from January 1997 to December 2007. Clients' age ranged from 15 to 52 years with a mean age (±SD) of 32.9 (±7.7) years. Their parity ranged from 1 to 13 with a median of 7. Most clients (97.1%) were married. The rest were single (1.9%), divorced (0.3%) or widowed (0.7%).

Two thousand eight hundred and sixty four (74.5%) were housewives, 294 (7.7%) were civil servants, 289 (7.5%) were students and 176 (4.6%) were professionals as shown in Table 1. The number of new acceptors increased steadily from 164 in 1997 to 624 in 2007 with a slight decrease in 2001 and 2004 as shown in Table 2. This rising trend of new acceptors over the study period was statistically significant. [$\chi^2_{trend}=7.4$ $P<0.01$].

Table 3 shows that most clients 1,470 (38.3%) chose injectables, followed by intrauterine devices preferred by 1,330 (34.6%) new clients. All the other methods were accepted by less than 30% of the new clients. Male condoms were accepted by only 26 (0.7%) patients while vasectomy was done on only one patient.

The preference for injectables and IUCDs persisted throughout the period under review. Younger clients (15-29 years) mainly chose injectables (39.1%), oral contraceptive pills (32.0%) and IUCDs (28.7%), compared to the preponderance of IUCD (47.5%),

injectables (38.2%) and female sterilization (7.4%) among older (30-52 years) clients. This difference was statistically significant [χ^2=479.5 df=3 P<0.001] as shown in table 5. Similarly women of low parity preferred injectables, IUCDs and oral contraceptive pills in contrast to women of higher parity who preferred female sterilization, IUCD and injectables. These differences were also statistically significant [χ^2=115.9 df=6 P<0.001] as shown in Table 4.

Discussion

This study found that most of our new clients preferred injectables (38.3%) and IUCD (34.6%). This concurs with the top two preferred methods in Enugu[14] [IUCD (60%) and injectables (20%)] and Osogbo[16] [IUCD (74.6%) and injectables (19.5%)]. However, in Ibadan[13] [(IUCD (66.2%) and Oral contraceptive pills (10.4%)] and Jos[12] [IUCD (26.1%) and Oral contraceptive pills (23.5%)], the oral contraceptive was the second most preferred method after the IUCD. Furthermore, our findings were in contrast to that observed in Ife[17] where most patients preferred the oral contraceptives.

These differences could be due to provider preferences, social networks, advertisement, perceived effectiveness, side effects and confidentiality concerns. Although clients are supposed to make their choice after counseling by a trained provider who is conversant with medical eligibility criteria, occasionally, clients come with pre-conceived choices that may be at variance with the recommendations of their family planning service providers. Similarly, family opposition, fear, cost and uncongenial supply sources affect choice of methods, the freedom to choose from a range of contraceptive methods, according to one's needs and preferences also rest partly on the sheer availability of these methods.

It has been reported that contraceptive preferences and the promotion of different methods vary with the region and country. Considered as a whole, a study conducted in sub-Saharan Africa[20] reported that female sterilization is the most widely employed method in developing countries, followed by the IUCD, the pill and injectables. However, female sterilization is one of the least used among the clients at our centre as it was a distant fourth among the preferred methods. Its popularity among older women is not surprising as it is the preferred method among those that have completed their family

sizes. These women found it effective, convenient and safe for protecting themselves from unwanted pregnancy. In addition, it requires no supplies, no further action once the procedure has been performed and there is little or no long-term side effect.[21]

The injectables were the most popular method among our new clients. This is similar to experiences from Enugu, [14] Oshogbo[16] and Ife,[17] all in Nigeria. Furthermore, reports from other African centers [18,19] indicate a high preference among their clients for injectables. The remarkable increase in injectable use in Sub-Saharan Africa and in lower-income Latin American countries is likely to have a significant public health impact. This dramatic rise signals regional shifts in methods employed away from the pill and traditional methods. The injectable is highly effective, long-lasting and a reversible method that meets the needs of women who want to space rather than limit their births. It has been reported as a leading method in a number of Sub-Saharan African countries.[22] Injectables offer several benefits, including the reduced likelihood of unplanned pregnancy, unsafe abortion and maternal mortality. The rapid increase in injectable use is largely attributable to its widespread accessibility.[20] Furthermore, women can use this method without others knowing about it; injections are administered periodically (once a month or every three months) and there are no supplies to keep on hand. One study estimated that 6–20% of women in Sub-Saharan Africa use the injectable covertly, a practice that was more common in areas where contraceptive prevalence was low, particularly rural areas.[23] Eventually, injectables may become even more convenient for women as availability increases through community-based distribution and pharmacies.[20]

Less than 1% of our new clients accepted the male condom. This is comparable to the figures reported from Osogbo[16] (0.2%). However, it contrasts with the experience in Uganda [24] where an increasingly higher proportion of their new clients accepted the male condom especially following the HIV/AIDS epidemic. Nevertheless, the prevalence of condom use as a family planning method has remained almost unchanged in most developing countries, despite the global AIDS epidemic.

The proportion of married female contraceptive users reporting condom use remained constantly low[25] as seen in the present study. Of the 12 countries with HIV prevalence of at least 5%, only Cameroon and Namibia have shown rising condom use among married women. Low levels of condom use are a cause for concern, particularly in the context of

generalized epidemics such as those found in Sub-Saharan Africa. Despite a growing number of studies showing that an increased proportion of HIV infections are transmitted through sex within marriage or with a committed partner, [26] individuals in committed relationships tend to resist condom use, because it is often considered a sign of infidelity.[27] However, evidence from national surveys has shown that condom use is much more prevalent outside of marriage, among both married and unmarried men and women.[28] While the family planning unit is open to all regardless of marital status or sex, it receives most of its clients from the postnatal clinic. Unmarried clients and males prefer to obtain condoms directly from the pharmaceutical chemist, NGO outlets and other sources rather than the family planning clinic. This may not be unconnected with confidentiality issues. So our figure for condom use is likely to be far lower than the population usage rates, especially among the unmarried.

This study has several limitations. First, this was a facility-based study and clients visiting such centres are usually a selection from the population. They are likely to be better educated and of higher socioeconomic status. Second, although family planning clinics are known to keep good records, the information available in such records are not exhaustive to allow the study of all factors that could affect the choice of contraceptive methods among the clients. Therefore the extrapolation of our findings to the catchment population should be done with caution. Figures obtained from population-based studies such as the demographic and health surveys will provide more accurate insight to the choice of contraceptive methods and their determinants at the population level.

Conclusions

The low level of condom use and the increasing use of injectables among clients in developing countries point at a critical public health issue. The provision of methods that are acceptable and accessible to women can reduce unintended pregnancy and save lives. Because of women's relative lack of decision-making power in developing countries, it makes sense to provide methods that can be used covertly and are female-controlled.

In the future, the procurement and distribution of contraceptive supplies will be challenging issues, given the rising demand for modern contraceptives, increasing population size and shrinking resources for family planning programs.

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Table I: Socio-demographic characteristics of new clients attending Family Planning clinic at AKTH, Kano, Nigeria, 1997-2007 (n=3,842)

Characteristic	Frequency No. (%)
Age group	
15-19	114 (3.0)
20-24	1,018 (26.5)
25-29	1,225 (31.9)
30-34	842 (21.9)
35-39	451 (11.7)
40-44	161 (4.2)
≥45	26 (0.7)
Not stated	5 (0.1)
Total	**3,842 (100.0)**
Parity	
1	709 (18.5)
2-4	1,872 (48.7)
5-9	1,109 (28.9)
≥10	141 (3.7)
Not stated	11 (0.3)
Total	**3,842 (100.0)**
Occupation	
House wife	2, 864 (74.5)
Civil servant	294 (7.7)
Student	289 (7.5)
Professional	176 (4.6)
Trading	155 (4.0)
Others	64 (1.7)
Total	**3, 842 (100.0)**

Table 2: Number of new clients accepting a method at the family planning clinic of Aminu Kano Teaching Hospital (1997-2007)

Year	No. (%) of new FP acceptors
1997	164(4.3)
1998	228(5.9)
1999	229(6.0)
2000	294(7.7)
2001	253(6.6)
2002	366(9.5)
2003	410(10.7)
2004	323(8.4)
2005	423(11.0)
2006	528(13.7)
2007	624(16.2)
Total	**3, 842(100.0)**

χ^2_{trend}=7.4 P<0.01

Table 3: Contraceptive methods accepted by new clients at Aminu Kano Teaching Hospital, Kano, Nigeria (1997-2007)

Contraceptive method	Frequency No. (%)
Injectables	1, 470 (38.3)
Intrauterine contraceptive device	1, 330 (34.6)
Oral contraceptive pill	887 (23.1)
Female sterilization	100 (2.6)
Male Condom	26 (0.7)
Diaphragm	11 (0.3)
Vaginal foaming tablets	9 (0.2)
Norplant implant	8 (0.2)
Vasectomy	1 (0.0)
Total	**3, 842 (100.0)**

Table 4: Contraceptive choice by age and parity

Age group	Male condom	Diaphragm	Vaginal Foaming tablets	IUCD	Injectables	OCP	Female sterilization	Norplant implant	Total
15-19	1(3.8)	-	1(11.1)	21(1.6)	50(3.4)	40(4.5)	-	1(12.5)	114
20-24	7(26.9)	-	2(22.2)	267(20.1)	438(29.8)	299(33.7)	1(1.0)	4(50.0)	1018
25-29	10 (38.5)	3(27.3)	3(33.3)	427(32.1)	485(33.0)	290(32.7)	4(4.0)	2(25.0)	1224
30-34	4 (15.4)	6(54.5)	1(11.1)	342(25.7)	317(21.6)	168(18.9)	3(3.0)	1(12.5)	842
35-39	1 (3.8)	1(9.1)	1(11.1)	202(15.2)	136(9.3)	65(7.3)	45(45.0)	-	451
40-44	3 (11.5)	1(9.1)	1(11.1)	53(4.0)	37(2.5)	21(2.4)	45(45.0)	-	161
≥45	-	-	-	17(1.3)	4(0.3)	3(0.3)	2(2.0)	-	26
Not stated	-	-	-	1(0.01)	3(0.2)	1(0.1)	-	-	5
Total	26(100.0)	11(100.0)	9(100.0)	1,330(100.0)	1,470(100.0)	887(100.0)	100(100.0)	8(100.0)	3841*
		χ^2=122.0 P<0.001							
Parity									
1	5(19.2)	-	2(22.2)	180(13.5)	256(17.4)	261(29.4)	4(4.0)	1(12.5)	709
2-4	14(53.9)	5(45.5)	4(44.4)	653(49.1)	760(51.7)	425(47.9)	5(5.0)	6(75.0)	1872
5-9	7(26.9)	4(36.3)	3(33.3)	452(34.0)	405(27.6)	189(21.3)	48(48.0)	1(12.5)	1067
≥10	-	-	-	45(3.4)	41(2.8)	12(1.4)	43(43.0)	-	99
Not stated		2 (18.2)	-	-	8(0.6)	-	-	-	10
Total	26(100.0)	11(100.0)	9(100.0)	1,330 (100.0)	1,470(100.0)	887(100.0)	100(100.0)	8(100.0)	3841*
		χ^2=115.9 P<0.001							

IUCD=Intrauterine contraceptive device; OCP= Oral contraceptive pill; *A case of vasectomy excluded

Table 5: Choice of contraceptive methods by age

Age group (Years)	Injectables	IUCD	OCP	Female Sterilization	Total
15-29	973 (39.1)	715(28.7)	797(32.0)	5(0.2)	2490
30-52	494 (38.2)	614(47.5)	89(6.9)	95(7.4)	1292
Total	1470	1329	886	100	3785*

*5 clients with missing age χ^2=479.5 df=3 P<0.001