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Original Research Article

Trend and Methods of Contraceptives Usage at Federal Teaching Hospital, Gombe, North East Nigeria; A Five Year Review

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ABSTRACT

BACKGROUND: Contraception has played a key role in fertility decline and reduction in maternal mortality, especially in countries with high contraceptive prevalence. Despite the high fertility rate of 5.7 children per woman in Nigeria, our contraceptive prevalence rate is low at 15%. **OBJECTIVE:** This study aimed to determine the pattern of contraceptive usage and socio-demographic characteristics of the users of family planning services in Federal Teaching Hospital, Gombe from 1st January 2017 to 31st December 2021. **STUDY DESIGN AND SETTING:** This was a 5-year retrospective study. **MATERIALS AND METHODS:** The records of the clients that attended the family planning clinic and patients who had Tubal ligation from 1st January 2017 to 31st December 2020 were analysed. The variables taken into consideration included age, parity, marital status, educational status, number of living children and the methods of contraception used. These were analysed using Epi Info 2019 version 7.2.2.16. **RESULT:** A total of 4713 new clients attended the Family Planning Clinic of FTHG, Gombe within the period of review. There was a steady rise in the number of new clients accepting a method of contraception over the period from 302 (6.41%) in 2017 to 1948 (41.33%) in 2021. The commonest method of contraception was sub-dermal implant (2417; 51.28%), followed by Intrauterine device (1404; 29.8%), while the lowest was bilateral tubal ligation (29; 0.62%). **CONCLUSION:** The acceptance rate of different the methods of contraception in our hospital are increasing rapidly and majority prefer long-acting reversible contraceptives.

Keywords: Contraception, Trends, Usage, Methods

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INTRODUCTION

Contraception is an important subject in developing countries and sub-Saharan Africa in particular. This is because countries in this region have the highest fertility and mortality rates in the world[1]. The decision regarding fertility control is, for many people, a highly sensitive and personal issue often involving cultural, religious and philosophical convictions[2]. Recently, the international community has agreed that the right to health includes the right to control one's health and body, including sexual and reproductive freedom.[1] The Family Planning 2020 (FP2020) initiative is a global movement that supports these rights and therefore the rights of women and girls

to decide freely and for themselves whether, when, and how many children they want to have.[1]

Contraception is practised by many couples for so many reasons, while some use contraception to space their children or to limit their family size, others use it to delay or avoid childbearing because of the effects of pre-existing illness on the pregnancy.[2] Across the globe, there are significant variations in the types of contraceptive methods used by women of reproductive age, ranging from traditional methods to long-acting reversible methods. [3] Access to contraceptives in Nigeria has not increased at the same pace as elsewhere in the developed world.[4] Typically, the level of development in a region also affects this choice[5, 6]. In developed countries, birth control pills and condoms represent the major contraceptive methods;[6] pills are most common in Europe, while condoms are most popular in East Asia.[6] In contrast, in developing countries, the percentage of women using modern contraceptive methods is lower than that in developed countries.[5, 6]

Contraceptive counselling should include a discussion of typical use failure rates and the importance of using the contraceptive method consistently and correctly to avoid pregnancy.[7] Women seeking contraception should be counselled on the wide range of effective methods of contraception available, including long-acting reversible contraceptive methods (LARCs). LARCs are the most effective methods of reversible contraception, have high continuation rates, and should be considered when presenting contraceptive options to any woman of reproductive age.[7] Family planning counselling should include counselling on the decline of fertility associated with increasing female age.[6, 7]

The most recent survey by the Nigeria Demographic Health Survey (NDHS) in 2018 found that the country's total fertility rate (TFR), which measures the number of children a woman is likely to have during her childbearing years, decreased from 5.5 births per woman in the 2013 (NDHS) to 5.3 births per woman in the 2018 NDHS.[8] Meanwhile, the total contraceptive prevalence rate (CPR) for married women using both traditional and modern methods has increased by 2 percentage points over the last five years, from 15% to 17%.[8] The 2018 NDHS shows the unmet need for family planning increased by 3 percentage points for married women nationally since 2013. The increase in total demand for family planning from 31% to 36% among married women may contribute to this increase in unmet needs over the last five years. Despite citing an overall increase in CPR among married women, the NDHS indicated there were significant differences in CPR across individual states, Gombe State had an impressive increase in CPR (32.5%), while Kwara and Oyo States each had decreases of up to 44% Whereas Lagos had a just 2% increase within the same period.[8]

Contraception is a method of preventing pregnancy despite the act of coitus. [9] It presents women with a window of opportunity to space their childbearing thereby improving their well-being and that of society.[8] The prevalence of contraception in the UK is high as in most developed countries.[10] Only 4% of sexually active, potentially fertile women who were not wishing to conceive reported not using any method of contraception [10] unlike in Nigeria where the total contraceptive prevalence rate (CPR) for married women using both traditional and modern methods has increased by 2 percentage points over the last five years, from 15% to 17%.[8]

The choice for a method of contraception varies from one country to another and even within a country, the major determinants for this include the client's age, marital status, ethnicity, religious inclination, future fertility concerns, number of living children, husband's education, working status of the woman and her educational attainment.[10] Currently, contraception can be divided into reversible or permanent, the reversible ones are further subdivided into hormonal or non-hormonal, hormonal of which could be combined hormonal or single agent.

In a retrospective study conducted at the Modibbo Adama University Teaching Hospital, Yola, Adamawa state Nigeria, between 2014 to 2019, the investigators reported 17.8% prevalence rate of contraceptive usage in a total of 9833 deliveries, with injectable constituting the highest prevalence rate 510 (29.2%), followed by implants 486 (27.7%), while barrier methods constituting the lowest prevalence 149 (8.5%).[11] Furthermore, in a cross-sectional study conducted over a decade ago at our centre with 554 respondents, the investigators reported that only 187 respondents which constituted about 34.4% believed that all women, irrespective of marital status, should have an independent right to contraceptive acceptance, choice and practice.[12] This portrays a limiting factor towards usage of contraception in the community.

Other investigators reported that, about 32.1% of married women used modern contraceptives in Gombe Local Government Area; from a study population of 318 respondents with implant as the most is preferred and utilized method by the respondents, due to its availability, affordability and log duration of action in the body.[13] However, to the best of our knowledge, there is no study at the research area that portrays parity and percentage of contraceptive usage in order to depict the actual trend and methods of contraception within the time frame of the present study, hence the need for the present study. Therefore, this retrospective study was conducted at the Federal Teaching Hospital Gombe to determine the pattern of contraceptive use, and socio-demographic characteristics of clients, at the family planning clinic of the hospital over 5 years.

MATERIALS AND METHODS

The records of the clients that attended the family planning clinic and theatre records of patients who had Tubal ligation from 1st January 2017 to 31st December 2021 were used. Patients' records were retrieved and data analysed included age, parity, marital status, educational status, number of living children and the methods of contraception used.

The family planning clinic of the hospital operates from 8:00 am to 4:00 pm daily on weekdays. It is run by trained family planning service providers, which include nurses, resident doctors, and consultants in the obstetrics and gynaecology department. Resident doctors rotate through the clinic, attend to cases, and manage complications associated with various contraceptive methods in consultation with their unit consultants. The clients who had visited the family planning clinic for contraceptive services during the period under review were identified from the clinic register. Their case notes were retrieved and relevant data were extracted with the use of a standardized proforma. Four thousand seven hundred and thirteen (4713) case notes were available and suitable for analysis. Data were analysed using Epi Info statistical software package (2019 version 7.2.2.16, Centres for Disease Control and Prevention, USA), and results were then presented as frequencies and percentages using tables.

RESULTS

Socio-Demographic Status Variables of Participants on Contraception Usage

Table 1 showed the demographic distribution of the participants in the current study. A total of four thousand seven hundred and thirteen (4713) women were seen at the family planning clinic during the period under review. Majority of the clients that used contraception were between the ages of 35 and 39 years 1526 (32.38%). Married women accounted for 95.54% of the users. Forty-one per cent (41.65%) of the women users belonged to the Fulani tribe while a large majority (80.52%) belonged to the Muslim faith. A large proportion of the studied clients (44.28%) had up to a tertiary level of education, while 42.08% and 13.49% had only secondary and primary levels of education, respectively, demonstrating positive correlation between high level high level of education and the use of contraception. Only seven clients did not have any formal education. Two thousand three hundred and ninety-nine (50.90%) clients were skilled workers while 11.10% (523) were unskilled workers (Table 1).

Table 1: Socio-Demographic Variables N=4713

AGE GROUP	Total	Percentage
< 20	305	6.47
20-24	599	12.71
25-29	941	19.97
30-34	962	20.41
35-39	1526	32.38
40-44	253	5.37
≥45	127	2.69
MARITAL STATUS		
Single	193	4.10
Married	4503	95.54
Divorced	15	0.32
Widowed	2	0.04
LEVEL OF EDUCATION		
None	7	0.15
Completed Primary	636	13.49
Completed Secondary	983	42.08
Completed Tertiary	2087	44.28
OCCUPATION		
Unskilled	523	11.10
Semiskilled	1791	38.00
Skilled	2399	50.90
RELIGION		
Islam	3795	80.52
Christianity	917	19.46
Others	1	0.02
TRIBE		
Fulani	1968	41.65
Hausa	1571	33.33
Tangale	701	14.88
Others	478	10.14

Yearly and Age Group Distribution of Clients during the Study Period

The age group and yearly distributions of clients in the present study is presented in figure 1. Out of the total number of participants (4713) that underwent contraception in the hospital during the period under consideration; (2017-2021), 302 (6.41%) visited the hospital in 2017, 480 (10.18%) in 2018, 884 (18.76%) in 2019, 1099 (23.31%), in 2020, 1948 (41.33%) in 2021.

The 35-39 years age group have the highest amount of contraception across the study period (2017-2021) with a total of one thousand five hundred and twenty-six, followed by 30-34 and 25-29 age groups, with a total of nine hundred and sixty-two and nine hundred and forty-one, respectively (Figure 1).

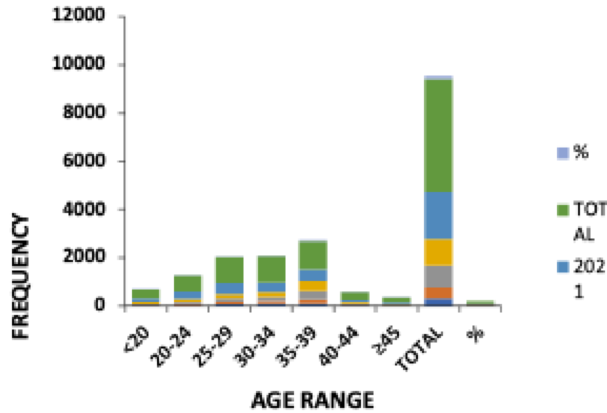

Figure 1: Distribution Of Clients by Age Group

Table 2: Yearly Distribution of Clients by Parity

YEAR	1-2	3-4	≥5	TOTAL
2017	212	79	11	302
2018	337	124	19	480
2019	623	236	25	884
2020	711	352	36	1099
2021	855	352	36	1948
TOTAL	2738	1798	177	4713
%	58.10	38.15	3.76	100

Yearly Distributions of Clients Parity

The results for yearly distributions of the clients' parity are presented in Table 2. The majority of the clients have a parity of 1–2 with a total number of two thousand seven hundred and thirty-eight (58.10%) followed by 3-4, with a total of one thousand seven hundred and ninety-eight accounting for 38.1% (Table 2), across the study period.

Table 3: Distribution of Contraceptive Methods

YEAR/ METHOD	BAR-RIER	BTL	POI	SDI	IUCD	OCP	TOTAL
2017	2	2	55	230	4	9	302
2018	5	3	93	304	52	23	480
2019	5	6	185	323	336	29	884
2020	11	10	77	582	392	27	1302
2021	17	8	224	978	620	101	1948
TOTAL	40	29	634	2417	1404	189	4713
%	0.85	0.62	13.45	51.28	29.79	4.01	100

BTL- Bilateral tubal ligation, POI-Progesterone only injections, SDI- sub dermal implants, IUCD- Intrauterine contraceptive devices, OCP- Oral contraceptive pills.

Distribution of Contraception Methods

Table 3 showed the yearly distribution of contraceptive methods from 2017 -2021. Sub-dermal implants were widely accepted by clients (51.24%) with a progressive increase in usage over the years from 2017 to 2021, with a total of two thousand four hundred and seventy clients as opposed to bilateral tubal ligation which is least accepted (0.62%), with a total of twenty-nine clients only.

Yearly Distribution of Contraceptive Use

The results of the yearly distributions of contraception from 2017-2021 was presented in Figure 2. A progressive increase in contraception use was recorded from 2017 to 2021, with the highest number of one thousand nine hundred and forty-eight recorded in 2021 which account for (41.3%), demonstrating increase in contraception in Gombe from period under study.

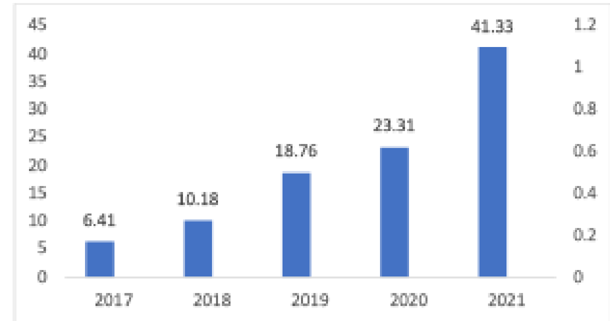

Figure 2: Yearly Distribution of Contraceptive Use

DISCUSSION

A total of four thousand seven hundred and thirteen (4713) clients were retrospectively identified between the age of <20 and ≥ 45 years for the current study. The raised in the number of women using contraception in the age group of 35-39 could be due to the fact that the group represents the highest reproductive age in the study area. This is in agreement with a similar to studies done in Kano and Ibadan Nigeria, respectively.[8, 9,14]

The highest number of married women using contraception compared to non-married women as observed from our findings agree with a previous study by Inuwa *et al.* conducted at the Modibbo Adama Teaching Hospital, Yola who reported that of the one thousand seven hundred and forty-six clients using contraception, one thousand one hundred and thirty six were married.[11] Our findings also demonstrated that level of education affects the use of modern contraception as people with tertiary education have highest level of contraception usage from our study population. This also agrees with the findings of Inuwa *et al.* and that of

Mohammed *et al*. who reported higher level of contraception acceptance in people with tertiary level of education as against secondary, primary and no formal education.[15] This demonstrated a positive correlation between high level of education and the use of contraception. Unlike the findings from Yola,[11] majority of the clients were Muslims and Fulani by tribe.

Most of the women were low para (1-2), which is about 2738, constituting about 58.1% of the study population. This is similar to the findings from Jos, Ife, and Kano [16, 17, 18] where women of low parity also had the highest use of the contraceptive method and contradicts the findings from Yola, who reported grand multiparous constituting significant percentage of their study population.[11]

The sub-dermal implants were the most accepted method of contraception in the clients, 2417 (51.28%) followed by intrauterine devices and POI, 1404(29.79%) and 634 (13.45%) respectively. The least was bilateral tubal ligation, 29 (0.62%). The least being bilateral tubal ligation may not be unconnected to the aversion to surgical techniques by the women in our environment and the desire for high parity may also be a factor. The contraceptive use in this study is different from that of Inuwa et al. in Yola[11] and that Mutihir et al.[19] in a suburban setting in Jos, north-central, Nigeria where injectable and the oral contraceptive pill were favoured, respectively. However, our findings were closely related to a study by Ameh and co-workers [20] in Zaria where although progesterone-only injectable was mostly used, the second commonest was intrauterine devices. Factors that could be responsible for the choice of sub-dermal implants among the clients in our study were presumably convenience of the method, high educational status compliance and the long-acting nature of the implants.

The striking thing in the study is the yearly trend which revealed a steady increase in the utilisation of contraceptives. This is most likely attributed to the fact that modern methods of contraception are now increasingly being accepted in our community as a measure of child spacing, as opposed to the previous reports from our centre by Bukar et al.[11]

It is important to state that the link between contraceptive prevalence rates and maternal mortality is evident in the fact that countries with low contraceptive prevalence rates also have very high mortality ratios.[14, 15, 20, 21] Nigeria has one of the highest maternal mortality ratios in Sub-Saharan Africa, and also a major contributor to the number of maternal deaths in the world.

The acceptance rate of different methods of contraception in our hospital is generally low though the utilisation is increasing, this may be attributed to the high literacy level of the women in the study group. This ability to plan the number and spacing of births may increase the likelihood of positive health outcomes for women, and thereby help in the reduction of maternal mortality. However, this study is a tertiary hospital-based study and may not be used as a generalisation for all the states or regions.

CONCLUSION

In conclusions, we surmise that the acceptance rate of different the methods of contraception in our hospital are increasing rapidly and majority of the clients prefer long-acting reversible contraceptives. We further conclude that level of education may be responsible for the increase in acceptability of contraception.

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