



■ Original Research Article

Utilisation of Modern Contraceptives Services Among Women of Reproductive Age in a Tertiary Hospital in North-eastern Nigeria. A 6 Year Review.

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ABSTRACT

Background: Contraceptive use is one of the key factors in protecting women health and right, when generally accepted and properly utilize in any community is proven to reduce unwanted pregnancies, high parity and maternal death. **Objective:** To determine the prevalence and trend of modern contraceptive use and the reasons for their discontinuation among women of reproductive age accessing family planning clinic in Modibbo Adama University Teaching Hospital Yola, Adamawa state. **Method:** Retrospective descriptive studies of all the new contraceptive acceptors over a period of 6 years (2014-2019 inclusive) was carried out. Data obtained was analysed using SPSS version 16.0 (Chicago, USA 2006). Results were presented in simple proportions and compared where necessary using chi square. **Results:** In this study there were 1746 new contraceptive acceptors including Bilateral tubal ligations during the period under review. A total of 9833 deliveries were conducted during the same period, giving rise to contraceptive prevalence of 17.8%. The commonest contraceptive method patronized was injectables 510(29.2%) followed by implantable contraceptives 486 (27.8%) while the least contraceptive method utilized was barrier method 149(8.5%). The commonest reasons for discontinuation of method was irregular menstrual bleeding 90(29.1%) followed by desire for pregnancy 79(25.6%). there was strong association between age ($p=0.001$), marital status($p=0.000$), and parity $p=0.001$ and discontinuation of contraceptive method, no significant relationship between education, religion and discontinuation of contraceptive method. **Conclusion:** Contraceptive acceptance in this environment is still low despite widespread awareness campaign worldwide. This might not be unconnected to cultural, religious, ignorance, myth and perception of the society on modern contraceptives use. Therefore, there is need for more awareness campaign on contraceptive used in the region because of its pertinent role in reducing too frequent deliveries, illegal abortions and maternal morbidity and mortality.

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INTRODUCTION:

Contraception is a deliberate attempt or intentional method employed to prevent pregnancy, through the use of agents like drugs, devices and surgery.¹⁻³ These agents and or surgical method interferes with the chain of events that leads to fertilization, thus, preventing pregnancy. Fertilization therefore, is a union between male and female gametes to form a zygote or fertilized ovum and eventual conception.^{1,2} The various contraceptive methods include Hormonal (pills, injectables and implantable), Barrier method (male and female condom), intrauterine contraceptive devices (IUCD) and surgical- Bilateral tubal ligation (BTL).^{1,2} The world population currently is estimated to be around 8 billion with over 80% of them living in developing countries.²⁻⁵ This is partly attributed to poor contraceptive usage and underutilization of various methods used in birth control. Despite the availability of these agents and other affordable technologies, women in low resource countries like Nigeria, are still dying from pregnancy complications.⁴⁻⁸

Nigeria, has one of the highest maternal mortality ratios and ranked as the country with the second highest number of maternal deaths after India^{2,4,6-9}. Majority of death occur due to inadequate Obstetrics care, short inter- pregnancy interval and unsafe abortions^{2,7-9}. Fertility rate is still on the increase despite economic hardship most especially in northern Nigeria. Currently the crude birth rate is about 5.7 per woman of child bearing age as against 5.3 births per woman in 2020. This figure is expected to double in 24 years.^{2,4-6,8,10} Consequently, since resources are limited and coupled with economic hardship, unplanned or unwanted pregnancies stands the risk of being terminated. Furthermore, due to the existing law prohibiting abortion in the country, these individuals are compelled to procure the procedure in an unsafe or hidden area leading to unsafe abortion which is associated with high maternal morbidity and mortality. Series of studies in Nigeria had shown that unsafe abortion contribute to maternal mortality in about 20-40% which is one of the highest in the world,^{3,10-11}. It was also reported that among women of reproductive age group one out of seven attempted terminating unwanted pregnancies and one out of ten actually terminated the pregnancy^{10,11}. Other similar Studies had also demonstrated that unexpected or unplanned pregnancy occur in about 1.5 million annually, 760,000 induced abortions with over 60,000 thousand annual maternal death.² Factors that may increase maternal morbidity and mortality include unsafe abortions, increased parity and too many short inter-pregnancy intervals and poor obstetrics care.^{2,9-12}

Proper and effective use of contraception is key to protecting women right and health through the prevention of unwanted or unplanned pregnancies, abortion related complications, and maternal death^{2,5,7,10-13}. It could also help in reducing the too many short inter-pregnancy intervals by either delaying or spacing the number of deliveries, thereby, increasing

the economic gains of the family by limiting the number of children per family¹¹. Thus, resulting in improving and promoting the health status of the mother and welfare of the entire family as the number of births are controlled¹¹⁻¹⁵. Studies had also proven that Contraceptive use reduces maternal mortality by 20% or more and infants are twice as likely to survive if the previous birth interval is about 2- 4 years.^{10,11,13} Unfortunately, Nigeria has one of the highest unmet need for family planning compared to other countries like Ghana^{2,10,16-18}. Unmet need for family planning in Ghana was reported to be 30% while that of Nigeria was 48%²⁰⁻²¹. Recent evidence from Nigeria Demographic health survey had shown that only about 15% of sexually active women currently practicing effective modern contraception, being higher in the south (12.5%) and low ((5.3%)) in the northern part of the country. Conversely, fertility rate is higher (6.6%) in the northern part of the country compared to (4.5%) in the southern region. Consequently, maternal mortality is higher in the north than in the southern part of the country.^{2,4,5,10}

The aimed of the study was to determine the prevalence rate of modern contraceptive uptake, complications, preferred method and the reason for discontinuation of any contraceptive method. The study also aimed to examine the trend and pattern of contraceptive usage among women of reproductive age accessing family planning services in our maternity section of Modibbo Adama University Teaching Hospital Yola, Adamawa State, North- eastern Nigeria. This study will also serve as a baseline for subsequent studies as to the best of the authors knowledge there was paucity of studies in our environment on the modern contraceptive usage.

MATERIALS AND METHODS

This was a 6year (January 2014- December 2019) retrospective descriptive study of all the new modern contraceptive acceptors that accessed the family planning unit of Modibbo Adama University Teaching Hospital (MAUTH) Yola, Adamawa State.

The state with its capital in Yola was created in 1992 from the defunct Gongola State, Nigeria. It has 21 Local Government areas with a land mass of 39,940km³, has a population of 3,178,950 according to 2006 Nigeria population census. As at 2022, the Adamawa state population was reported to be about 4,902,100, with population density of 122.7/km³⁻⁵ and annual population increase of 2.7%.³⁻⁵. It is inhabited by multinational and multitribal population with majority consisting of Fulani, Hausa, Bata, Vere, Bachama, Chamba, kilba, Ga'anda, Bura and Lunguda among others. MAUTH is the only Federal Teaching Hospital in the state. It was upgraded from the then Federal Medical Centre Yola to Teaching hospital following the approval by the Federal Government of Nigeria in 2020.

The family planning clinic runs daily except on weekends. Clients with or without their spouses

received group or individual counselling before making an informed choice as to which methods are suitable for them. Contraceptives agents were administered by trained Nurses and Doctors. The hospital records of all the family planning attendees during the period under review were retrieved from the family planning clinic, hospital medical record department and theatre registers. Information regarding age, parity, occupation, religion, educational status, tribe and marital status were extracted from the records, also the previous contraceptive practices, method chosen, source of information about the modern contraceptive were also recorded. Obstetrics history, breast feeding history, reason for discontinuation of the method and complications were studied. The data was analysed using SPSS versus 16 (Chicago, USA 2006). Results were presented as simple proportion and compare where necessary using Chi square. Line graphs were used for trend analysis. The confident level was set at 95% (P < 0.05). Ethical approval was obtained from the ethics and research committee of Modibbo Adama University Teaching Hospital Yola, Adamawa state.

RESULTS

In this study a total of 1746 clients accepted modern contraceptives methods including tubal sterilization during the year under review and there were 9833 deliveries conducted over the same period., giving the modern contraceptive prevalence of rate of 17.8%.

Table 1 shows the Sociodemographic characteristic of modern contraceptive acceptors. Majority of the clients were between age range of 30-34 years 422 (24.2%) followed by 35-39 years of age 284(21.2%). Most of them were married, 1136(65.1%) and educated 751(43.0%) as most of the clients attained tertiary education. In this study the modal parity was above 5, (558(32%), majority were Christians 902(51.7%). Majority of the clients got information about modern contraceptive usage from health personnel 81.1 % (doctors, Nurses chews Junior-chews and other health workers), friends 5.2%, mass media 7.4% and others 6.3%. Majority of the clients requested for contraceptive methods within 6 months of delivery and almost all were breast feeding their babies at the time of conducting this research. Most of the clients had used one or more of the modern contraceptive methods in the past during their previous pregnancies.

Table 2 depicts the current contraceptive method chosen, most of the clients used injectable contraceptive methods (Levenogestrel and depot Medroxyprogesterone acetate) 510(29.2%) followed by implantable (Implanon and Jadelle) contraceptive methods 486(28.0%), while barrier method 149(8.5%) was the least accepted modern contraceptive method chosen.

Table 3 shows the complications and the reasons for discontinuation of any contraceptive method chosen. A total of 17.7% of the study population discontinued the modern contraceptive method due to various complications while using the various methods.

The most common complication and cause of discontinuation of the method was excessive and irregular menstrual bleeding.90(29.1%) followed by desire for subsequent pregnancy 79(25.6%). Method failure 7(2.3%) was the least recorded complications and the reason for discontinuation of any method. One resulted in ectopic pregnancy, 3 normal pregnancies and 3 miscarriages.

Table 1: Socio-demographic characteristic of contraceptive acceptors

Variables	Number	Percentage (%)
Age (years)		
<20	230	13.2
20-24	280	16.0
25-29	284	16.3
30-34	422	24.2
35-39	370	21.2
>	160	9.2
Total	1746	100
Parity distribution		
0-1	335	19.2
2-3	416	23.8
4-5	437	25.0
>5	558	32.0
Total	1746	100
Educational status		
No formal education	192	11.0
Primary school	349	20.0
Secondary school	454	26.0
Tertiary	751	43.0
Total	1746	100
Marital status		
Married	1,136	65.1
Single	403	23.1
Divorcee	117	6.7
Widow	88	5.1
Total	1746	100
Religion		
Christian	902	51.7
Muslim	840	48.1
Others	4	0.2
Total	1746	100

Table 4: Depicts the relationships of sociodemographic characteristic and discontinuation of the various method. In this study age, parity and marital status were significantly associated with discontinuation of any modern contraceptive methods Chi-square 26.23, 30.46

and 23.21 with their p-values of <0.001, <0.000 and <0.001 respectively.

Table 2: Current Contraceptive Method Chosen

Variables	Number(frequency)	Percentage (%)
Implant	486	28.0
IUCD	210	12.0
Injectables	510	29.2
OCP	273	15.6
Barrier	149	8.5
Barrier	118	6.8
Total	1746	100.0

NB Oral Contraceptive Pills

While religion and level of education does not seem to be significantly related to the discontinuation of any method $X^2 = 1.35$ and 6.45 with their p-values of 0.633 and 0.544 respectively.

Table 5 showed the trend of modern contraceptive prevalence over the period under review. The study population in the first 3 years (2014-2016) showed a progressive decline in the use of chosen modern contraceptive prevalence with a nadir in 2016, followed by progressive increased demand for the methods in the last 3 years (2017-2019). The prevalence rate was fairly constant between 2018-2019. This is perhaps due to increased awareness.

Figure. 1: Is the line graph demonstrating the total yearly trend in the used of modern contraceptives.

Figure. 2: Is the line graph which demonstrate the demand for individual modern contraceptive methods. The injectables contraceptives was the most common patronized modern contraceptive method over the period of 6 years followed by implantable contraception, while the barrier method was the least patronized method.

Table 3: Complications and Reasons for discontinuation

Variables	Number	(%)
Menstrual irregularities	90	29.1
Desire for pregnancy	79	25.6
Lower Abd/back pain	47	15.2
Infections	29	9.4
Headache	8	2.6
Displaced IUD	20	6.5
Weight changes	16	5.2
Method failure	7	2.3
Others	13	4.2
Total	309	100

Others - may cause cancer, husband refusal, menopause, culture and religious barriers.

Table 4: Sociodemographic Influence on Discontinuation of Modern Contraceptive Methods

Variables	Number (freq)	Chi-square (X ²)	P-V
Age(years)			
<20	4		
21-24	14		
25-29	90		
30-34	98	26.23	< 0.001
35-39	68		
≥40	35		
Parity			
0-1	33		
2-3	56		
4-5	88		
>5	132	30.46	< 0.000
Marital status			
Married	216	23.21	< 0.001
Single	40		
Divorce	33		
Widow	20		
Educational status			
No formal education	52		
Primary	56		
Secondary	98		
Tertiary	103	6.45	0.544
Religion			
Christians	158	1.35	0.633
Muslims	138		
Others	13		

Table 5: Trend In Contraceptive Prevalence Rate

Years	Clients	Total del	Contraceptive Prevalence
2014	216	1284	16.8%
2015	247	1556	15.9%
2016	282	1901	14.8%
2017	309	1700	18.2%
2018	333	1636	20.4%
2019	359	1756	20.4%
Total	1746	9833	17.8%

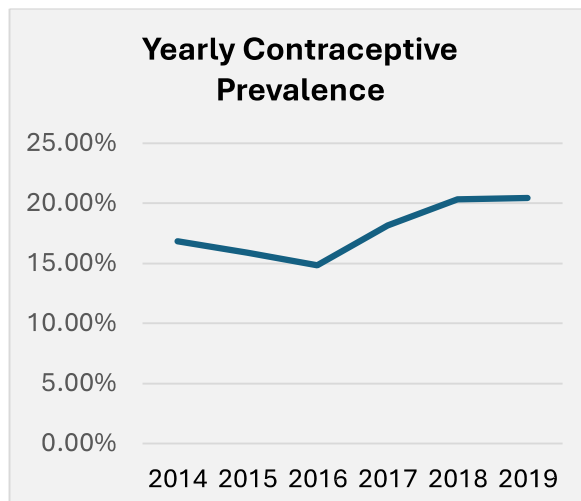


Fig 1. Total yearly trend in the used of modern contraceptives among the study population

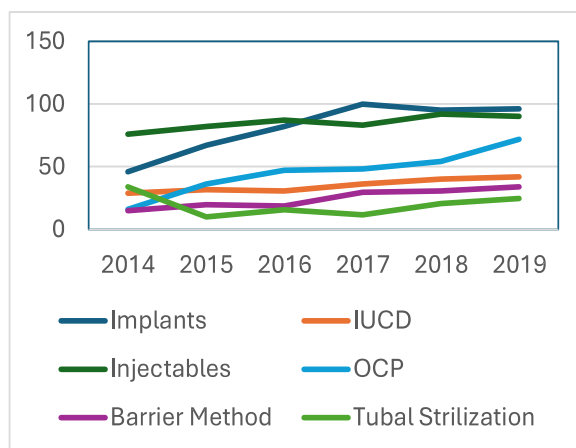


Fig.2 Trend of various contraceptive method chosen.

DISCUSSION

Effective use of modern contraceptive method is pivotal to women protection of right and health. In Nigeria the unmet need for family planning is still high despite widespread campaign on contraception. The Nigeria demographic health survey reported that effective utilization of modern contraceptive methods was 15 percent.⁴ In this study the prevalence of modern contraceptive uptake was 17.8% which was slightly above the national figure. It is however comparable with the prevalence of 18.1% reported by Akintayo et al from Ado Ekiti Northwest Nigeria ². But lower than 51.1% reported by Envaladu et al in Jos, North central Nigeria⁹, a similar finding was also reported from Northwest Nigeria¹⁹. Thus, findings suggest that Unmet need for family planning is still high. Albeit awareness about modern contraception has increased significantly in recent time, it does not reflect in the clinical practice in our environment.

Majority of the study population ranged between 30-39 years of age with peak age between 30-34 years 422(24.2%), followed by age range of 35-39 years 370(21.2%). This finding is similar to findings reported by other studies across the country.^{2-3, 9-11, 13, 18-19}. Majority of the clients were married 1136(65.1%) and were Christian 902(51.7%) this was similar to the studies reported from Ife, Gombe, Jos and Calabar South-South Nigeria.^{2,7,9 12}. Most of the women were para 5 and above 558(32%) and educated up to tertiary level of education 751(43%). This finding was similar to the findings reported from Malawi and Ghana and some studies in Nigeria.^{2, 7,8-16}. However, the parity distribution in this study was at variant with the findings reported from Jos and Ile Ife, where they reported in their separate studies as para 2-4 and 2-3 respectively as the most common parities.^{2, 9}

It is a known fact that Education affects woman’s awareness about her fertility which can in turn affect their use and choice of contraception. About 70 % of the study population had secondary school and tertiary level of education. Perhaps, the reason for majority of the clients of the study population demanded for contraception but is still insignificant when compared to general population in the study region. People that have high level of education tend to delay pregnancy or space their children for pursuance of academia and carrier advancement. In recent time, desire for knowledge and epistemophile also contribute to the delay in conception leading to low parity.^{2,9}

The commonest and most popular contraceptive method utilized among the clients in this study was injectable contraception 510(29.21%) followed by implantable method, a finding that was in contrast to the findings reported in Jos by Mutahir et al ¹⁸. They reported in their study that intrauterine contraceptive device was the most common (26.1%) accepted method¹⁸. The preferred short-term reversible contraception in this study as against the reported long-term reversible contraception from other studies might be due to individual desire and choice^{5-7,9,18-21}.

The major complications that led to discontinuation of any method was irregular and heavy menstrual period suggesting that the hormonal contraceptives, especially injectable are associated with irregular menses. This finding was similar to the findings reported by other authors, while in contrast to other findings, Akintayo et al reported desire for pregnancy as the main reason for discontinuation of the modern contraceptive use^{2,9,11}. Our study also showed that some of the socio - demography characteristics of the clients were associated with the discontinuation of modern contraceptive method. While others do not. Age, parity and marital status were significantly associated with discontinuation of the method P-V = <0.001, <0.000 and <0.001 respectively. While educational status and religion were not significantly associated with discontinuation of the methods P-V = 0.633 and 0.544 respectively. Similar studies were reported by Envaladu et al and Akintayo et al ^{2,7}.

Comparable findings were also reported from Malawi and Ghana.,⁹⁻¹⁶. Looking at the trend of the modern contraceptive uptake in this study, there was initial declined (2014-2016) in the demand for the method with a nadir in 2016. However, we observed that it was followed by steady increased in the demand for the contraceptive method between 2017-2019. Table 5 and figure 1. This perhaps was due to increase in awareness and Knowledge about the contraception. This finding was similar to the findings reported from Ile Ife and Calabar South - South Nigeria ^{2,12}.

Finally, in this study, the injectable contraceptive was largely the most common acceptable contraceptives method while barrier method was the least see figure 2. Similar findings were reported across Nigeria^{7, 9-14, 17,19}.

CONCLUSION

Contraceptive acceptance in this environment is still low despite increased awareness on modern contraceptive use. This might not be unconnected to myth, perception, cultural and religious practices of the people in the region, discouraging them from practising family planning in general. Therefore, there is need for more advocacy and awareness campaign on contraceptive use because of its pertinent role in reducing unwanted pregnancy, illegal abortions and maternal morbidity and mortality.

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