

Trends in Contraceptive Choices among Women Attending the Family Planning Clinic in a Nigerian Tertiary Hospital in Makurdi, Nigeria

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Received date: March 15, 2018; Accepted date: March 20, 2018; Published date: March 27, 2018.

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Citation: Hembah-Hilekaan SK, Augustine OO, Onyemocho A, Onche PE, Maanongun MT, et al. (2018) Trends in Contraceptive Choices among Women Attending the Family Planning Clinic in a Nigerian Tertiary Hospital in Makurdi, Nigeria. J Contracept Stud 3: 12.

Abstract

Aims/Objectives: To examine the socio-demographic characteristics and the trends in contraceptive choices including counseling of clients, using the family planning clinic of the newly established Benue State University Teaching Hospital, Makurdi.

Study design: A retrospective cross-sectional study.

Setting: Benue State University Teaching Hospital, Makurdi, Nigeria.

Subjects: New subjects attending the family planning clinic.

Main outcome measures: Contraceptive choices and trend including the social demographic variables of subjects over the study period.

Results: During the 3 year study period, 807 clients were seen at the family planning clinic. The overall contraceptive prevalence rate was 39.0% with a rising trend from 17.7% in the first year to 50.8% in the last year. Majority of the clients chose implants 467 (57.9%), 20.4% condoms, 12.8% IUCDs, 9.9% injectable, 5.3% combined pills and 0.1% bilateral tubal ligation. Adolescents constituted only 16% of the population studied.

Conclusions: There was a rising trend in contraceptive use with the implant as the most common contraceptive used in our center followed by the condom.

Keywords: Family planning; Trends; Contraceptive choices; Makurdi; Nigeria

Introduction

Unexpected or unplanned pregnancy poses a major public health challenge for women of reproductive age, especially in developing countries [1]. Nigeria, with a population of close to 160 million, an expected national growth rate of 3.2%, and a total fertility rate of 5.7 and 6.3 in urban and rural areas, respectively, has an expected maternal death rate of 545 per 100,000 live births and 6.8 million pregnancies annually, of which 16% end in spontaneous miscarriage and 11% in induced abortion [2,3]. About 30 million women are in the reproductive age group and contraceptive prevalence rate (any method) is only 15% [2].

An estimated 123 million couples, mainly in developing countries do not use contraceptives despite wanting to space or limit their childbearing [4]. The use of modern family planning methods is an effective tool to control the rising population in Nigeria. The most recent Nigeria Demographic and Health Survey (2013) put the overall contraceptive prevalence rate among married women aged 15-49 years using modern methods at 9.8% against 9.7% in the 2008 report [5]. Non usage of contraceptives by reproductive age women, who engage in sexual activity, can result in unwanted/ unplanned pregnancy with its attendant problems such as induced/unsafe abortion, post abortion sepsis and maternal death [6]. It has been documented that 600,000 unsafe abortions occur annually in Nigeria [6]. Some of the late complications of abortion are pelvic pain, dyspareunia, ectopic pregnancy and infertility. Other problems associated with non-usage of contraceptives include the rampant food scarcity, population explosion, the HIV pandemic and other reproductive health infections and the socioeconomic development challenges seen, especially in the developing countries like Nigeria.

Factors responsible for contraceptive choices vary from place to place even within the same country. Some of these factors include social, economic and low level of awareness

and education. Family planning in many parts of Nigeria is influenced by cultural and religious beliefs [7]. The low contraceptive prevalence has been attributed to poverty, ignorance, low educational level, and desire for large family size, poor access to contraceptive services, community pressure, male or husband dominance, and religious beliefs [7].

This study reviewed 3 years records of data of clients attending the family planning clinic of Benue State University Teaching Hospital, Makurdi in order to examine the socio-demographic characteristics and the trends in contraceptive choices including counseling of clients.

Materials and Methods

Location

This study was carried out from September, 2012 to August, 2015 at the newly established Benue State University Teaching Hospital located in Makurdi, North Central Nigeria.

Study design and population

A retrospective cross sectional study design with convenient non-probability sampling technique was used for this study. All family clinic attendees enrolled for any form of family planning between September, 2012 and August, 2015 were included in the study. Those whose hospital records were incomplete were excluded from the study. The study was carried out over a three year period (from September, 2012 and August, 2015, both years inclusive). The contraceptives offered at the Centre during the study period included oral pills, injectable methods (Noristerat and Depo Provera), copper T intrauterine device, implants (although Merina IUD was not available at the Centre during the study period) and bilateral tubal ligation including male sterilization, and male and female condoms.

Data collection

A standard pretested pro forma was used for data collection. Data sources were medical record files, family planning unit records, Obstetrics and Gynecology theatre records. Information obtained include: socio-demographic characteristics of the women such as age, parity, educational status including family planning choices, and information on whether the client was counseled were collected. Ethical clearance was obtained from the institutional review board before the commencement of the study.

Data analysis

Data that were extracted from the data sources were entered into predesigned software in Statistical Packages for Social Sciences (SPSS) version 23 (IBM corp Released 2015 IBM SPSS statistics for windows, version 19.0, Armonk, NY: IBM Corp) and analyzed. Frequency tables, charts, mean and

standard deviation were used to summarize the independent variables of interest. The main outcome of the study was compared with the independent variables of interest and Pearson chi-square (χ^2) test was used for test of association between the independent variables and the main outcome of the study, with statistical significance set at p-value of 5%. Linear relationship between the predictor variable and the outcome (criterion variable) was further performed for selected independent predictors that have significant chi-square, using multiple logistic regression models by controlling for possible confounders.

Results

During the period of this study, 807 clients attending the family planning clinic were analyzed. Within the same period under review there were 2071 ANC attendees recorded, giving a contraceptive prevalence rate of 39.0%. Although 807 clients were studied, some of them practiced two methods of contraception at the same time probably due to the fear of failure of one and others for infections, resulting in a total usage of 859. The contraceptive preference rate was found to be rising over the three year period from 17.7% in the first year to 50.8% in the last year (Figure 1).

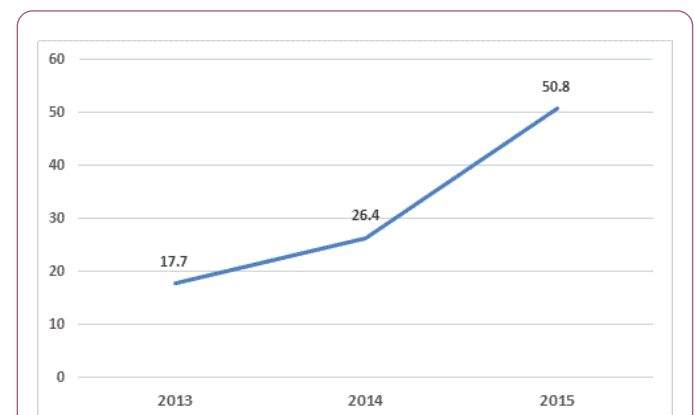


Figure 1 Trend of contraceptive use (September 2012-August 2015).

Table 1 shows that the ages range of the participants was 13-50 years, with a mean of 29.7 (± 5.8) years. The parity of the participants ranged from 0-14 with an average of 3 (± 1.8). Majority (94.1%) of the contraceptive users were in the age bracket 20-40 years. Only 1.6% of the clients were less than 20 years of age.

The parity distribution of the attendees showed that majority 320 (39.7%) had 1-2 deliveries, 296 (36.7%) had 2-4 while 135 (16.7%) were grand multiparous women. Nulliparous clients made up only 56 (6.9%) of the total participants. The educational status of the family planning clinic attendees revealed a marked shift of 659 (81.7%) in favor of those who had secondary and tertiary level education. Those with primary level education were 118 (14.6%), while

only 30 (3.7%) of the study group with no formal education were using modern contraceptive methods.

Table 1 Socio-demographic Characteristics of Respondents (n=807).

Age (years)	Frequency	Percent
13-19	13	1.6
20-26	218	27.0
27-33	377	46.7
34-40	165	20.4
41-47	27	3.3
≥ 48	7	0.9
Parity		
0	56	6.9
1-2	320	39.7
2-4	296	36.7
≥ 5	135	16.7
Educational status		
No formal education	30	3.7
Primary	118	14.6
Secondary	434	53.8
Tertiary	225	27.9

On counseling (**Figure 1**), there was information in the records that majority 63.1% of the clients were counseled while 36.9% were not. It was also found that, 35.1% of the clients were new contraceptive users, 60.3% were continuing with their previous methods and 4.6% changed methods.

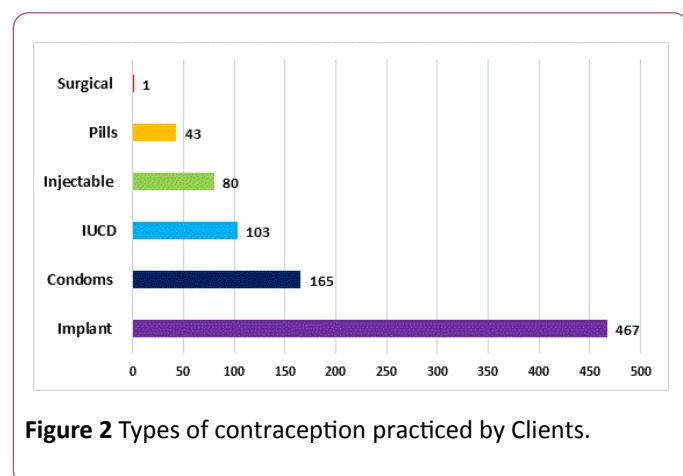


Figure 2 Types of contraception practiced by Clients.

Figure 2 shows that, the predominant method of contraceptive chosen was the implant (54.4%), followed by male condoms (19.2%), IUCD (12.0%), injectable (Noristerone enanthate and DepoMedroxyprgesterone acetate-DMPA) (9.3%), and combined oral contraceptive pills

(5.0%). The least accepted method with only 1 (0.1%) case was bilateral tubal ligation. No case of vasectomy was found among the contraceptive users.

Table 2 is a multivariate linear regression analysis of socio-demographic variables (predictors) to the type of contraception used (criterion variable). Using the enter method, a significant model for the different outcome variables emerged as follows; Injectable ($F_4, 147=351.007, P<0.0005$, and adjusted R square=0.901). Of all the predictors (age, parity and educational status), only age and parity had a significant impact on the choice of contraceptive method. With reference to use of implant, age had higher impact ($Beta=1.079$) compared to parity ($Beta=0.764$). Concerning the use of condoms parity had higher impact ($Beta=1.354$) compared to age ($Beta=0.912$). For IUCD and Injectable the significant predictor is age, while for pills the significant predictor is the parity of the clients. The impact of educational status on uses of surgical contraceptive methods is higher than parity and age, but the relationship is not statistically significant ($p>0.05$). The educational level of the respondents did not have a significant impact on the choice of contraceptive choices ($P>0.005$). The source of information and referral to the family planning unit was mainly relatives/friends and health personnel.

Table 2 Multiple Linear Regressions.

Predictor Variable	Dependent Variable: Choice of contraception					
	Implant	Condom	IUCD	Injectable	Pills	Surgical
	Beta (P-Value)	Beta (P-Value)	Beta (P-Value)	Beta (P-Value)	Beta (P-Value)	Beta (P-Value)
Age (years)	1.079 (0.000)*	0.912 (0.000)*	0.941 (0.002*)	1.057 (0.030)*	0.983 (0.583)	0.815 (0.180)
Parity	0.764 (0.000)*	1.354 (0.000)*	0.888 (0.058)	1.163 (0.077)	1.833 (0.000)*	1.314 (0.645)
Educational status	1.166 (0.132)	0.896 (0.383)	0.929 (0.617)	0.858 (0.375)	1.006 (0.979)	1.468 (0.755)

*Relationships with Statistical significance.

Discussion

Women who use modern methods of contraception are less likely to have unwanted and undesired pregnancies resulting in grand multiparity and unsafe and illegal abortions with all its dangerous complications. Contraceptives benefit the individual by limiting family size and the complications of grand multiparity and abortion while countries benefit by reduction in population. Despite the advances in health indicators in Nigeria, contraceptive services are still not universally available and even where they are; the utilization of such services is not optimal due to various reasons.

The contraceptive prevalence rate is related to the maternal mortality rate, and it has been shown that countries with a low prevalence of contraception have high maternal mortality rates [8]. The institutional contraceptive prevalence rate in this study was 39.0%. whereas, the 2013 Nigerian Demographic and Health Survey put the use/unmet need for modern contraceptives among married women aged 15 to 49 years in Nigeria respectively at 9.8/16.1% overall, 16.9/14.9% in urban centers and 5.7/16.8% in rural areas [9]. There was a rising trend in the prevalence rate of contraceptive use from 17.7% in the first year to 50.8% in the last year during the study period. This may be due to an increasing demand for modern contraceptives among clients or improved availability in the newly established tertiary hospital.

The age range of the study participants was from 13 to 50 years with most 377(46.7%) of them in the age group of 27 and 33 years, while the least frequency (0.95%) was in those equal or greater than 48 years which is consistent with declining reproductive capacity and hence the reduced need and low desire for contraception. This was followed by adolescents below 20 years of age who are likely to be in high need for contraceptives. The recorded low usage of 1.6% for modern contraceptives in our center among these adolescents, who are reported to be sexually active, and account for 60% of the 610,000 induced abortions in Nigeria [10], may call for urgent intervention by all concerned. Several reasons have been proffered for the low contraceptive use in this group from shyness, attitude of health workers to other factors that affect family planning such as ignorance, religion, traditional beliefs, and availability of services. Majority of the clients (73.7%) were in the age range of 20 to 33 years representing the peak age of reproductive capacity and in

most need for services. These findings are similar to those in Sokoto, Zaria and Port Harcourt [4,7,11].

The parity distribution in the study population showed that 76.4% had parity 1-4, followed with 16.7% grand multipara and the least 6.9% single/nulliparous women. With the mean age of the study population at 29.7 (\pm 5.8) years coupled with the depicted parity range of 0-14, it suggests that the women are still at risk of large family size and unintended pregnancies with all their complications, reinforcing the need for modern family planning methods.

This study also showed that most (81.7%) of the clients were educated up to secondary and tertiary levels reinforcing the observation that the frequency of contraceptive use increases with the level of education [12]. It was however gratifying to note from the records that majority (63.1%) of the clients receiving family planning services at the center were counseled (**Figure 3**).

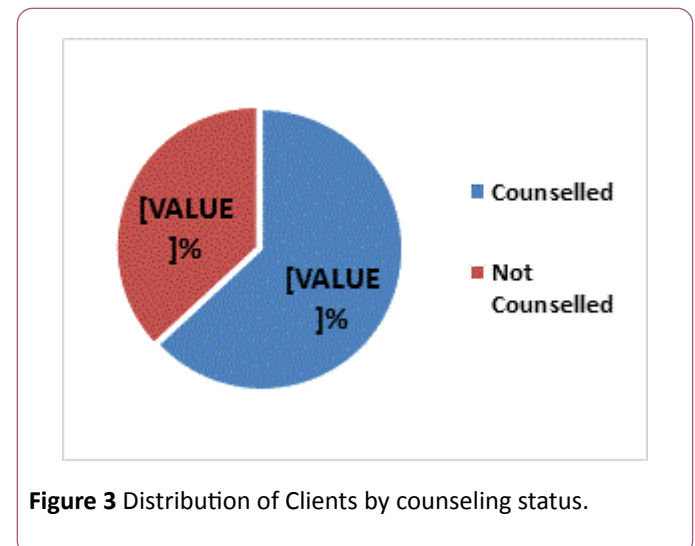


Figure 3 Distribution of Clients by counseling status.

Although it has been found in Nigeria that the most common methods of contraceptives in use include the pills, condoms, injectable and IUCDs [13], the most predominant 467 (57.9%) contraceptive method chosen by clients in this study was the implant and the least was surgical sterilization by bilateral tubal ligation 1 (0.1%). The finding of implant as the most preferred choice in this study is similar to the finding in Sokoto [7]. This however, contradicts the finding from many other centers in Nigeria where the IUCD (6) and the injectable contraceptives are the most frequent choices among clients

[4,14,15]. The avoidance of the permanent surgical method of contraception is similar to the finding in other studies [4,6,15]. This is contrary to the finding in United Kingdom where BTL was 11.0% and vasectomy was 12.6% [15]. Condoms were the second most preferred method and this may be related to the advocacy for its use as not just a barrier contraceptive but a protection against HIV/AIDS transmission especially in our region.

Conclusion

In conclusion, the most preferred method of family planning in this study was the implant while the least was sterilization. It is also probable that the pattern of contraceptive use among the population especially the educated ones may have begun to shift towards the implant while still maintaining the use of condoms as a source of protection against HIV/AIDS and other sexually transmitted infections. With the observed rising trend in contraceptive use, there is the need to train personnel manning the family planning unit on the adequate counseling of clients on contraceptive choices and the opening of rural sites to towards improved utilization especially by adolescents and young people.

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