

Original Research Article

Uptake of hormonal implants contraceptives compared to other forms of contraceptives in Abuja, Nigeria

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Received: 04 October 2019

Revised: 08 October 2019

Accepted: 13 November 2019

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ABSTRACT

Background: Subdermal implants are a long-term, efficacious, and easily reversible contraceptive with few adverse effects that pose no risk to the health of the users. It is increasingly accepted as a method of contraception in sub-Saharan Africa like ours. Despite this, its uptake in Nigeria has not reached optimum level. This study is aimed at evaluating the socio-demographic characteristics of subdermal implants users in Abuja, Nigeria, its acceptance rate, efficacy, and discontinuation rate.

Methods: The case notes of all the women from the family planning unit were studied. Data on socio-demographic characteristics, uptake rate, side effects profile and the discontinuation rates between January 2013 and December 2017 were retrieved and analyzed using SPSS software and results expressed in numbers and percentages

Results: Out of a total of 1,716 clients that were for contraception during the period under review, 786 accepted Jadelle/Implanon accounting for 45.8% of the implants acceptance rate. Of the 786 acceptors, 485(28.3%) chose Implanon, whereas 301(17.5%) preferred Jadelle. Discontinuation rate for both implants was 20.7%; the main reasons cited by the women were desire to have more children; 51(31.35%) and irregular vaginal bleeding; 30(18.4%). The Pearl Index for the implants in the study was zero. The peak parity for implant users was para 3. Approximately 72.1% the users of all forms of contraception were Christians, while 25.4% were Muslims. About 74.0% of the users had tertiary education.

Conclusions: Jadelle/Implanon uptake was relatively high compared to other forms of contraception.

Keywords: Contraceptive, Uptake, Discontinuation, Implants, Subdermal

INTRODUCTION

The provision of effective contraception is fundamental to the practice of women's health care. In Nigeria, the level of unmet need for family planning exceeds the level of contraceptive use.¹ The fertility level in Nigeria is quite high (total fertility rate; TFR is 5.5) according to National Demographic Health Survey (NDHS 2013).¹ This entails that an average Nigerian woman will bear approximately six children in her lifetime.

Contraceptive prevalence for any method in Nigeria is 15.1% and implants accounts for only 0.4%.¹ This rate is very low in spite of the high rate of sexual activity and widespread awareness of the various contraceptive methods among Nigerian adolescence and youths.² This situation is mainly due to a culture that is highly supportive of large family size, wrong perception about family planning methods including beliefs that people who use contraceptives can cause health problems or permanent infertility, contraception not meant for the unmarried women and male child preference.

Nevertheless, unprotected intercourse is the primary cause of unwanted pregnancies resulting in illegal abortions that are devastating and can be potentially fatal, often leading to maternal morbidity and mortality.² In order to control population growth and other complications of pregnancy, availability and use of appropriate contraceptive methods for family planning are important.³

Contraceptive implants are said to have the highest effectiveness of any contraceptive method accepted globally.^{4,6} with only 0.05% of typical and perfect users expected to experience an unintended pregnancy in the first year of use.⁵ It is a long term hormonal contraceptives and a better option for women in sub-Saharan Africa because its effectiveness and convenience.^{4,5} Interestingly, these contraceptive devices can be safely placed in the immediate postpartum period, ensuring good contraceptive coverage.⁶

Implanon consists of a single silastic rod which contains 68 micrograms of etonorgestrel and is inserted subdermally under local anaesthetic into the upper arm.⁴ Jadelle is a set of two flexible cylindrical implants, each consisting 75 micrograms of progestin-levonorgestrel.^{4,5}

Jadelle can be effective for five years and three years in the case of Implanon.^{4,5} Additional benefits of implants include their noninterference with intercourse, does not require compliance, and there is immediate return to fertility after removal.^{4,6,7} It also include improvements in endometriosis, dysmenorrhea, and ovulatory pain.⁶

Disturbances of the normal menstrual bleeding pattern is their major drawback, a problem they share with all other progestin-only contraceptives especially in the early months after insertion, and account for the most number of early discontinuations.^{4,7-9}

Inhibition of ovulation through the suppression of the luteinizing hormone surge is the main contraceptive mechanism of these implants.^{2,7} The secondary mechanisms of action are the increase in the viscosity of the cervical mucus making it impenetrable to spermatozoa and the thinning out of the endometrial lining making it atrophic.⁷

However, progestin-subdermal implants require the technicality of insertion and removal necessitating the provision only in hospital setting where the trained personnel are available. Some of these centers are not available in every community and in communities with such centers; some are not within the reach of the clients.⁶

Adequate counseling should be made available to potential recipients by well trained counselors in contraceptive services, so that the clients clearly understand the procedure of implant insertion and removal, risks and benefits of its use, as well as side effects, particularly menstrual bleeding disruption.

Implanon/Jadelle were introduced into Nigeria in 2006 by Federal Ministry of Health.⁴ The aim of this study is to document our experience in the use of these subdermal implants in our centre, focusing on profile of acceptors, the uptake rate, side effects profile and the discontinuation rates of the implants at Abuja.

METHODS

The study population comprised of all clients who accessed various forms of contraception methods at University of Abuja Teaching Hospital during the study period. The study was commenced after obtaining approval for the proposal from the institution scientific and research committee. The study period was from 1st January 2013 to 31st December 2017.

Inclusion Criteria

All the contraceptive users with complete available data/variable of interest within the study period.

Exclusion Criteria

Any contraceptive user whose data or variable of interest was not complete during data collection.

This was retrospective descriptive study of all clients seen at the family planning clinic of University of Abuja Teaching Hospital, Abuja. The names and family planning clinic numbers of all users of contraceptives over a period of 5 years (from 1 January 2013 to 31 December, 2017) was obtained from the family planning register after permission was sought. This was then used to retrieve their family planning record cards from which the following information was obtained using a proforma: the age, parity, marital status, level of education and religion. The trends of uptake of major contraceptives used by the clients were evaluated and compared to one another. With the Uptake and use of implant (Jadelle/Implanon) as the focus of the study, information on its acceptance rate, its side effect, Pearl index, its discontinuation rate and also reasons for discontinuation were extracted.

The data obtained were analyzed using SPSS (statistical package for social sciences) statistical software, version 20. Absolute numbers and simple percentages were used to describe categorical variables.

RESULTS

Over the 5-year period; there were 786 acceptors of subdermal implants among the 1,716 clients using one form of contraceptive or the other. There was a progressive increase in the uptake of Implants and they were the commonest form of contraceptive used. Four hundred and eighty five clients accepted Implanon (28.3%) and three hundred and one clients accepted Jadelle (17.5%). Thus, the acceptance rate for subdermal

implants were 45.8%. This was followed by IUD and injectables which were taken up by 543 (31.7%) and

247(14.4%) of clients respectively (Table 1).

Table 1: Overview of the various forms of contraception provided by the family planning clinic during the period under review.

Method	2013	2014	2015	2016	2017	total	%
Implants	129	120	153	172	212	786	45.8
IUD	119	95	105	106	118	543	31.7
Injectables	85	41	33	32	56	247	14.4
Pills *(COC)	25	30	16	18	36	125	7.3
Condom	-	5	-	2	4	11	0.6
**BTL	-	-	1	1	2	4	0.2
Total	358	291	308	331	428	1,716	100

*Intrauterine device ** combined oral contraceptive, *** bilateral tubal ligation,

Table 2: Socio-demographic characteristics of all study clients.

Characteristics	Frequency	Percent
Age group		
15-19	18	1.05
20-24	150	8.74
25-29	433	25.23
30-34	511	29.78
35-39	396	12.12
≥40	208	
Parity		
0	16	0.93%
1	205	11.95%
2	340	19.81%
3	422	24.60%
4	342	19.93%
≥5	388	22.61%
Religion		
Christianity	1237	72.09
Islam	436	25.4
Not specified	43	2.5
Level of Education		
None	90	5.25
Primary	126	7.34
Secondary	229	13.34
Tertiary	1271	74.07
Marital Status.		
Single	28	1.67
Married	1688	98.63

The age group with the highest acceptance rate of all forms of contraception was women 30-34 years (29.8%) of age. This was followed by women aged 25 to 29 years (22.2%). Parity distribution of the client indicates that para 3 was the highest users of all forms contraceptives with 422(24.60%) accessing. About 1% of the clients were teenagers. Majority have tertiary level of education, constituting about 74.07% of the total study group while

those with no formal education constitute 5.25% of the study group. Christians constituted the majority of the clients accounting for and 72.9% of the entire contraceptive users (Table 2).

About 196(25%) of the users of the sub-dermal implants alone had 3 children, 173(22%) of them had 5 or more children,166(21%) of the users had 2 children, 144(18%) had 4 children and 103(13%) of them had a child. Only 4 (0.5%) single ladies made use the implants (Table 3).

Table 3: Parity distribution of clients who took up the Implants.

Parity	N	%
0	4	0.5
1	103	13.1
2	166	21.1
3	196	24.9
4	144	18.3
≥5	173	22.0
Total	786	100

The discontinuation rate for both contraceptive implants were 20.7%; the main reasons cited by the women were desire to have more children; 51(31.35%), followed by irregular vaginal bleeding; 30(18.4%). No pregnancy was recorded within the period. The peak parity for implant users was para 3 with 196(24.9%) clients using them problems, partner disapproval of contraception 14(8.6%) and Re-insertion after expiration constituting 14 (8.6%). (Table 4).

Illustrates the trend of uptake of four major contraceptives used by clients. The demand for implants had consistently increased within this period as revealed. They were the commonest form of contraceptives with up to786 (45.8%) of women using the method within the period under review. IUD was next preferred form of contraception with 543(31.7%) using it. Its uptake, however, remained fairly constant within the period. The

injectable contraceptives uptake declined from 1st year and its demand slightly increased in the 5th year under review. Only 125(7.3%) accessed COC with barely no change in its acceptance rate. (Figure 1)

Table 4: Percentage distribution of clients based on reason for discontinuation of the implants.

Indications	No.	Percentage
To get pregnant	51	31.3
Irregular vaginal bleeding /other menstrual problems	30	18.4
Husband's order	14	8.6
Re-insertion after expiration	14	8.6
Change of method of contraception	11	6.7
Impalpable implants	9	5.5
skin atrophy at the site of insertion, acne,	8	4.9
No reason	7	4.3
Weightgain/headache,insomnia	6	3.7
Acne/Skin atrophy at the site of insertion	5	3.1
Spotting	4	2.5
Breast pain	4	2.5
Total	163	100

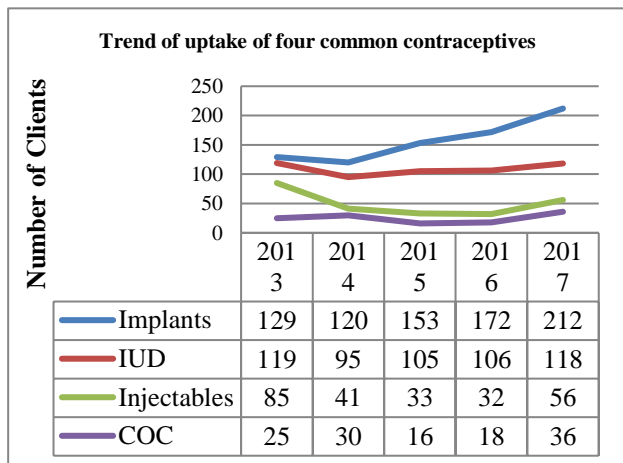


Figure 1: Trend of uptake of four common contraceptives.

DISCUSSION

Over the 5-year period, there were 786 acceptors of subdermal implants among the 1,716 clients using one form of contraceptive or the other, accounting for 45.8% of the sub-dermal implants acceptance rate. Of the 786 acceptors, 485 (28.3%) chose Implanon, whereas 301(17.5%) chose Jadelle. This finding is comparable to 55.8% recorded in Sokoto, Nigeria, where it constituted major contraceptive options for new clients.¹⁰

The uptake rate is however, much higher than what were documented in other places.^{4,7} This high acceptance rate of contraceptive subdermal implants may not be

unconnected with cosmopolitan nature of Abuja and high level of education attained by the majority of the clients. Approximately 87% of the acceptors all forms of contraception attained secondary education and above. Various reports have demonstrated that educated clients could be better informed about the needs for contraception like implants, the side effects, its convenience, and that it does not require compliance and repeat visits to health facilities.^{11,12} Also, a strong association has been reported from Kenya between women empowerment and choice of family planning.¹¹ It is not surprising to note in this study that almost all our clients (98.63%) were married⁷

This is attributed to the fact that in our environment most parents discourage pre-marital sex and therefore the use of contraception by single ladies.¹³ These findings are generally in tandem with other studies done elsewhere.^{4,5} It may also be due to the existing religious restrictions on pre-marital sex and the general misconception that associates adolescent contraception with sexual permissiveness.¹⁴ In addition, most being married is alluded to the existence of cultural and attitudinal restriction on single women with regards to contraception uptake.¹¹

The most frequent users of contraception in this study were the 30-34 age group and this is similar to the age range 30-34 years (mean age: 33.4) recorded by Balogun et al.¹¹ This is probably due to perceived fear of the effects of implants on future reproduction among the people . This is also the age at which most individuals aspire to attain the peak in their career, hence the request for contraception so as not be hindered by unwanted pregnancies.

Despite the fact that subdermal implants has been found to be appropriate for teenagers, few teenagers used it. Society norms in developing countries shun on unmarried women to engage on sexual activity.¹¹

Majority of the acceptors of all forms of family planning in this study were Christians. This may be attributed to the religious belief. It is inferred that Muslim faithfuls hardly accept the use of family planning as a birth/population control method.¹⁵ In Northern Nigeria, female Muslim faithfuls are confined indoor by their husbands thereby reduce their accessibility to contraceptive utilization.

This finding of majority of the acceptors of subdermal implant being multiparous are consistent with another study in Ethiopia.¹⁶ This correlation with parity is understandable as young, married clients with low parity and desirous of further pregnancy are less likely to use the method.

Discontinuation rate for both implants was 20.7% and the most common reason for discontinuation of contraceptive implants in this study was the desire for pregnancy. This

is in agreement with the work done by others.^{5,17,18} This findings, however are in contrast to the what was documented elsewhere where the main reasons cited by the women for not using contraceptives were a dislike of contraceptives followed by a desire to have more children and partner disapproval of contraception.¹⁵

However, dislike for contraceptives followed by irregular vaginal bleeding /other menstrual problems, partner disapproval of contraception were other reasons for discontinuation. High rates of contraceptive discontinuation of short-term methods by users in sub-Saharan Africa have, however, prompted expansion of access to longer-acting methods, most recently implants as observed in this study.¹⁹ The continuation rates of implants as reported by Oladipo et al was higher among those who had adequate pre-insertion counseling and encouraging return for side –effects, follow-up phone calls and home visit would also, raise contraceptive rates.^{11,12,20}

Failure rates are described by the Pearl Index, which refers to the number of failures per 100 women using the contraceptive method for a year (100 women years), 21 however, subdermal implants contraceptive failure was not recorded during the period of review.

CONCLUSION

The subdermal implants contraceptive method is safe and efficacious and there is a high uptake of it with good continuation rate among our clients compared to other forms of contraceptives in in Abuja. Health education and increased patient awareness are strategies to increase the desirability and uptake.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Ayogu ME, Eruemulor CC, Olibe AO. Uptake of hormonal implants contraceptives compared to other forms of contraceptives in Abuja, Nigeria. *Int J Res Med Sci* 2019;7:4557-62.