

EXPERIENCE WITH IMPLANON USE AT THE ABUBAKAR TAFAWA BALEWA UNIVERSITY TEACHING HOSPITAL BAUCHI NIGERIA

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ABSTRACT

Background: Implanon is an implantable, subdermal rod-shaped contraceptive device designed to provide a long acting contraception for up to three years.

Aim: to determine Implanon acceptance and socio-demographic characteristics of women accepting it.

Materials and methods: a retrospective study was carried out in the family planning Unit, Bauchi Teaching Hospital, Nigeria, between January 1, 2010 and December 31, 2013. The records of the clients from the family planning clinic were studied. Socio-demographic characteristics, years of distribution and source of information were analyzed using SPSS Version 20 software.

Results: Of the 4091 acceptors of contraception, 601 had Implanon representing 14.7% of the acceptors. The age range was 20 to 45 years, with mean age of 24.4±3.6 years. Most of them 518(86.2%) were aged 20-34 years. All the acceptors were married. Many 476(79.2%) of the clients were multiparous. Majority 242(40.3%) of the clients had 2-3 living children and about 481(80.0%) had secondary education. Five hundred and sixty three clients (93.7%) desired more children after discontinuation of Implanon. Some of them 38(6.3%) weighed more than 80 kg. The main source of knowledge of Implanon was clinical personnel 462(76.9%). Mass media constituted the least source of information 76(12.6%).

Conclusion: Implanon is an acceptable method of contraception among our women

KEYWORDS: Implanon, acceptance, source of information, Bauchi, North-eastern Nigeria.

INTRODUCTION

The possibility of the subdermal contraceptive implant began when silicone was discovered in the 1940s and found to be biocompatible with human body¹. In 1964, Folkman and Long demonstrated that such a rod could be used to deliver drugs². In 1966 Dziuk and Cook³ published a study that looked at release rate and suggested that the rod could be well suited for contraception. The population counsel developed and patented Norplant (six rods), followed by Jadelle (2 rods); later Implanon (a

single rod) was introduced..

Implanon is a non-biodegradable, long acting reversible subdermal contraceptive implant consisting of a co-axial rod placed inside an applicator⁴. The rod consists of a core containing a mixture of drug substances etonogestrel and ethylene vinyl acetate. Each rod has a length of 4.0 cm and a diameter of 2.0 mm and it is located into a stainless part of the cannula of the applicator⁵. Each Implanon consist of 68mg of etonogestrel. The release rate is 60- 70ug/day during week 5 to 6, and decrease to approximately to 35 to 45 ug/day at the end of the first year and approximately 30 to 40 ug/day at the end of the second year and 25 to 30ug/day at the end of the third year⁶⁻¹⁰.

The acceptance rate of Implanon is variable, and ranges from 4.1-13 % in some studies.^{11,12} Sociodemographic characteristics such as literacy level and educational background,

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marital status have been found to influence the choice of Implanon, with clients who are married, of higher educational background and literate more likely to prefer Implanon.¹¹⁻¹³ Research has also indicated that many clients using other methods of contraception switched over to Implanon after discontinuation of the previous method.¹¹

This study aim at documenting our experience with the Implanon in the first four years of its use and to determined its acceptability in the study population.

MATERIALS AND METHOD

This is a retrospective study that was carried out in the family planning clinic of Bauchi University Teaching Hospital, North-eastern Nigeria, after obtaining ethical approval from the hospital research and ethics committee. The case files of all clients who accepted Implanon contraception between January 1, 2010 and December 31, 2013 were retrieved from the family planning record section. Data collected from the files included client's age, parity, educational status, marital status, occupation, weight, number of living children, desire for more children, outcome of last pregnancy and initial source of information

about implanon. The data was collected using a Proforma and entered and analysed using IBM SPSS Statistical software version 20.0, NY, USA 2011. The data were presented in tabular form as frequency and percentage.

RESULTS

During the study period, 4091 clients accepted contraceptive methods, of these 601 clients used Implanon; representing 14.7% of new contraceptive acceptors.

Some of the clients 201(33.4%) were aged 20-24 years; 181(30.2%) aged 25-29, while only 22(3.7%) were aged more than 40 years. Majority of them 476(79.2) were para1-4.

Less than half 242 (40.3%) had 2 to 3 living children, only 5 (0.8%) had no living child. Five hundred and sixty three (93.7%) desired more children on discontinuation of the method, 37(6.1%) would not want more children, while only one (0.2%) was undecided. A large proportion of the clients 481(80.0%) had a secondary education; non-literate women constituted only 36(6.0%), and they were married. Four hundred and fifty three (75.4%) were Muslims as shown in Table I.

TABLE I: Socio-demographic characteristics of Implanon acceptors

Variable	frequency	percentage
Age		
20-24	201	33.4
25-29	181	30.2
30-34	136	22.6
35-39	61	10.1
>40	22	3.7
TOTAL	601	100.0
Parity		
0	10	0.2
1-4	476	79.2
>5	124	20.6
TOTAL	601	100.0
Need for more children		
Yes	563	93.7
No	37	6.1
Undecided	1	0.2
TOTAL	601	100.0
Number of living children		
Non	5	0.8
1	164	27.3
2-3	242	40.3
>4	190	31.6
TOTAL	601	100.0
Education		
Non-formal	36	6.0
Primary	79	13.2
Secondary	481	80.0
Tertiary	5	0.8
TOTAL	601	100.0
Religion		
Islam	453	75.4
Christian	141	23.4
Others	7	1.2
TOTAL	601	100.0

Among the Implanon acceptors, majority 496(82.5%) had spontaneous vaginal delivery during their last pregnancy, while 105 (17.5%) had caesarean section. The women were of body weight of between 40 to 102 kg. Only 38 (6.3%) were above 80 kg in weight.

TABLE II: Weight and Mode of last delivery

variable	frequency	percentage
Weight in kilogram		
40-49	173	28.8
50-59	164	27.3
60-69	153	25.5
70-79	73	12.1
>80	38	6.3
TOTAL	601	100.0
Mode of last delivery		
SVD49682.5		
C/S10517.5		
TOTAL	601	100.0

The commonest source of information about implanon was clinical personnel 462(76.9%), followed by friends/relations 63(10.5%) and electronic media 62(10.3%); print media constituted the least source of information 14(2.3%) as seen in table III.

TABLE III: Source of Information about Implanon

Source	frequency	percentage
Clinical personnel	462	76.9
Friend /relation	63	10.5
Electronic media	62	10.3
Print media	14	2.3
TOTAL	601	100.0

Table IV: Four -year trend of the contraceptive and Implanon use at the ATBUTH

Year	Total No of New Contraceptive acceptors	No of implanon users
January 2010-December 2010	372(9.1%)	20(3.3%)
January 2011-December 2011	1112(27.2%)	91(15.2%)
January 2012-December 2012	1295(31.61%)	150(25%)
January 2013-December 2013	1312(32.1%)	340(56.5%)
Total	4091(100.0%)	601 (100.0%)

In the first year of introduction of Implanon in the center, Implanon users were only 20(representing 3.3% of total contraceptive acceptors).There was an upsurge of acceptance, 91 clients (15.2% of acceptors) in the second year and 150(25% of acceptors) in the 3rd year; in the 4th year, 340(56.5% of acceptors) used Implanon.

DISCUSSION

The acceptance of Implanon in this study was 14.7%; this is higher than 4.1 and 13% recorded in Porthartcourt and Jos respectively^{11,12}. The acceptance of Implanon is rising and this may be due to increase awareness among the clients about the method.

The women in this study were aged 20 to 45 years, with most of them being in the age range of 20 to 34 years. This represents the peak reproductive age that most likely in need of contraception. It is also in keeping with finding of earlier study¹³ and reflect the practice of early marriage in the community where the study was carried out.

Majority of the clients were multiparous, had more than 2 living children and were also desirous of having more pregnancy. These findings are in keeping with earlier studies^{11,12}. The likely reason for these is the fact that Implanon offers long but reversible contraception which makes it suitable for clients who have living children but would not want permanent method. All the clients were married and almost all were educated up to secondary school level. These findings are consistent with findings from some other studies.^{13,14,15} The educated women are more likely to be aware and accept contraception while married women are more likely to accept regular contraception for spacing when compared with single women. Non literate women constituted about 6% of the acceptors, this is higher than the Jos study and may probably reflect the general non acceptance of

contraception by women who have no formal education.¹²

Our study revealed that clients who weighed more than 70 Kg accepted Implanon, signifying that weight is not an impediment to offering Implanon, also that it has good pearl index. This finding concurs with that of a previous study.¹²

Many of the clients obtained their information about Implanon from the clinical personnel; this was similar to findings in earlier studies.^{11,13} However it is in contrast to finding in Urban community in South-Western Nigeria where the mass media was the predominant source of information.¹⁶ Most probably the study community is reluctant to use mass media or there may be no active mass media family planning campaign in the community.

The yearly distribution of acceptors of Implanon showed progressive increase in the four years of the review. This reflects increasing acceptance of Implanon amongst the clients, which is in agreement with finding of others.^{11,17}

CONCLUSION: Implanon was an acceptable contraception to women in all reproductive age group. Contraceptive knowledge was mainly from clinical personnel. Concerted efforts should be made to intensify publicity through both electronic and printed media so that information dissemination to increase awareness and knowledge about contraception can be achieved in study area.

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