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RESEARCH ARTICLE

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IMPLANON UPTAKE AND DETERMINANTS AMONG FAMILY PLANNING CLIENTS AT THE FEDERAL MEDICAL CENTRE, YENAGOA NIGERIA

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ABSTRACT

Background: Contraceptive use plays a vital role in reducing unintended and high-risk pregnancies, unsafe abortions, and consequently maternal morbidity and mortality. Implanon is a single-rod subdermal implant that provides long-acting reversible contraception for women. **Aim:** This study aimed to determine the uptake of Implanon and to assess the sociodemographic characteristics of users, previous contraceptive methods, reasons for choosing Implanon, and sources of information. **Study Design:** A descriptive retrospective study conducted among clients who accessed family planning services at the Federal Medical Centre, Yenagoa, over a three-year period from 1st January 2018 to 31st December 2020. **Results:** During the study period, 1,281 clients attended the family planning clinic for contraception, of whom 95 chose Implanon, yielding an uptake rate of 7.4%. The mean age of Implanon users was 33.4 years (range: 20–49 years), with the highest proportion (32.6%) aged 30–34 years. Most users had at least secondary education (50.5%), while 28.4% attained tertiary education. Christians accounted for 95.8% of users, and uptake increased with increasing parity. Over half of the users (54.7%) had no prior contraceptive experience, whereas injectables were the most commonly used method among previous users (32.6%). Information about Implanon was predominantly obtained from clinic personnel (69.5%), and the primary reason for choosing the method was child spacing (68.4%). **Conclusion:** Implanon uptake was low and is influenced by educational status, with higher use among multiparous women in their third decade.

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INTRODUCTION

Contraceptive practices have existed for centuries; however, the twentieth century marked the introduction of modern family planning services (Balogun et al., 2014). Despite these advances, the unmet need for contraception remains substantial, particularly in developing countries. In sub-Saharan Africa, including Ethiopia, persistent reproductive health challenges contribute to high maternal mortality rates, elevated total fertility rates, and a significant burden of unintended pregnancies (Yalew et al., 2015 and Mengstu, 2018). In Nigeria, contraceptive prevalence remains low, with marked disparities between rural (9%) and urban (27%) populations (Kate, 2018). Furthermore, access to the most effective contraceptive methods is often limited (World Health Organization, 2012). Consequently, contraceptive use continues to represent a critical strategy for reducing maternal morbidity and mortality (Mumuni, 2019 and Ahmed, 2015). Implanon is a single-rod, progestogen-only subdermal contraceptive implant measuring 40 mm in length and 2 mm in diameter, containing 68 mg of etonogestrel embedded in an ethylene-vinyl acetate matrix (Mumuni, 2019). It provides effective contraception for up to three years by delivering sufficient hormone levels to consistently suppress ovulation.

Additional mechanisms of action include cervical mucus thickening and inhibition of estradiol-mediated endometrial maturation (Balogun, 2018; Kassa et al., 2018 and Sam, 2014). Compared with other contraceptive methods, Implanon offers several advantages, including high efficacy independent of user adherence, low discontinuation rates, minimal need for follow-up visits, cost-effectiveness, and rapid return of fertility following removal (Anudha, 2019). Although the Pearl Index for Implanon is reported to be nearly zero, rare cases of contraceptive failure have been documented (Adebola, 2015). Similar to other progestogen-only methods, Implanon is particularly suitable for women with contraindications to estrogen-containing contraceptives (Adebola, 2015). Beyond contraception, Implanon provides additional health benefits such as reduction in sickle cell crises through improved red blood cell stability and circulation (Adebola, 2015). Evidence suggests that women prefer Implanon because it does not interfere with sexual activity, does not require daily compliance, and offers long-term protection (Anudha, 2019 and Adebola, 2015). The method is generally well tolerated, with commonly reported side effects including menstrual irregularities, amenorrhea, weight changes, and transient alterations in lipid profiles (Adebola, 2015). Improving Implanon uptake requires comprehensive contraceptive counseling, adequate training of healthcare providers in insertion and removal

techniques, and consistent availability within health facilities. Access to long-acting reversible contraceptives may also be enhanced by eliminating unnecessary procedural barriers, such as multiple clinic visits and routine pre-insertion investigations (Parks, 2016).

Objectives

- To assess the rate of Implanon uptake among family planning clients.
- To describe the sociodemographic characteristics of clients who accepted Implanon.
- To identify the contraceptive methods previously used by the clients.
- To examine clients' reasons for choosing Implanon as a contraceptive method.
- To determine the sources of information on Implanon among the clients.

MATERIAL AND METHODS

This was a descriptive retrospective review of records of clients who attended the family planning unit of the Federal Medical Centre, Yenagoa, over a three-year period from 1st January 2018 to 31st December 2020. Ethical approval was obtained from the hospital's Ethics and Research Committee prior to the commencement of the study. Relevant information was extracted from the family planning record booklets and patients' case notes. Data collected included age, parity, previous contraceptive use, source of information on Implanon, and reasons for choosing the method. The extracted data were entered into a structured proforma, coded, and analyzed using the Statistical Package for Social Sciences (SPSS) version 25.0 for Windows.

RESULTS

During the study period, a total of 1,281 clients accessed contraceptive services at the family planning clinic, of whom 95 chose Implanon, resulting in an uptake rate of 7.4%.

Table 1.

Age	Frequency	Percentage (%)
15 – 19	1	1.1
20 – 24	8	10.5
25 – 29	18	15.5
30 – 34	32	32.6
35 – 39	24	29.2
≥40	12	11.6
Level of education		
None	3	3.2
Primary	17	17.9
Secondary	48	50.5
Tertiary	27	28.4
Religion		
Christianity	91	95.8
Islam	1	4.2
Parity		
0	2	2.1
1	6	6.3
2	33	34.7
3	15	15.8
4	30	31.6
≥5	9	9.5
Previous contraceptive use		
Yes	43	45.3
No	52	54.7
Previous method used		
Injectable	14	32.6
Pills	3	6.9
Male condoms	10	23.3
Iud	2	4.7
Implanon	9	20.9
Jadelle	5	11.6

Source of information about method		
Clinic personnel	66	69.5
Outreach personnel	8	8.4
Print media	13	13.7
Friends/relatives	6	6.3
Not stated	2	2.1
Reasons for the choice		
Child spacing	65	68.4
Completed family size	27	28.4
Prevent pregnancy	3	3.2

The mean age of Implanon users was 33.4 years, with ages ranging from 20 to 49 years. The highest proportion of users (32.6%) belonged to the 30–34-year age group. Most of the clients had at least secondary education, accounting for 48 (50.5%), while 27 (28.4%) had tertiary education, 17 (17.9%) had primary education, and 3 (3.2%) had no formal education. The majority of the users were Christians (95.8%), while Muslims constituted 4.2%. Uptake of Implanon increased with increasing parity. More than half of the clients, 52 (54.7%), had no prior history of contraceptive use, while 43 (45.3%) had previously used other methods, with injectable contraceptives being the most common (32.6%). Most users, 66 (69.5%), received information about Implanon from clinic personnel. The predominant reason for choosing Implanon, reported by 65 (68.4%) of the clients, was child spacing.

DISCUSSION

A total of 1,281 clients accepted the family planning services offered, with 95 selecting Implanon, resulting in an uptake rate of 7.4%. This rate is higher than that reported in Ilorin, where only 3.6% of contraceptive users chose Implanon (Balogun, 2014), but lower than the 14.7% documented in a study from India (Bhatia, 2011). The relatively higher uptake in this study may be attributed to direct interaction between family planning personnel and clients, whether they visited the clinic voluntarily or were referred, which may have facilitated counseling and acceptance. Additionally, women with unmet contraceptive needs may be more willing to adopt newer methods due to campaigns emphasizing their minimal side effects and ease of use¹³. In this study, Implanon use was most prevalent among women aged 30–34 years, accounting for 32.6% of users. This finding aligns with a study conducted in Abuja (Jumbo, 2021), but contrasts with reports from Enugu (Okafor, 2016) and Borno (Isa, 2020). Uptake was lowest among women aged 15–19 and 20–24 years, suggesting that age influences adoption, as older women are more likely to have achieved their desired family size and make informed fertility decisions. The attitude of clinic staff and fear of stigmatization may also contribute to these differences. Most clients (50.5%) had attained secondary education, while a small proportion (3.2%) had no formal education, consistent with findings from Gambia (Anyanwu, 2014). This underscores the importance of awareness, understanding, and access to information in influencing Implanon uptake. The majority of acceptors were Christians (95.8%), while Muslims accounted for only 4.2% of users. This pattern agrees with a study in Eastern Nigeria (Okafor, 2016) but differs from findings in Northern Nigeria (Jumbo, 2019), likely reflecting the predominantly Christian population in the study area and cultural practices in some Muslim communities that limit women's access to family planning services (Fasubaa, 2018). Uptake was also higher among multiparous women, which aligns with similar studies conducted in Nigeria (Balogun, 2014 and Mumuni, 2019).

In this study, 54.7% of women had never previously used any form of contraception, while injectables were the most commonly used method among those with prior contraceptive experience (32.6%) (Isa, 2020). Most clients (62.9%) reported that clinic personnel provided information about Implanon, consistent with studies in Gambia (Anyanwu, 2017) and Northern Nigeria (Mohammed). These findings highlight the need for broader public education and sensitization on the availability and benefits of different contraceptive options. The primary reason for choosing Implanon was child spacing

(68.4%), in agreement with the findings of Anyanwu et al.¹⁷. Implanon is a highly effective, long-term, reversible hormonal contraceptive suitable for diverse groups of women and generally well-tolerated. However, its advantages remain underutilized due to low uptake among contraceptive users¹. Increasing awareness and acceptance of Implanon will require continued public education and outreach initiatives.

CONCLUSION

Implanon uptake among family planning clients was relatively low, with higher acceptance among older, multiparous, and educated women. Direct counseling by clinic personnel significantly influenced acceptance, and child spacing was the main reason for choosing Implanon.

Recommendations

To increase Implanon uptake, targeted awareness campaigns on long-acting reversible contraceptives should focus on younger and nulliparous women, highlighting Implanon's safety, efficacy, and convenience. Strengthening the training of clinic personnel in counseling and insertion, alongside community outreach and engagement of religious and community leaders, can improve acceptance and address cultural or informational barriers.

Author Contributions

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