

## CHOICE OF CONTRACEPTIVES: A STUDY OF THE EXPERIENCES OF MOTHERS AT ANTENATAL CLINICS IN A NIGERIAN TOWN

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### ABSTRACT

**Background:** Increased use of contraceptives in developing countries as family planning tools has significantly reduced maternal mortality rates and increased infant survival in sub-Saharan Africa. Currently available family planning options include: oral contraceptive pills, injectable contraceptives, implants, condom for males, female condom, diaphragms, spermicides, intra-uterine devices, periodic abstinence or safe period, and sterilization (vasectomy and bilateral tubal ligation for males and females respectively). Frequently the choice of contraceptive depends more on the woman and a number of factors could influence the choice she makes. As part of a bigger project, we investigated the patterns and determinants of choice of contraceptives

by mothers at antenatal clinics in Enugu, a major town in Nigeria. **Methods:** The study was a cross-sectional survey conducted in Enugu and was clinic based. Data analysis was done using SPSS version 20 computer software. Statistical differences were determined at  $p < 0.05$ . **Results:** The method of family planning used most commonly by the women ( $n=216$ ) was periodic abstinence/safe period (41.2%), which is a natural method. This was followed by condom for males (25%), oral contraceptives (17.6%), hormonal implants (14.4%), and injectable hormonal injections (13.4%). The least frequently used were diaphragms/cervical caps (0.9%) and spermicides (4.2%). The choice of contraceptives was associated with educational level attained by the mothers for the use of intra-uterine contraceptive device (loop), sterilization, as well as periodic abstinence. Parity was on the other hand negatively associated with the choice of spermicides and oral contraceptives.

**KEYWORDS:** Contraceptives, antenatal clinic, women, family planning, Nigeria.

## INTRODUCTION

The use of contraceptives has become part of life in human society in most nations of the world, particularly in the context of family planning. Increased use of contraceptives in developing countries has cut the number of maternal deaths by 40% over the past 20 years, and appreciably improved infant survival rates.<sup>[1]</sup> This trend needs to be further improved.<sup>[2, 3]</sup>

Currently family planning options include: oral contraceptive pills, injectable contraceptives, implants, condom for males, female condom, diaphragms, spermicides, intra uterine devices or loop coil, periodic abstinence or safe period, and sterilization (bilateral tubal ligation or vasectomy).<sup>[4]</sup> These all fall into either of two broad categories: short-term methods or long-acting reversible/permanent methods.<sup>[5]</sup>

Over the years, the benefits of limiting family size and spacing out childbirths have encouraged most couples to adopt one or more methods of family planning. Frequently the choice of contraceptive depends more on the woman and a number of factors could influence the choice of family planning method.<sup>[6]</sup>

In this paper we report our findings, part of a larger study, on the patterns and determinants of choice of contraceptive by mothers at antenatal clinics in Enugu a major town in Nigeria.

## METHODS

The study was a cross-sectional survey conducted in Enugu from April 2017 to July 2017 using pre-validated questionnaire. Enugu is a major town in south-eastern Nigeria. The study was based in three key hospitals that had busy and well attended antenatal clinics chosen by multistage random sampling to include both public and private hospitals within the metropolis. The target population was women who attended antenatal clinics in the urban areas of the town. Research personnel obtained authorization from hospital officials in order to distribute the questionnaires to women who were in attendance at their prenatal clinics. There was no coercion on prospective respondents and only the women who gave informed consent completed the questionnaire.

Data analysis was done using Epi info and SPSS version 20 computer softwares. Statistical differences were determined at  $p < 0.05$ .

## RESULTS AND DISCUSSION

The number of women who completed the questionnaires was two hundred and sixteen as shown in Table 1. Over eighty percent of them) were urban residents and more than ninety percent of them (95.5%) had some formal education at least up to primary school level. The category of those who had no formal education constituted only 0.5%. As expected they were all within the reproductive age bracket with virtually all of them (95.5%) being between 18 years and 45 years old. Interestingly 6.0% were single; widows were 0.9%, while the grand majority (93.1%) were married women. Women who were pregnant for the first time (primigravida) made up 29.2% of the respondents, whereas the mothers who had had more than five or more pregnancies (grand multiparous women) were only 5.6% of respondents.

The method of family planning used most commonly by the women (n=216) at some point in life prior to their current pregnancy was periodic abstinence/safe period (41.2%), which is a natural method. This was followed by condom for males (25%), oral contraceptives (17.6%), hormonal implants (14.4%), and injectable hormonal injections (13.4%). The least frequently used were diaphragms/cervical caps 0.9%) and spermicides (4.2%) as shown in Table 2.

It is noteworthy that hormonal contraceptives (altogether 45.4%) were actually the most popular methods used by the study participants when the various hormone-based options were summed up. Condom for males though popular among our study participants has a lower success rate than the hormonal methods,<sup>[4]</sup> but has the advantage of preventing transmission of some sexually transmitted diseases.<sup>[7]</sup> Hormonal implants, and intrauterine devices impregnated with anti-fertility hormonal agents (intra-uterine contraceptive devices), and sterilization are the most effective contraceptive methods available. Contraceptive pills, injectable hormonal preparations, and some of the other methods were also considered highly effective contraceptives when used correctly.<sup>[8-11]</sup>

Among the married, single mothers, and widowed respondents, positive association of marital status was observed only in the use of injectable contraceptives where 79.3% of married women had chosen intramuscular injection forms of contraception (Table 3). The choice of contraceptives was associated with educational level attained by the mothers for the use of intra-uterine contraceptive device (loop), sterilization, as well as periodic abstinence in which higher education favoured the choice of those methods as in Table 4. Parity was on the other hand negatively associated with the choice of spermicides and oral contraceptives (Table 5).

As the uptake of family planning services in our nation has been reported to be low compared to what is obtainable in some Western nations.<sup>[12-15]</sup> More efforts need to be made to achieve a sustained optimal utilization of the services including continuing education of women at antenatal clinic visits and in other fora.<sup>[6, 12]</sup> There should be emphasis on assisting women to be able to make informed choices concerning safety and real world effectiveness of the available methods of family planning.<sup>[1, 10, 16, 17]</sup>

**Table 1: Personal characteristics of respondents.**

<b>Characteristics</b>	<b>Frequencies (%)</b>
<b>Age (years)</b>	
Less than 18	1 (0.5)
18-31	127 (58.8)
32-45	88 (40.7)
<b>Total</b>	<b>216 (100.0)</b>
<b>Marital Status</b>	
Married	201 (93.1)
Single mother	13 (6.0)
Widow	2 (0.9)
<b>Total</b>	<b>216 (100.0)</b>
<b>Level education</b>	
No formal	1 (0.5)
Primary education	9 (4.2)
Secondary education	67 (31.0)
College education	20 (9.3)
Polytechnic	47 (21.8)
University	72 (33.3)
<b>Total</b>	<b>216 (100.0)</b>
<b>Place of residence</b>	
Enugu Urban	184 (85.2)
Rural Area	32 (14.8)
<b>Total</b>	<b>216 (100.0)</b>
<b>Ever Pregnant before</b>	
Yes	171 (79.2)
No	45 (20.8)
<b>Total</b>	<b>216 (100.0)</b>
<b>Position of the Current pregnancy</b>	
First	63 (29.2)
Second	51 (23.6)
Third	47 (21.8)
Fourth	32 (14.8)
Fifth	12 (5.6)
No response	11 (5.1)
<b>Total</b>	<b>216 (100.0)</b>

**Table 2: Distribution of family planning methods Ever used in the past by respondents.**

Method of family planning	Ever used before	
	Frequencies	Percentage (%)
Oral contraceptives	38	17.6
Injectable contraceptives	29	13.4
Implants	31	14.4
Condom for males	54	25.0
Female condoms	26	12.0
Diaphragms or cervical caps	2	0.9
Spermicides	9	4.2
Loop coil or intra uterine device	15	6.9
Periodic abstinence or safe period	89	41.2
Sterilization	14	6.5

**Table 3: Association of family planning methods used to Marital status.**

Method of family planning	Marital status			Fisher's exact / Chi-square (p-value)
	M	SM	W	
Oral contraceptives	33(86.8)	5(13.2)	0(0.0)	4.524(0.104)
Injectable contraceptives	23(79.3)	6(20.7)	0(0.0)	12.97(0.002)
Implants	31(100.0)	0(0.0)	0(0.0)	2.701(0.259)
Condom for males	52(96.3)	1(1.9)	1(1.9)	2.825(0.244)
Female condoms	25(96.2)	1(3.8)	0(0.0)	0.536(0.765)
Diaphragms or cervical caps	2(100.0)	0(0.0)	0(0.0)	0.151(0.927)
Spermicides	9(100.0)	0(0.0)	0(0.0)	0.701(0.704)
Loop coil or intra uterine device	15(100.0)	0(0.0)	0(0.0)	1.203(0.548)
Periodic abstinence or safe period	82(92.1)	7(7.9)	0(0.0)	2.273(0.321)
Sterilization	8(57.1)	6(42.9)	0(0.0)	35.969(0.000)

**Table 4: Association of family planning methods used versus educational attainment.**

Method of family planning	NFE	P. Sch.	S. Sch.	COE	Poly	Uni	Fisher's exact / Chi-square
Oral contraceptives	1(2.6)	2(5.3)	11(28.9)	4(10.5)	12(31.6)	8(21.1)	9.091(0.105)
Injectable contraceptives	0(0.0)	0(0.0)	14(48.3)	2(6.9)	9(31.0)	4(13.8)	10.130(0.072)
Implants	0(0.0)	1(3.2)	12(38.7)	1(3.2)	4(12.9)	13(41.9)	4.466(0.484)
Condom for males	0(0.0)	2(3.7)	18(33.3)	4(7.4)	12(22.2)	18(33.3)	0.769(0.979)
Female condoms	0(0.0)	0(0.0)	8(30.8)	3(11.5)	4(15.4)	11(42.3)	2.801(0.731)
Diaphragms/cervical caps	0(0.0)	0(0.0)	0(0.0)	0(0.0)	1(50.0)	1(50.0)	1.815(0.874)
Spermicides	0(0.0)	1(11.1)	7(77.8)	0(0.0)	1(11.1)	0(0.0)	12.24(0.032)
Loop coil or intra uterine device	0(0.0)	0(0.0)	1(6.7)	0(0.0)	2(13.3)	12(80.0)	16.378(0.006)
Periodic abstinence or safe period	0(0.0)	5(5.6)	15(16.9)	12(13.5)	18(20.2)	39(43.8)	19.332(0.002)
Sterilization	0(0.0)	0(0.0)	0(0.0)	3(21.4)	7(50.0)	4(28.6)	13.320(0.021)

**Table 5: Association of family planning methods used to parity.**

Method of family planning	Parity					Fisher's exact/ Chi-square (P-value)
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	≥ 5 <sup>th</sup>	
Oral contraceptives	18(47.4)	12(31.6)	7(18.4)	0(0.0)	1(2.6)	13.565(0.009)
Injectable contraceptives	12(42.9)	8(28.6)	5(17.9)	2(7.1)	1(3.6)	3.871(0.424)
Implants	11(35.5)	5(16.1)	12(38.7)	2(6.5)	1(3.2)	7.754(0.101)
Condom for males	21(39.6)	9(17.0)	15(28.3)	7(13.2)	1(1.9)	6.717(0.152)
Female condoms	10(38.5)	6(23.1)	9(34.6)	1(3.8)	0(0.0)	6.775(0.148)
Diaphragms or cervical caps	0(0.0)	1(50.0)	1(50.0)	0(0.0)	0(0.0)	2.212(0.697)
Spermicides	8(88.9)	1(11.1)	0(0.0)	0(0.0)	0(0.0)	15.256(0.004)
Loop coil or intra uterine device	0(0.0)	1(6.7)	11(73.3)	3(20.0)	0(0.0)	26.214(0.000)
Periodic abstinence or safe period	27(31.4)	24(27.9)	23(26.7)	8(9.3)	4(4.7)	5.651(0.227)
Sterilization	3(21.4)	6(42.9)	4(28.6)	1(7.1)	0(0.0)	4.154(0.386)

## CONCLUSION

The literacy rate of our sample population is very impressive and most of the mothers attending antenatal clinics were in a current marriage relationship. The most popular methods of family planning among the women were the hormonal methods (contraceptive pills, injectable contraceptives and hormonal implants. Level of maternal education and parity were influential factors in choice of contraceptives. As some not-so-effective methods were also popular among the women in this study, further health education at the clinics and other fora would help to improve choice of appropriate and effective methods of family planning.

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