Original Research Article

Prevalence, Pattern and Determinants of Contraceptive Use among Women of Reproductive Age (15-49 Years) In Rural Communities in Imo State, Nigeria

Chukwuma B. Duru[1], Obiageli F. Emelumadu[2], Anthony C. Iwu[1], Ikechi Ohanle[3], Chuka C. Agunwa[3], Ernest Nwaigbo[3], Emmanuel N. Ndukwu[3]

[1]Department of Community Medicine, Imo State University, Owerri, Imo State, Nigeria
[2]Department of Community Medicine, Nnamdi Azikiwe University Awka, Anambra State, Nigeria
[3]Department of Community Medicine, Imo State University Teaching Hospital, Orlu Imo State, Nigeria
[3]Department of Community Medicine, University of Nigeria, Nsukka, Enugu state, Nigeria

Corresponding Author: Chukwuma B. Duru

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ABSTRACT

Introduction: This rapid increase of population has an adverse effect on the national economy and also the increasing number of births has a deleterious effect on the health of the mother, which in turn hinders social and economic uplift of the family.
Aim: To assess the prevalence, pattern and determinants of contraceptive use among women of reproductive age in rural communities of Imo State, Nigeria.
Methodology: The study was a community based descriptive cross-sectional study involving 563 women of reproductive age who met the inclusion criteria and were selected using a multistage sampling technique. The data was collected with a pretested, semi-structured and interviewer administered questionnaire and was analyzed using EPI-INFO version 3.2.1. A p–value ≤0.05 was considered significant.
Results: Most of the women, (96.1%) were aware of family planning and the common methods known were; injections (53.8%), condoms, (52.2%) and Intra Uterine Contraceptive Device, (33.2%). The prevalence of ever use and current use of family planning was 42.5% and 19.4% respectively and the commonest ever and currently used method was the condom (43.9% vs 36.7%). Determinants of current contraceptive use in this study were; educational level of women and their partners, religion of women, family size and number of male children, ever use of contraceptive method, contraceptive knowledge, being able to access and pay for family planning services without partners financial support, prior discussion of family planning with partner, and partner being in support of modern family planning methods use.
Conclusion: Most of the determinants of contraceptive use found in this study can modified by appropriate intervention programs.

Key Words: Determinants, contraceptive use, women, rural communities, Imo state.

1.0 INTRODUCTION

The practice of family planning is said to be as old as life itself. It dates back to ancient civilization in which infanticide was practiced, twins infants were killed, the Hebrews practiced withdrawal method while the Egyptians used honey, gums and fabrics which were inserted into the vagina in an attempt to block sperm from reaching the cervix. [1] The act of family planning in ancient times were evil and illegal and were prohibited by many nations of the world largely due to religious, cultural and traditional beliefs. [2] The above practices encouraged population growth, and explosion, leading to food scarcity and famine, high maternal and infant mortalities and general hardship. With increasing population related problems, many pressure groups or movements emerged in the late

19th and early 20th century in different parts of the world calling for the legalization and liberalization of the family planning methods use in these nations. [2] All these efforts culminated to the establishment of legal precedent that allowed physicians to provide advice on contraception for health reasons and right to prescribe family planning methods in many nations of the world. [2-6] Despite advances in contraception, maternal and child health, indices continued to rise globally with sporadic growth in population leading to discussions on issues concerning family planning in several world gatherings. The United Nations Conference at Tehran in 1968 recognized family planning as a basic human right, this was also declared at Bucharest Conference on World Population held in August 1974 and re-entreated in the World Women Conference in 1975. [7,8] The International Conference on Population and Development in Cairo, 1994 focused international attention on the full scope of family planning that can be addressed during delivery of family planning services including reproductive and primary care concern, of which its communiqué was adopted by member countries and implemented by many. [9] Nigeria has been among the League of Nations that adopted some of these conference agreements yet the use of contraception has remained consistently low for almost two decades steading now at 15% for use of all methods. [10-13] This low contraceptive prevalent rate coupled with other factors could be responsible for the high fertility rate of 5.5 reported in the country,(6.2 in rural areas), high natural growth rate of 2.4%, and estimated large population of 177.5 million in 2014. [14,15] Nigeria is one of the countries with the poorest health indices globally and its currently ranked 187th out of 191 as the country with one of the poorest health indicators in the world. [16] These poor indices could be related to problems of high fertility rate, population explosion, deprivation of scarce resources and overall poor health service delivery. There are several factors that could influence contraceptive use which range from socio-demographic/economic factors to health care based factors. Some of the factors that had been found to significantly influence contraceptive use among women of reproductive age in general were; age of women, [17-24] marital status, [19, 22, 23, 25, 26] religion, [17, 18,20,23, 26,27] educational status of women, [18,19,21-24,26, 28-34] level of knowledge of women about family planning, [17,20,28,29,34] socioeconomic status of women (monthly income, occupation of women, ownership of household items, and wealth index), [17,18,21,23,25,30,34] fertility related issues (parity of women, family size, number of males, age at marriage, and years of marriage), [17,18, 21,23,24,26,31,31] place of residence of women/region of the country of respondent, [23-25,31] tribe of respondents, [22,25] family setting (monogamy or polygamy), [27] and attitude of women towards family planning use. [29] Factors concerning place of service or health care delivery like quality of service rendered, proximity of service point, friendliness of care providers, [17] and availability of family planning services, [29] were also found to influence the use of family planning services.

Other factors reported to have influence on contraceptive use were issues related to males/ partners; partners/spousal approval of the use of family planning services, [17,20,28,31,33] prior discussion with partner, [31] Husbands occupation [33] and husbands level of education. [24, 31]

Thus the aim of this study was to assess the prevalence, pattern and determinants of contraceptive use among women of reproductive age (15-49years) in rural communities of Imo State, Nigeria with a view of generating data that will help policy makers to develop policies that could help improve the use of contraceptive methods in the state.

2.0 METHODOLOGY
2.1 Description of Study Area

Imo State is one of the 36 States of Nigeria and it's located in the South Eastern Region of the country. It has a total population of about 3.93 million people, comprising more males than females (2.03 million and 1.9 million people respectively). It has a population growth rate of 2.89 from 1991-1998 and 3.0 from 1999-2005. More than 60% of the people in the state live in the rural areas. [35,36] The State is made up of 27 Local Government Areas with 22 of them being rural in nature. [35] Mbaitoli Local Government Area is a rural local government area in the state with a total population of 237, 555 people. The female population is 115516 people as at 2006. [35] The number of enumeration areas (EA) as demarcated by the National population commission in 2006 was 1387. The major occupation of the people are farming and trading and their main religion is Christianity.

2.2 Study design/ study population/ Inclusion criteria

The study was a community based descriptive cross-sectional survey. All women of reproductive age (15-49years) whether married or single were included in this survey. For an individual to be selected she must have been resident in the enumeration areas selected for the study for at least a period of one year prior to commencement of research.

2.3 Minimum sample size estimation

Using the Cochran sample size formula for populations greater than 10,000 [37] and proportions of women in reproductive age group in South East Nigeria who are currently using any form of contraception among rural dwellers, to be 8.3%; [19]

Z^2pq/d^2

Where; n = Sample size to be estimated, p= Proportion of women within reproductive age group currently using any form of contraceptive method: Rural (8.2%), [19] q=1-p= 0.92, Z= Standard normal deviate corresponding to 95%

Significance Level ≅ 1.96, d= level of precision desired for the study set at 0.05. Thus the minimum sample size was 476. Anticipating a non-response rate of about 20% for this study, a total sample size of 563 was used. This was to cover for missing and incorrectly filled questionnaires.

2.4 Sampling technique.

The sampling technique used for this study was multistage sampling technique. The first stage involved the selection of the Local Government Area (LGA) that was used for the study. The Local Government Areas were grouped into 2 categories. Category A, were made up of 5 urban Local Government Areas and category B, consisting of 22 rural Local Government Areas. From category B, Mbaitolu LGA was selected using simple random sampling technique by balloting.

The second stage involved the selection of the primary sampling units from the LGA. The enumeration areas (EA's) which are geographic clusters that have been clearly demarcated by the National Population Commission (NPC), served as the primary sampling units. Then using simple random sampling technique, twenty EA's were selected from 1387 EA's in the LGA.

The third stage involved the selection of the respondents that were interviewed. Thus a total of 28 respondents per EA from the LGA were recruited. In each of the selected EA's, a random starting point was determined in the field by the supervisor using a community landmark such as village square, church, market, school or streets and movement was in a clockwise direction. Eligible respondents were consecutively recruited and interviewed until the required sample size for the selected EA was achieved. In any EA where the required sample size could not be obtained, simple random sampling was used to select another EA outside those previously selected and studied until the required size for that EA was completed. Only one eligible respondent per household was interviewed during the survey. If a

household had more than one eligible respondent, only one was randomly selected by simple balloting.

2.5 Data collection process, techniques and analysis

There was proper community entry, sensitization and mobilization. Each eligible and consenting woman of reproductive age group was recruited and responses elicited from them using the semi-structured, interviewer administered questionnaire. The questionnaire was divided into 2 major sections, the first section was designed to obtain the socio-demographic characteristics of the respondents and the second section was designed to access the knowledge, awareness, practice and use of family planning services. The questionnaires were first translated to their native language (Igbo) then back translated to English to ensure that the original meanings of the research questions were maintained. This was to ensure validity and reliability of the study.

Data collected were cleaned and validated manually, while a computer software package (EPI INFO version 3.2.1) was used for data entry and analysis. Frequencies and percentages of relevant variables were generated and test associations of associations between variables were carried out using Chi-square and multiple regression analysis. For the purpose of this study, respondents who could not mention any family planning method were categorized as having poor contraceptive knowledge; correct mention of any two (2) or less was classified as fair contraceptive knowledge while correct mention of any three (3) or more was classified as having good contraceptive knowledge. A p-value ≤0.05 was considered significant.

2.6 Ethical consideration

Ethical clearance was obtained from the Ethics Committee of the Nnamdi Azikiwe University Teaching Hospital Nnewi (NAUTHEC) before the commencement of the study. In addition

before the questionnaires were administered, the concept of the study was carefully explained to each participant and written consent obtained from all the respondents. All authors hereby declare that the study was performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

3.0 RESULTS

Table 1: Socio-demographic/Economic characteristics of respondents

Variable	Frequency	Percentage
Age group (yrs)		
15-19	34	6.0
20-24	96	17.1
25-29	121	21.5
30-34	114	20.2
35-39	105	18.7
40-44	50	8.9
45-49	43	7.6
Total	**563**	**100**
Mean ±SD	**31.2±8.1**	
Marital Status		
Married	433	76.9
Single	109	19.4
Co-habiting	10	19.4
Previously married	11	2.0
Total	**563**	**100**
Educational status		
None	2	0.4
Primary	74	13.1
Secondary	416	73.9
Tertiary	71	12.6
Total	**563**	**100**
Employment status		
Employed	436	77.4
Unemployed	127	22.5
Total	**563**	**100**
Religion		
Christianity		
Catholics	261	46.3
Pentecostal	94	16.7
Orthodox	194	34.6
Others [1]	14	2.4
Total	**563**	**100**
Tribe		
Ibo	550	97.7
Hausa	8	1.4
Yoruba	5	0.9
Total	**563**	**100**
Monthly income		
<10000	346	61.5
10000 - 19999	79	14.0
20000 - 29999	25	4.4
30000 - 39999	19	3.4
≥40000	19	3.4
Unsure	75	13.3
Total	**563**	**100**
Median income	**5,520**	
No of living children (n=454)		
0	64	14.1
1-4	257	56.6
>4	133	29.3
Total	**454**	**100**
Mean ± SD	**4.2±1.1**	

Table 1 to be continued...		
No. of males(n-454)		
0	117	25.8
1-2	249	54.8
3-4	72	15.9
>4	16	3.5
Total	**454**	**100**
Mean ± SD	**1.8±0.6**	
Type of current marital union (433)		
Polygamy	17	3.9
Monogamy	416	96.1
Total	**433**	**100**
Currently staying together with husband (n=443)		
Yes	403	91.0
No	41	9.0
Total	**443**	**100**
Husbands level of Education (n=443)		
≤Primary	75	16.9
Secondary	306	68.9
Tertiary	63	14.2
Total	**443**	**100**
Husbands occupation (n=443)		
Employed	433	97.7
Unemployed	10	2.3
Total	**443**	**100**

Others[1]=Traditional religions, Muslims, Gray message, Eckanker etc

The mean age of the respondents was 31.2± 8.1 year with most of the women being currently married, 433 (76.9%). Majority of the women had secondary education, 402 (71.4%), were employed, 436 (77.4%), attends Catholic denomination, 261 (46.3%) and were of Igbo extraction, 550 (94.7%). The median monthly income of the respondent was 5,520 naira ($15) with majority of the women, 346 (61.5%) earning less than ten thousand naira ($30) per month. The average family size and number of males per women was 4.2±1.2 and 1.8±0.6 respectively with majority of them, 403

(91.0) staying with their husbands. Most of their husbands were; were employed, 433 (97.7%) and had secondary education, 306 (68.9%). Table1

Table 2: Awareness and knowledge about contraception

Variable	Frequency	Percentage
Ever heard about family planning (n=563)		
Yes	539	96.1
No	24	3.9
Total	563	100
**Family planning methods known (n=539)		
Injections	303	53.8
Pills	302	53.6
Condoms	294	52.2
IUCD Loops	187	33.2
Natural Method/Rhythm	136	24.2
Withdrawal Methods	111	19.7
Abstinence	59	10.5
Sterilization Methods	40	7.1
Exclusive Breastfeeding	26	4.6
Implants	26	4.6
Traditional Methods	21	3.7
Foam/Jelly /Spermicide	6	1.1
Diaphragm	4	0.7
Level of knowledge(n=539)		
Poor(none)	37	7.0
Fair (1-2methods)	199	36.9
Good (≥3)	303	56.1
Total	**539**	**100**

**=multiple response

Table2 above showed the level of awareness and contraceptive knowledge of the respondents. Majority of respondents, 539 (96.1%) have heard about family planning and the common methods known were, injections, (53.8%), condoms, (52.2%) and IUCD, (33.2%). More than half of the women, 303 (56.1%) had good knowledge about contraceptive methods.

Table 3: Education Attainment of Respondents and Contraceptive Knowledge

Educational level	Contraceptive knowledge of respondents				Statistics (χ^2)/
	Poor (%)	**Fair (%)**	**Good (%)**	**Total (%)**	**P-value**
≤Primary	10(14.5)	26(37.7)	33(47.7)	**69(100)**	**19.63**
Secondary	24(5.8)	157(39.9)	218(54.8)	**398(100)**	
Tertiary	2(2.6)	16(22.5)	53(74.7)	**71(100)**	**p=0.011***
Total	**37(7.0)**	**199(36.9)**	**303(56.6**	**539(100)**	

*=statistically significant

Contraceptive knowledge increased significantly with increase in educational attainment of respondents and those with tertiary education having better contraceptive knowledge than others, (X^2=19.63, p=0.011). Table 3

Table 4 showed the distribution of the women's views about issues concerning

male involvement in family planning. Majority of the respondents stated that their partners do nothing to delay pregnancy, 370 (65.7%) and that their partners were not in support of the use of modern family planning methods, 259 (54.0%). Most of the women, 477 (84.7%) agreed that their partners opinion is important in family

planning use and less than half of them, 254 (45.1%) agreed that they can access and pay for family planning services without their partners financial support. Only a few of them, 83 (14.7%) agreed that they can decide and use family planning services without their husbands consent, though less than half of them, 269 (47.8%) had ever discussed family planning methods use with their partners.

Table 4: Distributions of Respondents Views on Issues Concerning Male Involvement in Family Planning

Variable	Frequency(n=563)	Percentage
whether husband /partner do anything to delay pregnancy		
Yes	193	34.3
No	370	65.7
Total	**563**	**100**
Can you access and pay for family planning services without your partners financial support		
Yes	254	45.1
No	378	54.9
Total	**563**	**100**
Is your Husband's/Partner's opinion important in family planning use		
Yes	477	84.7
No	86	15.3
Total	563	**100**
Can you decide use family planning without their Husband/ Partner's Consent		
Yes	83	14.7
No	480	85.3
Total	**563**	**100**
Have you ever discussed Family Planning with Husband or Partner		
Yes	269	47.8
No	294	52.2
Total	**563**	**100**
Husbands/Partners is/are in support Modern Family Planning Methods		
Yes	259	46.0
No	304	54.0
Total	**563**	**100**
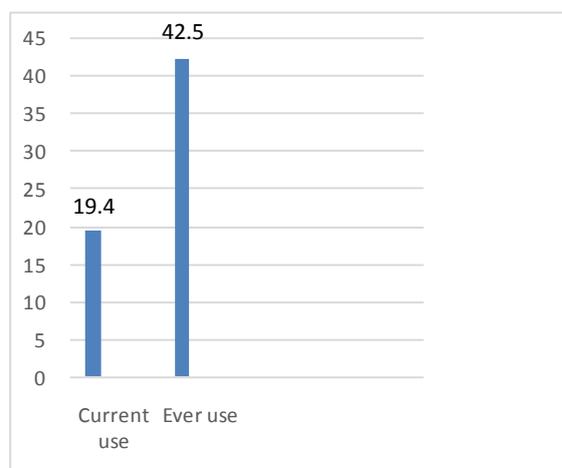
Figure 1: Contraceptive use among respondents

Figure one showed that the prevalence of ever use of any form of contraception was, 239 (42.5%) while that of current use was, 109 (19.4%).

Table 5: Contraceptive methods ever used and currently being used by respondents

**Contraceptive method	Ever used (n=239)	Currently used (n=109)
Condom	105(43.9)	40(36.7)
Injections	61(25.5)	21(19.3)
Pills	53(22.2)	19(17.4)
Rhythm	36(15.1)	14(12.8)
Withdrawal method	32(13.4)	16(14.7)
IUCD/loop	29(12.1)	17(15.6)
Breastfeeding	7(2.9)	2(1.8)
Abstinence	4(1.7)	1(0.9)
Traditional method	1(0.4)	1(0.9)

**=multiple response

The common contraceptive methods ever used and still currently being used were; condoms, (43.9%vs. 36.7%), injections, (25.5% vs. 19.3%) and pills, (22.2% vs. 17.4%). Table5

Table 6: Reasons for contraceptive method use and non-use

Variable	Frequency	Percentage
**Reasons for contraceptive method use (n=109)		
It is convenient	57	52.3
Easy to use	48	44.0
Has less side effects	14	12.8
It is cheap	14	12.8
It is effective	13	11.9
Recommended by friends and relatives	12	11.0
Can be used without partners knowledge	11	10.1
Recommended by Health Care Professional	10	9.2
Is easily reversible	8	8.3
** Reasons for not currently using any method (n=454)		
Want more children	196	43.5
Not married	64	14.2
Religious reasons	57	12.6
Pregnant	54	11.9
Health Problems/fear of side effects	45	9.9
Not convenient	43	9.5
Infrequent sex	36	8.0
Don't know method/source	24	5.3
Not sexually active	14	3.1
Too costly	10	2.2
Partners refusal	10	2.2
Others	6	1.5

**=multiple response

Table 6 showed reasons for contraceptive method use and none-use among the women. Common reasons for contraceptive method use as mentioned by respondents were; it is convenient, (52.3%) and it is easy to use, (44.0%) while that of none-use were; desire for more children, (43.5%), not married, (14.2%) religious reasons, (12.6%) and health problems/fear of side effects, (11.9%)

Table 7: Socio-demographic Determinants of contraceptive ever use among the respondents

Variable	Contraceptive ever use			Statistics (χ^2)	OR (95% CI)
	Yes (%)	No (%)	Total (%)	p=value	
Age group (yrs)					
15-19	6(17.6)	28(82.4)	34(100)		1.00
20-24	40(41.7)	56(58.3)	96(100)	**18.330**	**3.33* (1.26, 8.80)**
25-29	42(34.7)	79(65.3)	121(100)	**p<0.0001***	2.48 (0.95, 6.47)
30-34	50(43.9)	64(56.1)	114(100)		**3.65* (1.40, 9.49)**
35-39	57(54.3)	48(45.7)	105(100)		**5.54* (2.12, 14.50)**
40-44	22(44.0)	28(56.0)	50(100)		**3.67* (1.29, 10.41)**
45-49	22(51.2)	21(48.8)	43(100)		**4.89* (1.68, 14.19)**
Total	**239(42.5)**	**324(57.5)**	**563(100)**		
Marital status					
Married/cohabiting	193(43.6)	250(54.6)	443(100)	1.073	1.00
Single	42(38.5)	67(61.5)	109(100)	p=0.302	0.74 (0.21, 2.57)
Previously married	4(36.4)	7(63.6)	11(100)		0.81 (0.52, 1.25)
Total	**239(42.5)**	**324(57.5)**	**563(100)**		
Educational status					
Primary	24(31.6)	52(68.4)	76(100)	**6.044**	1.00
Secondary	175(42.1)	241(57.9)	402(100)	**p=0.001***	1.57 (0.93, 2.65)
Tertiary	40(56.3)	31(43.7)	71(100)		**2.80* (1.43, 5.48)**
Total	**239(42.5)**	**324(57.5)**	**563(100)**		
Religion					
Christianity					
Catholics	125(47.9)	136(52.1)	261(100)	3.061	1.00
Orthodox	70(36.1)	124(63.9)	194(100)	p=0.080	**0.61* (0.43, 0.89)**
Pentecostal	41(43.6)	53(53.4)	94(100)		0.84 (0.48, 1.24)
Others [1]	3(21.4)	11(78.6)	14(100)		0.30 (0.08, 1.09)
Total	**239(42.5)**	**324(57.5)**	**563(100)**		
Occupational status					
Employed	187(42.9)	249(57.1)	436(100)	0.152	1.00
Unemployed	52(40.9)	75(59.1)	127(100)	p=0.696	0.92 (0.62, 1.38)
Total	**239(42.5)**	**324(57.5)**	**563(100)**		
Family size (n=454)					
None	15(23.4)	49(76.6)	64(100)	**12.100**	1.00
1-4	111(43.2)	146(56.8)	257(100)	**p<0.0001***	**2.48* (1.32, 4.66)**
>4	71(53.4)	62(46.6)	133(100)		**3.74* (1.91, 7.32)**
Total	**197(43.4)**	**257(56.6)**	**454(100)**		
No. of males (n=454)					
None	39(33.3)	78(66.7)	117(100)	**5.071**	1.00
1-2	114(45.8)	135(54.2)	259(100)	**p=0.024***	**1.69* (1.07, 2.67)**
3-4	36(50.0)	36(50.0)	72(100)		**2.00* (1.10, 3.65)**
>4	8(50.0)	8(50.0)	16(100)		2.00 (0.69, 5.073)
Total	**197(43.4)**	**257(56.6)**	**454(100)**		
Contraceptive knowledge					
None	0(0.0)	24(100)	24(100)	**26.420**	Na
Poor	0(0.0)	37(100)	37(100)	**p<0.0001***	Na
Fair	75(37.7)	124(62.3)	199(100)		1.00
Good	164(54.1)	139(45.0)	303(100)		**1.95* (1.35, 2.81)**
Total	**239(42.5)**	**324(57.5)**	**563(100)**		

*=statistically significant, Na= Not applicable, others[1]=Traditional religion and Islam

Ever use of contraceptive methods was influenced significantly by respondents age (X^2= 18.330, p<0.0001). The likelihood of ever use increased with increase in age of respondents and those within 30-35 years age bracket having the highest likelihood to have ever used any form of contraception than their counterparts in other age groups, (OR: 5.54; 2.11 – 24.50). Educational level of respondents significantly influenced ever use of contraceptive methods, (X^2 = 6.044, p=0.001) with respondents that attended tertiary education being more likely to have ever used any form of contraception than their other counterparts, (OR: 2.80; 1.43-5.48). Family size, (X^2= 12.100, p<0.0001) and number of male children delivered by respondents, (X^2 = 5.071, p =0.024), influenced ever use of contraception significantly, with those having greater than four children, (OR: 3.74; 1.91 – 7.32) and 3-4 male children and above, (OR = 2.00; 1.97 – 3.65) being more likely to had ever used any form of

contraceptive method. Concerning knowledge about contraception those with good knowledge were more likely to had used any form of contraception than their counterparts, (X^2 = 26.420, p<0.0001, OR: 1.95; 1.35 -2.81) with lower knowledge. Religion of respondents did not generally influence ever use, but those that were of Pentecostal denomination (OR: 0.614; 0.43 - 0.89) were least likely to had used any form of contraception than their Catholic and Orthodox counterparts. Marital status and occupation of respondents had no significant effect on ever use of contraception (p> 0.05). Table 7

Table 8: Determinants of current contraceptive use among respondents

Variable	Current contraceptive use			Statistics (χ^2) p=value	OR (95% CI)
	Yes (%)	No (%)	Total (%)		
Age group (yrs)					
15-19	4(11.8)	30(88.2)	34(100)		1.00
20-24	20(20.8)	76(79.2)	96(100)	3.005	1.98(0.62, 6.26)
25-29	10(8.3)	111(91.7)	121(100)	p=0.085	0.68 (0.20, 2.31)
30-34	25(21.9)	89(78.1)	114(100)		2.12 (0.68, 6.55)
35-39	25(23.8)	80(76.2)	105(100)		2.30 (0.75, 7.30)
40-44	13(26.0)	37(74.0)	50(100)		2.64 (0.78, 8.92)
45-49	12(27.9)	31(72.1)	43(100)		2.90 (0.84, 10.01)
Total	**109(19.4)**	**454(80.6)**	**563(100)**		
Marital status					
Married/cohabiting	82(18.5)	361(81.5)	443(100)		1.00
Single	26(23.9)	83(76.1)	109(100)	0.752	1.38 (0.84, 2.28)
Previously married	1(9.1)	10(90.9)	11(100)	p=0.386	0.44 (0.06, 3.49)
Total	**109(19.4)**	**454(80.6)**	**563(100)**		
Educational status					
≤Primary	9(11.8)	67(88.2)	76(100)		1.00
Secondary	81(19.5)	335(80.5)	416(100)	**5.200**	1.80 (0.86, 3.76)
Tertiary	19(26.7)	52(73.2)	71(100)	**p=0.036***	**2.72* (1.14, 6.51)**
Total	**109(19.4)**	**454(80.6)**	**563(100)**		
Religion					
Christianity					
Catholics	62(23.8)	199(76.2)	261(100)		1.00
Pentecostal	9(9.6)	85(90.4)	94(100)	**10.145**	**0.34* (0.16, 0.72)**
Orthodox	37(19.1)	157(80.9)	194(100)	**p=0.001***	0.76 (0.01, 1.20)
Others [1]	1(7.1)	13(92.9)	14(100)		0.25 (0.03, 1.93)
Total	**109(19.4)**	**454(80.6)**	**563(100)**		
Occupational status					
Employed	91(20.9)	345(79.1)	436(100)	2.413	1.00
Unemployed	18(14.2)	109(85.8)	127(100)	p=0.120	0.63 (0.36, 1.08)
Total	**109(19.4)**	**454(80.6)**	**563(100)**		
Family size(n=454)					
None	3(4.7)	61(95.3)	64(100)		1.00
1-4	41(15.9)	216(84.1)	257(100)	**21.131**	**3.86* (1.16, 12.89)**
>4	39(29.3)	94(70.7)	133(100)	**p<0.0001***	**8.44* (2.50, 28.51)**
Total	**83(18.3)**	**371(81.7)**	**454(100)**		
No. of males (n=454)					
None	8(6.8)	109(93.2)	117(100)		1.00
1-2	51(20.5)	198(79.5)	249(100)	**25.340**	**3.51* (1.61, 7.67)**
3-4	22(30.6)	50(69.4)	72(100)	**p<0.0001***	**5.99* (2.50, 14.39)**
>4	2(12.5)	14(87.5)	16(100)		1.96 (0.37, 10.10)
Total	**83(18.3)**	**371(81.7)**	**454(100)**		
Monthly income(Naira)					
<10,000	65(18.8)	281(81.2)	346(100)		1.00
10,000-19,999	17(21.5)	62(78.5)	79(100)	9.58	1.19 (0.65, 2.16)
20,000-29,999	6(24.0)	19(76.0)	25(100)	p=0.088	1.37 (0.52, 3.55)
30,000-39999	5(26.3)	14(73.7)	19(100)		1.54 (0.54, 4.44)
>40,000	6(31.6)	13(68.4)	19(100)		1.99 (0.73, 5.45)
Unsure	10(13.3)	65(86.7)	75(100)		0.67, (0.32, 1.36)
Total	**109(19.4)**	**454(80.6)**	**563(100)**		
Family type (n=433)					
Monogamy	78(18.3)	349(81.7)	427(100)	0.301	1.00
Polygamy	4(23.5)	13(76.5)	17(100)	p=0.583	1.38, (0.44, 4.34)
Total	**82(18.5)**	**361(81.5)**	**443(100)**		
Contraceptive knowledge					
None	0(0.0)	14(100)	14(100)		**Na**
Poor	0(0.0)	37(100)	37(100)	**15.310**	**Na**
Fair	33(16.6)	166(83.4)	199(100)	**p<0.0001***	1.00
Good	76(24.4)	227(75.6)	303(100)		**1.68* (1.07, 2.66)**
Total	**109(19.4)**	**454(80.6)**	**563(100)**		
Previous contraceptive use					
Yes	108(45.2)	131(54.8)	259)100)	**174.580**	**266.29*(36.79,1927.69)**
No	1(0.3)	323(99.7)	324(100)	**p=0**	1.00
Total	**109(19.4)**	**454(80.6)**	**454(100)**		

*=statistically significant, Na= Not applicable, others[1]=Traditional religion Eckanker, Gray message and Islam

Table 8 showed the determinants of current contraceptive use among women of reproductive age from the study area. Those with tertiary education (X^2=5.200, p= 0.036, OR: 2.72; 1.14 – 6.51) were more likely to be currently using any form of contraception than their counterparts with lower educational status. Religious denominations attended influenced current contraceptive use significantly (X^2=10.145, p= 0.001) with Pentecostal worshippers been the least likely to use any form of contraception, (OR = 0.34; 0.16 – 0.72) than their counterparts in other denominations. Number of children (family size), (X^2= 21.131, p<0.0001) and number of males, (X^2 = 25.340, p<0.0001) significantly influenced current use with those having greater than four living children (OR: 8.44; 2.10 – 28.51) and 3-4 males, (OR: 6.00; 2.50 – 14.39) being more likely to use than their counterparts. Level of knowledge about contraceptives also influenced current use significantly, (X^2 = 15.310, p<0.0001) with those having good or high knowledge of contraceptive methods being more likely to currently use than their counterparts with lower knowledge (OR: 1.78; 1.07 – 2.65).Those who had used any form of contraception previously were more likely to currently use, (X^2=174.580, p=0, OR: 266.29; 36.79-1927.29).Age of respondents, marital status, occupation, monthly income and family type did not play any significant role in influencing current contraceptive use among the women, (p> 0.05).

Table 9: Influence of male issues on current contraceptive use

Variable	Current Contraceptive use			Statistics (χ^2) p=value	OR (95% CI)
	Yes (%)	No (%)	Total (%)		
Husbands level of education (N=443)					
None	0(0.0)	2(100)	2(100)		Na
Primary	7(9.6)	66(90.4)	73(100)	**7.330**	1.00
Secondary	57(18.6)	248(81.4)	305(100)	**p=0.026***	2.22 (0.97, 5.17)
Tertiary	18(28.6)	45(71.4)	63(100)		**3.89* (1.50, 10.06)**
Total	**82(18.5)**	**361(81.5)**	**443(100)**		
Husbands employment status (n=443)					
Employed	80(18.5)	353(81.5)	433(100)	0.470	2.04 (0.26, 16.33)
Unemployed	1(10.0)	9(90.0)	10(100)	p=0.493	1.00
Total	**82(18.5)**	**361(81.5)**	**443(100)**		
Currently staying together with husband (n=-443)					
Yes	75(18.6)	328(81.4)	403(100)	0.253	1.24 (0.53, 2.89)
No	7(17.1)	34(82.9)	41(100)	p=0.615	1.00
Total	**82(18.5)**	**361(81.5)**	**443(100)**		
Ever discussed family planning with partner/husband					
Yes	96(35.7)	173(64.3)	259(100)	**85.970**	**11.99* (6.52, 22.06)**
No	13(4.4)	281(95.6)	304(100)	**p<0.0001***	1.00
Total	**109(19.4)**	**454(80.6)**	**563(100)**		
Partner/husband in favor of modern family planning methods					
Yes	94(36.3)	165(63.7)	259(100)	**86.090**	**10.97* (6.16, 19.55)**
No	15(4.9)	289(95.1)	304(100)	**p<0.0001***	1.00
Total	**109(19.4)**	**454(80.6)**	**563(100)**		
Can access and pay for family planning services without partners/ husbands financial support					
Yes	68(26.8)	186(73.2)	254(100)	**16.281**	**2.39* (1.55, 3.67**
No	41(13.3)	286(86.7)	309(100)	**p<0.0001***	1.00
Total	**109(19.4)**	**454(81.6)**	**563(100)**		

Table 9 revealed the influence of some selected male issues on current contraceptive use among women. Those whose husbands had tertiary education were more likely to use any form of contraception when compared to those whose husbands had lower educational status (X^2= 7.330, p= 0.026, OR: 3.90; 1.50- 10.06). Also those who had discussed family planning with their partners before, (X^2= 88.970, p<0.0001, OR: 12.00; 6.52-22.06), those whose partners were in support of the modern family planning methods, (X^2 = 86.090, p<0.0001, OR: 10.97; 6.16-19.55) and those who can access and pay for family planning without their husbands financial support, (X^2 = 16.281, p<0.0001, OR = 2.39; 1.55-3.67) were more likely to be using any form of contraception than the other counterparts. Husbands occupation

and their current stay with husband in the same household did not play any significant role, (p>0.05).

4.0 DISCUSSION

Our study accessed contraceptive use and its determinants among women of reproductive age (15-49 years) in rural communities in Imo State Nigeria. The study revealed a high awareness level among the respondents (96.1%) but a low contraceptive use, (19.4%). This pattern of high awareness and low contraceptive use has been reported in previous studies in Nigeria. [10-13,19,26,35] This low prevalence of current contraceptive observed in our study use was higher than the overall national average which stood at 15.0% and much higher than the national value for rural women, (8.5%), [13,19] but was lower than the figures reported from the State, (34.1%) [19] and South East region of Nigeria, (28.3%) [19] and other studies in Nigeria. [20,26,27] It was also lower than the figure reported from an earlier study in rural communities of Imo State (27%). [38] It was consistent with 18.0% reported in a rural community from Plateau State, Nigeria [22] and 20% reported from Enugu State Nigeria. [39] This low use can be accounted for by complex interactions between several factors that can in turn influence contraceptive use and they vary greatly from persons, regions, localities etc. This could also be linked to the fact that our rural areas are deeply rooted in cultural beliefs and taboo's which gives a wrong perception about the use of family planning. Some of the reasons for non-use corroborates the above in that some claim they want large families, some see its use as a sign of promiscuity, while others gave religious issues and side effects as reasons for non-use, most of which are related to culture and beliefs. This pattern of reason for non-use has been reported in previous studies. [12,13,19,24,27] This is of great public health concern owing to the fact that majority of our health indices are still poor.

Determinants of current contraceptive use found in this study were, having tertiary education, being of Pentecostal denomination, having a large family size and number of males, high knowledge of contraception, previous use of any form of contraception, husband attaining tertiary education, ever discussing family planning with partner, partner being in favor of modern family planning methods, and being able to access and pay for family planning without partners/husbands financial support.

Women with high education were more likely to use than those with lower education status. This pattern has been reported in several studies. [18,19,21-24,26,28-34] Also the education level of their husbands influenced contraceptive use with women whose husbands had higher education being more likely to use than those with lower education. This pattern has also been observed in related studies. [24,31,40] Education creates awareness, deepens knowledge and influences attitude of individuals and so it is a major determinant of utilization of health services. It improves health literacy and thereby empowers individuals to make informed choices about health services utilization. This fact was supported by some of the women who mentioned lack of knowledge about method or source of contraceptives as a reason for non-use of any form of contraception.

Women with higher knowledge about contraception were more likely to use than their counterparts with lower knowledge. This positive effect of knowledge on use of contraceptives was consistent with findings from other studies [17,20,28,29,34] but contrasted with findings from two related studies. [39,41] Education was found to influence knowledge in this study and education can be regarded as the foundation of knowledge. Knowledge is power and the fact remains that woman who had knowledge on the importance and effect of family planning service could decide easily to use it than those without any knowledge about it. Those who had ever

used any form of contraceptive in the past were more likely to currently use than those who had never used previously. This was also corroborated by another study from North East, Nigeria. [20]

Religious denomination attended by respondents influenced contraceptive use significant in our study with those in orthodox denominations being the least likely to have ever used any form than their counterparts in other denomination while those in Pentecostal denominations being most likely to currently use any form than their counterparts from other denominations. This effect of religion on contraceptive use has been reported in several studies. [17,18,20,23,26,27] This finding was supported by the fact that many of the respondents gave religious beliefs as one of the reasons for non-use in this study. Religion beliefs and values play critical roles in molding an individual's attitude and behavior towards any issue and some of the predominant religious sects in this part of the world are against family planning as a whole or against some of the contraceptive methods and this might have contributed in the low contraceptive use reported in the study. This is of great concern because majority of us in this part of the world are deeply religious and well influenced by our religious leaders unlike in some of the developed countries of the world.

Increase in family size (number of living children) and increase in number of males were found to increase contraceptive use among the women significantly. This pattern corroborated with what was reported from other studies around the world. [17,18,20,24,26,31,31] This was supported by the fact that most of the respondents not using gave "wanted more children" as their reason for non- use. This result further strengthens the fact that most women use family planning to limit family size rather than space pregnancies. Those who have completed their families will likely use a contraceptive to prevent pregnancies. Also our society celebrates large family size and prefers male children due to issues of inheritance and family name. It is purely a male dominant society and all this could have contributed to the low use reported in this study.

Women who can access and pay for family planning services without their partners/husbands financial support use more than those who cannot. This effect of socioeconomic status of woman influencing family planning has been reported in other studies. [17,18,21,23-25,30,34] This shows that empowerment of women is vital in the utilization of family planning services as some respondents mentioned cost as a reason for non-use of contraceptives. This study showed a significant association between prior discussion of family planning and current contraceptive use and this was similar to findings from studies elsewhere. [31,42,43] Furthermore, those whose partners were in favor of modern family planning methods were more likely to use than those whose partners were not in support. This report was consistent with findings from similar studies around the world. [17,20,28,31,33] It has been noted that husbands' opinion on family planning has a very strong influence on whether their wives will use family planning method or not. [28] This was strengthened by the fact the majority of the women in this study agreed that their husbands/partners opinion is important in commencing family planning use and that they cannot decide to use family planning without their husbands/partners consent. It is of note that the role of men in household decision making has been instrumental in traditional patrilineal societies like ours. Men take decision on every aspect of life including reproductive health choice. [31]

Condom was the commonest contraceptive ever used and currently used respectively by these women and this was in line with findings elsewhere. [25,26,29,30,44] This high use of condom may be due to the educational campaigns and social marketing of condoms in response to the HIV epidemic. Also condoms perform dual functions of pregnancy prevention and protection from sexually transmitted

diseases including HIV.

CONCLUSION

Despite high awareness, contraceptive use was found to be low. Also there were obvious socio-demographic barriers to use as noticed in this study. Most of the reasons given for non-use can be modified through appropriate actions. Thus there is need to involve community and church leaders in helping to convince woman on the need to use modern contraceptives. There is also need to institute measures that will help to bring about positive behavioral and attitudinal changes which will help increase the acceptance and use of family planning services. Furthermore, there is the need to provide basic family planning services in the rural areas to make access to care easy and if possible free of charge to these women.

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