Original Article

Modern Contraceptive Use and Associated Barriers among Women of Child-Bearing Age Attending PHC Centres in Alimosho Lga of Lagos State

Maitanmi Julius Olatade, RN, MSc
Lecturer, Department of Community Health Nursing, School of Nursing, Babcock University. Nigeria

Olowolabi Mary Oluwadamilola, RN, BNSc
School of Nursing, Babcock University, Nigeria

Correspondence: Maitanmi, Julius Olatade RN, MSc. Lecturer, Department of Community Health Nursing, School of Nursing, Babcock University. Nigeria mail: maitanmij@babcock.edu.ng

Abstract

Introduction: Contraception is a crucial aspect of maternal and child health. However, the use of modern contraceptives had drastically reduced in the sub-Saharan African. In Nigeria, the modern contraceptive use was reported at 15% in 2013 giving to a surge in population and a high fertility rate.
Aim: This study assessed modern contraceptives use and associated barriers among women of child-bearing age attending Primary Health Care Centers in Alimosho Local Government, Lagos State.
Method: Cross-sectional descriptive research design was adopted while multi-stage sampling technique was used to recruit 215 study participants and analysis of data were done using SPSS version 25.
Results: Findings from the study revealed that majority (68.8%) of the respondents were aware of modern contraceptives, while only (12.6%) claimed to be currently using a modern method of contraception. The commonly known and used methods were condom 89.6% and 11.6% respectively. The most significant identified barriers to modern contraceptive use were; partner's disapproval (p=0.001), expensive cost of services (p=0.003), and fear of modern contraceptives side effects (p=0.001).
Conclusions: In conclusion, modern contraceptives use was found to be low. To increase the use of modern contraceptive methods, more emphasis should be geared towards public enlightenment on the use of other forms of modern contraceptives been under-utilized, cost reduction, effective counseling and sensitization on men involvement in modern contraception or family planning.

Keywords: Associated barriers, Modern contraceptives, Women of childbearing age.

Introduction

Over the years, Nigeria popularly referred to as the "giant of Africa" had recorded an immense increase in population with a fertility rate of 5.71% and currently ranked the 7th most populated country in the World evidenced by an estimated country's population of over 195.88million, a growth rate of 2.61%, and a population projection of approximately 350million dwellers by 2050 (Nigeria's National Bureau of Statistics Report, 2018). Owing to this population increase, in 2016 Lagos State was ranked the 1st most populated state in Nigeria with about 21 million occupants attributed to high fertility rate and other factors of economic importance (Odusanya, 2018).

Contraception also known as family planning is defined according to the World Health Organization (WHO, 2018), as a process whereby individuals and couples decide voluntarily, free from coercion, their desired or intended number of children, timing and spacing of their birth, in order to promote the health and welfare of the family and

thus contribute effectively to the social development of a country. The various modern contraceptive methods include; Celibacy or sexual abstinence, coitus interruptus or withdrawal method, barrier method, chemical method, intrauterine methods, fertility awareness method, lactational amenorrhea method and surgical sterilization method. Contraception is not specific to people of certain tribes, religious beliefs, socio-cultural groups, educational or occupational group but, it has been identified that it use can be affected by people's beliefs, religion, tribe or socio-cultural differences and level of educational attainment or occupation of some individuals (Asuquo, Etokidem, Etowa & Ndifon, 2017).

According to the United Nations Department of Economic and Social Affairs Population Division Survey on world contraceptive use in 2016, it was reported that contraception has a crucial role to play in curbing close to 44% of maternal deaths in the world by limiting high-parity and high-risk births, and averting unintended or unwanted pregnancies which has high tendencies of resulting in unsafe abortions which is one of the contributing factors to global maternal mortality. Although, contraceptives use has increased in various continents of the world especially in Latin America and Asia, the use is still significantly low in Sub-Saharan Africa (WHO, 2018), an approximate of 25% of couples in Sub-Saharan Africa who want to space their children do not use any form of contraceptive method (Ali, Edosa, & Yeshialem, 2018).

According to the National Policy on Population for Sustainable Development Goals (SDGs) incorporated in February (2005) by the Nigerian Federal Government Council, it was pronounced that one of the important aspect of the SDGs was targeted towards the reduction of national population growth rate to 2% or lower by 2015, and total fertility rate reduction by 0.6% children at least every 5 years through encouraging child spacing by family planning and increasing modern contraceptive methods prevalence rate by at least 2% per year (Adebowale, Adeoye, &Palamuleni, 2013). Akinola (2018) reported that the maternal mortality rate in Lagos is at 555per 100,000 live births with a total demand for contraception at 48.3% for married women only and a modern contraceptive prevalence rate of 26% for both married and single women of childbearing age (15-49years).

However, according to the reports from previously concluded research, it was revealed that the common barriers to modern contraceptive use in Nigeria as well as other Sub-Saharan African countries has been linked to; the fear of contraceptive side effects, associated treatment costs, cultural and religious barriers, low male involvement in family planning, lack of adequate knowledge of where to obtain family planning methods, misconceptions about family planning, inadequate family planning trained personnel and equipment, and lack of information on what women considered to be the trusted sources of family planning information and services (Alege, Matovu, Nabiwemba, & Ssensalire, 2016).

The aim of this study is therefore to assess modern contraceptives use and associated barriers among women of child-bearing age attending Primary Health Care Centers in Alimosho Local Government, Lagos State.

Objectives of the Study

The specific objectives of this study were to;

1. Determine the level of awareness of women in Alimosho Local Government, Lagos State about modern contraceptives
2. Identify the various modern contraceptive methods available to women of child-bearing age in Alimosho Local Government, Lagos State
3. Assess the use of various modern contraceptive methods among women of child-bearing age in Alimosho Local Government, Lagos State
4. Identify barriers against the use of modern contraceptives among women of child-bearing age in Alimosho Local Government, Lagos State

Hypotheses

The following were tested:

$H_0$1: There is no significant relationship between the level of awareness of women on modern contraceptives and the use of various modern contraceptive methods.

$H_0$2: There is no significant relationship between level of education of women and the use of modern contraceptive method among women of child bearing age.

$H_0$3: There is no significant relationship between modern contraceptive use and its associated barriers among women of child-bearing age.

Significance of the Study: Unintended and unplanned pregnancies contribute largely to the poor state of health in child-bearing age women and their children in most developing countries. This study takes into consideration associated socio-cultural and economic barriers faced by women of child-bearing age (15-49years) in accessing and adopting modern contraceptive use in the study area. It was also conducted to find out the expression and worries of contraceptive-deprived women. Findings from this study could serve as a baseline in improving the administration and implementation of contraceptive programs, initiation and improving women friendly programs on modern contraceptive methods usage in Alimosho Local Government area of Lagos State and, it will impact the nursing profession by providing relevant information to nurses and midwives that will add to the pre-existing body of knowledge on contraception and delivery of contraceptive services that ensures privacy and confidentially in promoting the dignity of child-bearing age women.

Methods and Materials: A descriptive research design was adopted in this study which focused on modern contraceptive use and associated barriers among women of childbearing age attending Primary Health Care Centers in Alimosho Local Government, Lagos State. A Multistage cluster probability sampling technique was employed in choosing the sample population from the study population. Utilizing Purposive, Proportionate and Simple random Sampling Techniques, a total of 215 women of child-bearing age (15-49) were recruited from Rauf Aregbesola PHC, Isheri PHC and Ikotun PHC for this study.

The sample size determination for the study was derived using Leslie Kish formula;

$$n = \frac{Z\alpha^2\, p\,(1-p)}{d^2}$$

Where; n = the desired sample size. Z = the normal standard deviation usually set at 1.96 which corresponds to 95% confidence level. p = prevalence of contraceptive use in Nigeria (married women 15-49 years) is 15% (Population Reference Bureau, 2014). = 0.15 d = Degree of accuracy desired set at 0.05.

$$n = \frac{(1.96)^2 \times 0.15\,(1-0.15)}{0.05^2}$$

$$n = \frac{3.8416 \times 0.15 \times 0.85}{0.0025}$$

$$n = \frac{0.489804}{0.0025}$$

n = 195.922 10% was added to take care of attrition rate n = 215

Therefore, 215 respondents were recruited for this study.

Method of Data Collection: An introduction letter was obtained from Babcock University School of Nursing and submitted to the offices of the Apex Nurses in each of the Primary Health Care Centers under this study (Rauf Aregbesola, Isheri and Ikotun PHCs respectively). Prior to the administration of the questionnaire to respondents, informed consent was sought, and the purpose of the research was explained to the study respondents prior to their involvement in the study.

Ethical Consideration: Ethical approval was obtained from Babcock University Health Research Ethics Committee (BUHREC) with certificate number: BUHREC/211/19 and was taken to each Primary Health Centers and submitted to the Medical Officer of Health (MOH). The purpose of the study was explained to the respondents, verbal informed consent was obtained ensuring autonomy and freedom from any form of coercion or harm. Strict privacy and confidentiality was also maintained with all the information given.

Results

The socio-demographic distribution of the respondents revealed that majority (70.7%) of the respondents were between 25-34 years with a mean 23.35±5.78, 97.7% were married, 97.2% were from monogamy family, above half (57.7%)

were tertiary education holders, most of the respondents (89.8%) were Yoruba, majority of the respondents (49.8%) were Islam and majority (66.0%) had between 1-2 children while most of the respondents (66.0%) age difference between their last 2 children were between 13-24 months (Table 1). Table 2 shows the awareness of the subjects on Modern Contraceptives methods. Table 3 shows the use of modern contraceptive or family planning methods while barriers that are associated with non-use of modern contraceptive or family planning are shown in Table 4.

Figure 1 shows a summary on use of modern contraceptive or family planning methods as the majority of the respondents (68.8%) were aware of modern contraceptive.

Figure 2 reveals that the majority (82.8%) of the respondents were not using modern contraceptives.

Figure 3 shows the sources of information on modern contraceptive. Most of the respondents (89.6%) reported that their mostly known modern contraceptive method was condom, while 15.4% injectable, 10.5% oral contraceptive, 9.8% IUCD and 5.2% implant.

Figure 4 shows the sources of information on modern contraceptive. The majority of the respondents (60.4%) heard about modern contraceptive from doctor, 58.5% said from nurses/midwives, 45.2% from mass media, 30.2% from partner/spouse while 20.0% from their parent and 12.8% from school teacher.

Table 1: Socio-demographic Characteristics

Variables	Frequency N= 215	Percentage (%)
Age: Mean=23.35±5.78		
15-24	53	24.7
25-34	152	70.7
35-44	9	4.2
45 and above	1	0.5
Marital status		
Single	3	1.4
Married	210	97.7
Divorced	1	0.5
Widowed	1	0.5
Type of Marriage		
Monogamy	209	97.2
Polygamy	6	2.8
Educational level		
No formal education	8	3.7
Primary	22	10.2
Secondary	61	28.4
Tertiary	124	57.7
Tribe		
Yoruba	193	89.8
Hausa	8	3.7
Igbo	13	6.0
Others	1	0.5
Religion		
Christianity	106	49.3
Islamic	107	49.8
Traditional	2	0.9
Occupation		
Students	8	3.7
House wife	21	9.8
Civil servant	78	36.3
Self employed	108	50.2

Number of children (Parity)		
No child	21	9.8
1-2 children	142	66.0
3-4 children	52	24.2
What is the age difference between your last 2 children?		
0-12	21	9.8
13-24	142	66.0
25 months and above	52	24.2

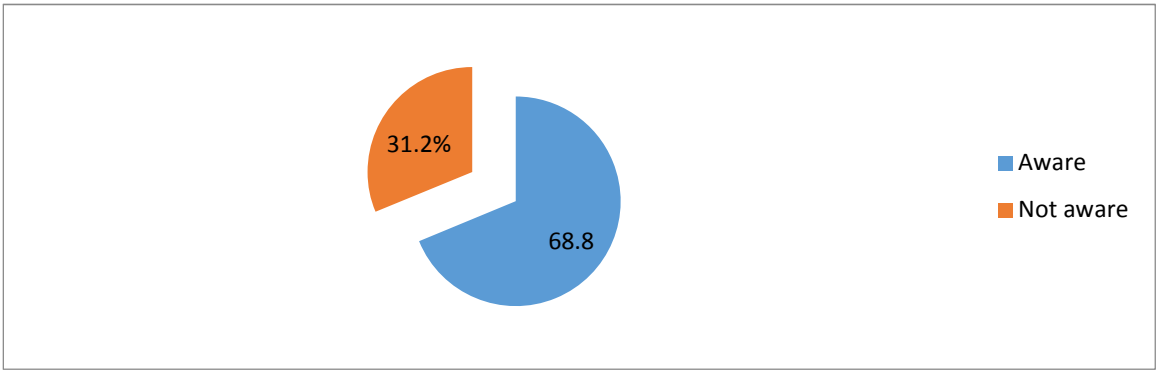

Figure 1: A pie chart summary on the level of awareness on modern contraceptives

Table 2: Awareness on Modern Contraceptives

Variables	Frequency N= 215	Percentage (%)
Can child-bearing be controlled		
Yes	177	82.3
No	38	17.7
Have you heard of modern contraceptives or family planning before?		
Yes	170	79.1
No	45	20.9
Does modern contraceptives or family planning methods helps infertile couple to have children?		
Yes	163	75.8
No	52	24.2
Does modern contraceptives or family planning methods helps to identify and treat diseases if found?		
Yes	181	84.2
No	34	15.8
Does modern contraceptives or family planning methods prevent unwanted pregnancy		
Yes	154	71.6
No	61	28.4

Does modern contraceptives or family planning method gives women room for adequate care of self and children born?		
Yes	170	79.1
No	45	20.9
Does modern contraceptives or family planning method help in limiting the numbers of children born thereby reducing population?		
Yes	151	70.2
No	64	29.8
Does modern contraceptives or family planning method help in spacing birth?		
Yes	121	56.3
No	94	43.7
Does a modern contraceptive or family planning method prolong the life of women?		
Yes	143	66.5
No	72	33.5
Is a modern contraceptive or family planning method Means to prevent Sexually Transmitted Infections?		
Yes	73	34.0
No	142	66.0

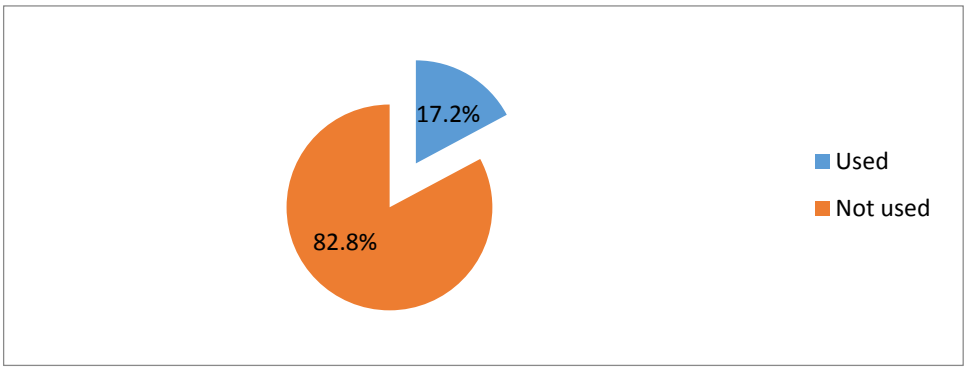

Figure 2: A pie chart summary on use of modern contraceptive or family planning methods

Table 3: Use of modern contraceptive or family planning methods

Variables	**Frequency N= 215**	**Percentage (%)**
Have you ever used any method of modern contraceptive or family planning method before?		
Yes	37	17.2
No	178	82.8
Are you currently using any modern contraceptive method?		
Yes		
No	27	12.6
	188	87.4
If yes, kindly mention the method you are using?		
Condom	25	11.6

Implant	1	0.5
Injectable	1	0.5
Were you counselled before making decision on the choice of modern contraceptive?		
Yes	18	8.4
No	197	91.6
Who counseled you?		
Nurse/midwives	2	1.0
Doctor	1	5.0
Friends	10	4.6
Chemist/patent medicine seller	5	2.3
Does your partner/spouse approve to your use of modern contraceptive or family planning method?		
Yes	68	31.6
No	147	68.4
If yes, does your spouse supports your use of modern contraceptives?		
Yes	51	23.7
No	17	7.9
Where do you access modern contraceptive services?		
Family planning or reproductive health clinic in government hospitals?		
Yes	147	68.4
No	68	31.6
Private Hospital		
Yes	119	55.3
No	96	44.7
Chemist or medicine stores		
Yes	70	32.6
No	145	67.4

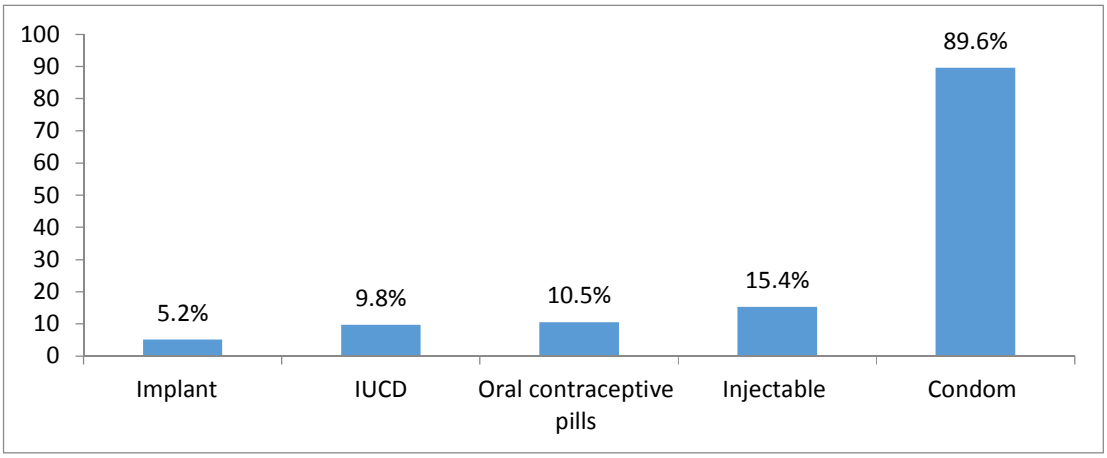

Figure 3. A bar chart show the method of modern contraceptive or family planning used by the respondents

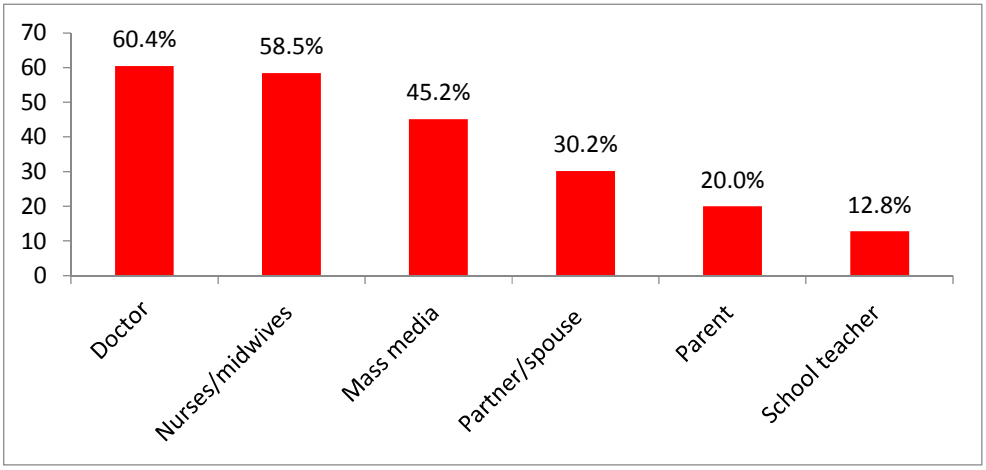

Figure 4: Bar chart showing the sources of information on modern contraceptives by the respondents

Table 4: Associated Barriers to Modern Contraceptive or family planning use

Variables	Yes	No
No reason or total dislike for modern contraceptive.	152(70.7)	63(29.3)
Partner or spouse disapproval	192(89.3)	23(10.7)
Religious prohibition	167(77.7)	48(22.3)
Cultural prohibition	18(8.4)	197(91.6)
Expensive cost of services	192(89.3)	23(10.7)
Desire to have more children	186(86.5)	29(13.5)
Fear of modern contraceptive side effect	183(85.1)	32(14.9)
Causes infertility	83(38.6)	132(61.4)
Little chances of preventing unwanted pregnancy	41(19.1)	174(80.9)
Ignorance on the effectiveness of modern contraceptive	37(17.2)	178(82.8)
Promotes promiscuity and gives room for infidelity	43(20.0)	172(80.0)
Cause of broken homes or marriages	44(20.5)	171(79.5)
It is only meant for married women	167(77.7)	48(22.3)

Discussion

This study revealed that a substantial number of the respondents (68.8%) were aware of modern contraceptive, this is supported by the studies of Fayehun (2017), Okafor, Onyeonoro, Nwokeukwu, and Ukegbu (2018), and Adeniyi et al. (2017) who revealed that a good number of their study participant were aware of modern contraceptive and the study of Abass, Adadow, Azongo, and Ziblim 2015 in Ghana also revealed that out of the majority of their participants (74.8%) has good awareness on modern contraceptives. This present study also revealed that 79.1% of the respondents have had about modern contraceptive or family planning before, this corroborated findings of Okafor, Onyeonoro, Nwokeukwu, and Ukegbu (2018) in their study conducted in Umuahia were most of their respondents (96.6%) were aware of modern contraceptive, also corroborated the findings of Ajepe et al. (2017) in University College Hospital were majority of respondents attending family planning clinic were aware of modern contraceptive and supported the findings of Mohammed, Adze, Bature, Abubakar, Mohammed and Taingson (2017) on a retrospect study on modern contraceptive awareness among women in a tertiary facility in Northern Nigeria were high level of awareness on modern contraceptive was found among the women. This present study was in line with the community-based cross sectional studies across four states (Lagos, Anambra, Oyo Kaduna) in Nigeria by Adewole et al (2014) in their report most of the respondents were aware of modern contraceptive.

In this current study, most method of modern contraceptive known by the respondents were condom (89.6%), this was corroborated by the study of Adeniyi et al. (2017) where the most method of modern contraceptive known by their respondents was condom (99%) and the study of Abass, Adadow, Azongo, and Ziblim 2015 in Ghana which revealed that out of the majority of their participants mentioned condom as the mostly known method (46.3%), while the study of Ekong and Johnson (2015) was not in support where the most known method was the injectables (44.8%). Also this was objected by the study of Adewole et al. (2014) where the most known method was pills (24.7%).

From this study report on the source of information on modern contraceptive, it was revealed that majority (60.4%) of the study respondents heard about modern contraceptives from the doctors, this was in line with the study of Makinde (2015) and Adewole et al. (2014) who mentioned that their respondents source of information was from health professionals and was objected by Ajepe et al. (2017) who reported that Nurses (42.9%) are the major source of information on modern contraceptives. Also, contrary with the study of Adeyinka, Oladipupo, and Omisore (2015) they reported that the most source of contraceptive information was through mass media.

Majority (82.8%) of the respondents were not using modern contraceptive and only 27% are currently using a method of modern contraceptives despite the high level of awareness. This was corroborated with the studies of Fayehun (2017), were only 15% of their respondent are using modern contraceptives, while the retrospective study of Mohammed, Adze, Bature, Abubakar, Mohammed and Taingson (2017) reported a significantly low rising use of modern contraceptives from 0.8% in 1990 to 1.1% in 2013, while the study of Abass, Adadow, Azingo, and Ziblim (2015) in Ghana also reported a poor use (20%) of modern contraceptives, while the study of Okafor, Onyeonoro, Nwokeukwu, and Ukegbu (2018) reported only 39.2% use and Osore (2016) reported that the use of modern contraceptives has significantly dropped from 31% to 15% in Kenya. These were however opposed by the studies of Adeniyi et al. (2017) whose respondents reported a good usage of modern contraceptives (50.5%) and that of Ajepe et al. (2017) whose respondents reported a good usage (97.0%).

In this present study, the most commonly used method was condom (25%), this was in line with the studies of Adeniyi et al. (2017), Ekabua, Essien, Monjok and Smesny (2016), Abass, Adadow, Azingo, and Ziblim (2015) in Ghana and Asekun-Olarinmoye, Adebimpe, Bamidele, Odu, and Ojofeitimi (2014) where the most commonly used methods were condom. However, this was opposed by the study of Ekong and Johnson (2015) where the most commonly used method was pills (27.3%). majority (70.7%) of the respondents mentioned that they had no reason but total dislike for modern contraceptive. Majority (89.3%) of the

respondents reported that partner or spouse disapproval was a barrier to modern contraceptive use this was supported by the studies of Aliyu et al. (2015), Ouma (2014), Anyanti et al. (2014), and Abdalla and Ahmmed (2017) who reported that partner or spouse disapproval was a key barrier or major threat to modern contraceptive use.

Findings from this current study also revealed that religious prohibition (77.7%) was a barrier to modern contraceptive use, this was in line with the studies of Obasohan (2015), Ajepe et al. (2017), Adeniyi et al. (2017), Owoseye (2018), Asa and Daniel (2015), and Ekabua et al. (2016). Although from this current study, minority (8.4%) of the respondents chose cultural prohibition has a barrier to modern contraceptives as opposed to the previous research's respondent.

In this current study, majority (89.3%) of the respondents chose expensive cost of services as a barrier to modern contraceptive use, this was corroborated with the studies of Abass et al. (2015), Anyanti et al. (2014), Adeniyi et al. (2017), and Asa and Daniel (2015), whose majority of their respondents reported expensive cost of services as a barrier to modern contraceptive use.

In this study, majority (86.5%) of the respondents chose desire to have more children as a barrier to modern contraceptive use, this is supported by the studies of Asekun-Olarinmoye et al. (2014), Finlay and James (2017), Ajepe et al. (2017), Ahmad, Hamajima, Osmani and Reyer (2015) in Afghanistan and Anguzu, Sekandi, and Sempeera (2018) in Uganda.

In this study, respondents attributed associated barriers to modern contraceptives use to; fear of side effect (majority= 85.1%), causes infertility (minority = 38.6%), Little chances of preventing unwanted pregnancy (minority= 19.1%), promotes promiscuity and gives room for infidelity (minority=20%), cause of broken homes or marriages (minority= 20.5%) and it is only meant for married women (majority = 77.7%), this was also in consistent with previous studies of Anyanti et al. (2014); Osore (2016) in Kenya; Endriyas and Eshete et al. (2018) in Ethiopia; Abass et al. (2015) in Northern Ghana; Chui et al. (2016); Ekong and Johnson (2015); and Asekun-Olarinmoye et al. (2014).

In this study, only minority (17.2%) of the respondents chose ignorance on the effectiveness of modern contraceptive as a barrier to modern contraceptive use, this is corroborated by findings from the studies of Anyanti et al. (2014); Chui et al. (2016); Adeoye et al. (2016); Afolabi, Fagbamigbe, and Idemudia (2018); and Asekun-Olarinmoye et al. (2014).

Furthermore, the result from the first hypothesis testing revealed that there was no significant relationship between there was no statistically significant association between level of awareness of women on modern contraceptives and the use of modern contraceptive method among women of child bearing age (x^2= 0.29, df =1, p>0.05), this was corroborated with the studies of Okafor et al. (2018); Makinde (2015); Asekun-Olarinmoye et al. (2014) and Osore (2016) and objected by the studies of Ajepe et al. (2017) and Adeniyi et al. (2017).

The result from the second hypothesis testing revealed that there was no significant relationship between level of education of women and the use of modern contraceptive at p>0.05 this was objected by Abass et al. (2015) p<0.001; Augustine and Abah (2015) p< 0.05; and Adeyemi et al. (2016) p= 0.0268 who reported a significant relationship exists between level of education and the use of modern contraceptives.

Summary, Conclusion and Recommendation

Majority of the respondents were between 23.35±5.78 and most women were aware of modern contraceptive and minority of them were currently using modern contraceptive. Most of the respondents identified some associated barriers to modern contraceptive. This study concludes that women of child bearing age were aware of modern contraceptives. However, the usage of modern contraceptive was low. Also, the most common barriers for non-usage of modern contraceptives were fear of contraceptives side effect, partner's disapproval and expensive cost of modern contraceptive services. Nurses can develop educational package that will focus on the importance of modern contraceptive and well-being of the women at various level.

There is need to educate the women of child-bearing age and men on the important of family planning. Also, more emphasis should be laid on the need for men involvement in family planning. Government and non-governmental bodies should review the cost of modern contraceptive services to ensure that it is affordable and available for more women to use.

References

Abass, Y. I., Adadow, Y., Azongo, & Ziblim, S.D. (2015). Socio-cultural determinants of contraceptives use among Adolescent. *Northern Ghana Public Health Research Journal.* 5(2167-7263), 83-89. doi:10.5923/j.phr.20150504.01

Adebowale, A. S., Adeoye, A.K., & Palamuleni, M.E. (2013). Contraceptive use among Nigerian women with no fertility intention: interaction amid potential causative factors. *African Population Studies.* 27(2), 234-250.

Adeoye, O., Aderinoye, A., Adeyemi, S., Agbaje, M.,Olugbenga-Bello, A., & Salawu, M. (2016). Contraceptive prevalence and determinants among women of reproductive age group in Ogbomoso, Oyo State, Nigeria. *Open African Journal of contraception.* 5(7), 33-41. doi.org/10.2147/OAJC.S94826

Adewole, I. F., Boniface, A., Ekanem, E.E., Gbadegesin, A., Iwere, N., Mahmoud, P., & Yusuf, B. (2014). Community-based cross sectional, descriptive study on Contraceptive Behavior among women of reproductive age (15-49) in Lagos, Anambra, Oyo, and Kaduna. *The Campaign against Unwanted Pregnancy (The CAUP)*, 1(2), 23-40.

Adeyinka, A. R., Oladipupo, A., & Omisore, A.O (2015). Contraceptive prevalence and determinants among women of child bearing age; sources of family planning information. *International Journal of Science and Engineering.* 2015(1), 70-76.

Ahmad, K.O., Hamajima, N., Osmani, A.R., & Reyer, A.J. (2015). Factors influencing contraceptive use among women in Afghanistan: secondary analysis of Afghanistan Health Survey. *Nagoya Journal of Medical Science.* 77(4), 551-561. PMC4664587

Ajepe, A., Daramola, E., Okunade, K.S., & Sekumade, A. (2017). A 3-year review of the pattern of contraceptive use among women attending the family planning clinic of a University Teaching Hospital in Lagos, Nigeria. *African Journal of Medical and Health Sciences.* 15(2), 69-73. doi: 10.4103/2384-5589.198317.

Akinola, W (2018). Investigation: How family planning helps reduce maternal deaths in Nigeria. *Legit Journal.* Retrieved from https://www.legit.ng/1205256.

Alege,G. S., Matovu, J.KB., Nabiwemba, E., & Ssensalire, S. (2016). Knowledge, sources and use of family planning methods among women aged 15-49 years in Uganda: a cross-sectional study. *The Pan African Medical Journal*. 23(778), 24-39. Doi: 10. 11604/pamj.2016.24.39.5836.

Ali, R., Edosa, D., & Yeshialem, E. (2018). Determinants of Long Acting and Permanent Family Planning Methods Utilization among Women of Reproductive Age in Ilu Aba Bor Zone, South West Ethiopia. *Journal of medical research and health education.* 2(8), 200-220.

Anguzu, R., Sekandi, J.N., & Sempeera, H. (2018). High parity predicts use of long-acting reversible contraceptives in the extended postpartum period among women in rural Uganda. *Journal on Contraception and reproductive medicine*. 3(6). doi.org/10.1186/s40834-018-0059-8.

Anyanti, J., Ankomah, A. & Oladosu, M. (2014). Myths, misinformation, and communication about family planning and contraceptive use in Nigeria. *Open Access Journal of Contraception* Retrieved from www.dovepress.com/ by 197.210.52.159;01/19.

Asekun - Olarinmoye, E.O., Adebimpe, W.O., Bamidele, J.O., Odu, O.O., & Ojofeitimi, E.O. (2014). Barriers to use of modern contraceptives among women in an inner city area of Osogbo metropolis, Osun state, Nigeria. *International Journal on Women Health.* 5, 647–655.

Asuquo, E.F., Etokidem, A.J., Etowa, J., & Ndifon,W. (2017). Family planning practices of rural community dwellers in cross River State, Nigeria. *Nigerian Journal of Clinical Practice.* 20(6), 707-715.

Augustine, V.U., & Abah, M.G. (2011). Contraception awareness and practice among antenatal attendees in Uyo, Nigeria. Department of Obstetrics and Gynecology, University of Uyo Teaching Hospital, Uyo, Nigeria. *The Pan African Medical Journal.* 10(53). doi:10.11604/pamj.2011.10.53.970.

Ekabua, J.E., Essien, E.J., Monjok, E., & Smesny, A. (2016). Contraceptive practices in Nigeria: Literature review and recommendation for future policy decisions. *Dove Medical Press Ltd Journal of Contraception.* 1, 9–22.

Ekong, I., & Johnson, O. (2015). Knowledge, Attitude and Practice of family planning among women. *British Journal of Medicine and Medical Research.* 12(2), 1-8.

Fayehun, F. (2017). Contraceptive use in Nigeria is incredibly Low, a lack of Knowledge May be why. Fayehun online article. 1(223).

Makinde, A.O., (2015). Factors influencing Modern Contraceptive choices among Women attending the Family Planning Clinic University College Hospital Ibadan.

Mohammed, D.A., Adze, J., Bature, S., Abubakar, A., Mohammed, C., & Taingson, M. (2017). Uptake and Predictors of Long-Acting Reversible Contraceptives among Women in a Tertiary Health Facility in Northern Nigeria. doi: 10.4103/2278-960.194504.

National Family Planning / Reproductive Health, (2010). Service Protocols for family planning and Reproductive health. Retrieved from http://health.gov.ng/doc/FPRHProtocols.pdf

Nigeria Population. (2018). Retrieved from http://worldpopulationreview

Odusanya, R. (2018). Most populated state in Nigeria-Top 5. Retrieved from https://www.legit.ng/1136511-most-populated-state-nigeria-top-5.html

Okafor, GOC., Onyeonoro, U.U., Nwokeukwu, H.I., & Ukegbu, A.U. (2018). Contraceptive Method Preferences, Use and Satisfaction among Women of Reproductive Age (15-49 Years) in Umuahia, Abia State, Nigeria. *Journal of Reproductive Health and Contraception.* 3(1), 6.

Osoro, F. (2016). Barriers Faced by Young Adult Females in Accessing Modern Contraceptive Methods in Mukuru Kwa, Nairobi City of Kenya.

Ouma, A.H., (2014). Socio-Economic and Cultural Barriers to Utilization of Contraceptives among Women in Ndhiwa District, Homa Bay County, Kenya.

Owoseye, A., (2018). Culture, religious misconceptions hindering family planning in Nigeria. *Premium Times Journal*. Retrieved from https://www.premiumtimesng.com/health/health-features/280411-culture-religious-misconceptions-hindering-family-planning-in-nigeria.html

World Health Organization, (WHO, 2018). Fact sheet on Family Planning/contraception.