

Prevalence of Contraceptive use among women of reproductive age in Calabar Metropolis, Southern Nigeria.

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ABSTRACT: *This study was aimed at determining the prevalence of contraceptive use among women of reproductive age in Calabar Metropolis, southern Nigeria. A cross sectional survey was employed and a structured questionnaire was used to generate both qualitative and quantitative data from 305 respondents selected using the multi-stage stratified sampling technique. Majority of the respondents 107(35.1%) were within the age group of 20-24 years and unmarried 204(66.9%). A greater proportion of the respondents were not currently using any contraceptives i.e. 239(78.4%). However, a handful of the respondents who currently use contraceptive methods uses male condom 27(29.3%) followed by pills 20(21.7%) predominantly. Effectiveness and reliability of contraceptive methods were their main reason for usage whereas, a larger proportion of the respondents had no reason for non-usage. Hence, the point prevalence of contraceptive use is 21.6%. It is recommended that health care providers should be trained to be able to offer counseling services to all clients in order to improve acceptance and utilization of contraceptives.*

KEYWORDS: *Prevalence, Contraceptive use, Women of Reproductive Age, condom, pill*

I. INTRODUCTION

A 1983 United Nations analysis of contraceptive prevalence estimates for the world by region, given low, medium, and high assumptions, confirms a global trend toward rising contraceptive use and declining fertility. Given medium assumptions, the percentage of married women of reproductive age who were using a contraceptive method in late 1983 was 51% for the entire world, 45% in developing regions (33% when China was excluded), and 70% in developed regions. This rate was 14% for Africa, 74% for East Asia, 34% for South Asia, and 56% for Latin America. On a global level, the most widely used forms of fertility control are sexual sterilization (36%), the IUD (19%), oral contraception (15%), condoms (10%), withdrawal (8%), and periodic abstinence (7%). Contraceptive use is also shown to improve child survival through optimal child spacing, lengthening birth intervals, and reducing sibling competition for scarce family and maternal resources (Potts 1990; Rutstein 2005; DaVanzo, Hale et al. 2007; DaVanzo, Hale et al. 2008; Yeakey, Muntifering et al. 2009). According to a new study led by researchers at the Johns Hopkins Bloomberg School of Public Health, contraceptive use would likely prevent more than 272,000 maternal deaths from childbirth each year. Researchers further estimate that satisfying the global unmet need for contraception could reduce maternal deaths an additional 30 percent. According to the United Nations, 63 percent of partnered, reproductive-age women worldwide, representing about 740 million couples, practice some form of contraception. Almost 90 percent of them employ modern methods, which include oral contraception (“the pill”), condoms, injections, intrauterine devices (IUDs), and sterilization. Contraceptive prevalence was increasing until 2000, but growth has stalled since then.

Modern contraceptive use has risen steadily over time in most of the developing world. In some countries in sub-Saharan Africa, however, the adoption of family planning has been slow (such as in Senegal) or it has leveled off in recent years (such as in Kenya). Nearly everywhere, wealthier women are more likely to use modern contraceptives than poorer women. The disparities in use between rich and poor are most pronounced in countries with low contraceptive use overall, such as in Uganda. In countries such as Honduras, contraceptive use overall may rise, but the poor still lag behind. The gap usually starts to close only when contraceptive use becomes widely accepted and available, such as in Colombia. Nonetheless, in Bangladesh, where contraceptive use is not universal, strong program efforts have reduced the rich-poor gap by making family planning services accessible to all, including those in poor, rural communities. Roughly 20 percent of couples using contraception in both Africa and Europe use traditional methods. These methods are typically less effective than modern methods, so couples practicing traditional contraception are included in the estimation of unmet need.

Nigeria which has a population of 140 million and an annual growth rate of 3.2 % (NPC, 2007) is the most populous country in Africa. Nigeria, according to Khurfeld (2006), is already facing a population explosion with the resultant effect that food production cannot match the growing population. In Nigeria today, the birth rates are higher than the world averages (Nwachukwu & Obasi, 2008). Contraceptive Prevalence Rate

(CPR) is still embarrassingly low in Nigeria, according to the report released by the International women's health coalition, the CPR among married women aged 15-49 years was 8% for modern methods and 12% for all methods. Also, other studies have reported a similarly low adoption rate of Modern Birth Control Methods (MBCM). (Haub & Yangishila, 1992; Makinwa-Adebusuyi, 2001; Population Reference Bureau, 2002; UNFPA, 2007).

The current prevalence rate of contraceptive use in Nigeria is approximately 11%-13% (Emmanuel, Andrea, John and James, 2010). According to NDHS 2008, only 10% of married women of reproductive age use contraceptives in Nigeria (UNFPA, 2010). This is lower than the current Sub-Saharan Africa average of 17%. Further analysis of the Total Contraceptive Prevalence rate (CPR) indicates wide state variations, ranging from 0.3 in Jigawa to 41.6 in Lagos state, as well as zonal variations ranging from 2.7 in the North West to 28.5 in the South West (UNFPA, 2010). Contraceptive prevalence (% of women ages 15-49) in Nigeria was 14.60 as of 2008. Its highest value over the past 26 years was 15.30 in 1999, while its lowest value was 6.00 in 1990 (Nigerian Demography Health Survey, 2008). A recent study carried out in a rural community in Osun state recorded a high prevalence of contraceptive usage of about 66.3% among women of reproductive age with cost and availability being the predominant reason for choice of contraceptive method (Olugbenga-Bello, Abodunrin and Adeomi, 2011). In contrast, Oye-Adeniran and his colleagues in their study recorded a low contraceptive prevalence rate of 11.1% among young women between 15-24 years of age. However, there is ample research evidence identifying the various factors that contributes to the low prevalence of modern contraceptives use in Nigeria, with the most common factor being the myth about the side effects of modern contraceptives. Hence, this research was therefore carried out to determine the prevalence of contraceptive use among women of reproductive age in Calabar metropolis, Nigeria with a view to making necessary recommendations that would help improve utilization of family planning services.

II. OBJECTIVE OF THE STUDY

The objective of this study is to determine the prevalence of contraceptive use among women in Calabar metropolis, southern Nigeria.

III. THEORETICAL FRAMEWORK

When modern family planning movement began in the 20th century, its primary purpose was to liberate woman from social and health consequences of unwanted pregnancies. When organized family planning programmes reached developing countries in the early 1950's, these programmes were viewed as the means to alleviate pressure of rapid population growth on economic development. In the last few decade, the purpose of family planning has broaden to encompass both these objectives and the objective of improving women's health and welfare. Previous research (Castro and Juarez, 1994) has examined how women's roles and status influence their use of contraception and their fertility. However, although young women are seen as beneficiaries of family planning, too little attention has been paid to assessing their behavior in relation to family planning.

Several theoretical models on health behavior such as **Health Belief Model** and **Health Promotion Model** have been developed (Becker, 1974). These models have been applied and tested with regards to the use of contraception. Several studies (Boohene *et al*, 1991; Bongaarts & Johanson, 2000), have shown a significant relationship between attitude and contraception intention and behavior. Considering the value of the attitude/belief behaviour relationship and its relevance to preventive strategies like sexual and reproductive health services, it is considered of importance to explore some beliefs of women in Nigeria regarding contraception by adapting some ideas from the Health Belief Model.

According to the **Health Belief Model**, individual perception such as, perceived seriousness of pregnancy, perceived benefits, perceived barriers are more likely to affect the prevention action such as using contraception which can prevent a specific condition such as unplanned pregnancy. In addition, perceived barriers such as difficult access to sexual and reproductive health services (SRH) and providers' negative attitude can prevent the use of services. In contrast the perceived benefit of communicating with parents may result in more effective use of contraception. This model promotes an ability to weigh benefits and make changes when confronting a health risk. An example of a scenario for this model will be; a woman (especially if she is unmarried and does not intend to have a child or married and does not intend having more children) must first perceived that engaging in unprotected sexual intercourse involves consequences such as unwanted pregnancy (**Perceived Susceptibility**); then the consequences could be negative such as, having a child and dropping out of school to support her child--if she is unmarried or having more children than needed because of economic reasons--if she is married (**Perceived Severity**); however, adherence to prescribed intervention such as use of contraception will help prevent unwanted pregnancies (**Perceived Benefit**). Family planning health education at designated centers will enhance women outweigh potential negative side effect such as weigh gain from contraception use or potential loss of social status by delaying parenthood (**Perceived Barriers**). Most research have reported high awareness of family planning methods as television and radio remain the highest sources of information which could be used as a medium to remind women on the need to use contraceptive methods (**Cues to action**). Women who indulge in using contraception should serve as corroborative evidence to encourage women who fear side effects of using contraceptives (**Self efficacy**).

IV. METHODOLOGY STUDY SETTING

The study area is Calabar metropolis. It is situated in the southern part of Nigeria. Calabar metropolis is made up of two local government areas, Calabar Municipality and Calabar South local government area with an estimated population of 196,630 for Calabar South and 176,218 for Calabar Municipality (NPC, 2006). Calabar Municipal council has 10 political wards while Calabar South has 12 political wards making a total of 22 political wards. The Calabar Municipality has a land mass of 141,33 square kilometer while the South which lies in the coastal area empty into the Atlantic ocean and located between latitude 4055 and 8030 East of the Green Meridian, it has a land mass of 181,42. The metropolis is bounded by Calabar river to the west, Akpabuyo local government area to the east, Odukpani local government area to the north and Atlantic ocean to the south. It is a cosmopolitan city which embraces all ethnic groups in Nigeria. The three dominant ethnic groups are the Efiks, Quas and the Efuts which share common culture and religion. English and Efik are the languages widely spoken. The metropolis is predominantly a Christian city with few Muslims and traditional religious groups and mainly occupied by civil servants, businessmen and traders. It also has industries and establishments such as airport, export processing zone, Naval and Army base, Tinapa, NNPC depot, cement factory etc. The metropolis has three levels of health care facilities, 41 primary health facilities, 2 secondary health facilities with 56 private health facilities. Calabar are famous for their rich cultural heritage, warm hospitality and peace-loving disposition.

V. STUDY POPULATION

The study population comprised of all women of reproductive age (15-49) years in Calabar metropolis, southern Nigeria.

VI. STUDY DESIGN

A descriptive cross-sectional study was employed to determine the prevalence of contraceptive use among women of reproductive age in Calabar metropolis, southern Nigeria between December to February 2013.

VII. SAMPLING PROCEDURE

A multi-stage stratified sampling technique was employed in the study and is described as follows:

1. Calabar metropolis was divided into two strata i.e. Calabar South and Calabar municipal.
2. In each stratum, 5 wards were randomly selected giving a total of 10 ward employed in the study.
3. In each ward, three streets were randomly selected giving a total of 30 streets employed in the study.
4. In each street, 10 households were sampled giving as a total of (10×30=300) 300 which became the sample size for the study.
5. To make room for non-response and attrition bias the sample size was increased to 305 which became the actual sample size for the study.

VIII. DATA COLLECTION METHOD

Data were collected using a structured questionnaire which was interviewer-administered to respondents and pre-tested prior to use. The questionnaire comprised of questions on socio-demographic characteristics, knowledge of contraception, attitude of respondents towards contraception, utilization of contraceptives among respondents and factors affecting utilization and acceptance of contraceptive usage among respondents.

IX. DATA ANALYSIS

The questionnaires were manually sorted out and analyze using Statistical Package for Social Science (SPSS, version 15.0). Data was summarized using frequency tables, graphs, means and standard deviations. Bivariate analysis was done with chi-square test or Fisher's exact test to compare proportions for categorical variables. Results were considered to be significant when the 2-sided value was < 0.05.

X. ETHICAL CONSIDERATION

Ethical approval was obtained from Cross River State Research Ethics Committee, Ministry of Health. Verbal informed consent was duly sought and obtained from research participant who volunteered to take part in the study. The research participant were assured of confidentiality of information elicited.

XI. RESULTS

A total of 305 completed questionnaires were distributed and analyze giving a response rate of 100%. Majority of the respondents were within the age range 20-24 years 107(35.1%), followed by 25-29 years

84(27.5%) with a mean age of . Most of them were single 204(66.9%) and still schooling 177(58.0%), christians 294(96.4%) and their either currently or had attained tertiary level of education 265(86.9%) (Table 1).

some respondents had to disagree with the fact that contraceptives are ineffective 109(35.7%) and that contraception is against culture and religion 74(24.3%). However, a large proportion of respondent do not know if contraception use encourage promiscuity 90(29.5%) (Table 3).

Table 3: Attitude of respondents toward Contraception (n=305)
Table 1: Socio-demographic Characteristics of respondents (n=305)

VARIABLE	FREQUENCY	PERCENTAGE
Age group (in years)		
15-19	32	10.5
20-24	107	35.1
25-29	84	27.5
30-34	29	9.5
35-39	23	7.5
40-44	20	6.6
45-49	10	3.3
Marital Status		
Single	204	66.9
Married	96	31.5
Separated	0	0
Widowed	3	1.0
Cohabiting	2	0.6
Religion		
Christianity	294	96.4
Islam	5	1.6
Traditional Religion	6	1.7
Level of Education		
No formal Education	4	1.3
Primary	1	0.3
Secondary	35	11.5
Tertiary	265	86.9
Occupation		
Farming	0	0
Trading	13	4.3
Civil Servant	82	26.9
Housewife	8	2.6
Student	177	58.0
Unemployed	10	3.3
Teaching	13	4.3
Others	2	0.6

In table 2, majority of the respondents claim to have heard of contraception or family planning methods before 281(92.1%) and health workers were their major source of information 108(34.3%). Most respondents also felt that contraceptives are used primarily for prevention of unwanted pregnancy 220(51.8%) and child spacing 107(25.2%). One hundred and one (22.1%) respondents reported irregular menses as side effect of contraceptive methods while 77 respondents (16.8%) felt weight gain was the side effect. 31 respondents (10.2%) felt that the wife should solely decide on the family planning method to be used, 13 respondents (4.3%) said it should be the husband but, 261(85.5%) respondents felt is a joint responsibility of husband and wife. Most respondents were knowledgeable of contraceptive methods as pills 174(28.0%), male condom 132(21.2%), female condom 87(14.0%) and calendar/rhythm method 76(12.2%) recorded highest.

Table 2: Knowledge of respondents about contraception

VARIABLE	FREQUENCY	PERCENTAGE
Heard of contraception/family planning methods before (n=305)		
Yes	281	92.1
No	24	7.9
Source of information (n=315)		
Friend	49	15.5
Radio	52	16.5
Television	69	21.9
Health worker	108	34.3
Husband	2	0.6
Handbills/posters	9	2.9
Market	1	0.3
Others	25	7.9
Contraceptives are used for (n=425)		
Prevention of unwanted pregnancy	220	51.8
Child Spacing	107	25.2
Limit family size	58	13.6
Prevention of sexually transmitted diseases	24	5.6
Does not know any method	16	3.8
Knowledge of side effects (n=457)		
None	55	12.0
Weight gain	77	16.8
Weight loss	51	11.2
Condom burst/spillage	40	8.8
Encourage extra marital affairs	52	11.4
Irregular menses	101	22.1
Heavy menses	59	12.9
Others	22	4.8
Decider of family planning method (n=305)		
Wife	31	10.2
Husband	13	4.3
Both	261	85.5
Knowledge of contraceptive methods (n=622)		
Does not know any method	37	5.9
Male Condom	132	21.2
Female Condom	87	14.0
Intra uterine contraceptive device (IUCD)	63	10.1
Pills	174	28.0
Calendar/Rhythm method	76	12.2
Vasectomy	29	4.7
Tubal Ligation	22	3.5
Other methods	2	0.3

On the attitude of respondents toward contraception, most of them strongly agreed to the national policy of 4 children per family 123(40.3%) and the involvement of husbands in family planning decisions 216(70.8%). Most of the respondents strongly disagreed with the fact that only females should use contraceptives 120(39.3%), contraception is only for literates 157(51.5%) and that contraceptives reduces sexual pleasure 76(24.9%). Furthermore,

VARIABLES	FREQUENCY (PERCENTAGE %)				
	Strongly agreed	Agreed	I don't know	Strongly disagree	Disagree
It is against culture and religion	62(20.3)	53(17.4)	59(19.3)	57(18.7)	74(24.3)
Only females should use contraceptives	23(7.5)	40(13.1)	33(10.8)	120(39.3)	89(29.2)
Contraceptives are ineffective	16(5.3)	48(15.7)	64(21.0)	68(22.3)	109(35.7)
It encourages promiscuity	53(17.4)	64(21.0)	90(29.5)	45(14.7)	53(17.4)
It is only for literates	14(4.6)	11(3.6)	39(12.8)	157(51.5)	84(27.5)
Husband should be involved in family planning decision	216(70.8)	62(20.3)	10(3.3)	15(4.9)	2(0.6)
Reduces sexual pleasure	33(10.8)	51(16.7)	75(24.6)	76(24.9)	70(22.9)
Support National policy of 4 children per family	123(40.3)	103(33.8)	35(11.5)	19(6.2)	25(8.2)

In table 4, majority of the respondent reported that they have not used contraceptive methods before 178(58.4%). Also, a larger proportion of respondents stated clearly that they are currently not using any method 239(78.4%). However, a handful of respondents 66(21.6%) currently uses modern contraceptive methods such as male condom 27(29.3%), pills 20(21.7%) and calendar/rhythm methods 14(15.2%). Most respondents never consult a doctor for advice before using their choice of contraceptive method 59(50.9%). The main reasons given for their choice of contraceptive method were effectiveness and reliability 38(33.0%), followed by affordability and availability 25(21.7%). Most of the non-users 93(38.3%) did not have any reason for not using any method. Most of the users had used the method of choice between 1- 5 Years (69.5%), followed by 6-10 years by 13.9% of the respondents.

Table 4: Utilization of Contraceptives among Respondents

VARIABLES	FREQUENCY	PERCENTAGE
Ever used contraceptive methods (n=305)		
Yes	127	41.6
No	178	58.4
Currently using contraceptive methods (n=305)		
Yes	66	21.6
No	239	78.4
Contraceptive methods currently in use (n=92)		
Male condom	27	29.3
Female condom	6	6.5
Withdrawal	6	6.5
Periodic Abstinence	5	5.4
Rhythm/Calendar method	14	15.2
Diaphragm	0	0
Intra Uterine Contraceptive Device (IUCD)	5	5.4
Hormonal Injectables	2	2.2
Pills	20	21.7
Implants	4	4.3
Vasectomy	0	0
Tubal Ligation	3	3.3
Others	0	0
Consult any doctor for advice before using contraceptives (n=116)		
Yes	57	49.1
No	59	50.9
Main reasons for choice of contraceptive methods (n=115)		
No reason	8	6.9
They affordable and available	25	21.7
Little or no side effect	16	13.9
They are effective and reliable	38	33.0
No longer need children	15	13.0
Other reasons	13	11.3
Main reasons for not using contraceptives (n=243)		
No reason	93	38.3
They have side effects	60	24.7
Religion does not permit	13	5.3
Husband disapproval	15	6.2
Still need children	31	12.7
Others reasons	31	12.7
Duration of contraceptive use (in years) (n=115)		
Less than 1	15	13.0
1-5	80	69.5
6-10	16	13.9
11-15	3	2.6
16-20	1	0.9
21-25	0	0

XII. DISCUSSION

This study reported a low prevalence rate of contraceptive use of about 21.6%. This low prevalence rate have been similarly reported by previous studies carried out within and outside Nigeria. A 2003 National Demographic Health Survey revealed that despite the high knowledge of at least one contraceptive method, only 29% of all women reported in the same survey to have used at least one of the known methods. The 2008 National Demographic Health Survey revealed that despite the high knowledge of at least one contraceptive method, only 29% of all women reported in the same survey to have used at least one of the known methods. A cross sectional community based survey in Nigeria among women of reproductive age (15-49) revealed a contraceptive prevalence rate of about 14.8% (Oye-Adeniran, Adewole, Odeyemi, Ekanem and Umoh, 2006). The reason for low contraceptive use may be due to women's level of illiteracy, lack of economic independence and husband/partners' disapproval. In contrast, it disagrees with findings from other studies where high prevalence rate of contraceptives were recorded. A study carried out by Odusina, Ugal & Olaposi (2012), reported a high prevalence rate of contraceptive use of about 73.3% among women. Olugbenga-Bello and colleagues also reported a high contraceptive prevalence rate of 66.3% among rural women in Osun state, Nigeria. The reason for high contraceptive prevalence may be attributed to high literacy level and high level of educational attainment among women which has assisted them in decision making.

This study also recorded a high level of knowledge on contraception. This was corroborated by Olugbenga-bello, Abodunrin & Adeomi, (2011) in their study carried out in South-Western Nigeria. This corroborates the on-going sensitization on family planning and prevention of unwanted pregnancy around the globe especially in affected regions. A high level of awareness on contraceptive methods was also recorded with most respondents predominantly knowing pills followed by male condom and then, female condom. This high awareness level was corroborated by previous studies carried out (Barrett & Buckley,2007; Adinma & Okeke, 1995; Odusina, Ugal & Olaposi, 2012). While some respondents knew one method or the other, 37 respondents had no knowledge of contraceptive methods. However, it is still worthy of note that some contraceptive methods such as diaphragm, implant and injectables were very unpopular among respondents. This may be due to the fact that they are relatively more expensive and less advertised than the commoner methods like male condoms, female condoms, pills, etc.

The most popular contraceptive method from this study is the pills with about 174 out of 305 respondents knowing about it. This is similarly reported by other studies (Odusina, Ugal & Olaposi, 2012) and may be probably due to the fact that it is effective and reliable and more advertised among young unmarried women which constitute the bulk of the respondents in this study. Unlike other studies where the media was the predominant source of information (Bassey, Abassattai, Asuquo, Udoma & Oyo-Ita, 2005; Onwasigwe, 2001), majority of the respondents knew about contraception through health workers which is similar to the finding of a study carried out in Osun state by Olugbenga-Bello, Abodunrin & Adeomi in 2011. This provides a substantial reason on why health workers should be trained and empowered at regular intervals so as to enhance service delivery to clients that visit health facilities for health care services. Nevertheless, the media would still need to do much more work on continuous sensitization and awareness about contraception since an appreciable number of the respondents heard or knew about contraception in television and radio.

Most of the respondents had favourable attitude towards contraception. About 70.8% of respondents felt husbands should be involved in family planning decision and this is imperative because men's approval and decision making has been said to be very vital in utilizing family planning services (Donati, Hammam & Medda, 2000; Shah et al, 2008; Shahin and Shahin, 2003) and this further stresses the need to carry men along in family planning campaigns.

The prevalence rate of modern contraceptive methods usage among respondents was 21.6% with effectiveness and reliability being the predominant reason for their choice of contraceptive methods. The unmet need for contraception was also high among respondents with about 58.4% not on any method. This corroborates the work of Westoff (2006) that reported about one in five married women of childbearing age (22%) in Africa has an unmet need for contraception. It is even more disturbing that more than 3 out of 10 of the respondents had an unmet need for modern contraception, because other methods (e.g. traditional methods) have been associated with high failure rates (Westoff, 2006). Hence, in order to achieve two of the eight Millennium Development Goals i.e. reducing maternal mortality and combating the spread of HIV, malaria and other diseases, the campaign on contraceptive use must be intensified especially among young women who have never used contraceptive methods. This approach will aid in reducing the unmet need of contraception among women of reproductive age. About 239 out of the 305 respondents employed in this study who are not using any contraceptive method had no reason for not using it. The reasons given by others are fear of side effects, desire for more children which is similar to what has been reported by other studies (Donati, Hamam & Medda, 2003; Shahin & Shahin, 2003).

XIII. CONCLUSION AND RECOMMENDATION

The prevalence rate of contraceptive use among women of reproductive age in Calabar metropolis of Cross River State, Nigeria is low (21.6%) with unmet need of 58.4%. The main reason for non-usage of contraceptive methods were fear of side effect and the desire to have more children. Certain factors such as perceived low risk of pregnancy, low educational status and religious consideration contribute to contraceptive non-use. There is a need for continuous enlightenment on contraceptives focusing particularly on the side effects and how to overcome the fears. Health care providers should be trained to be able to offer counseling services to all clients in order to improve their acceptance of contraceptives. Young unmarried women should be targeted to inculcate early in them a positive attitude towards family planning methods including emergency contraceptives pills to prevent unwanted pregnancy and unsafe abortion.

REFERENCES

- [1]. Potts, M.. "Family planning is crucial to child survival." *Network* 11(4): 2. (1990)
- [2]. Nwachukwu I. and Obasi O.O. Use of Modern Birth Control Methods Among Rural Communities in Imo State, Nigeria. *African Journal of Reproductive Health*. 12(1), 2008 :101-108
- [3]. Emmanuel M. Andrea S. John E. James E: Contraceptive practices in Nigeria: Literature review and recommendation for future policy decision. *Open access to Scientific and Medical research*. Vol (1), 2010, pg 9-22
- [4]. Olugbenga-Bello AL, Abodunrin OL, Adeomi AA.: Contraceptive Practices among women in a rural communities in South-Western Nigeria. *Global Journal of Medical Research* vol 11(2), 2011
- [5]. Castro M. T., Juarez F.: Womens' education and fertility in Latin America. Exploring the significance of education on womens, lives. *Demography and Health Survey working paper* No. 10, Maryland; Macro International. 1994
- [6]. Becker M. H. The Health Belief Model and Personal Health Behaviour. *Health education monographs* vol. 2:4, 1974
- [7]. Boohene E., Tsodzai J., Hardee Cleaveland K., Weir S., Janowitz B.: Fertility and contraceptive use among young adult in Harare, Zimbabwe. *Studies in Family Planning* 22 (4): 1991, 264-271.
- [8]. Bongaarts J. Johanson E : Further trends in contraception in developing World: prevalence and method mix. *Population Council* 141. 2000
- [9]. NPC (Nigerian Population commission); Result of 2006 census figures, 2007
- [10]. Oye Adeniran B. A. et al. 'Contraceptive Prevalence among Young Women in Nigeria'. 2006
- [11]. Adinma JIB., Nwosu BO. Family Planning Knowledge and Practice among Nigerian women attending antenatal clinic. Volume 13. 1995.
- [12]. Odusina E. K, Ugal D. B. Olaposi O: Socio-economic status and contraceptive knowledge and use among rural women in Ikeja Arakeji, Osun state, Nigeria. *Afro Asian Journal of Social Sciences*. Vol 3, 2012, No. 3.2
- [13]. Onwasigwe CN: Contraceptives Knowledge and Practice among married women in Enugu metropolis. *Orient Journal of Medicine*; 13(13 & 14): 2001, Pg. 67
- [14]. Bassey EA, Abassattai AM, Asuquo EE, Udoma EJ, Oyo-ita A. Awareness, attitude and practice of contraception among secondary school girls in Calabar. *Nigerian Journal of Medicine*; 14(2): 2005, 146-150.
- [15]. Barrett Jennifer and Buckley Cynthia. Constrained Contraceptive Choice: IUD Prevalence in Uzbekistan. *International Family Planning Perspectives*; 33(2): 2007, 50-57
- [16]. Donati S, Hamam R, Medda E. Family planning KAP survey in Gaza. *Soc Sci Med*; 50:841-9, 2000
- [17]. Shahin HA, Shahin HG. Reasons for not using family planning methods in Eastern Turkey. *Eur J Contracept Reprod Health Care*; 8:11- 6. 2003.
- [18]. Westoff CF. New estimates of unmet need and the demand for family planning, DHS Comparative Reports, No. 14. 2006
- [19]. Health surveys." *Int J Gynaecol Obstet* 89 Suppl 1: S7-24.
- [20]. Johns Hopkins University Bloomberg School of Public Health. Contraceptive use averts 272,000 maternal deaths worldwide. *Science Daily*. (2012, July 10), Retrieved December 27, 2012.
- [21]. *Journal of Obstetrics & Gynecology* 25(2) 182 – 185
- [22]. Population References Bureau: Family Planning Worldwide 2008 data sheet. 2008.
- [23]. Rutstein, S. O. "Effects of preceding birth intervals on neonatal, infant and under-five years Santa Monica, CA, RAND Corporation. 2005.
- [24]. Seltzer, J. R. The Origins and Evolution of Family Planning Programs in Developing Countries. 2002
- [25]. Singh, S., J. E. Darroch, et al. Adding It Up: The Costs and Benefits of Investing in Family Planning. 2009
- [26]. World statistics: prevalence of contraceptive use in selected countries. *High Beam*. 2008.