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CONTRACEPTIVE METHOD CHOICE AND COMMODITY SOURCES AMONG WOMEN OF REPRODUCTIVE AGE CURRENTLY USING ANY FORM OF CONTRACEPTION IN COMMUNITIES IN IMO STATE, NIGERIA

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ABSTRACT

Introduction: The choice and use of a particular contraceptive method and their sources varies globally. The common modern contraceptive methods used were; condoms, injectables, pills and Intra Uterine Contraceptive Devices (IUCD).
Aim: The aims of this study was to determine the pattern of contraceptive method choice and commodity sources among women of reproductive age who are currently using any contraception in communities in Imo State, Nigeria.
Methodology: This study was a community based cross-sectional study carried out among 1123 women of reproductive age (15-49 years) living in communities in Imo State, Nigeria. Eligible participant were selected using a multistage random sampling technique and data was collected using a pretested, semi structured and interviewed administered questionnaire. Data was analyzed using computer software (EPI-INFO Version 3.3.2).
Results: The mean age of the women was 32.0±8.0 years. Out of the 1123 women studied, only 305 (27.2%) were current contraceptive users. About two-third of the users (18.2%) were using any form of modern contraceptive method. The common contraceptive methods used were; condoms, periodic abstinence, injections and pills. Contraceptive choice varies with age, marital status, religion and resident of women. Overall most women sourced their contraceptives from the private sector. Most of the barrier methods and pills were sourced from the chemist while the injections, IUCD tubal ligation and implants were sourced from the hospitals.
Conclusion: Use of modern contraceptive method was low and the choice of a particular contraceptive type and source of the commodity varies with socio-demographic characteristics of the women. There is need to make contraceptives available and family services accessible to women in a way that will be culturally acceptable to them.
Keyword: Contraceptive method, choice, commodity sources, communities, Imo State

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1.0 INTRODUCTION

From a broad perspective, family planning involves the control of the world's population with respect to the available food and economic resources of the world.[1] Family planning allows people to attain their desired number of children and determine the spacing of pregnancies and is achieved through the use of contraceptive method and treatment of infertility.[2] Contraception is the deliberate use of techniques to prevent conception.[3] Contraceptive use is the corner stone of prevention for unwanted pregnancies.[4,5] Contraceptive methods are classified into two major types; modern and natural or traditional methods. Modern methods include; barrier methods (male and female condoms, diaphragm, cervical cap, spermicidal), hormonal methods (oral contraceptives, injections, subcutaneous silicone implants), intrauterine devices, and surgical methods (tubal ligation, vasectomy and laparoscopic sterilization) while natural/traditional methods includes; rhythm or billings method, breast feeding, abstinence, withdrawal method and various traditional methods.[6,7] However, some of these are available only in family planning clinics and hospitals, and many must be given only by trained providers, yet many others are available in diverse places.[7]

Sources of these contraceptives varies globally, while in some countries most people source it from the private sector, [8,9,10] in others the common source is from the public sector [11,12,13]. some of the key factors that had been found to influence the places people source for contraceptive methods were; availability and accessibility of family planning services, type of contraceptive needed, cost of family planning services and socio-demographic/economic factors of individuals among others. [7,8,14]

Despite the proven impact of contraceptive use in preventing unwanted pregnancies, spacing and limiting of pregnancies and general health and wellbeing of women as well as the outcome of each pregnancy, the use of modern contraception have remained consistently low in Nigeria with a current prevalence of 10.0% and a high unmet need of 16.0%. This could have accounted for the consistently high maternal and infants deaths reported in Nigeria and over 610,000 pregnancy terminations occurring in the country and its attendant consequences [8,15,16].

The choice and pattern of contraceptive method used varies from place to place and it is influenced by several factors. The common modern contraceptive methods use by women in Nigeria and other countries in studies that were reviewed included; males condoms, injectibles, pills and IUCD while the least was surgical methods.[7,8,14,17,18,19] The main reasons reported by women for using a contraceptive type were; it is convenience, safe and has less side effects, simple to use, efficacy and reversibility of method, availability and cost, family/partner's opinion, health care professionals advice, religious/cultural acceptability, confidentiality, prevention of sexually transmitted infections (STIs) among others.[2,5,8,14,19,20] Also studies have revealed some socio-demographic/economic/cultural factors that were strongly associated with pattern of contraceptive choice and use such as woman's age, duration in marriage, marital status, religion practiced, educational status of women/spouse, place/region/country of residence, family size, income, spousal approval and ever discussing the method type with partner etc. [7,8,18,20,21,22]

Thus the aim of this study is to assess the pattern of contraceptive choice and commodity sources among women of reproductive age (15-49) currently using any form of contraception in communities in Imo State, Nigeria.

2.0 METHODOLOGY

2.1 Study area: Imo State is one of the 36 States of Nigeria 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). Majority of the people living in the State were Christians and of Igbo ethnic nationality.[8] The State is made up 27 Local Government Areas; 22 are rural while 5 are urban as designated by the National Population Commission (NPC). An urban (Owerri Municipal) and a rural (Mbaitolu) Local Government Area (LGA) were studied. Owerri Municipal has a total population of 127,213, with a female population of about 64,223 while Mbaitoli has a total population of 237, 555 people, with a female population of about 115516.[8]

2.2 Study design/Study population/Inclusion criteria: The study was a descriptive cross-sectional survey. The study population consisted of women of reproductive age group (15-49years) in the selected communities in the state irrespective of their marital status**.** 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 study.

2.3 Minimum sample size estimation: Using the Cochran sample size formulae for populations greater than 10,000 and proportions of women in reproductive age group in Imo state who are currently using any modern form of contraception in a previous study to be 27.0%[17] ,

Z^2pq/d^2

Where n = Sample size to be estimated, p= Proportion of women within reproductive age group currently using any modern form of contraceptive method (27.0%)[17], q=1-p= 0.73, Z= Standard normal deviate corresponding to 95% Significance Level ≅ 1.96, d= level of precision desired for the study set at 0.05. A total sample size of 1123 was used.

2.4 Sampling technique: The sampling technique used for this study was the multistage sampling technique. The first stage involved the selection of the Local Government Areas that were used for the study. The Local Government Areas (LGA's) were grouped into 2 categories. Category A, were made up of 5 urban Local Government Areas; and category B, consisted 22 rural Local Government Areas. From each category, a Local Government Area was selected by simple random sampling technique, using balloting. Thus Owerri

municipal was selected from the urban while Mbaitoli LGA was selected from the rural category. The second stage involved the selection of the primary sampling units from the LGA's. The enumeration areas (EA's) which are geographic clusters that have been clearly demarcated by the National Population Commission (NPC), which served as the primary sampling units. Then using simple random sampling technique, based on the population size of the LGA's; ten EA's were selected out of 750 EA's in Owerri Municipal while twenty were selected from 1387 EA's in Mbaitoli LGA. The third stage involved the selection of the respondents that were interviewed. From each LGA, 565 women in the reproductive age group (15-49 years) were recruited for the survey. Thus a total of 57 respondents per EA were recruited from the urban LGA and 28 respondents per EA from the rural LGA respectively. 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 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, technique 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 a 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 contraceptive method choice and pattern.

Quantitative data collected were cleaned and validated manually, while a computer software package (EPI INFO version 3.3.2) was used for data entry and analysis. Frequencies and percentages of relevant variables were generated and bivariate analysis conducted where necessary using the Chi-square. 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 consent obtained before proceeding for the interview. They were also assured of confidentiality and participation was optional.

3.0 RESULTS

Table 1: Socio-demographic characteristics of respondents

Variable	Frequency (%) [N=1123]
Age group (yrs)	
15-19	48(4.3)
20-24	162(14.4)
25-29	246(23.5)
30-34	223(19.9)
35-39	197(17.5)
40-44	144(12.8)
45-49	85(7.6)
Mean ±SD=32.0±8.0	
Marital Status	
Married	798(71.1)
Single	207(18.4)
Co-habiting	68(6.0)
Previously married	50(4.5)
Educational Status	
None	3(0.9)
Primary	96(8.6)
Secondary	673(60.0)
Tertiary	315(28.3)
Vocational	36(3.2)
Employment status	
Employed	924(82.3)
Unemployed	199(17.7)
Religion	
Christianity	
Catholics	512(45.6)
Pentecostal	208(18.5)
Orthodox	372(33.2)
Muslim	7 (0.6)
Traditional religion	24 (2.1)
Tribe	
Ibo	1100 (98.0)
Hausa	11 (1.0)
Yoruba	12 (1.0)
Type of union (n=789)	
Polygamy	50 (6.3)
Monogamy	748 (93.7)
Residence	
Rural	563 (50.1)
Urban	560 (49.9)

The mean age of the respondents was 32.0±8.0 years with majority of them being currently married, (71.1%), had secondary education, (60.0%), were Christians, (97.3%), of Igbo ethnic extraction, (97.3%), employed, (82.3%), and of monogamous marital unions among the married, (93.7%). The overall median age at first marriage was 23.3 years {rural, 22.1years and urban, 24.2 years}. Almost equal number of respondents were enrolled from both the rural, (50.1%) and urban, (49.9%), locations respectively.

Table 2: Contraceptive method use among respondents

Variable	Frequency (%)
Current use of any form family planning method (n=1123)	
Yes	305(27.2)
No	818(72.8)
****Methods currently used**	**n=305**
Condom	90(29.8)
NFP/Rhythm (periodic abstinence)	62(20.3)
Injections	55(18.0)
IUCD/Loops	55(18.0)
Withdrawal	55(18.0)
Pills	43(14.1)
Abstinence	25(8.2)
Breastfeeding (lactation amenorrhea)	17(5.6)
Tubal ligation	15(4.9)
Others (traditional methods)	15(4.9)

****=multiple response,** others- traditional methods, spermicides, diaphragm/cervical caps and implants

The contraceptive prevalence among the studied population was 27.2% and the common contraceptive methods used were; condoms, (29.8%), Natural method/rhythm, (20.3%), injections, (18.0%), and IUCD, (18.0%).

Table 3: Pattern and proportion of contraceptive method use by some selected socio-demographic characteristics of respondents

Variable	Percentage use of each contraceptive type (%)							
	Any of all methods	Any of modern methods	Barrier	Pills	injections	Implants/IUCD	Tubal ligation	All NFP Methods
Age group (yrs)								
15-19	13.1	13.1	13.1	0.0	0.0	0.0	0.0	0.0
20-24	23.4	16.4	11.0	4.5	0.9	0.0	0.0	7.1
25-29	19.5	11.4	6.8	3.3	1.3	0.0	0.0	8.1
30-34	26.0	15.0	7.4	1.7	3.8	2.1	0.0	11.0
35-39	30.4	20.5	4.4	2.8	5.5	6.0	1.8	9.9
40-44	39.1	27.0	5.3	3.1	7.1	9.1	2.4	12.1
44-49	36.6	24.5	0.0	1.9	4.2	15.6	2.8	12.1
Total	**27.5**	**18.2**	**6.7**	**2.9**	**3.6**	**4.0**	**1.0**	**9.3**
Marital status								
Married	31.6	17.1	5.9	2.3	4.4	3.0	1.5	14.5
Cohabiting	38.6	25.7	5.5	3.4	4.3	11.9	2.6	12.9
Single	46.1	36.9	22.3	9.0	5.6	0.0	0.0	9.2
Divorced	41.7	33.6	8.4	0.0	8.4	8.4	8.4	8.1
Separated	27.4	27.4	4.6	4.6	9.1	9.1	0.0	0.0
Widowed	19.0	16.9	0.0	6.3	2.2	8.4	0.0	2.1
Total	**27.5**	**18.2**	**6.7**	**2.9**	**3.6**	**4.0**	**1.0**	**9.3**
Religion								
Catholic	38.7	25.0	11.8	3.6	4.3	3.9	1.4	13.7
Orthodox	38.0	25.9	6.8	4.3	5.1	7.5	2.2	12.1
Pentecostal	37.9	21.6	6.3	4.0	5.7	4.7	0.9	16.3
Others[1]	12.6	9.0	4.1	0.9	0.9	3.1	0.0	3.6
Total	**27.5**	**18.2**	**6.7**	**2.9**	**3.6**	**4.0**	**1.0**	**9.3**
Residence								
Rural	19.5	16.1	6.6	3.2	3.5	2.8	0.0	3.4
Urban	35.4	20.2	6.9	2.8	3.9	4.9	1.7	15.2
Total	**27.5**	**18.2**	**6.7**	**2.9**	**3.6**	**4.0**	**1.0**	**9.3**

Others[1]= Muslims and Traditional religion worshippers

Table 3 shows the pattern of contraceptive method use by some selected socio-demographic variables of the women. Women in younger age groups tend to use more of barrier methods; 15-19years (13.1%), 20-24 years (11.6%) while women in the older age groups >35 years of age tend to use more of Natural family planning methods (NFP) and other long lasting modern methods (IUCD/implants and injections. Tubal ligation was only

used among women >35years of age. Among the currently married women, the use of NPF (14.4%), was sizable and the commonest modern method used was barrier method, (5.9%). In those cohabiting the commonest modern method used was implants/IUCD, (11.9%) while among singles the commonest modern method used was the barrier method, (22.3%), followed by pills, (9.0%). Among the divorced, the common methods used were; barrier, (8.4%), injections, (8.4%), implants/IUCD, (8.4%) and tubal ligation, (8.4%) while among those separated the common methods were; injections, (9.1%) and implants, (9.1%). The common methods used by widows were; implants/IUCD, (8.4%), and pills, (6.3%). Commonest modern method used by women in Catholic denomination was barrier methods, (11.8%), Orthodox was implants/IUCD, (7.5%), Pentecostals was barrier methods, (6.3%) and in women in other religions was a barrier method, (4.1%). Higher proportion of rural women among the current users (82.6%), use any modern contraceptive than urban counterparts, (57.1%). Nevertheless no woman in the rural areas used tubal ligation, implants, diaphragm, nor spermicides while urban women use more natural family planning methods, (15.2%)

Table 4: Main Source of methods used by place of residence of respondents

Method source	Rural n (%)	Urban n (%)	Total n (%)	χ^2	p-value
Chemist/pharmacy	48(44.1)	51(26.0)	99(32.4)	26.260	
Public hospitals	34(31.2)	54(27.6)	88(28.9)	df=4	<0.0001*
Private hospitals	14(12.8)	50(25.5)	64(21.0)		
Others	13(11.9)	41(20.9)	54(17.7)		
Total	109(100)	196(100)	305(100)		

*=Significant, Others=Friends and relatives, Churches/spiritual homes, and Traditional birth attendant

Among those currently using any form of contraception in the rural areas, the commonest source of family planning commodities was pharmacy/chemist shop, (44.1%), this was followed by public hospitals, 34(31.2%), while in the urban areas the commonest sources of family planning commodities was the public hospitals, 54(27.6%), closely followed by pharmacy and chemist shops, 51(26.0%). The variation in source of commodities between the localities was statistically significant, (χ^2=26.260, p<0.0001). Overall, majority of the women in both localities sourced their contraceptives from the private sector, (71.1%)

Table 5: Sources of family planning commodities by method in urban and rural localities of study

Source	**Family planning commodities/methods****					
Urban	**Barrier N (%)**	**Pills N (%)**	**Injections N (%)**	**IUCD N (%)**	**TL/Implants N (%)**	**Natural methods N (%)**
Public Hospital	5(8.3)	1(4.2)	7(20.6)	21(55.3)	12(60.0)	15(11.9)
Private Hospital	10(16.7)	3(12.5)	11(32.4)	17(44.7)	8(40.0)	25(19.8)
Pharmacy/Chemist	42(70.0)	18(75.0)	15(44.1)	0(0.0)	0(0.0)	77(61.1)
Others	3(5.0)	2(8.3)	1(3.0)	0(0.0)	0(0.0)	9(7.2)
Total	60(100.0)	24(100.0)	34(100.0)	38(100.0)	20(100.0)	126(100.0)
RURAL						
Public Hospital	1(2.5)	7(36.8)	14(66.7)	11(64.7)	0(0.0)	9(24.5)
Private Hospital	0(0.0)	1(5.3)	6(28.6)	6(35.3)	0(0.0)	3(8.8)
Pharmacy/Chemist	38(95.0)	10(52.6)	0(0.0)	0(0.0)	0(0.0)	13(38.2)
Others	1(2.5)	1(15.3)	1(4.7)	0(0.0)	0(0.0)	9(26.5)
Total	40(100.0)	19(100.0)	21(100.0)	17(100.0)	0(0.0)	34(100.0)

Multiple responses Applicable**

Sources of the contraceptive commodities vary with types of methods and location of the respondents. In both the rural and urban areas, barrier methods were mostly procured from pharmacy/chemists shops, (rural, 95.0% and urban, 75.0%). Oral contraceptive pills were procured mostly from the pharmacy/chemist shops, (52.6%) and public hospitals, (36.8%) in the rural , while pharmacy/chemist shops, (75.0%), were the main sources for urban dwellers, but the injectable in the rural area where mainly procured from the public hospitals, (66.7%), and private hospitals, (28.6%) while their urban counterparts sourced their own mainly from pharmacy/chemists shops, (44.1.%), private hospitals, (32.3%), and public hospitals, (20.6%). The IUCDs, implants, tubal ligation were only procured from either public or private hospitals in either locality. In both rural 75(68.8%) and urban 143(72.4%), majority of respondents sourced their commodities from the private sector.

Table 6: Selected socio-demographic characteristics of respondents and sources of contraceptive commodity by percentage

Variable	Sources of contraceptive commodity by percentage (%)				
	Public hosp.	Private hosp.	Pharm/Chemist	Others[2]	Total (%)
Age group (yrs)					
15-19	0.0	0.0	100.0	0.0	**100**
20-24	8.3	7.8	71.1	12.8	**100**
25-29	8.3	9.6	65.9	16.2	**100**
30-34	24.9	19.9	37.9	17.3	**100**
35-39	46.2	24.7	18.4	10.8	**100**
40-44	50.2	21.7	18.3	9.8	**100**
44-49	47.2	36.6	0.0	16.2	**100**
Marital status					
Married	36.6	22.3	23.5	17.6	**100**
Cohabiting	66.7	18.8	8.3	6.2	**100**
Single	1.8	8.2	86.7	3.3	**100**
Divorced	0.0	66.7	33.5	0.0	**100**
Separated	40.0	20.0	40.0	0.0	**100**
Widowed	100	0.0	0.0	0.0	**100**
Religion					
Catholic	25.9	18.8	43.2	12.1	**100**
Orthodox	34.3	27.4	34.3	4.0	**100**
Pentecostal	33.8	22.9	27.9	15.4	**100**
Others[1]	10.0	20.0	60.0	10.0	**100**

Others[1]= Muslims and Traditional religion worshippers, Others[2]= Friends and relatives, Churches/spiritual homes, and Traditional birth attendant

Table 6 shows the sources of contraceptive commodities used by selected socio-demographic characteristics using proportions. Women of younger age group commonly sourced their family planning commodities from the pharmacy/chemist; 15-19 years (100%), 20-24 (71.1%) 25-29 years, (65.9%), and 30- 34 years (37.9%) while those in the older age group sourced theirs from public hospitals; 35-39 years; (46.1%), 40-44 years, (50.2%), and 45-49 years, (47.2%). Commonest sources for the currently married women (36.6%) and cohabiting (66.7%) was the public hospital while that of singles was, pharmacy/chemist, (86.7%), divorced was private hospitals, (66.7%), and separated women were from public hospitals, (40.0%) and pharmacy/chemist, (40.0%) respectively. Considering religion, more Catholics sourced theirs from pharmacy/chemist, (43.2%), Orthodox women from public hospitals, (34.3%), and pharmacy/chemist, (34.3%), Pentecostals from public hospitals, (33.8%) while those in other religious sects sourced theirs mainly from the pharmacy/chemist shops, (60.0%)

4.0 DISCUSSION

Out of the 1123 women studied only 305(27.27) were currently using any form of contraception as at the time of the study and the commonest method used was the condom. This was followed by rhythm method (periodic abstinence), injections, IUCD, withdrawal method and pills. Similar pattern had been reported in several studies even though slight variations do exist. [2,5,7,8,14,17,19,20] This increased use in natural family planning (Rhythm and withdrawal) among the women was consistent with findings in a similar study in the state.[17] Female sterilization though low, (4.9%) was still higher than pervious figures reported in the country,[7,8,14,17] but was lower than figures reported from studies in India and Europe where prevalence as high as 20-40% has been reported[20,22,23].This slight improvement in the use of tubal ligation, could be due to increase awareness about its effectiveness and lack of side effects. Also this high condom use could be because of its availability at common service points in state, its low cost, fewer side effects, coupled that it does not need much skills to use together with its dual role in prevention of unwanted pregnancy and the transmission of sexually transmitted diseases.

Generally, about two-thirds of current uses (18.2%) use any of modern methods with barrier method being the commonest used. This was close to national figure (69.4%) reported in 2013 but quite higher than the state average of 34.4% reported in 2013 NDHS.[8] However, some other studies have reported similar patterns.[7,17,21,22] This high use of natural method may be connected to high cultural and religious influence in the state.

Pattern of contraceptive method use varies with respondent's age, religion, marital status and place of residence. Women in younger age groups (15-24years) tend to use more of barrier methods while women in the older age groups above 35 years of age tend to use more of natural methods and other long lasting modern methods. Tubal ligation was only used by women 35 years of age and above. This pattern of influence by age has been reported in other studies. [2,8,21,22] This use of barrier method in the younger age is likely because most of them are singles or in their early marriage and will still want to have children. They may use it majorly for spacing and prevention of sexually transmitted disease. Those in the older age group are likely to have completed their family size and may want to limit pregnancy rather than space and this could also explain

why tubal ligation was used only among the older age group.

More married women used natural family methods (14.5%), singles used more of barrier methods (22.3%) and the ever married used more of pills, injections and implants. Tubal ligation was only used by the currently married, cohabiting and divorced women. This trend is in agreement with findings from other studies reviewed,[8,21,22] but a study in Kenya showed no variation in contraceptive choice and marital status[10]. The common use of barrier methods among single women is because it is easily reversible and can also prevent sexually transmitted disease. Some of them may likely have more than one sexual partner. Those married are likely to have one partner and will prefer permanent methods that can be used without their partner's involvement especially in this part of the world where male dominance is prominent.

Contraceptive choice varied with religion of respondents with women in Christian denominations using more of natural methods than their counterpart's in other religions. Also to note is that considering modern contraceptives, women in Catholic and Pentecostal denominations used more condoms, and those in orthodox sect used more IUCD/implants while no woman used permanent method outside the Christian denominations. This finding corroborates with reports from other similar studies.[2,24,22,25] Many religious bodies discourages the use of one contraceptive method or the other, especially the modern types and this practice is likely to lead to higher fertility rates in households of such religious affiliations. Some religious sects have been regarded as pronatalist in their ideology on contraception and so they observe population increase as positive and object to artificial fertility control mechanisms.[25] As noted by Palamuleni in 2014 that the strength of one's religiosity or degree of one's adherence to the norms of a given religion may exert an influence on one's mode of life including reproductive health behaviors.[25,26]

Higher proportion of women from the rural areas uses (82.6%) modern contraceptives than their urban counterparts (571%). No woman in the rural areas used tubal ligation, implants, diaphragm nor spermicide. This pattern is in line with finding of Nigerian Demographic and Health Survey (NDHS), 2013,[8] but differ with that reported from a study in Malawi where a greater proportion of urban women used modern contraception than their rural counterparts,[25] yet another study from Malawi showed no variation in use with respondents place of residence.[21] This high use of natural methods could suggest that urban women in Nigeria are more likely to be informed on how to use and observe these natural methods than their rural counterparts who are likely to be less educated. Also urban areas have equally good family planning services provision in terms of availability and accessibility.[25]

Generally contraceptive commodities in both the rural and urban communities were sourced more from the private sector (Chemist/Pharmacy, private hospitals etc). This is in tandem with reports from NDHS (2013) which showed that 60 percent of current users sourced their commodities from the private medical sector. Also other studies in Nigeria,[7] Ghana,[9] and Kenya[10] revealed the same pattern. But contrary to our findings some studies from India[11], Zimbabwe[12] and Tanzania[13] reported that majority of current users' sourced their commodities from government sources and this pattern has been the result of strong government involvement in the provision of family planning services in these countries. This general shift from public to private sources in Nigeria is worrisome due to likely high cost of these commodities from the private sector.

This study revealed that barrier methods and pills were sourced from chemist/pharmacy shops while IUCDs/implants, Tubal ligation, injections were sourced more from hospitals. This was similar to the pattern reported among contraceptive users in Nigeria.[7,8] The major reason why these methods were sourced more in the hospitals is that they require skilled man power and expertise by trained health personnel to be administered. Most women in the young age group < 35 years of age sourced their commodities mainly from the pharmacy/chemist shop while those in the older age group >34 years sourced their commodities from the hospital setting. This was similar to results reported among contraceptive commodities users in Nigeria.[7]

Majority of married women (60.1%), cohabiting (85.5%), and those previously married sourced their commodities from hospitals while the singles sourced theirs mostly from chemist/pharmacy shops (86.7%). This was still the same pattern among current users in Nigeria.[7] Religion of women revealed that more women of Christian denominations sourced their commodities from hospital though a sizable proportion of Catholics got theirs from chemist/pharmacy shops (43.2%).Those in traditional religion and Islam sourced theirs more form the chemist/pharmacy (60.0%). This was consistent with finding in a reviewed study from Nigeria[7]. Commodities sourced from the chemist shops may not be properly administered and can lead to increase in failure rates.

CONCLUSION

In conclusion the study revealed that there was generally a low use of modern contraceptive method and this varies with some selected socio-demographic variables. Also most respondents sourced their commodities more from the private sector and this was affected by age, marital status, and place of residence of the women. There is need to create awareness by all concerned on the effectiveness of these methods and better places they could be sourced. There is needed to make available a variety of contraceptive method mix so that women in the state could have a wide range of choice to make if they need any form of contraception. Also there will be need to create in both locations family planning service centers enough to cater for the family planning needs of these women which could in turn increase contraceptive use in the state.

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