Knowledge and utilization of family planning among rural postpartum women in Southwest Nigeria

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ABSTRACT

Background: In Nigeria, contraceptive use has remained low, 12% for any modern method, despite the huge resources committed to family planning programs by stakeholders. This study was carried out to assess the knowledge and utilization of family planning and determine predictors of utilization of family planning among postpartum women attending primary health care centers (PHCs) in a selected rural area of Lagos State, southwest Nigeria. Methods: This was a descriptive cross-sectional study conducted among 325 postpartum women attending PHCs in Ibeju-Lekki local government area of Lagos State selected using a multi-stage sampling technique. A pretested, interviewer-administered questionnaire was used to collate data which was analyzed using the IBM SPSS Statistics version 23. Result: The mean age was 29.94 ± 5.14 years. All the respondents (100%) had heard of contraceptive methods, however only 38 (11.7%) had good knowledge of family planning. About 38.5% of the respondents used modern family planning methods during the postpartum period. The most commonly used methods were male condoms (26.3%) and implants (17.0%). The significant predictors of postpartum family planning (PPFP) were non-intention to have more children [AOR = 1.88 (95% CI: 1.14–3.11)], and good knowledge of family [AOR = 2.31 (95% CI: 1.11–4.81)]. Conclusion: It is recommended that interventions be designed to educate and advocate for the use of family planning methods not only to stop childbearing but also to space pregnancies. Education about family planning should also be intensified to improve knowledge of family planning, and thus practice.

Keywords: Family planning, knowledge, Nigeria, post-partum, rural

Introduction

All over the world, maternal health issues continue to pose serious concerns. This is considering that pregnancy and child birth are the major causes of morbidity and mortality among women of childbearing ages. This concern is re-echoed in the third Sustainable Development Goal, which includes targets to reduce the global maternal mortality ratio to less than 70 per 10,000 and to ensure universal access to sexual and reproductive health care services, including family planning information and education and the integration of reproductive health into national strategies and programs by 2030. Globally, the population growth is on the increase because of increase in medical advancement and control of diseases. However, the developed countries have witnessed a decline in population growth as a result of deliberate policies to have smaller families achieved through birth control measures, unlike most developing and underdeveloped countries which still have high birth rates.

In Africa, majority of the countries that have the lowest rates of contraceptive use have the highest fertility rates and invariably the highest infant, child, and maternal mortality rates. Annually in sub-Saharan Africa, about 14 million unintended pregnancies occur. This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

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are recorded.[3] In 2017, a study found that 214 million women in developing countries had an unmet need for modern contraceptive methods.[4] Nearly 70% of postpartum women who engage in unprotected sexual activities within 2 years after child birth are exposed to the risk of being pregnant in Sub-Saharan Africa.[5] In Nigeria, some studies show that there is a high level of unmet need for family planning among women in spite of their high level of awareness of common methods of contraception. For instance, a community-based study conducted in rural areas of Imo State, South East Nigeria reported 70% unmet need for family planning,[6] while another study in a rural area of Osun State, South West Nigeria, found an unmet need of family planning at 86.6%.[7] This statistic is particularly high among women who are poor, less educated, and especially residents of rural areas.[8–11]

To tackle population explosion and eliminate high rates of unwanted pregnancies, family planning becomes imminent. Family planning is a valuable tool in helping to space pregnancies, thus reducing the risks of maternal and child deaths.[12,13] Postpartum family planning (PPFP) refers to a woman’s use of any modern method of contraception for the prevention of unintended and closely spaced pregnancies during the first 12 months following her most recent childbirth.[14] The contraceptive prevalence rate (CPR) in the country is low at 17% among currently married women age 15–49 years, with 12% using a modern method, while 5% use a traditional method.[15] Uptake of postpartum contraceptives will in addition to reducing unplanned pregnancies, improve maternal and child health outcomes,[16] considering the fact that short birth intervals of less than 15 months are often linked to unfavorable outcomes like preterm births, still births, induced abortions, miscarriages neonatal and child mortalities and maternal deletion syndrome.[17–19]

Despite high contacts with health care providers during immunization, the unmet need of postpartum women for family planning is still high.[19,20] It is therefore crucial for the survival of child and mother that their needs for family planning be met. This study was carried out to assess the knowledge and utilization of family planning, as well as to determine the predictors of utilization of family planning among post-partum women attending primary health centers (PHCs) in a selected rural area of Lagos State, southwest Nigeria.

**Materials and Methods**

**Description of study area**

Lagos State is a state located in the southwestern geopolitical zone of Nigeria. Lagos is a port city and the most populous city in Nigeria.[21] The study was carried out in Ibeju-Lekki Local Government Area (LGA), one of the four rural LGAs in Lagos State. According to the National Population Commission (2006) census, Ibeju-Lekki had a population of 117,481 but an estimated population of 162,200 for the year 2016.[22] The LGA has 7 wards and there are 12 PHCs which offer antenatal and postnatal services, deliveries, immunization clinics, and family planning services.

**Study design and population**

This study was a descriptive cross-sectional study conducted between August and September, 2018. The study population consisted of women within the reproductive age group (15–49 years) who were 6–12 months postpartum and who were accessing child health services (immunization and treatment) from the PHCs in Ibeju-Lekki LGA.

**Sample size determination and Sampling technique**

The minimum sample size was determined using the Cochran’s formula for the determination of sample size for descriptive studies.[23] A standard normal deviate of 1.96, prevalence of use of modern contraceptives from a similar study in rural Edo state among women of childbearing age (26.4%)[24] and a margin of error of 5% were imputed into the formula to give a minimum sample size of 295. Assuming the non-response rate of 10%, the minimum sample size of 325 was estimated.

A two stage multi-stage sampling technique was used in the selection of respondents.

The first stage was the selection of PHCs, which involved selection of 5 out of the 12 PHCs in Ibeju-Lekki LGA using a simple random sampling method by balloting. The second stage involved selection of respondents by systematic random sampling method. The sample size was divided equally across the 5 randomly selected PHCs, thereby allocating 65 participants to each PHC. The sampling interval was calculated by dividing the estimated number of patients visiting the PHCs daily, usually between 100 and 140, by 65, which was approximately 2. The first participant was selected by simple random sampling technique, and every 2nd person presenting to the health centre (or someone allocated an even number) was selected to participate in the study. However, in the event that the person with an even number did not meet the inclusion criteria, the next woman who met the inclusion criteria was recruited for the study.

**Data collection**

Data was collected using a pretested, interviewer-administered questionnaire, which was developed from literature.[24–26] The questionnaire had four sections, namely: sociodemographic characteristics of the respondent, reproductive history; knowledge of family planning and utilization of family planning.

Four females having a minimum qualification of ordinary level diploma (OND) certification were recruited as research assistants for the purpose of data collection. They were trained on questionnaire administration by the principal investigator while emphasizing the importance of confidentiality and sensitivity. The questionnaire was pretested among 25 respondents in Epe LGA, Lagos State, another rural community in Lagos with similar socioeconomic activities. The pre-testing was carried out to check
for ambiguities and deficiencies in the questionnaire after which necessary corrections and adjustment were effected.

**Data analysis**

Data entry and cleaning was done on Microsoft Excel 2010. Data was then imported unto IBM SPSS Statistics version 23 (© Copyright IBM Corporation 2011) and analyzed. Frequency tables and figures were generated for categorical variables. Numerical variables were summarized using mean and standard deviation for normally distributed variables and median and interquartile range for numerical data that were not normally distributed. PPFP was defined as current use of any modern method of contraception among the postpartum women.

Knowledge of family planning was assessed by scoring knowledge questions. The respondents were asked to mention the uses of family planning, and the methods of family planning they knew. Uses of contraceptives (prevent people from getting pregnant, allow for child spacing, prevent STIs) was scored 2 points if mentioned. Common types of contraceptives (male condom, female condom, injectable, intrauterine contraceptive device IUCD, Pills, Implants) were scored as 2 if mentioned. Less common contraceptive methods (diaphragm, vasectomy, bilateral tubal ligation) and natural methods (periodic abstinence, coitus interuptus, and lactational amenorrhea) were scored as 1 if mentioned. Zero was given for every correct option not mentioned and for incorrect responses. The highest possible score was calculated as 24 and the lowest possible score 0. Respondents who scored between 0 and 12 were graded as having “poor knowledge” while respondents who scored between 13 and 24 were graded as having “good knowledge.”

Chi-square test was used to determine associations between sociodemographic characteristics, parity, age of baby, mode of delivery, intention to have more children, knowledge of family planning, and utilization of PPFP. Variables that were significant from the bivariate analysis at P value ≤0.1 were imputed into a multivariate logistic regression model to determine the predictors of utilization of PPFP. Level of significance was set at P value ≤0.05.

**Ethical considerations**

Ethical approval for this research was obtained from the Human Research and Ethics Committee (HREC) of the College of Medicine, University of Lagos, with assigned number: ADM/DCST/HREC/APP/195. Required approval was also obtained from authorities of the Lagos state primary health care board and consent from authorities of the selected primary health centers. The aim of the study was thoroughly explained to the participants and written informed consent obtained from each of them before administering the questionnaire. The respondents were assured of confidentiality by not using identifiers.

**Results**

Mean age of respondents was 29.94 ± 5.14 and more than half of the respondents (59.7%) were between the ages of 21 and 30. Most of the respondents (97.2%) were married. A little more than half 167 (51.4%) had only secondary school education with most of them 211 (64.9%) being artisans (self-employed) in trades such as hair dressing, tailoring, petty trading, catering while 47 (14.5%) were house wives. [Table 1].

Majority of the respondents 260 (80.0%) had between 1 and 3 children. Respondents with babies between 6 and 9 months were more 257 (79.1%) while those with babies between 10 and 12 months 68 (20.9%). Most respondents had their index birth by spontaneous vaginal delivery 275 (84.6%). A greater percentage of the respondents 210 (64.6%) still intended to have more children, 100 (30.8%) had no intentions of having more children while 15 (4.6%) were undecided [Table 2].

All the respondents (100%) had heard of contraceptive methods. Majority (90.2%) had heard from the hospital/health center [Figure 1]. All the respondents (100%) reported that family planning prevents women from getting pregnant and 51.7%

| Variables                  | Frequency (n=325) | Percentage |
|----------------------------|------------------|------------|
| Age-group (Years)          |                  |            |
| 19-20                      | 3                | 0.9        |
| 21-30                      | 194              | 59.7       |
| 31-40                      | 123              | 37.9       |
| 41-50                      | 5                | 1.5        |
| Mean age±SD (years)        | 29.94±5.14       |            |
| Marital status             |                  |            |
| Single                     | 4                | 1.2        |
| Married                    | 316              | 97.2       |
| Separated/Divorced         | 5                | 1.5        |
| Widowed                    | 1                | 0.3        |
| Level of education         |                  |            |
| None                       | 3                | 0.9        |
| Primary                    | 20               | 6.2        |
| Secondary                  | 167              | 51.4       |
| Tertiary                   | 135              | 41.5       |
| Occupation                 |                  |            |
| Unemployed                 | 54               | 16.6       |
| Artisans (self-employed)   | 211              | 64.9       |
| Privately employed         | 41               | 12.6       |
| Civil servant              | 19               | 5.8        |
| Religion                   |                  |            |
| Christianity               | 253              | 77.8       |
| Islam                      | 71               | 21.8       |
| Others                     | 1                | 0.3        |
| Ethnicity                  |                  |            |
| Hausa                      | 6                | 1.8        |
| Igbo                       | 72               | 22.2       |
| Yoruba                     | 145              | 44.6       |
| Others                     | 102              | 31.4       |
said family planning was to allow for child spacing [Table 3]. For modern methods of contraception, 60.3% knew about male condoms, implants (59.7%), injectables (59.4%), and pills (51.4%). For natural methods, 15.1% knew about coitus interruptus (withdrawal method), 6.8% mentioned Periodic abstinence, and 5.2% mentioned lactational amenorrhoea [Table 3].

More than half of the respondents 194 (59.7%) were using a form of contraceptive while 125 (38.5%) were using a modern method. Of those that used contraceptives, the most commonly used modern method was the male condom 51 (26.3%), closely followed by implants (17.0%) and injectables (9.3%). The most commonly used natural method was the coitus interruptus 43 (22.2%) while the most common traditional method was the use of Salt water/strong alcohol/lime juice 9 (4.6%), use of rings, amulets, padlocks 4 (2.1%) [Table 4].

Table 2: Reproductive history of Respondents

| Variables                  | Frequency (n=325) | Percentage |
|----------------------------|-------------------|------------|
| Parity                     |                   |            |
| 1-3 children               | 260               | 80.0       |
| 4-6 children               | 65                | 20.0       |
| Median (IQR)               | 2.0 (1.0-4.0)     |            |
| Age of baby                |                   |            |
| 6-9 months                 | 257               | 79.1       |
| 10-12 months               | 68                | 20.9       |
| Median (IQR)               | 9.0 (6.0-9.0)     |            |
| Mode of delivery           |                   |            |
| Spontaneous Vaginal Delivery | 275           | 84.6       |
| Caesarean section          | 50                | 15.4       |
| Intention to have more children |               |            |
| Yes                        | 210               | 64.6       |
| No                         | 100               | 30.8       |
| Undecided                  | 15                | 4.6        |

Table 3: Respondents Knowledge of Family Planning

| Variables                                         | Frequency (n=325) | Percentage |
|---------------------------------------------------|-------------------|------------|
| Ever heard of contraceptives/family planning      |                   |            |
| Yes                                               | 325               | 100.0      |
| Use of contraceptives *                           |                   |            |
| Prevent women from getting pregnant               | 325               | 100.0      |
| Allow for child spacing                          | 168               | 51.7       |
| Prevent STIs                                     | 6                 | 1.8        |
| Types of family planning methods known*           |                   |            |
| Modern methods                                    |                   |            |
| Male condom                                       | 196               | 60.3       |
| Implants                                          | 194               | 59.7       |
| Injectable                                        | 193               | 59.4       |
| Pills                                             | 167               | 51.4       |
| IUCD                                              | 126               | 38.8       |
| Female condom                                     | 14                | 4.3        |
| Bilateral tubal Ligation                          | 9                 | 2.8        |
| Vasectomy                                         | 7                 | 2.2        |
| Diaphragm                                         | 3                 | 0.9        |
| Natural Methods                                   |                   |            |
| Coitus interruptus (withdrawal)                   | 49                | 15.1       |
| Periodic abstinence                               | 22                | 6.8        |
| Lactational amenorrhoea                           | 17                | 5.2        |
| Traditional methods                               |                   |            |
| Salt water/strong alcohol/lime juice              | 24                | 7.4        |
| Use of rings, amulets, padlocks                   | 14                | 4.3        |
| Mechanical removal of semen from vagina           | 4                 | 1.2        |
| Use of local concoctions/herbal preparations      | 1                 | 0.3        |
| Overall Knowledge grade                           |                   |            |
| Good                                              | 38                | 11.7       |
| Poor                                              | 287               | 88.3       |

*Multiple responses: IUCD-Intra-uterine contraceptive device

There was a statistically significant relationship between intention to have more children (P = 0.003), knowledge of family planning (P = 0.023) and use of PPFP. A higher proportion of women with no intention for more children (49.0%) use family planning as compared with women who still want more children (31.9%). A higher proportion of women with good knowledge (55.3%) were using family planning as compared with women with poor knowledge (36.2%). The relationship between age, marital status, level of education, occupation, religion, ethnicity, parity, baby’s age, mode of delivery, and utilization of PPFP was not statistically significant [Table 5].

Table 4: Respondents Knowledge of Family Planning

| Variables                                         | Frequency (n=325) | Percentage |
|---------------------------------------------------|-------------------|------------|
| Intention to have more children                   |                   |            |
| Yes                                               | 210               | 64.6       |
| No                                                | 100               | 30.8       |
| Undecided                                         | 15                | 4.6        |

Intention to have more children was a significant predictor of utilization of PPFP. Respondents who had no intention to have more children were 1.88 times more likely to utilize PPFP, when compared with respondents who had intention to have more children [AOR = 1.88 (95% CI: 1.14–3.11)]. Also, respondents who had good knowledge were 2.31 times more likely to utilize PPFP, when compared with respondents with poor knowledge [AOR = 2.31 (95% CI: 1.11–4.81)] [Table 6].

Discussion

This study was carried out to assess the knowledge and utilization of contraceptives among post-partum women in a rural community in order to identify factors that influence residents of such communities from utilizing PPFP and recommend appropriate interventions that will increase use of contraceptives among postpartum women.

All the respondents had heard of contraceptive methods. The most common methods of contraception known were male condoms, implants, injectables, and pills. Only 125 (38.5%) of the respondents were using a modern method of contraception. Intention to have more children and good knowledge of family planning were significant predictor of utilization of postpartum in the multivariate analysis.

Results from this study reveal that awareness of family planning was universal (100%). This is consistent with findings from a community-based study among women of reproductive age in Ogbomosho, Nigeria, in which contraceptive awareness among respondents was also universal (100%).

Knowledge of family planning methods in this study was equally high (86.8%), with more than three quarters of the respondents...
Male condoms and implants were the most commonly used modern methods while coitus interruptus was the most commonly used natural method. Similar findings were reported from a study among women of childbearing age in Rivers State, Nigeria, with 36.8% of the women using a modern form of family planning and another study in rural Lagos, in which condom was the most commonly used method of contraceptive.[30,31] This study showed low use of contraceptive methods such as female condoms (0.3%), bilateral tubal ligation (0.6%), and IUCD (2.2%), as noticed in a study among women of reproductive age in a semi-urban community of Ekiti State, Southwest Nigeria.[32]

The results from this study established a statistically significant association between intention to have more children and knowledge of family planning with use of PPFP (P = 0.003, \(P = 0.023\), respectively) in the bivariate analysis. Multivariate analysis showed respondents who had no intention for more children were 1.88 times more likely to utilize family planning, when compared with respondents who intended to have more children. Women use FP to either limit births or space births. However, in this study, women with no intention for more children use family planning more, probably because they had achieved their ideal family size and needed to stop childbearing. Women who wanted to have more children used family planning less, probably for fear of family planning, causing infertility. Similar result is corroborated in two studies among women of reproductive age in Southwestern and North Central, Nigeria in which respondents who reported non preference for another child used contraceptive more and respondents who were desirous of more children used contraceptive less.[33,34]

Also, respondents who had good knowledge were 2.31 times more likely to utilize PPFP, when compared with respondents with poor knowledge. Women with good knowledge know the various options of family planning available and understand its importance to postpartum women as a tool not just for stopping childbearing but also in spacing child births and preventing STIs. Therefore, will use family planning more. This result is similar to that of a community-based study in rural Ethiopia in which women with good knowledge were more likely to use family planning than those with poor knowledge.[35]

**Conclusion**

Most of the women were within the ages 21–30 years, most were married and most had secondary level of education. Majority of

### Table 4: Utilization of Family Planning

| Variable                                                                 | Frequency | Percentage |
|--------------------------------------------------------------------------|-----------|------------|
| Use of Family Planning (n=325)                                           |           |            |
| Currently using any method of family planning                             | 194       | 59.7       |
| Currently using a Modern method of family planning (Post-Partum Family Planning) | 125       | 38.5       |
| Currently using a Natural method of family planning                      | 55        | 16.9       |
| Currently using a Traditional method of family planning                  | 14        | 4.3        |
| Method of family planning being used (n=194)                             |           |            |
| Male condom                                                             | 51        | 26.3       |
| Implants                                                                | 33        | 17.0       |
| Injectable                                                               | 18        | 9.3        |
| Pills                                                                   | 13        | 6.7        |
| IUCD                                                                    | 7         | 3.6        |
| Bilateral tubal Ligation                                                | 2         | 1.0        |
| Female condom                                                           | 1         | 0.5        |
| Natural Method                                                          |           |            |
| Coitus interruptus (withdrawal)                                         | 43        | 22.2       |
| Periodic abstinence                                                     | 8         | 4.1        |
| Lactational amenorrhrea                                                  | 4         | 2.1        |
| Type of Traditional method                                              |           |            |
| Salt water/strong alcohol/lime juice                                     | 9         | 4.6        |
| Use of rings, amulets, padlocks                                         | 4         | 2.1        |
| Mechanical removal of semen from vagina                                 | 1         | 0.5        |

**Figure 1: Respondents’ main source of information on family planning**

having good knowledge of modern contraceptive methods. This is comparable to findings from a study carried out among women attending postnatal clinic in Okitipupa LGA, Ondo State, Nigeria, and among rural women of childbearing age in Rivers State Nigeria.[28,29] Male condoms and implants were the most common forms known to the postpartum women with 90.2% of the respondents citing the health centre/health personnel as their main source of information. This is a testament to the effectiveness of health education given by the health personnel during ante natal, postnatal, or immunization sessions. This finding is similar to those of a mixed study among women of childbearing age from two South-Western States, Nigeria and another study from rural Lagos in which most of the respondents became aware of contraceptive methods from their antenatal clinics.[30,31] However, this result was contradicted by a community-based study among women of reproductive age in Umuahia, Abia State, in which respondents cited electronic media (television/radio) as their main source of information.[32]
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The women had babies that were between 6 and 9 months of age and most wanted to have more children. All the women had heard of family planning and male condom, implants, injectable and pills were more commonly known. Over 90% had their information from the hospital/health center. About 60% were currently using any method of family planning while only 38% were using a modern method (PPFP). In the multivariate analysis, women who did not want to have more children were more likely to practice PPFP. Also, women with good knowledge of family planning were more likely to practice PPFP.

Despite the level of awareness being universal and the knowledge of family planning methods being high, use of PPFP was low. The women in this study had only given birth to babies,

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**Table 5: Factors Associated with Utilization of Post‑Partum Family Planning**

| Variables                        | Utilization of Post‑Partum Family Planning | Statistics |
|----------------------------------|--------------------------------------------|-------------|
|                                 | Currently using a modern method of Family Planning n=125 (n %) | Not currently using a modern method of Family Planning n=200 (n %) | Total n=325 (n %) | $\chi^2$ | df | P   |
| Age‑ group (years)              |                                             |             |                    |                  |         |     |     |
| 19‑20                           | 1 (33.3)                                   | 2 (66.7)    | 3 (100.0)          | 2.770*           | 3     | 0.487*|
| 21‑30                           | 68 (35.1)                                  | 126 (64.9)  | 194 (100.0)        |                   |        |     |     |
| 31‑40                           | 54 (43.9)                                  | 69 (56.1)   | 133 (100.0)        |                   |        |     |     |
| 41‑50                           | 2 (40.0)                                   | 3 (60.0)    | 5 (100.0)          |                   |        |     |     |
| Marital status                  |                                             |             |                    |                   |         |     |     |
| Single                          | 1 (25.0)                                   | 3 (75.0)    | 4 (100.0)          | 1.159            | 3     | 0.763|
| Married                         | 122 (38.6)                                 | 194 (61.4)  | 316 (100.0)        |                   |        |     |     |
| Separated/Divorced             | 2 (50.0)                                   | 2 (50.0)    | 4 (100.0)          |                   |        |     |     |
| Widowed                         | 0 (0.0)                                    | 1 (100.0)   | 1 (100.0)          |                   |        |     |     |
| Educational Status             |                                             |             |                    |                   |         |     |     |
| None                            | 1 (33.3)                                   | 2 (66.7)    | 3 (100.0)          | 3.058*           | 3     | 0.206|
| Primary                         | 9 (45.0)                                   | 11 (55.0)   | 20 (100.0)         |                   |        |     |     |
| Secondary                       | 57 (34.1)                                  | 110 (65.9)  | 167 (100.0)        |                   |        |     |     |
| Tertiary                        | 58 (43.0)                                  | 77 (57.0)   | 135 (100.0)        |                   |        |     |     |
| Occupation                      |                                             |             |                    |                   |         |     |     |
| Unemployed                      | 14 (74.1)                                  | 40 (25.9)   | 54 (100.0)         | 5.778            | 3     | 0.123|
| Artisan (self employed)         | 83 (39.3)                                  | 128 (60.7)  | 211 (100.0)        |                   |        |     |     |
| Civil servant                   | 10 (52.6)                                  | 9 (47.4)    | 19 (100.0)         |                   |        |     |     |
| Privately employed              | 18 (43.9)                                  | 23 (56.1)   | 41 (100.0)         |                   |        |     |     |
| Religion                        |                                             |             |                    |                   |         |     |     |
| Christianity                    | 101 (39.9)                                 | 152 (60.1)  | 253 (100.0)        | 2.815*           | 2     | 0.185*|
| Islam                           | 23 (32.4)                                  | 48 (67.6)   | 71 (100.0)         |                   |        |     |     |
| Others                          | 1 (100.0)                                  | 0 (0.0)     | 1 (100.0)          |                   |        |     |     |
| Ethnicity                       |                                             |             |                    |                   |         |     |     |
| Hausa                           | 4 (66.7)                                   | 2 (33.3)    | 6 (100.0)          | 2.171*           | 3     | 0.052*|
| Igbo                            | 19 (26.4)                                  | 53 (73.6)   | 72 (100.0)         |                   |        |     |     |
| Yoruba                          | 58 (40.0)                                  | 87 (60.0)   | 145 (100.0)        |                   |        |     |     |
| Others                          | 44 (43.1)                                  | 58 (56.9)   | 102 (100.0)        |                   |        |     |     |
| Parity                          |                                             |             |                    |                   |         |     |     |
| 1-3 children                    | 95 (36.5)                                  | 165 (63.5)  | 260 (100.0)        | 2.031            | 1     | 0.154|
| 4-6 children                    | 30 (46.2)                                  | 35 (53.8)   | 65 (100.0)         |                   |        |     |     |
| Baby's age group                |                                             |             |                    |                   |         |     |     |
| 6-9 months                      | 31 (45.6)                                  | 37 (54.4)   | 68 (100.0)         | 1.845            | 1     | 0.207|
| 10-12 months                    | 94 (36.6)                                  | 163 (63.4)  | 257 (100.0)        |                   |        |     |     |
| Mode of Delivery                |                                             |             |                    |                   |         |     |     |
| Vaginal delivery                | 102 (37.1)                                 | 173 (62.9)  | 275 (100.0)        | 1.419            | 1     | 0.234|
| Caesarian section               | 23 (46.0)                                  | 27 (54.0)   | 50 (100.0)         |                   |        |     |     |
| Intention to have more children |                                             |             |                    |                   |         |     |     |
| Yes                             | 67 (31.9)                                  | 143 (68.1)  | 210 (100.0)        | 11.447           | 2     | 0.003|
| No                              | 49 (49.0)                                  | 51 (51.0)   | 100 (100.0)        |                   |        |     |     |
| Undecided                       | 9 (60.0)                                   | 6 (40.0)    | 15 (100.0)         |                   |        |     |     |
| Knowledge of Family Planning    |                                             |             |                    |                   |         |     |     |
| Poor Knowledge                  | 104 (36.2)                                 | 183 (63.8)  | 287 (100.0)        | 5.132            | 1     | 0.023|
| Good Knowledge                  | 21 (55.3)                                  | 17 (44.7)   | 38 (100.0)         |                   |        |     |     |

*P<0.05
Table 6: Predictors of Post-Partum Family Planning

| Ethnicity               | AOR   | Confidence Interval | P     |
|------------------------|-------|---------------------|-------|
|                        | Lower | Upper               |       |
| Hausa (ref)            | 1     |                     |       |
| Igbo                   | 0.027 | 0.027               | 1.034 | 0.054 |
| Yoruba                 | 0.061 | 0.061               | 2.043 | 0.245 |
| Others                 | 0.072 | 0.072               | 2.470 | 0.338 |
| Intention to have more children |       |                     |       |
| Yes (ref)              | 1     |                     |       |
| No                     | 1.88  | 1.14                | 3.11  | 0.014 |
| Undecided              | 3.13  | 1.04                | 9.48  | 0.043 |
| Knowledge of Family Planning |       |                     |       |
| Poor Knowledge (ref)   | 1     |                     |       |
| Good Knowledge         | 2.31  | 1.11                | 4.81  | 0.025 |

Ref-reference category

6–12 months prior to the study and should have been using contraceptives for child spacing and/or limiting births. However, use of family planning was significantly higher among women who did not want to have any more children and non-intention to have more children was a predictor of use of PPFP. It is therefore recommended that effective programs aimed at promoting the use of family planning in child spacing, and not only in limiting births should be advocated for and implemented. Primary care Physicians and other health workers should intensify health education about family planning to increase knowledge of family planning, and thus practice and also encourage the use of family planning in child spacing.

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