

## ORIGINAL ARTICLE

# Knowledge, attitude and readiness to use contraceptives among postpartum women at a tertiary hospital in southwest Nigeria

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## ABSTRACT

**Background:** Postpartum family planning is vital in the prevention of unintended pregnancy and closely spaced pregnancies in the first year post-delivery. This study was designed to examine the postpartum women's knowledge, attitude, belief and readiness to contraceptive use.

**Methods:** This descriptive cross-sectional study was conducted among one hundred and ninety-four consenting women, six weeks post-delivery, at the University College Hospital, Ibadan, Nigeria using an interviewer-assisted structured questionnaire. Data was analysed using IBM Statistics for Windows Version 23.0. Tests of association was done using chi-square and statistical significance was set at p-value of <0.05.

**Results:** Many of the respondents (60.8%) were in the age group 30-39 years and the majority (90.3%) had tertiary level of education. Most of the respondents got their information from health talks at antenatal clinic (42.8%) and health workers

(42.3%). The majority (82.5%) of respondents were aware of contraception and 157(80.9%) intended to use contraceptives. The most preferred contraceptive methods were implants(19.1%). Respondents with three or more children alive( $p=0.001$ ), had statistically significant associations with prior use of contraception while those with the tertiary level of education( $p=0.001$ ), of the Christian religion ( $p<0.001$ ) and had contraceptive counselling during pregnancy ( $p=0.031$ ) had statistically significant associations with good knowledge of contraception.

**Conclusion:** The knowledge and readiness to use contraceptives was high but only about half were willing to adopt contraception post-delivery. There is therefore the need for the enactment of government policy and legislation that will ensure wide coverage and availability of contraception counselling among pregnant women.

## INTRODUCTION

The desire for birth spacing and contraceptive use is as old as humanity. According to the international human right laws, access to contraceptives is one of the basic human rights and to achieve safe

**Keywords:** Post-partum contraception, Family planning, Contraceptive counselling

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motherhood; family planning is one of the six fundamental health interventions<sup>1</sup>. While contraceptive use is important throughout an individual's and couple's reproductive life, postpartum family planning focuses on the prevention of unintended and closely spaced pregnancies through the first 12 months following childbirth.<sup>2</sup> It is estimated that of the 210 million pregnancies that occur annually worldwide, about 80 million (38%) are unplanned, and 46 million (22%) ends in abortion.<sup>3</sup>

Globally, 62% of married women aged 15 to 49 years use a method of family planning and 56 percent use modern methods such as the pills, intrauterine devices, implants, injectables, condoms, and sterilization.<sup>4</sup> These rates are two times higher among women living in high-income countries compared to low-income countries due to differences in demand, availability, and access to modern methods of contraception.<sup>4</sup> At country levels, use of any method of family planning among married women varies significantly, ranging from 9% in Eastern Sudan to 90% in Belgium.<sup>5,6</sup>

In Nigeria, despite a high awareness of contraception,<sup>7</sup> the latest Nigeria demographic and health survey (NDHS), in 2018, reported modern contraceptive usage of 17%.<sup>8</sup> This report also showed that from 2013 to 2018 modern contraceptive use increased from 10 to 12%.<sup>8,9</sup>

Generally, in developing countries, especially in Africa and Asia, the percentage of married women with unmet need for modern contraception ranges from 18-37%<sup>10</sup> and the unmet need for contraceptive use in Nigeria is 19%.<sup>8</sup> The World Health Organization (WHO) technical committee recommends birth spacing with an interval of at least 12 months before couples attempt to become pregnant.<sup>11</sup>

Post-partum women may resume sexual intercourse in the postpartum period before the initiation of uptake of contraceptive and family planning. In South-west Nigeria, about two-thirds of women who

had resumed sexual activity were not using any form of family planning.<sup>12</sup> A study done in two local governments in Ebonyi, South-South Nigeria reported that 87% of postpartum women have knowledge of methods of contraception.<sup>13</sup>

Despite good knowledge and awareness, prompt uptake of family planning methods is still suboptimal and affected by several factors. The use of modern contraceptive can be improved by increasing family planning counselling during the antenatal, intrapartum care, improving awareness of the populace about the benefits to the women, family and community; and increase in the government and NGO funding of family planning program, improving access to the services.<sup>14,15</sup>

Exclusive breast-feeding may confer some protection and pregnancy prevention, nursing mothers find it difficult to exclusively breastfeed after resumption of work or while they are students.<sup>16,17</sup> This could result in many cases of unwanted pregnancies. Births that are spaced too closely together pose substantial health risks for the mother and child.

This study was designed to assess the intention to adopt postpartum contraception, to examine the postpartum patients' disposition, attitude, belief and practice to contraceptive use and to determine the contraceptive preferences among postpartum Nigerian women.

## METHODS

**Study site and design:** This descriptive cross-sectional study was done at the University College Hospital (UCH), Ibadan between February 1, 2020 and May 31, 2020, among one hundred and ninety-four recently delivered women. The women were recruited at the six-weeks post-delivery clinic visit. Women aged <18 years, non-consenting women or those with medical conditions that needed emergency care were excluded from this study.

**Sample size calculation:** Respondents were selected using the formula for cross-sectional studies by

Leslie Fisher formula<sup>18</sup>,  $n = z^2pq/d^2$ , where n is the minimum sample size expected, p is the prevalence of contraceptive use in Nigeria (0.12)<sup>8</sup>, d is the precision of the study which is 0.05 and Z is the area under normal curve corresponding to 95% confidence interval = 1.96. Using a non-response rate of 20% to improve the power of the study, the minimum sample size was 194 respondents.

**Sampling technique:** The study respondents were selected using purposive sampling technique and consecutive women were recruited into the study after counseling and informed consent.

**Data collection instrument:** Data was collected using pretested interviewer-assisted semi-structured questionnaire developed using information from the literature and face validated by experienced gynecologists. The questionnaire was pre-tested among 20 women attending the postnatal clinic of Adeoyo Maternity Teaching, Hospital (AMTH), Yemetu, Ibadan, Nigeria.

The questionnaires were administered shortly before the six-weeks post-delivery clinic visit. It comprised of four sections and the information obtained included socio-demographic data, knowledge about the various methods of contraception, their source of information, the attitude of women towards methods of contraception and misconception towards the methods, readiness to use contraceptives, previous use of contraceptives and side effects known or experienced. The research assistants were trained on the process of data collection.

**Outcome variables:** Knowledge on contraception was measured by using three questions which include - knowledge of the meaning of contraception, contraceptive methods and side effects of contraceptives. Items under each question were scored 1 except best definition of family planning which was scored 2. Knowledge of types of contraceptive methods was given a score of 1 for every method identified by the respondents. A score of 6 and above is classified as good knowledge and

poor knowledge if score is less than 6. Respondents who scored 5 and above on knowledge of side effects of contraceptive had good knowledge while a score of less than 5 had poor knowledge. The overall good knowledge was interpreted as having good knowledge in any two of the variables above while poor knowledge was having one good knowledge only one variable or none.

Attitude towards contraceptive use was determined by asking the respondents if they intended to use any method of contraception. Those with positive attitude intended to use any method of contraception. Readiness to use contraceptive was measured by asking the respondent if they plan to get a contraceptive device at family planning clinic using the opportunity of the six-weeks post-delivery clinic visit for family planning uptake.

**Data analysis:** This was done using IBM SPSS Statistics for Windows, Version 23.0, Armonk, New York: IBM Corp. Frequencies and proportions were used for categorical variables and test of association between categorical variables was assessed using Chi-square tests. The level of significance was set at p of <0.05.

**Ethical consideration:** The ethical principles of autonomy, beneficence and non-maleficence were maintained. Ethical approval was obtained from the University of Ibadan, Ibadan and the University College Hospital, Ibadan (UI/UCH), Institutional Review Board.

## RESULTS

Many of the respondents (60.8%) were in the age group 30-39 years, while the majority were married (96.4%), had tertiary level of education (90.3%) in monogamous relationships (96.3%) and had their antenatal care in the last pregnancy at UCH Ibadan. This is shown in table 1.

**Table 1: Socio-demographic and reproductive characteristics of the respondents**

<b>Variable</b>	<b>Frequency (N = 194)</b>	<b>Percentage (%)</b>
<b>Age group in years</b>		
20 – 29	61	31.5
30 – 39	118	60.8
≥ 40	15	7.7
<b>Highest level of education</b>		
Non-formal	2	1.0
Primary	3	1.5
Secondary	14	7.2
Tertiary	175	90.3
<b>Religion</b>		
Islam	46	23.7
Christianity	148	76.3
<b>Tribe</b>		
Yoruba	158	81.4
Igbo	18	9.3
Hausa	4	2.0
*Others	14	7.2
<b>Occupation</b>		
Professional	21	10.8
Skilled workers	69	35.6
Semi-skilled	80	41.2
Unskilled	7	3.6
Unemployed	17	8.8
<b>Marital status</b>		
Single	7	3.6
Married	187	96.4
<b>Type of marriage</b>		
Monogamous	187	96.4
Polygamous	7	3.6
<b>Spouse's level of education</b>		
Non-formal education	6	3.1
Primary	2	1.0
Secondary	12	6.2
Tertiary	174	89.7
<b>Mode of delivery in last pregnancy</b>		
Caesarean section	97	50.0
Spontaneous vaginal delivery	92	47.4
Instrumental delivery	5	2.6

*Table 1: Socio-demographic and reproductive characteristics of the respondents continued*

<b>Variable</b>	<b>Frequency (N = 194)</b>	<b>Percentage (%)</b>
<b>No. of living children</b>		
One	82	42.2
Two	63	32.5
≥ Three	49	25.3
<b>Desire another pregnancy</b>		
Yes	128	66.0
No	66	34.0
<b>Desired pregnancy interval (years)</b>		
Completed my family size/No desire	66	34.0
One	15	7.7
Two	59	30.4
Three	37	19.1
≥ Four	17	8.8
<b>Place of ANC in the last pregnancy?</b>		
UCH	172	88.7
Other hospitals	22	11.3

\*Edo, Esan, Fulani, Ibibio, Igala, Isoko, Itsekiri, Kanuri

One hundred and sixty-four (82.5%) respondents were aware of contraception. The commonest sources of information were from antenatal clinic

(42.8%) and health workers (42.3%). One hundred and twelve (57.7%) respondents had good knowledge of contraception. This is shown in Table 2.

Table 2: Awareness, sources of information, counselling and knowledge of contraception among the respondents

Variable	Frequency (N=194)	Percentage (%)
<b>Awareness of contraception</b>		
Yes	164	82.5
No	30	17.5
<b>*Source of information on contraception</b>		
Antenatal Clinic	83	42.8
Health Worker	82	42.3
Media	40	20.6
Friends	31	16.0
Partner	11	5.2
<b>Counselling on contraceptive methods in pregnancy.</b>		
Yes	160	82.5
No	34	17.5
<b>Counselling on contraceptive methods at delivery.</b>		
Yes	143	73.7
No	51	26.3
<b>Counselling on contraceptive methods at discharge.</b>		
Yes	114	58.8
No	80	41.2
<b>Knowledge of contraception</b>		
Good	112	57.7
Poor	82	42.3

\*Multiple responses

One hundred and fifty-seven (80.9%) respondents intended to use contraception, out of which 54(34.4%) were willing to take contraception at the six weeks postnatal clinic visit. The most preferred

contraceptive methods were implants (19.1%)and the fear of side effects (40.5%) was the most frequent reason for not intending to use any form of contraception. This is shown in Table 3.

Table 3: Attitude and readiness to use contraception among the respondents.

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Intention to use contraception (N = 194)</b>		
Yes	157	80.9
No	37	19.1
<b>Contraceptive preference(N = 194)</b>		
Progestin-only-pill (Mini Pill)	1	0.5
Levonorgestrel IUS	2	1.0
Bilateral Tubal Ligation	5	2.6
Female condoms	9	4.6
Combined oral contraceptive pills	13	6.7
Injectables	16	8.3
Copper-T-IUCD	21	10.8
Natural Methods	22	11.3
Male Condoms	31	16.0
Implants	37	19.1
None	37	19.1
<b>Reasons for planning to use a contraceptive** (n = 157)</b>		
For birth spacing	102	65.0
To limit number of children	61	38.9
Completed family size	48	30.6
Recommended by a doctor	16	10.2
Husband's request	14	8.9
<b>Reasons for not planning to use any contraception** (n=37)</b>		
Fear of side effects	15	40.5
Fear of delay in pregnancy in the future	13	35.1
Lack of approval by husband	10	27.0
Personal disapproval of contraception	9	24.3
Religious belief	3	8.1
Unaffordable cost	1	2.7

\*\* Multiple responses

Table 4a shows that women with two or more children had statistically significant associations with prior use of contraception ( $p < 0.001$ ). Respondents with the tertiary level of

education ( $p < 0.001$ ) and of the Christian religion ( $p < 0.001$ ) had statistically significant associations with good knowledge of contraception. This is shown in Table 4b.

Table 4a: Factors associated with prior use of contraception among the respondents.

Variables	Ever used contraception n=103(%)	Never used Contraception n=91(%)	Chi square	p -value
<b>Age group (in years)</b>				
20 – 29	30 (49.2)	31 (50.8)	0.72	0.70
30 – 39	64 (54.2)	54 (45.8)		
≥40	9 (60.0)	6 (40.0)		
<b>No. of living children</b>				
One	23 (28.0)	59 (72.0)	35.92	< 0.01
Two	44 (69.8)	19 (30.2)		
Three	36 (73.5)	13 (26.5)		
<b>Highest Level of education</b>				
Below tertiary	9 (47.4)	10 (52.6)	0.28	0.60
Tertiary	94 (53.7)	81 (46.3)		
<b>Religion</b>				
Islam	25 (54.3)	21 (45.7)	0.04	0.85
Christianity	78 (52.7)	70 (47.3)		
<b>Tribe</b>				
Yoruba	80 (50.6)	78 (49.4)	2.07	0.15
Non-Yoruba	23 (63.9)	13 (36.1)		
<b>Spouse's level of education</b>				
Below tertiary	10 (50.0)	10 (50.0)	0.09	0.770
Tertiary	93 (53.4)	81 (46.6)		
<b>Mode of delivery in last pregnancy</b>				
Vaginal delivery (SVD/IVD)	51 (52.6)	46 (47.4)	0.02	0.886
Caesarean section	52 (53.6)	45 (46.4)		



**Table 4b: Factors associated with knowledge of contraception among the respondents.**

Variables	Good Knowledge n=112	Poor Knowledge n=82	Chi square	p - value
<b>Age group in years</b>				
20 – 29	34(55.7)	27(44.3)	1.64	0.441
30 – 39	67(56.8)	51(33.2)		
40 - 49	11(73.3)	4(26.7)		
<b>Highest level of education</b>				
Below Tertiary	4(26.7)	15(73.3)	11.46	<0.001
Tertiary	108(61.7)	67(38.3)		
<b>Religion</b>				
Islam	17(36.9)	29(63.1)	10.67	<0.001
Christianity	95(64.1)	53(35.9)		
<b>Tribe</b>				
Yoruba	91(57.6)	67(42.4)	1.03	0.597
Igbo	12(66.7)	6(33.3)		
Others	9(50.0)	9(50.0)		
<b>Occupation</b>				
Professional	3(14.3)	18(85.7)	10.9	0.027
Skilled workers	26(37.1)	43(62.9)		
Semi-skilled	42(52.5)	38(47.5)		
Unskilled	3(42.9)	4(57.1)		
Unemployed	8(47.1)	9(52.9)		
<b>Marital status</b>				
Single	5(71.4)	2(28.6)	0.56	0.455
Married	107(52.3)	80(47.7)		
<b>Type of marriage</b>				
Monogamous	109(58.3)	78(41.7)	0.65	0.417
Polygamous	3(42.9)	4(57.1)		
<b>Spouse's level of education</b>				
Below Tertiary	7(50.0)	13(50.0)	4.72	0.298
Tertiary	105(60.3)	69(39.7)		
<b>Spouse's Occupation</b>				
Professional	25(75.6)	8(24.4)	7.68	0.104
Skilled worker	45(56.3)	35(43.7)		
Semi-skilled	37(59.7)	29(40.3)		
Unskilled	5(45.5)	6(54.5)		
Unemployed	10(71.4)	4(28.6)		
<b>Counselled on contraception during pregnancy</b>				
Yes	98(61.3)	62(38.7)	4.63	0.031
No	14(41.2)	20(58.8)		
<b>Previous use of contraception</b>				
Yes	57(55.4)	46(44.6)	0.32	0.574
No	55(60.4)	36(39.6)		

## DISCUSSION

In this study, the respondents were postpartum women who delivered at least six weeks prior to the study interview, mostly aged 20-29 years, with tertiary education, more than half were married, and one-third had completed their family size. About four in five women, were counselled on family planning during antenatal care; three-quarter and half of the respondents received family planning counselling at delivery and at the time discharge respectively.

This study shows that 82.5% of the respondents are aware of at least a method of contraception and only 58% demonstrated good knowledge on contraception majority of whom are of tertiary education (61.7%) This may be because most of the respondents attended ANC during their last pregnancy, had tertiary level of education and had received information on contraception at least once during the antenatal period and prior to discharge. Previous studies demonstrated the role of age and education in the knowledge, awareness and positive attitudes to the use of contraceptives.<sup>13,19</sup> Women who are educated demonstrated a higher level of awareness and knowledge of contraception.<sup>13,19,20</sup>

This pattern of awareness and knowledge of contraception is similar to the finding of a study done in India which reported high awareness and knowledge of 90% and 90.8%, respectively.<sup>21,23</sup> However, another study in India documented that though respondents demonstrated high level of awareness of 70%, only about 30% had correct knowledge on contraceptive use.<sup>24</sup> This shows the need for health talk to be strengthened across health centers as it is a major source of information.

The majority of the respondents in this study got their information from health talks at the antenatal clinic and health workers. This is in contrast to a study done by Mao J et al, who reported that most postnatal women got information from their friends.<sup>25</sup> Bajracharya et al reported the media as the main source of information.<sup>22</sup> The findings from

these various studies shows that all the possible sources of information are important so efforts should be made to ensure that these sources are adequately equipped with the right information.

This study revealed that many of the respondents (80.9%) exhibited positive attitudes to contraceptive use with about 87.9% preferring modern contraceptives. Similar result was reported by Nagedo et al<sup>26</sup> however, Sharma et al reported a lower percentage of 28.2% of respondents that showed positive attitude to contraception.<sup>20</sup> In this study, implants (23.4%) was the most preferred contraceptive, followed by male condom (19.8%) while minipill (0.6%) was the least preferred. A study by Rita et al revealed these similar findings however Gupta et al reported barrier methods as the most commonly used contraceptive among postpartum women.<sup>13,27</sup> This may be because most of the participants in the latter study had between two and four children necessitating the need for long-acting reversible contraception and since implants require a single visit for insertion, it may be more convenient for the respondents. The condom is also cheap, readily available and may be a better choice for the partners of the respondents who do not want to take any form of chemical agent as contraception.<sup>28</sup>

In this study, a little over one-third of the respondents (34.4%) were ready to adopt a method at six-weeks post-delivery. Most of those respondents who were not ready to adopt at the visit cited the fear of side effects and delayed return to fertility, but an important proportion also mentioned lack of approval by their husband. This shows the role husbands play in decision making on contraception and the need to involve them during antenatal period. This could be achieved through the distribution of pamphlets on contraception to pregnant women to be given to their husband at home. A few respondents cited religious beliefs so there is need to further educate the religious leaders or organizations on the benefits of contraception and to promote any contraceptive choice acceptable by couples including traditional methods.

This study revealed that the number of children per women were significantly associated with women's readiness to adopt any method of contraception after delivery. Women that married at age group 16-24 and women with three or more children had highest level of readiness of 44.9% and 18.3% respectively. Women that married early tend to agree to birth spacing due to their long reproductive period than those that married late, who might want to complete their desired number of children within the shortest possible time due to possible age limit and the wrong notion that contraceptives delay pregnancy. Also, multiparous women most especially with three or more children have good attitude and more readiness as reported in this study. Studies done in Zimbabwe and India also supports the fact that parity as a positive impact on contraceptive uptake.<sup>29,30</sup>

Women with two or more children had statistically significant associations with prior use of contraception ( $p < 0.001$ ). This is similar to other studies, especially in countries with low levels of contraceptive uptake, which reported that the higher the number of children per family, the more likely the practice of contraception.<sup>12,14</sup> Respondents with the tertiary level of education ( $p < 0.001$ ), semi-skilled workers ( $p = 0.027$ ), of the Christian religion ( $p < 0.001$ ) and counselled on contraception during pregnancy ( $p = 0.031$ ) had statistically significant associations with good knowledge of contraception. This shows the importance of the antenatal and intrapartum counselling and that those with higher education more easily understands the information being passed. This may imply that adopting other forms of communication using visuals and local languages may help to endure better understanding among the women.

## LIMITATION

The limitation of this study is that it did not assess the background knowledge of contraception and perception of the women before pregnancy as this could have helped in evaluating the contribution of counselling during pregnancy to the demonstrated

good knowledge and the readiness to accept contraception postdelivery. It also assessed their readiness which may not necessarily translate to practice of contraception.

## CONCLUSION

The results of this study demonstrated high knowledge and readiness to use any method of contraception among respondents but lower than 50% were ready to adopt a method on the day of discharge at postnatal clinic. This study also showed that the majority of respondents demonstrated positive attitude to contraceptive use and over half of the respondents had previously used a contraceptive method.

The antenatal and postnatal period provides an opportunity for family planning counselling. There is a need for the enactment of government policy and legislation that will ensure wide coverage and availability. There is therefore the need to ensure contraception counselling among pregnant women or women of reproductive age group across all levels of healthcare. Additionally, training and retraining of health care workers to ensure appropriate and updated counseling of women will be helpful to enhance the willingness and uptake of contraceptives.

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## AUTHORS CONTRIBUTION

Temitope Azeez Olukunle (TAO), Olayinka Oladunjoye Ogunbode (OOO) and Rukiyat Adeola Abdus-salam (RAA) had substantial contributions to the conception, design, acquisition of data, data analysis and interpretation of data. TAO, OOO and RAA also contributed to the drafting, revising and approval of this manuscript.

## CONFLICTS OF INTEREST:

Authors declared they have no conflicts of interest.

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