

Determinants of Intention to Use Post Partum Family Planning among Women Attending Immunization Clinic of a Tertiary Hospital in Nigeria

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Abstract Background The period immediately after childbirth offer a window of opportunity for counseling and adoption of family planning. Little is currently known about intention of women particularly in Nigeria to adopt PPF and factors associated with such intentions. Nevertheless, this information is vital to the design of strategies to increase the uptake of PPF. **Objectives:** The study assessed the factors associated with the intention of women in south-west Nigeria to use post partum family planning (PPFP). **Methodology:** This cross-sectional study was carried out between September to November, 2014. Systematic sampling technique was employed to recruit 444 women attending immunization clinic of Bowen University Teaching Hospital, Ogbomosho, Nigeria. A pre-tested questionnaire was used for data collection and data analysis was done using SPSS version 17. Chi-square test was used for bivariate analysis while binary logistic regression was used for multivariate analysis. Statistical significance was set at $p < 0.05$. **Result:** Most (65.0%) of the respondents had intentions to use PPF. Intention to use PPF was significantly associated with respondents' social class (AOR; 2.67, 95% C.I; 1.11-6.42), their age (AOR; 0.43, 95% CI; 0.20 – 0.91), their level of awareness about PPF (AOR; 0.15, 95% C.I; 0.08-0.28) and their prior use of any family planning method (AOR; 4.48, 95% C.I; 2.61-7.69). **Conclusion:** Most women in the south western part of Nigeria had intention to adopt post partum family planning, thus family planning policies should be focused on women in their extended postpartum periods. To be very effective, such efforts should particularly target women in middle socio-economic class who are less than 30 years of age and those who had ever used any family planning method.

Keywords: determinants, post partum, family planning, intention

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1. Background

The period after birth is often characterized by high risk of unwanted pregnancies and frustrated contraceptive desires [1]; yet this period provides a window of opportunity for counseling women on the adoption of modern family planning methods. Despite frequent encounters of women with healthcare providers during this period, little attention has been given to enhancing their intention for family planning use especially in developing countries [2]. In fact, Ross and Winfrey in 2001 found out that most post partum women are already at risk of getting pregnant within 7-9 months after birth; characterized by return of menses and unprotected sexual

exposures with only a few using any contraceptive method [1].

In a country that is striving to reduce the menace of high maternal deaths, provision of post partum family planning (PPFP) should be an important and effective strategy to be adopted. PPF is the initiation and use of contraceptives by women shortly after delivery [3]. Contraceptive uptake during post partum period offers a great opportunity of reducing unwanted pregnancies among women. Fewer unwanted pregnancies mean fewer pregnancy related deaths. According to Berber et al in 2007, commencing family planning during the post partum period proved to lengthen birth spacing and improve maternal and infant health generally [4].

Uptake of modern family planning methods remains unacceptably low in Sub-Sahara Africa (SSA) and this is associated with a high incidence of unwanted pregnancies,

unsafe abortions, unplanned deliveries and maternal mortalities [5,6]. The Nigerian Demographic and Health Survey (NDHS) in 2008 reported 14.6% and 9.7% as the contraceptive prevalence rate and the proportion of married woman using modern methods of contraception respectively [7]. Despite availability of family planning commodities at little or no cost to the client, the 2013 NDHS report shows minimal improvement in this reproductive health indicator [8].

Little is currently known about intention of women particularly in Nigeria to adopt PFP and factors associated with such intentions. Nevertheless, this information is vital to the design of strategies to increase the uptake of PFP. Moreover, there had been dearth of information regarding intention to use PFP although unmet need has received considerable attention from researchers. Intention to use is currently receiving recognition as an alternative to unmet need as an indicator of PFP uptake. Intention to use now appears to be a better predictor of actual contraceptive use than unmet need [9]. The use of PFP in West and Central Africa has been shown to be unacceptably low compared to other regions of the world. For example, analysis of Demographic and Health Survey report from 43 countries published in 2014 by William et al revealed that post partum family planning prevalence rate at twelfth month post partum, ranged from 21.3% in Ghana (DHS2008) to as low as 5.9% in Sierra Leon (DHS 2008). Nigeria took a distal fourth position among the seven countries compared with a prevalence rate of 12.7% (NDHS 2008) [10].

Different studies have examined post partum family planning in relation to several potential explanatory variables and factors such as antenatal service utilization, wealth index, place of residence and maternal age have been identified as strong predictors [11,12]. The objective of this study was thus to assess the factors influencing intention of women in Ogbomoso, south west Nigeria to use PFP.

2. Materials and Methods

Study site

The study was conducted at the immunization clinic of Bowen University Teaching Hospital (BUTH) in Ogbomoso North Local Government Area (LGA) of Oyo State, south west Nigeria. The hospital was purposively selected because of its popularity as one of the foremost missionary hospital in Nigeria and the high patronage it receives from the people of Ogbomoso in particular and Oyo state in general. The immunization unit of the hospital provided an avenue for accessing women in their extended post partum periods because of high client turn-out. Ogbomoso town where the hospital is located has a population of 1,200,000 as at the last population census in 2006 [13]. The inhabitants are predominantly of Yoruba ethnic group although other tribes such as Hausa and Igbo equally reside in the town. The people engage in varied occupations such as farming, trading and white/blue collar jobs and their dominant religions include Christianity, Islam and Traditional religion.

Study design: The study design was cross-sectional descriptive

Participants and sampling: The sample size was calculated using the Lesly Kish formula for estimating single proportion based on the assumption that 50% of our respondents will have intention to use PFP. A precision of 5% was used and correction for non-response was made. A total of 444 women were selected using systematic sampling technique between September to November, 2014. The sampling interval was calculated by dividing the calculated sample size by average daily attendance at the immunization clinic and the first participant was selected by balloting.

Inclusion criteria: All women who brought their children for immunization, who had delivered within the last one year and consented to participate in the study, were recruited for the study.

Exclusion criteria: Women attending immunization clinic but had not delivered a baby in the last one year preceding the survey, those considered not fit to respond adequately to questions asked either due to the health condition of the mother or that of the child and those who failed to give their consents were excluded from the study.

Study procedures: Data were obtained using semi-structured interviewer guided questionnaire. The questionnaire was developed based on information obtained from previous studies on PFP. Data were collected on socio-demographic characteristic of the respondents, their awareness and knowledge on PFP as well as their intention to use PFP. The questionnaire was translated to Yoruba language and back translated to English language for respondents who found it easier to complete in their native language. The back translation was done to retain the original meaning of the questions asked. The questionnaire was validated by pre-testing it in another health facility in Ogbomoso south LGA outside Ogbomoso North LGA that was used for the main study. Ambiguous questions observed during pre-testing were either re-phrased or removed in line with the study objective.

Five fresh graduates were recruited as research assistants for the purpose of data collection; they were trained on questionnaire administration to mothers for two days by the principal investigator. The training involved role playing and other practical demonstrations.

Data analysis: The data were field-edited daily and were entered using epidata version 3.1 before they were exported into SPSS (version 17) for analysis. Initial analyses were done by generating frequency tables and graphs while further analyses were done to explore statistical association between variables. Appropriate bivariate analysis was carried out to assess statistical association depending on the type of the variables and stepwise logistic regression model was performed to identify factors that were significantly associated with intention to use PFP. Independent variables in the model were selected based on whether they were significant at bi-variate level and on whether they had been reported in different literatures as strong predictors of PFP. Some of the independent variables used include age, socio-economic class, marital status, living situation and ever use of family planning. The level of statistical significance was set at p value <0.05. Control for potential confounders such as age, socio-economic class of respondents, their living situation and marital status was done by placing our respondents in different categories. The adjusted odds

ratio and 95% confidence interval were obtained to determine factors associated with intention to use family planning during the extended postpartum period.

Key variables and measurements

Respondents' awareness about post partum family planning: To assess this, respondents were asked if they had heard about postpartum family planning before. The response was "Yes" or "No". Those whose responses were "Yes" were further asked the sources of their information.

Respondents' knowledge on post partum family planning: Five questions regarding post partum family planning were asked and a scoring system was used in assessing respondents' knowledge; a score of 1 was allotted for each correct answer. Those who scored between 0-1 were categorized as having "poor knowledge", those who had a score of 2-3 were classified as having "fair knowledge" while those who scored 4-5 were classified as having "good Knowledge" on PFP.

Respondents' social class: Using Oyediji's classification of Social Class [14], respondents' socio-economic status was classified into three; low, middle and high. This classification used a composite score of respondents' educational levels and occupational types of their spouses. Educational levels of respondents as well as occupational types of their spouses were scored. The score ranged from 5 to 1 for educational level; a score of 5 was for university education or its equivalent while a score of 1 stood for respondents who could barely read or write or were illiterates. For spousal occupational types, the score also ranged from 5 to 1 with 5 standing for professionals such as doctors, lawyers and engineers and 1 standing for the unemployed, full-time housewives and students. Respondent's scores from each of the occupational and educational categories were added together and rated over 10. Those who scored less than 5 were grouped into lower social class; scores from 5 to 7 were grouped into middle-social class while those who scored above 7 were grouped into high social-class.

Ethical consideration: Ethical approval for this study was obtained from Bowen University Teaching Hospital's Research and Ethics Committee. Written informed consents were obtained from all respondents. Participation of women attending the immunization clinic was voluntary and their confidentiality was guaranteed by making the questionnaire anonymous; codes were used in identifying the questionnaires rather than writing the names of the study participants on them. Also data obtained were saved in a computer with a password known to the principal investigator only. The study did not inflict any injury on the participants, no invasive procedure was carried out hence no need for any compensation. However, respondents discovered not to have any intention to adopt PFP were adequately counseled on the benefits of family planning.

3. Results

A total of 444 respondents were interviewed consisting of 209 respondents within the age group of 30-39 years. Only 44 (9.9%) of them were 50 years and above while none was less than 20 years of age. Majority (82.20%) of the respondents were married, 10.1% of them were never

married while 1.10% were widows. Majority (91%) of the respondents attained certain levels of education but 9% had no formal education. Forty five percent (44.8%) belonged to middle socio-economic class, 44.4% were in the high socio-economic class while only 0.8% of them were in the low socio-economic class. Majority (82.2%) of the respondents were Christians (Table 1).

Table 1. Respondents' Socio-Demographic Characteristics

SOCIO-DEMOGRAPHIC CHARACTERISTICS	N=444	n (%)
Age		
20-29	87	19.6
30-39	209	47.1
40-49	104	23.4
>=50	44	9.9
Marital status		
Never married	45	10.1
Married	365	82.2
Separated	16	3.6
Divorced	13	2.9
Widowed	5	1.1
Ever attended any school		
Yes	404	91.0
No	40	9.0
Socio-economic status		
Low		
Middle	48	10.8
High	199	44.8
	197	44.4
Religion		
Christianity	369	83.1
Islam	62	14.0
Traditional	13	2.9
Place of residence		
Ogbomoso	284	64.0
Outside ogbomoso	84	18.9
Outside oyo state	76	17.1
Living situation		
Live alone	60	13.5
Live with spouse	337	75.9
Live with parents	33	7.4
Live with relatives	10	2.3
Other	4	0.9

More than three quarter (78.6%) of the respondents were aware of post-partum family planning but most (65.7%) of them demonstrated poor knowledge about same. Mass media were their commonest sources of information; reported by 44.6% of the respondents (Figure 1).

Previous use of family planning and ANC attendance

More than half (59.0%) of the respondents had ever used any family planning method. The commonest type of family planning method ever used was condom (27.1%). Most (53.8%) of the respondents stopped using contraception in order to have another child, however, 26.3% of them stopped due to the appearance of side effects. More than three quarter (80.4%) of respondents attended antenatal clinic in their last pregnancies and 44.3% had four or more antenatal visits. Most of the

respondents (90.8%) received counseling on post-partum family planning during their antenatal visits.

Factors associated with intention to use PFP

In Table 2, the proportion of women with intention to use PFP was significantly higher among married women compared to other women (89.1%, $p=0.00$). Similarly, the proportion was significantly higher among respondents who had attained certain degree of education compared to those who had no formal education (97.3%, $p=0.00$).

Respondents in high socio-economic class had significantly higher proportion of intention to use PFP compared to women in other socio-economic strata (49.5%, $p=0.00$). Moreover, the proportion was significantly higher among women who were living with their spouses compared to women with other living arrangements (82.2%, $p=0.00$). The proportion of women who intended to use PFP was also significantly higher among respondents who were aware of PFP compared with those who were not (90.4%, $p=0.00$).

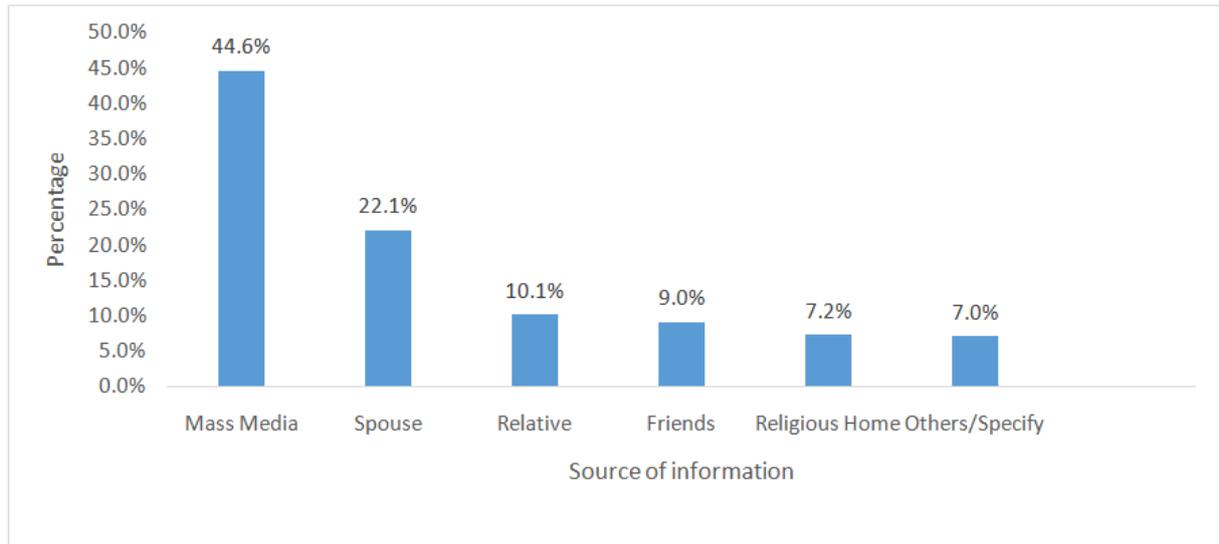


Figure 1. Respondents' sources of information on post partum family planning

Table 2. Association between respondents' characteristics and intention to use post-partum family planning

RESPONDENTS' CHARACTERISTICS	Number of respondents N=444	Intend to use PFP N=293 n (%)	Adjusted OR	95% CI
Age				
20-29 (rc)	87	51 (17.4)		
30-39	209	147 (50.2)	0.63	0.26 – 1.48
40-49	104	74 (25.3)	0.43*	0.20 – 0.91
>=50	44	21 (7.1)	0.39*	0.16 – 0.91
Marital status				
Never married (rc)	45	17 (5.8)		
Married	365	261 (89.1)	1.01	0.12 – 7.92
Separated	16	8 (2.7)	0.37	0.05 – 2.66
Divorced	13	5 (1.7)	0.29	0.03 – 2.91
Widowed	5	2 (0.7)	0.71	0.06 – 7.68
Ever use family planning				
No (rc)	40	8 (2.7)		
Yes	404	285 (97.3)	4.48*	2.61-7.68
Socio-economic status				
Low (rc)	48	15 (5.1)		
Middle	199	133 (45.4)	2.67*	1.10 – 6.42
High	197	145 (49.5)	1.30	0.79 – 2.14
Awareness about PFP				
Aware (rc)	349	265 (90.4)		
Not aware	95	28 (9.6)	0.15*	0.08 – 0.27
Living situation				
Live alone (rc)	60	35 (12.0)		
Live with spouse	337	238 (82.2)	1.26	0.08 – 18.36
Live with parents	33	11 (3.7)	1.56	0.114 – 21.22
Live with relatives	14	9 (3.0)	3.58	0.06-2- 24.28

*significant at $p<0.05$ rc=reference category PFP=post partum family planning OR=Odds ratio CI=Confidence Interval

Women in the 40-49 age group were significantly less likely to use PPF compared to those in 20-29 age group (AOR; 0.43, 95% CI; 0.20-0.91). Moreover, women who were not aware of PPF had an 85% decreased odds of intention to use PPF compared to those who were aware; this was found to be statistically significant (AOR; 0.15, 95% CI; 0.08-0.28). Similarly, respondents in the middle socio-economic class were significantly more likely to use post partum family planning compared to those in lower class (AOR; 2.67, 95% CI; 1.11-6.42). The odds for intention to use PPF were also significantly higher among women who had ever used any family planning method compared to those who had never (AOR; 4.48, 95% CI; 2.61-7.69).

4. Discussion

Our study revealed that more than half (59.0%) of the study participants had ever used any form of family planning. Condom being the commonest method they had ever used and desire for another child their commonest reason for stoppage. This is in keeping with findings of a 2011 multi-national study conducted by Sian et al on contraceptive discontinuation and unintended pregnancy, where most women discontinued family planning on account of wanting to get pregnant again [15].

Not less than 65% of our respondents had intention to commence family planning after births, most indicated interest to start within six months of deliveries. This figure is close to what Sebatian et al published in 2013 in a related study conducted in rural Ghana where 70% of the women interviewed had the intention to use PPF, prior use of modern family planning method was one of the strongest predictors of intention to adopt PPF [16]. A study conducted by MEASURE Evaluation/ USAID on factors influencing adoption of PPF among Ghanaian pregnant women revealed that 84% of the women surveyed were willing to adopt a family planning method after birth [17]. However, an analysis of the Demographic and Health Survey reports from 27 countries by John et al in 2001 revealed that less than half of women interviewed had the intention to use PPF [18]. Our study demonstrated improvement in intention to use PPF compared to this finding. Awareness as well as knowledge on family planning has generally improved now compared to when the survey reported by John et al was conducted. The higher value for intention to use PPF in the present study as well as increased willingness to adopt PPF reported by MEASURE Evaluation could therefore be associated with improved awareness of the women on the subject matter.

The odd for intention to use PPF was expectedly lesser among women in the 40-49 age range compared to those in 20-29 age categories. Syed et al, in 2011 reported that post partum contraceptive uptake in India was higher among respondents who were less than 30 years of age compared to those in other age range [19]. Most women in the 40-49 age range would have finished childbearing, had already adopted a family planning method prior to the survey or were already having menopausal symptoms with less desire for sex and reduced intention to use a family planning method.

The odds for intention to use PPF also increased significantly among respondents in middle socio-economic class compared to those in lower socio-economic class. Gideon et al, in a study on predictors of modern contraceptive use during the post partum period among women in Uganda, revealed that the use of PPF was significantly associated with such factors as age of respondents and their wealth index [20]. Also, Singh et al in a comparative study on contraceptive use among postpartum Indian women (published in 2014), showed that socio-economic status is a strong determinant of PPF use [21]. Socio-economic class has a direct relationship with general knowledge of people and improved knowledge is expected to have a positive effect on the decision making capacity, particularly in relation to family planning. The current study also revealed that intention to use PPF increased significantly among women with prior history of contraceptive usage compared to those who had never tried a method before. In a study conducted by Sileo et al in 2014, respondents' prior use of family planning was one of the strongest determinants of PPF use among the women interviewed [22]. Those who had ever used a method in the past would have experienced the beneficial effects of family planning in child's spacing and will be more eager to adopt a method especially after birth.

5. Conclusion

Our study revealed that most women in south western part of Nigeria had the intention of using PPF. Efforts of policy makers working in the field of reproductive health should therefore be geared towards women in their extended postpartum period for the provision of family planning services. For such services to be highly impactful, they should be targeted towards postpartum women who are within the age-range of 20-29 years and those in the middle socio-economic class. There is need for reinforcement of family planning knowledge- through a well-packaged awareness campaigns for women who have had prior contraceptive experiences. Doing this will guarantee increased uptake and continued usage of family planning during the post partum period. Findings in this study calls for further research which should preferably be a qualitative community-based study to fully understand socio-cultural factors associated with PPF use among Nigeria women.

Study limitation: Due to financial and time constraints, this study was conducted among women attending immunization clinic; the result may therefore not be generalizable to all women in Nigeria. In order to minimize this challenge and increase the external validity of the study, the number of study participants was marginally increased above the calculated sample size. Our assumption for this was that the higher the sample size, the greater the external validity and the precision of our study.

Also, being a hospital-based study, this research may not be totally free from Berksonian bias. The perceived better quality of care in the selected health facility could have attracted the kind of respondents who participated in this study- they were mostly in middle and higher socio-

economic classes. Thus the result may not be a true representation of the happenings within the community.

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