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## RESEARCH ARTICLE

### KNOWLEDGE AND DETERMINANTS OF POSTPARTUM FAMILY PLANNING USE AMONG POSTPARTUM WOMEN IN ABAKALIKI SOUTH-EAST NIGERIA

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#### ABSTRACT

**Background:** Uptake of postpartum family planning remains low in sub-Saharan Africa. Little is known about how postpartum women in Abakaliki arrive at their decisions to adopt postpartum family planning. Hence this study is important so as to identify gaps, and to improve engagement with reproductive health services, particularly in helping women align their contraceptive choice with their expressed need. **Methods:** It was a hospital based cross-sectional study which involved 55 reproductive-age women who gave birth in the last 24 months prior to the study period. The collected data was coded and entered and analyzed using Epi Info version 7.0 (CDC, USA). **Results:** The mean age of the respondents was 28.2±4.3 years. The prevalence of contraceptive use among postpartum women was 34 (61.8%). Forty-eight (87.3%) women received family planning counselling at antenatal and postnatal care sessions. Fear of side effects (42.9%) and spousal disapproval were the main reasons for not using contraceptive methods. Educational level, parity, antenatal care and postnatal visits, family planning counselling during ANC and PNC, knowledge of postpartum family planning and experience of side effects in previous contraceptive use showed significant and independent association with postpartum family planning use. **Conclusion:** This study calls attention to the importance of increased need for family planning in Abakaliki as significant number (38.2%) of respondents were not on any contraceptive method. The persistence of unmet need for family planning, particularly the high rate of unmet need amongst these women points to an important gap in service provision.

## INTRODUCTION

Maternal health problems remain a major global concern since pregnancy and childbirth are the leading causes of morbidity and mortality among reproductive age women (Dulli et al., 2016). Contraceptive prevalence for modern method of contraception in developing countries are far lower when compared with that of developed countries (Farmer et al., 2015). In Nigeria, the contraceptive prevalence for modern method of contraception has increased from 6% in 1990 to 15% in 2013 (NPC, 2013). This is far below over 50% contraceptive prevalence rate in most developed countries. Part of the reason that many women are without birth control is that many countries limit access to contraception due to cultural, religious or political factors, while another contributor is poverty (Ahmed et al., 2013). World Health Organization (WHO) technical committee advises an interval of at least 24 months before couples attempt to become pregnant (Eliason et al., 2013). Postpartum women are at a high risk of unplanned pregnancies, especially in the first year after delivery (Eliason

et al., 2014). Adoption of postpartum contraceptives leads to not only a reduction in unplanned pregnancies, but also improves maternal and child well-being, since short birth intervals of less than 15 months are associated with adverse pregnancy outcomes (Pasha et al., 2015). A short birth interval would endanger the lives of the mother, the newborn, and the previously delivered child. When a mother becomes pregnant shortly after childbirth, she is more likely to develop complications including spontaneous abortion, postpartum bleeding, and anemia. Secondly, the newborn could be born low birth weight and/or preterm (Nattabi et al., 2011; Rutaremwa et al., 2015). Thirdly, the index child (previously delivered child) might receive inadequate care and support which, thereafter, could lead to vulnerabilities to disease and malnutrition (Nattabi et al., 2011; Rutaremwa et al., 2015). The postpartum period is a time when many routine interventions are provided to mothers (Tilahun et al., 2015; Jalang et al., ?; Abera et al., 2015; Ajong et al., 2016; Orach et al., Mehata et al., 2014). Uptake of postpartum family planning (PPFP) remains low insub-Saharan Africa and very

little is known about how pregnant women arrive at their decisions to adopt PFP (Hounton *et al.*, 2015). Yet, the benefit of early adoption or continuation of family planning are well known and are positive (Abraha *et al.*, 2017). Postpartum months are a challenging time for women because of breastfeeding, childcare, menstrual resumption, and resumption of sexual relations (Ling and Tong, 2017). Resumption of sex puts woman at the risk of conception and therefore, creates the need for postpartum contraception (White *et al.*, 2014). The choice of a post-partum contraceptive method depends on many factors, including the need for a temporary versus a permanent method, the infant feeding choice and the extent of informed knowledge of available methods prior to delivery (Sonalkara *et al.*, 2014). The factors that influence a woman's decision to use a PFP include enabling factors like availability of PFP services, organization of the health system, economic means (income, insurance, transport); Predisposing characteristics (demographic factors, social structures and beliefs); and Need (perceived and evaluated) (Marlow, 2014).

Counseling for family planning during the antenatal period, considered the standard of care, is only offered to a fraction of women in developing countries, where few receive effective antenatal care. Similarly, postpartum family planning counseling is infrequently provided (Ling and Tong, 2017; White *et al.*, 2014; Sonalkara *et al.*, 2014; Marlow, 2014). In settings where home deliveries are common and postnatal care unlikely, there are few opportunities for postpartum contraception counseling (Sonalkara *et al.*, 2014). Moreover, national family planning programs of many developing countries often neglect the needs of recently delivered women. Taking into consideration the demonstrated need for family planning postpartum and the potential for improving both maternal and child outcomes through effective birth spacing, there is a clear need to integrate postpartum contraception into maternal child health programs; however, implementation of integrated programs remains limited especially in developing countries like Nigeria (Marlow, 2014). Lack of data on knowledge, attitudes and practices of family planning among postpartum women hampers efforts to improve modern contraceptive practice (Sileo, 2015; Salisbury *et al.*, 2016). Family planning (FP) is an essential component of Sustainable Development Goal (SDG) 3 and addressed specifically in SDG 3.7: "By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programs" (WHO, 2015). Little is known about family planning knowledge and determinants of its use among postpartum women in Abakaliki. A poor understanding of these populations prevents effective service provision due to a lack of local insight sensitive to the cultural, social and educational values of women in remote and rural areas. This study aims to assess family planning knowledge and determinants of its use among postpartum women who delivered at Alex Ekwueme Federal University Teaching Hospital Abakaliki.

## MATERIALS AND METHODS

**Study area:** Abakaliki is the capital of Ebonyi state which is in the south-east geographical zone of Nigeria. It has a total population of 79,280 based on the 2006 census ([www.jst.or.org/stable/25434601?seq=1#page\\_scan\\_tab\\_contents](http://www.jst.or.org/stable/25434601?seq=1#page_scan_tab_contents)). Alex

Ekwueme Federal University Teaching Hospital is a tertiary institution located in Abakaliki. It receives referral from all parts of the state and neighbouring states of Benue, Enugu, Cross River and Abia as well as any part of the country. The Obstetrics and Gynaecology department is one of the many departments in the hospital. The functions of the Obstetric unit are performed in the booking, antenatal, postnatal and family planning clinics; labour, antenatal, and intensive care unit as well as obstetric theater.

**Study design:** It was a hospital based cross-sectional study carried out in the postnatal ward, postnatal clinic and immunization clinic. The study population comprised all reproductive-age women who gave birth in the last 24 months prior to the study period.

**Sample size:** The sample size was calculated using the single population proportion formula

$$N = [Z_{1-\alpha/2}^2 P (1-P)] / d^2$$

Where,  $Z_{1-\alpha/2}$  = Standard normal variate at 5% type 1 error ( $P < 0.05$ ) is 1.96

P = Expected proportion in population based on previous studies (considering the 15% prevalence of postpartum modern contraceptive use in Nigeria)

d = Absolute error or precision (set at 5%)

$$N = [1.96^2 \times 0.15(1-0.15)] / 0.1^2 \text{ Therefore } N = 48.98$$

(Approximated to 50). After adding a 5% buffer for non-response, therefore the sample size was 55.

**Data collection instrument and procedures:** A structured and pre-tested questionnaire was prepared first in English and translated to the local language (Igbo), and translated back to English in order to assess its consistency. Data was collected by the researchers and six assistants comprising of house officers. Face-to-face interviews were conducted to collect the data. The questionnaire has four parts. The first part included on socio-demographic variables, encompassing age, marital status, occupation, maternal educational status, and the partner's educational level. The second part assessed reproductive history and maternal health care, including items on ANC utilization, PNC utilization, family planning counseling during ANC and PNC, place of delivery, number of living children, parity, desire for fertility, breastfeeding, husband's approval, whether the participant had discussed family planning methods with their husband in the last 12 months, current reproductive intentions, birth interval, and the decision to use family planning methods. The third part assessed participants knowledge, and current practices regarding postpartum modern contraceptive use. The fourth part evaluated past experiences with modern contraception services and sexuality related variables, such as family planning counseling by health workers in the last 24-month and the experience of any problems with previous modern contraceptive use.

**Data quality control:** Data quality was controlled through the provision of training to the data collectors and supervisors about the overall data collection procedures and the techniques of interviewing. The collected data was checked for

completeness, consistency, accuracy and clarity by the supervisor and the principal investigator on a daily basis.

**Data processing and analysis:** All returned questionnaires was checked manually for the completeness and consistency of responses. The collected data was coded and entered and analyzed using Epi Info version 7.0 (CDC, USA). For the descriptive analysis, continuous variables was summarized using means, medians, and standard deviations (SDs), while categorical variables were summarized using proportions. Multivariate logistic regressions was used to identify factors associated with postpartum modern contraceptive use. Odds ratios (OR) with 95% CIs was used to identify factors associated with postpartum modern contraceptive use. The p-values less<0.05 was considered to indicate statistically significant of the associations with postpartum modern contraceptive use.

**Ethical consideration:** Before commencement of the study, ethical approval was sought for and obtained from the Research and Ethical Committee of the Alex Ekwueme Federal University Teaching Hospital, Abakaliki. Written informed consent was obtained from each study participant to confirm willingness to participate after explaining the objectives of the study. Respondents' names and personal identifiers were not included in the written questionnaires. Education about the importance of postpartum contraceptive use during postpartum period and sources for obtaining contraceptives were provided at the end of the interview for those who did not use postpartum contraceptives.

## RESULTS

The study included 55 respondents who met inclusion criteria. All the study participant responded to the questionnaire making the response rate to be 100%. The mean age of the respondents was 28.2±4.3 years. Twenty-four women were between the age range of 25 and 29 years. The majority (61.8%) of the respondents were married. Forty percent of the respondent attended primary school and 10.9% attended tertiary education. Twenty-three of respondent partners attended secondary education. About half (50.9%) of the respondents were farmers and 27 of respondents partners were traders (Table 1). The mean parity of the respondents was 5.2±0.1. Forty-two women were para 5 and above. The median number of living children was 4.2 per woman. Eight women had one child. The median duration of birth interval was 22 months. Twenty-three(41.8%) of the respondents had intention to have more children and 8 women want to limit their family size. (Table 2) From the antenatal care attendance, 33(60%) respondents had 4 or more antenatal visits. Fifty-two (94.5%) women delivered in health facility. The majority (74.5%) of the respondents attended postnatal care visit. Forty-eight (87.3%) women received family planning counselling at antenatal and postnatal care sessions (Table 2). The prevalence of contraceptive use among postpartum women was 34 (61.8%) [95%CI: (58.1-64.6)]. Male condom (25.5%) and lactational amenorrhoea (14.5%) were the most frequently used methods. Thirty-five (63.6%) contraceptive users made contraceptive decisions jointly with their partners. Fear of side effects (42.9%) and spousal disapproval were the main reasons for not using contraceptive methods (Table 2). In the multiple logistic regression analysis, educational level, parity, ANC and PNC visits, family planning counselling during ANC and PNC,

knowledge of postpartum family planning and experience of side effects in previous contraceptive use showed significant and independent association with postpartum family planning use (Table 3).

## DISCUSSION

Context plays a major role in barriers and enablers of successful strategies to fill unmet family planning needs. Worldwide over 200 million couples state a desire to delay pregnancy or cease fertility but have an unmet need for contraception, more so if they are amongst the poor, less educated, and rural residents of our globe, and this was reflected in the data collected during this study.<sup>12</sup> Women in the postpartum period have a critical window of opportunity to receive family planning service because of their better access to health services including ANC, delivery, postnatal care, and immunization. This study revealed that more than half (61.8%) of the participants were using one form of contraceptives. This finding is slightly higher as compared to the 2011 EDHS report for urban women in Ethiopia (52%), Zambia (46%), Mexico (47%), and Rwanda (50.4%).<sup>16-18</sup> Male condom (25.5%) and lactational amenorrhoea (14.5%) were the commonly used methods. Moreover, long acting methods accounted for 18.2% of the users. This would be attributed to client's preferences for a specific method. These predominant methods have been observed in different studies. Antenatal care utilization was an important variable affecting contraceptive use. The possible explanation is women who attend antenatal care are more likely to get information towards contraceptive use. This is consistent with a prospective study done in Kenya and Zambia (Ling and Tong, 2017; White *et al.*, 2014). Studies in Mexico, India and United State of America have shown that FP counseling during prenatal care would motivate women to practice contraceptives (Sonalkara *et al.*, 2014). Those women who attended postnatal care had higher odds of using contraceptive in postpartum period. This is explained due to that postnatal visit may give the opportunity for contraceptive counseling and adoption in the postpartum period.

There was higher contraceptive prevalence rates (61.8%) among postpartum women in Abakaliki compared to the national figure of 15%. The contraceptive prevalence rate was due to the combine efforts of both the governments and the non-governmental organizations in providing family planning services in Ebonyi state. This has led to improved availability of free family planning services to this population. In this study husband disapproval of family planning has no effect on the use of family planning services in the postpartum period. This finding is not in agreement with studies done in Kenya and Ethiopia (Abraha *et al.*, 2017; Marlow, 2014). This could be due to women tendency to use family planning is spite of the partners' disapproval. Our finding showed that 18.2% of respondents use family planning is spite of the partners' disapproval. Educational attainments of both women and their partners were found to be very significant factors in the use of family planning methods. Unlike women with no formal education, women with some formal education were more likely to use modern methods of contraception. A similar relationship was established for their partners. Other researchers also found similar results in their studies (Hounton *et al.*, 2015; Abraha *et al.*, 2017; Ling and Tong, 2017). Lack of formal education has been found to strongly reduce modern family planning use.

Table 1. Socio-demographic characteristics of study participants

Variables	Frequency	Percentage
Age (yr)		
15-19	6	10.9
20-24	10	18.2
25-29	24	43.6
30-34	8	12.7
≥ 35	7	14.6
Marital status		
married		
Single	34	61.8
Divorced	6	10.9
Widowed	10	18.2
Educational level	5	9.1
No formal education	13	23.6
Primary	22	40.0
Secondary	14	25.5
Tertiary	6	10.9
Occupation		
House wife	9	16.4
Farming	28	50.9
Civil servant	11	20.0
Trading	7	12.7
Partner's education		
No formal education	11	20.0
Primary		
Secondary	16	29.1
Tertiary	23	41.8
Partner's occupation	5	9.1
Farming	7	12.7
Labourer	8	14.5
Trading	27	49.1
Civil servant	13	23.7

Table 2. Reproductive and maternal health service use-related characteristics of the study participants

Variable	Frequency	Percentage
Parity		
1-4	13	23.6
≥ 5	42	76.4
Living children		
1	8	14.5
2-3	19	34.5
≥ 4	28	51.0
Birth interval		
≤ 24	25	45.5
24-47	13	23.6
≥ 48	17	30.9
Reproductive intention		
Want to space	13	23.6
Want to limit	8	14.5
Want to have a child	23	41.8
Undecided	11	20.1
Who decide to use family planning		
Mainly respondents	6	10.9
Mainly the husband	14	25.5
Joint decision	35	63.6
Antenatal care(ANC) visits	22	40
1-3	33	60
≥ 4		
Postnatal care(PNC) visit	41	74.5
Yes	14	25.5
No		
Place of delivery	52	94.5
Health institution	3	5.5
Home		
Family planning counseling during ANC and PNC	48	87.3
Yes	7	12.7
No		
Method of PFP use	14	25.5
Condom	8	14.5
Lactational amenorrhoea	6	10.9
Implant	4	7.3
IUCD	2	3.6
COC	21	38.2
None		
Reasons for non-use of PFP		
Religious prohibition	4	19.0
Spousal disapproval	6	28.6
Fear of side effects	9	42.9
Medical problem	2	9.5

Table 3. Factors associated with postpartum family planning (FP) use

Variable	Postpartum family planning use		OR(95% CI)	P-value
	Yes	No		
Educational level	32	13	7.43(1.75-31.59)	0.003
Formal education	3	10		
No formal education				
Parity			0.08(0.02-0.31)	<0.0001
1-4	23	9		
≥ 5	4	19		
Living children			2.63(0.86-8.04)	0.08
1	2	6		
2-3	11	7		
≥ 4	21	8		
Currently breastfeeding			4.67(1.44-15.13)	0.008
Yes	12	16		
No	21	6		
ANC visit			1.15(0.29-4.520)	0.03
1-3	13	4		
≥ 4	30	8		
FP counseling during ANC and PNC			0.17(0.04-0.68)	0.36
Yes	32	4		
No	11	8		
Postnatal clinic visit			0.09(0.02-0.40)	0.0004
Yes	29	3		
No	11	12		
Knowledge of postpartum FP			0.09(0.02-0.34)	0.0001
Yes	25	5		
No	8	17		
Husband approval of family planning			0.12(0.03-0.56)	0.48
Yes	35	3		
No	10	7		
Experienced problems with previous contraceptive use			6.92(1.91-25.12)	0.002
Yes	13	18		
No	20	4		

This does not come as much of a surprise as higher education attainment increases female decision making power and awareness of the benefits of good family planning practices. This study showed that women had high level of awareness and knowledge about family planning. Therefore, knowledge barrier was not an important obstacle to family planning use among postpartum women in Abakaliki. This finding is not in agreement with an Eritrean study which showed that lack of knowledge was a major factor for non-use of contraception among women (Sileo, 2015). The high level of awareness and knowledge of family planning was mainly because of the government policy that family planning services be provided to all women attending antenatal care. The development partners were providing free family planning services which was also responsible for the high level of family planning awareness and knowledge.

**Limitations:** This study has some limitations. It mainly focuses on individual level factors. Factors related to the health system and the service providers did not included in the current study. The socio cultural factors and related misconception on family planning did not assessed in this study.

### Conclusion

This study calls attention to the importance of increased need for family planning in Abakaliki as significant number (38.2%) of respondents were not on any contraceptive method which predisposed them to unintended pregnancy with its attendant consequences. This is a cause for concern. The persistence of unmet need for family planning, particularly the high rate of unmet need amongst these women points to an important gap in service provision.

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**Conflict of Interest:** None

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