

## ORIGINAL ARTICLE

### Effect of counseling on contraceptive uptake in Nigeria

O.R. Balogun<sup>1</sup>, A. Adewole<sup>2</sup>, A.S. Adeniran<sup>1</sup> and R. Adegboye<sup>3</sup>

<sup>1</sup>Department of Obstetrics & Gynecology, <sup>3</sup>Department of Paediatrics, University of Ilorin/ University of Ilorin Teaching Hospital, Ilorin, <sup>2</sup>Obstetrics & Gynecology Department, Federal Medical Centre, Lokoja, Nigeria.

Despite multiple options for contraception, choices are limited with low satisfaction among clients in low resource countries. Effective counseling may improve satisfaction and compliance if adequately pursued. The objective of this study was to evaluate the influence of counseling on contraceptive choices and its associated factors. This was a prospective, descriptive study involving consenting family planning clients at the family planning clinic of a tertiary hospital in Ilorin, Nigeria. All participants completed an interviewer-administered questionnaire designed for the study. Statistical analysis was done using SPSS version 21.0 (IBM, USA) and  $p$  value  $<0.05$  was significant. Among the 260 participants, the mean age was  $30.3 \pm 5.7$  years, mean parity  $3.0 \pm 1.0$  and modal age 20–39 years (93.5%). The commonest preferred contraceptive pre and post-counseling was intrauterine device (36.5% vs. 53.5%); increased post-counseling desire was reported for injectables (28.8% vs. 35.4%) and implant (0% vs. 3.1%). Preferences increased post-counseling for highly effective methods (38.1% vs. 60.4%;  $p < 0.0001$ ), long term methods (38.1% vs. 60.4%;  $p < 0.0001$ ) and permanent methods (1.5% vs. 3.8%;  $p < 0.001$ ). Significant predictor of contraceptive choice pre-counseling was level of education ( $p = 0.032$ ) and parity ( $p < 0.001$ ) post-counseling. The study shows that counseling can improve choices, encourage satisfaction and possibly enhance compliance among contraceptive clients.

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#### INTRODUCTION

Access to contraceptive services continue to increase due to population growth and increasing number of reproductive age women resulting in increased clients requiring contraceptives with 215 million women having unmet need for modern contraception (UNFPA., 2004; Ashwell, 2009; Darroch and Singh, 2013). Report suggest that increased options for safe, effective, and convenient family planning methods encourages more users and improves client satisfaction (Kim *et al.*, 2005). Therefore, providers should avail potential clients the opportunity of available choices through clinic-based counseling, community outreaches and social franchising (Duvall *et al.*, 2014).

In low resource countries, barriers to contraception

include ignorance, incorrect information and relationship with the providers, clients and the community (Sturm, 2002). Women are most concerned about effectiveness, side effects, and safety usually with a desired method at presentation (Kim *et al.*, 2005). In the absence of an ideal contraceptive, choice becomes inevitable and it is usually influenced by individual client characteristics and needs (Huezo, 1998). Counseling by trained providers therefore encourages informed choice with a potential for compliance (Huezo, 1998).

Counseling is an interactive process, where the provider listens to the client's needs, identifies the concerns and offers relevant information to enable an informed decision (Kim *et al.*, 2005). It involves client education on contraception methods, provision of answers to questions and concerns, evaluation of eligibility for desired method and eventual adoption of a method. A report indicated an increase in contraceptive uptake in women provided with educational leaflets and counseling sessions

Correspondence: Adewole A., Department of Obstetrics & Gynecology, Federal Medical Centre, No 1, Saliu Ibrahim Way, PMB 1001, Lokoja, Kogi State, Nigeria.  
E-mail: adewoleobsgyn@hotmail.com

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(Saeed *et al.*, 2008).

A major barrier to contraception uptake in low resource countries is misinformation and myths about contraception which are commonly spread verbally among the people. Thus, right information during counseling provide an opportunity to demystify contraception and improve uptake (Omu and Unuigbo, 1986). This study was aimed at evaluating the influence of counseling on contraceptive choices among women seeking contraception.

### MATERIALS AND METHODS

#### Study design

This was a descriptive cross-sectional study conducted at the family planning clinic of the University of Ilorin Teaching Hospital, Ilorin, Nigeria from April 2014 to March 2015. The clinic opens on working days and provides unrestricted access accommodating both referred and self-presenting clients. It is under the supervision of a gynecologist with a full complement of resident doctors and nursing staff. Informed consent was obtained from all participants.

#### Study population

Participants were women on first visit to the clinic and desiring contraception while those already on contraception or visiting for other reasons were excluded from the study.

#### Data collection

All participants had an interviewer-administered questionnaire completed at presentation; thereafter, individual counseling on contraception was undertaken and the same questionnaire administered post-counseling. counseling was conducted by trained family planning providers with provision of answers to clients' questions. Information obtained included demography, knowledge about contraception, the client preferred contraceptive and reasons for the preference as well as post-contraception preferences. In the study, contraceptive options were subgrouped based on effectiveness (highly effective versus less effective), duration of action (long term versus short term) and the type of method (temporary versus permanent). Those classified as less effective

methods were oral pills, condoms and injectable while intrauterine device (IUD), implants and bilateral tubal ligation (BTL) were classified as highly effective methods. The methods classified as less effective were also short term while the highly effective methods were long term methods. Bilateral tubal ligation was the only form of permanent method while the others were temporary methods.

#### Statistical analysis

Data was entered into Microsoft excel and exported to SPSS. Data obtained was analyzed using SPSS version 21.0. Data was present as proportions, percentages, and mean  $\pm$  standard deviation(SD), and p value  $<0.05$  was significant.

### RESULTS

Of the 260 participants, 1(0.4%) was a teenager, 243(93.5%) were aged 20-39 years (mean age  $30.27 \pm 5.66$ ), the mean parity was  $3.0 \pm 1.0$ , 231 (88.8%) were multipara while 18(6.9%) were grand-multipara; 14(5.4%) had no formal education while 246(94.6%) had at least primary level of education (Table 1).

**Table 1: Socio-demographic characteristics of participating women**

VARIABLE	NUMBER	PERCENTAGE (%)
<b>Age (years)</b>		
Less than 20	1	0.4
20-29	113	43.5
30-39	130	50
40 above	16	6.1
<b>Parity</b>		
0	1	0.4
1	10	3.8
2 - 4	231	88.8
5 above	18	6.9
<b>Education</b>		
Not education	14	5.4
Primary	103	39.6
Secondary	129	49.6
Tertiary	14	5.4
<b>Religion</b>		
Islam	138	53.1
Christianity	122	46.9

*Data presented as number and percentages*

**Table 2: Effect of counseling on contraception choices pre and post-counseling among contraceptive clients**

Variable	Contraceptive choice pre-counseling			Contraceptive choice post-counseling		
	n(%)	X <sup>2</sup>	p-value	n(%)	X <sup>2</sup>	p-value
<b>Method</b>						
BTL	4(15.0)	7.44	0.282	10(3.8)	79.38	<0.0001
IUD	95(36.5)			139(53.5)		
Injectable	75(28.8)			92(35.4)		
OCP	85(32.7)			11(4.2)		
Condom	1(0.4)			0(0.0)		
Implants	0(0.0)			8(3.1)		
<b>Effectiveness</b>						
Highly	99(38.1)	11.01	0.088	157(60.4)	53.77	<0.0001
Less	161(61.9)			103(39.6)		
<b>Duration</b>						
Long term	99(38.1)	11.01	0.088	157(60.4)	53.77	<0.0001
Short term	161(61.9)			103(39.6)		
<b>Reversibility</b>						
Permanent	4(1.5)	10.29	<0.0001	10(3.8)	49.24	<0.0001
Temporary	256(98.5)			250(96.2)		

*Data presented as number(percentages); X<sup>2</sup>-chi square, p<0.05 was statistically significant*

The most preferred method pre and post-counseling was IUD with an increase uptake post-counseling (36.5% vs. 53.5%); there was post-counseling reduction in uptake for oral contraceptive pills (OCP) (32.7% vs. 4.2%). Uptake of the highly effective (38.1% vs. 60.4%) long term (38.1% vs. 60.4%) and permanent methods (1.5% vs. 3.8%) increased post-counseling. There were statistically significant increases in post-counseling choices based on the method (p<0.0001), effectiveness (p<0.0001), duration (p<0.0001) and reversibility (p<0.0001) of the contraceptives (Table 2).

Following logistic regression, the significant pre-counseling predictor of the effect of counseling on contraception was level of education (p=0.032)

while parity (p<0.001) was significant post-counseling (Table 3).

## DISCUSSION

In this study, the commonest preferred contraceptive pre and post-counseling was IUD with increased post-counseling client desire for injectable, implant and BTL. Also, preferences increased post-counseling for highly effective methods, long term methods and permanent methods. The significant predictors of contraceptive choice were level of education (pre-counseling) and parity (post-counseling) while age and religion were not significant.

Worldwide, about 200,000 maternal deaths occur

**Table 3: Logistic regression of factors affecting the choice of contraceptives**

Variable	Pre-counseling		Post-counseling	
	X <sup>2</sup> (95% CI)	p-value	X <sup>2</sup> (95% CI)	p-value
Age	4.596 (2.356 - 8.762)	0.331	7.688 (0.923 - 20.539)	0.104
Parity	3.092 (0.439 - 7.845)	0.543	65.935 (20.324 - 80.735)	0.001
Education	10.579 (4.952 - 16.265)	0.032	2.126 (0.625 - 8.397)	0.713
Religion	8.741 (2.637 - 18.249)	0.068	3.48 (2.356 - 9.765)	0.481

*X<sup>2</sup>-chi square, CI confidence interval at 95%, p<0.05 was statistically significant*

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annually from the lack, or failure of contraceptive services. Also, 120–150 million women who want to limit or space their pregnancies are still without effective methods to do so (Commission, 2016). Contraceptive prevalence is lower in developing countries due to limitation in availability, poor access as well as social, cultural and health-facility factors (Adeniran *et al.*, 2014a; Adeniran *et al.*, 2014b).

Counseling should be continuous from antenatal, postpartum or outside pregnancy in women of reproductive age. Pregnancy affords the opportunity for contact with health practitioners to many women in low resource countries. However, many women do not receive antenatal or postpartum contraception counseling due to lack of institutional protocol, oversight or busy schedule of providers leading to unwanted pregnancies (Adeniran *et al.*, 2014a).

Research has suggested a trend towards increasing uptake of methods that encourage discrete use among women in developing countries to exclude partner interference (Adeniran *et al.*, 2014b; Balogun *et al.*, 2016). Sometimes, the male partner opposes contraceptive use by assaulting the woman (Omu and Unuigbo, 1986; Feyisetan and Ainsworth, 1996), reporting her to friends and families or denial of feeding allowances (Balogun *et al.*, 2016). However, sufficiently motivated women prefer discrete methods like IUD, Implant and injectable as reported in this study.

For women desiring to stop childbearing, permanent methods are often restricted to BTL which is sometimes limited by misinformation, high infant mortality as well as cultural and religious beliefs. The increased post counseling preference shows effects of counseling to provide awareness, answer questions, correct the misinformation and encourage uptake.

While COCP remains an effective method, it is often hindered by forgetfulness or taking it under the watchful eye of partners and others. It is sometimes difficult to remember to take COCP and as many as 30% of women report missing one or more pills per month with almost 50% discontinuation rate among new users (Rosenberg *et al.*, 1995). Evidence has

shown that missed pills with “typical use” can cause a 50-fold less effectiveness rate than with “perfect use” (Hall *et al.*, 2010). Awareness during counseling about other methods possibly reduced its uptake for other highly effective methods as reported in the study.

Male dominant method of contraception (male condom) was conspicuously less preferred both pre-counseling and post-counseling. The only woman who preferred it pre-counseling discarded it post-counseling. Male condom was the least used method in a comparative study on contraception in Nigeria due to male partner dependence (Adeniran *et al.*, 2014b). More women want to be in-charge in order to be certain about the use and compliance. This may not be unexpected since they bear the burden of unwanted pregnancy, frequent deliveries and the consequences.

In addition, short term contraceptives necessitate repeated visits at short intervals which may not be feasible due to transportation cost, higher cumulative cost and absence from work and home. Preference for long term methods increased post-counseling possibly after making participants to realize the benefits. A previous report from Ilorin, Nigeria showed that implants were underutilized (Balogun *et al.*, 2014; Balogun, 2014b) though they portend potentials for meeting unmet need for contraception (Balogun, 2014a). In a report, majority of previous contraceptive users and the contraceptive naïve opted for implants due to their long durations of use (Balogun, 2014a). In addition, counseling has been shown to also improve tolerability of side effects from implants thereby facilitating continuation (Balogun, 2014a; Balogun, 2014b).

Pre-counseling, educational level was the determining factor on contraceptive preference. This may be due to increased access and exposure to information on various platforms which education offers. However, post-counseling, parity was the determining factor. This shows that counseling if appropriately harnessed has the potential to bridge the gap in educational level among clients.

## CONCLUSION

This study concludes that availability of adequate counseling for clients desiring contraception have a significant improvement on their choices. It offers opportunity to address the fears, concerns and correct misconceptions. It is expected that this will enhance client satisfaction with a potential for improving compliance thereby preventing unwanted pregnancy and its attendant complications. We recommend that family planning providers should be trained in the necessary communication skills to make them effective counselors.

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## COMPETING INTERESTS

The authors declare that they have no competing interests.

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