

Structured Antenatal Counselling and Postpartum Contraceptive Uptake in South West Nigeria

Abstract

Background: Antenatal clinic is an opportunity to counsel women on the need for postpartum contraception. This study was designed to determine the effect of structured antenatal counselling on postpartum contraceptive uptake. **Materials and Methods:** A prospective intervention study was conducted in the antenatal clinic of Olabisi Onabanjo University Teaching Hospital, Sagamu from July 15, 2018 to June 31, 2019. Two hundred antenatal attendees were randomly allocated to intervention and control groups. Women in the control group had routine antenatal counselling by the nurses/midwives, whereas those in the intervention group had well-structured antenatal contraceptive education sessions at each antenatal visit. A data capture sheet was used to obtain relevant information at presentation in labor and completed 6 months postpartum through phone conversation. **Results:** The overall contraceptive acceptor prevalence was 35.5%. Majority of the contraceptive acceptors (42.3%) opted for intrauterine contraceptive devices. The contraceptive prevalence among the intervention group was 45% when compared with 26% among the controls. This was statistically significant ($\chi^2 = 7.883$, $P = 0.005$). However, after multivariate logistic regression analysis, the intervention (structured antenatal counselling) was not found to be a significant determinant of postpartum contraceptive uptake [adjusted odds ratio (AOR) 1.0; confidence interval (CI) 0.4–2.2; $P = 0.941$]. Previous history of contraceptive usage, attending six or more antenatal visits, and Islamic religion were significant determinants of postpartum contraceptive uptake [(AOR 34.3; CI 7.1–164.6; $P < 0.001$) (AOR 8.0; CI 2.9–22.3; $P < 0.001$) (AOR 8.3; CI 3.3–10.0; $P < 0.001$), respectively]. **Conclusion:** Incorporation of structured antenatal contraceptives counselling was not significantly better than routine antenatal care in its effect on postpartum contraceptive uptake. There is need for deliberate efforts to encourage women to attend antenatal clinics in which contraceptive information would be provided during routine visits.

Keywords: Antenatal, contraceptive, counselling, health education, postpartum

Abstrait

Contexte:

La clinique prénatale est l'occasion de conseiller les femmes sur la nécessité d'une contraception post-partum. Cette étude a été conçue pour déterminer l'effet d'un conseil prénatal structuré sur l'adoption de la contraception post-partum.

Méthodes:

Une étude d'intervention prospective menée dans la clinique prénatale de l'hôpital universitaire Olabisi Onabanjo, Sagamu du 15 juillet 2018 au 31 juin 2019. Deux cents patientes prénatales ont été réparties au hasard dans les groupes d'intervention et de contrôle. Les femmes du groupe témoin ont bénéficié de conseils prénatals de routine dispensés par les infirmières/sages-femmes, tandis que celles du groupe d'intervention ont bénéficié de séances d'éducation prénatale bien structurées sur la contraception à chaque visite prénatale. Une feuille de saisie de données a été utilisée pour obtenir des informations pertinentes lors de la présentation pendant le travail et a été complétée 6 mois après l'accouchement par conversation téléphonique.

Résultats:

La prévalence globale des accepteurs contraceptifs était de 35,5%. La majorité des utilisatrices de contraceptifs (42,3%) ont opté pour des dispositifs contraceptifs intra-utérins. La prévalence contraceptive parmi le groupe d'intervention était de 45% contre 26% parmi le groupe témoin. Ceci était statistiquement significatif ($\chi^2 = 7.883$, $P = 0.005$). Cependant, après une analyse de régression logistique multivariée, l'intervention (conseil prénatal structuré) ne s'est pas avérée être un déterminant significatif de l'adoption de la contraception post-partum (AOR 1,0; IC 0,4-2,2; $P = 0,941$). Les antécédents d'utilisation de

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contraceptifs, la participation à six visites prénatales ou plus et la religion islamique étaient des déterminants significatifs de l'utilisation de la contraception post-partum [(AOR 34,3; IC 7,1 – 164,6; $P < 0,001$), (AOR 8,0; IC 2,9 – 22,3; $P < 0,001$), (AOR 8,3; IC 3,3-10,0; $P < 0,001$) respectivement]

Conclusion:

L'intégration de conseils structurés sur les contraceptifs prénataux n'était pas significativement meilleure que les soins prénataux de routine dans son effet sur l'adoption de contraception post-partum. Des efforts délibérés sont nécessaires pour encourager les femmes à se rendre dans les cliniques prénatales où des informations sur la contraception seraient fournies lors des visites de routine.

Mots clés: *Prénatal, Contraceptif, Conseil, Éducation à la santé, Post-partum.*

Introduction

The world population has been characterized by unprecedented growth, and this is associated with enormous consequences on environmental, social, and economic development.^[1] In 2012, the world population was estimated to be 7 billion.^[1] Africa is the most populated continent accounting for 16.5% (1.2 billion) of the world population, and Nigeria is the most populous African nation.^[2] The total fertility rate in Nigeria was 5.3 children per woman in 2018.^[3] With this present figure, Nigeria is among the countries with the highest fertility rate worldwide.^[2] The consequences of this include the depletion of natural resources, conflicts, unemployment, low wages, and high maternal and infant mortalities. Hence, there is need to ensure a gradual decline in fertility rate so as to enhance population stabilization.^[4] One of the ways by which this can be achieved is by encouraging contraceptive uptake by women of reproductive age.^[5,6]

The knowledge of family planning methods is high in Nigeria; 85% of women aged 15–49 years know at least one method of family planning. However, only 15% of currently married women use any method of contraception.^[3] While 10% of married women use a modern method of family planning, 5% use traditional methods. The unmet need for contraception among reproductive age is about 30%.^[3] There appears to be a wide disparity between the level of awareness and knowledge of contraception and the utilization of the various modern methods.^[3] Some authors have postulated that the reason for this gap could be due to perceived poor quality of family planning services, poor access to services, perceived limited contraceptive choices, fear of possible future infertility, and socioeconomic factors.^[7,8] Many of the barriers to utilization of modern contraceptives result from misconception about the various methods. Hence, contraceptive counselling should be aimed at addressing the wrong perception of women in order to drive the demand for and remove barriers to contraceptive usage and also to ensure continuation of the chosen contraceptive methods. Contraceptive counselling is one of the activities usually performed during antenatal care; in addition, women are referred to the family planning clinic at 6 weeks postpartum for contraceptive services. It is not clear if this is being done properly in our environment. Thus, this study was to determine whether addition of a structured antenatal contraceptive counselling to routine antenatal counselling will lead to increased postpartum utilization of modern contraceptive methods in Olabisi Onabanjo University Teaching Hospital, Sagamu.

Materials and Methods

This was a hospital-based intervention study conducted at the antenatal clinic of the Olabisi Onabanjo University Teaching Hospital (OOUTH), Sagamu, Nigeria. The hospital serves as a referral centre for Obstetric and Gynecological Services for neighboring towns and villages of Ogun and Lagos states in south west Nigeria.

The study population consisted of pregnant women who presented for antenatal booking during the period between July 15, 2018 and June 30, 2019.

The minimum sample size for the study was calculated using the formula for sample size determination for comparison of proportions of two groups^[9]:

Sample size for each arm, $n = (Z_{\alpha/2} + Z_{\beta})^2 * (p_1(1-p_1) + p_2(1-p_2)) / (p_1 - p_2)^2$,

where $Z_{\alpha/2} = 1.96$, $Z_{\beta} = 0.84$, p_1 and p_2 are estimates of prevalence in the two groups. From a previous study,^[8] the proportion of postpartum women who started using modern contraceptive by 12–14 months postpartum was 28.2%, i.e., $p_1 = 0.282$. Assuming that the intervention will result in 20% increase in proportion of postpartum women using modern contraceptive, i.e., $p_2 = 0.482$, the calculated sample size for each arm was 89. However, to allow for possible defaulters, 10% was added to each arm, making a sample size of 98 which was rounded off to 100 participants for each group.

Allocation to groups

The study participants were given adequate information about the study. Those that agreed to participate were asked to sign an informed consent form. All consenting women who presented for antenatal care were randomly allocated to two groups, i.e., intervention and control groups at each antenatal booking clinic. On each antenatal booking clinic day, each consenting study participant was asked to pick a sealed envelope (without replacement) from a box containing envelopes corresponding to the total number of clinic attendees for that day. The tag in each envelope indicated the group (intervention or control) that the participant was randomized to, and the box contained equal number of tags for each group. In the event of an odd number of eligible participants, the last participant to register on the day was excluded. The women were informed that attending antenatal clinic at least thrice was essential to continuing in the study. The women were recruited consecutively until the sample size of 100 per group was reached.

Intervention

Women in the intervention group had well-structured antenatal contraceptive education sessions at each antenatal visit, administered by trained senior resident doctors in the Department of Obstetrics and Gynaecology. The topics taught included benefits of child spacing and optimal inter-pregnancy interval; the contraceptive options available and their risks and benefits; the eligibility criteria for the various methods; and facilities to access family planning services from. The participants at each counselling session were limited to 15 women so as to make the counselling sessions interactive. Women were encouraged to ask questions, and these were adequately addressed by the instructors.

Women in the control group had routine antenatal care counselling by nurses on a wide range of topics which include contraceptives usage. All the other components of antenatal clinic were similar in both groups and in accordance with the standard protocol of the hospital. Antenatal visits were scheduled every 4 weeks until 28 weeks gestation, fortnightly until 36 weeks, and weekly till delivery. Women assigned to the intervention group had follow-up antenatal visit on Mondays and Thursdays, whereas control groups had theirs on Tuesdays and Fridays. Postpartum appointments were scheduled for the end of the first, second, and sixth weeks postpartum, and all the participants were thereafter referred to the family planning clinic for postpartum counselling. Six months after delivery, telephone interviews were conducted to determine the uptake of any form of modern contraceptives.

Data collection

Data on sociodemographic characteristics of study participants, their mobile phone numbers and those of their spouses, contraceptive awareness, and previous use of contraceptives were collected from study participants and recorded on a data capture sheet. The primary outcome of the study was the prevalence of modern contraceptive uptake at 6 months postpartum. At 6 months postpartum, the study participants were contacted on phone, and information on the contraceptive choices, indications for uptake of contraceptives, and reasons for non-usage were also recorded on the data capture sheet.

Ethical approval

Ethical approval for the study was obtained from the Health Research Ethics Committee of Olabisi Onabanjo University Teaching Hospital, Sagamu. The research was conducted in accordance with World Medical Association Declaration of Helsinki. Informed consent was obtained from the participant.

Data analysis

The data were entered into SPSS version 21 (IBM Corp., Armonk, NY, USA). Categorical variables were summarized using frequencies and percentages. Continuous variables such as age and parity were summarized using mean and median, respectively. The χ^2 test was used to determine the association between variables such as age, parity, ethnicity, religion,

educational status, occupation, previous contraceptive use and number of antenatal clinic visits, and postpartum contraceptive uptake. The significantly associated variables were included in a multivariate logistic regression model to determine whether structured antenatal counselling was a predictor of postpartum contraceptive uptake. The confidence interval (CI) was set at 95%, and a *P*-value of less than 0.05 was taken as statistically significant.

Results

Table 1 depicts sociodemographic data of the cases and controls. The mean age (\pm SD) of the women in the intervention group was 32.36 ± 4.97 years, whereas that of the control was 31.64 ± 4.94 years. The two groups were comparable in terms of age. Majority of the participants were of Yoruba ethnicity, accounting for 83.0% and 82.0%, respectively, for intervention and control groups. Most of the respondents were civil servants or traders. The educational status of the intervention group and control group was comparable ($\chi^2 = 5.909$, *P* = 0.116).

After 6 months postpartum, 71 women (35.5%) were on modern contraceptives. Of these, 45 women (63.4%) belonged to the intervention group, whereas 26 women (36.6%) were in the control group. The prevalence of postpartum contraceptive uptake was significantly higher among the intervention group (45%) when compared with the control group (26%) ($\chi^2 = 7.883$, *P* = 0.005).

Table 2 depicts the respondents' contraceptive choices at 6 months postpartum. Intrauterine contraceptive devices (IUCDs) were the most commonly used contraceptive methods in both groups, accounting for 30 (42.3%) of all methods used, whereas condoms were the least frequently used contraceptive method. There was no statistically significant difference in the contraceptive choices of women in the two groups.

The most common reasons for contraceptive use among the study participants were child spacing in 43 (60.6%) and terminal contraception in 28 (39.4%). Fear of side effects was the main reason reported by women for not using contraceptives [42 (32.5%)]. Other reasons given by the respondents for non-usage of contraceptives include not being ready for contraceptives, not willing to use contraceptives, and contraceptive services not accessible [Table 3].

Table 4 shows the association between predictor variables and postpartum contraceptive uptake on the bivariate analysis. Religion, previous contraceptive use, and number of antenatal visits all had a statistically significant association with postpartum contraceptive uptake (*P* = 0.001 for each variable). These factors were included in a logistic regression model [Table 5]. Women with previous history of contraceptive usage had increased odds of postpartum contraceptive uptake [adjusted odds ratio (AOR) 34.3; CI 7.1–164.6; *P* < 0.001]. Furthermore, women who had had six or more antenatal visits had increased odds of postpartum contraceptive uptake compared with those with less than six visits (AOR 8.0; CI

Table 1: Sociodemographic characteristics of study participants (n = 200)

Variable	Intervention group, n=100	Control, n=100	χ^2/t -test	P-value
Age				
<30	30	39	1.416	0.234
≥30	70	61		
Mean±SD	32.36±4.97	31.64±4.94	1.027*	0.306
Parity				
Primipara	28	32	0.214	0.643
Multipara	72	68		
Mean±SD	2.56±1.31	2.30±1.23	1.452*	0.148
Ethnicity				
Yoruba	83	82	2.656	0.265
Igbo	13	9		
Hausa	4	9		
Religion				
Christianity	62	59	0.084	0.772
Islam	38	41		
Occupation				
Civil servant	31	22	9.034	0.060
Trading	32	24		
Artisan	15	23		
Unemployed	10	19		
Professional	22	12		
Educational status				
No formal education	13	5	5.909	0.116
Primary	16	25		
Secondary	39	42		
Tertiary	32	28		

Table 2: Respondents postpartum contraceptive uptake and contraceptive choices

Parameter	Intervention group (n=45) n (%)	Control group (n=26) n (%)	P-value
Contraceptive choices			
Condom	3 (6.7)	2 (7.7)	0.871
Injectable	9 (20.0)	8 (30.8)	0.306
Subdermal implant	14 (31.1)	5 (19.2)	0.276
IUCD	19 (42.2)	11 (42.3)	0.994

2.9 – 22.3; $P < 0.001$). Women who were Muslims also had higher odds of postpartum contraceptive uptake compared with Christians (AOR 8.3; CI 3.3–10.0; $P < 0.001$). However, the intervention (structured antenatal counselling) was not found to be a significant determinant of postpartum contraceptive uptake (AOR 1.0; CI 0.4–2.2; $P = 0.941$).

Discussion

Health education is one of the main objectives of antenatal care. Counselling on postpartum contraceptive uptake is often incorporated into the antenatal health education sessions, with the aim of reducing unplanned pregnancies, ensuring adequate child spacing, and ultimately reducing maternal morbidity and mortality.^[10,11] This study assessed whether addition of a structured antenatal contraceptive counselling to routine antenatal counselling would lead to increased

Table 3: Reasons for non-contraceptive usage

Reasons	Frequency	Percentage
No reason	26	20.2
Service not accessible	14	10.9
Not willing to use	18	13.9
Not ready for contraceptive	29	22.5
Fear of side effects	42	32.5

postpartum contraceptive uptake, and findings suggest that this intervention was not associated with increased uptake of modern contraceptives when compared with women who had routine antenatal care.

The overall prevalence of postpartum contraceptive uptake at 6 months was 35.5%. This was higher than 17% reported in the 2018 National Demographic Health Statistics.^[3] The difference is not surprising as the latter was a national survey which would have included women who did not receive any proper antenatal care or antenatal contraceptive counselling. Although there was a higher proportion of current users of contraceptives in the intervention group when compared with the control group, the difference was not statistically significant after controlling for potential confounders. This suggests that the intervention (structured antenatal counselling) was not independently effective in improving postpartum contraceptive uptake. A similar finding was reported from a multicentre study done in Edinburgh, Shanghai, and Cape Town.^[12] There is a possibility that many of the women relied on lactational

Table 4: Association between predictor variables and postpartum contraceptive uptake

Variable	Postpartum contraceptive uptake		χ^2	P-value
	Yes	No		
Age				
<30	24 (34.8)	45 (65.2)	0.024	0.878
≥30	47 (35.9)	84 (64.1)		
Parity				
Nulliparity primipara	21 (35.0)	39 (65.0)	0.009	0.923
Multipara	50 (35.7)	90 (64.3)		
Ethnicity				
Yoruba	62 (37.6)	103 (62.4)	1.837	0.399
Igbo	6 (27.3)	16 (72.7)		
Hausa	3 (23.1)	10 (76.9)		
Religion				
Christianity	28 (23.1)	93 (76.9)	20.436	0.001
Islam	43 (54.4)	36 (45.6)		
Educational status				
No formal/primary	20 (33.9)	39 (66.1)	0.094	0.759
Secondary/tertiary	51 (36.2)	90 (63.8)		
Occupation				
Unemployed/artisan/trader	36 (31.9)	77 (68.1)	1.504	0.220
Professional/civil servant	35 (40.2)	52 (59.8)		
Previous contraceptive use				
Yes	69 (50.4)	68 (49.6)	41.971	0.001
No	2 (3.2)	61 (96.8)		
Number of ANC visits				
≥6	61 (48.8)	64 (51.2)	25.751	0.001
<6	10 (13.3)	65 (86.7)		

ANC = antenatal clinic

Table 5: Logistic regression analysis showing the predictors of contraceptive uptake at 6 months postpartum

Variables	COR	AOR	CI	P-value
Previous contraceptive				
Yes	30.9	34.3	7.1–164.6	<0.001
No	Ref.	Ref.		
Number of ANC visit				
≥6	6.2	8.0	2.9–22.3	<0.001
<6	Ref.	Ref.		
Religion				
Islam	4.0	8.3	3.3–10.0	<0.001
Christianity	Ref.	Ref.		
Intervention				
Yes	2.3	1.0	0.4–2.2	0.941
No	Ref.	Ref.		

COR = crude odds ratio; AOR = adjusted odds ratio; ANC = antenatal clinic

amenorrhea during the first 6 months postpartum, and this may be partly responsible for the lack of significant effect of the intervention on postpartum contraceptive uptake during that period. A previous study done in Ogun State, Southwest Nigeria indicated that more than half of postpartum women exclusively breastfed their babies for at least 6 months postpartum.^[13]

In this study, previous history of contraceptive use and six or more antenatal visits more than six were found to be

independent determinants of postpartum contraceptive use. Similar findings were reported by studies done in Ghana and Ethiopia.^[14,15] This may suggest that previous contraceptive knowledge and perhaps positive experience with previous use were strong motivating factors for postpartum contraceptive uptake. Such clients may also have realized that many of the side effects of contraceptives were self-limiting and usually abated after a few months without any residual health challenges. The increased odds of postpartum contraceptive uptake in women who had six or more visits underscore the importance of multiple contacts with health workers in creating the opportunities for more in-depth contraceptive counselling.^[16] As the intervention in this study, which had to do mainly with increased dose of contraceptive counselling, did not lead to a significant uptake, we can hypothesize that frequency of antenatal counselling is perhaps more important than dose of counselling in influencing postpartum uptake of modern contraceptives. Islamic religion was also noted to be a significant predictor of postpartum contraceptive uptake. The reason for this is not clear. Although it is known that some Christian religious denominations such as Catholics oppose use of contraceptives, this subanalysis was not done in this study.

Our study found that IUCDs were the most commonly used methods, and this agrees with findings from previous studies done in Sagamu and Osogbo, southwestern Nigeria.^[17,18] About two out of every five contraceptive acceptors opted for IUCD. IUCD is particularly favoured by women with

completed family size due to its long duration of action.^[17] It is also interesting to note that about 40% of the women on contraceptives at 6 months used it for terminal contraception. Permanent contraceptive methods are not popular among Nigerian women,^[19] and none of the study participants opted for tubal ligation. This could be due to inadequate information about the method, strong aversion for surgical procedures, religious beliefs, irreversibility of the procedure, and the likelihood of future regret.^[19,20] The study intervention did not alter the contraceptive choices of the study participants as there was no significant difference in the contraceptive choices of women in the two groups. Similar findings were reported by Akman *et al.*^[21] in Turkey. This may indicate that the contraceptive information provided by the health workers were same for both intervention and control groups.

The fear of side effects was the main reason for non-use of contraceptives. This has been implicated in high discontinuation rates, especially among hormonal contraceptive users.^[17] It is noteworthy that there are several misconceptions about the side effects of some contraceptives. This underscores the importance of detailed contraceptive counselling during the antenatal period. It will also be beneficial to educate women on ways of avoiding unhealthy life styles that could potentiate the unwanted side effects of some contraceptives. Fourteen respondents could not access family planning services to meet their contraceptive needs in their immediate vicinity, despite the willingness to use the service. This could indicate an uneven distribution of healthcare facilities with family planning services in our environment.

Use of social franchising networks to scale up delivery of contraceptive services may help in increasing contraceptive uptake in our environment.^[22] It should be noted however that all the study participants were aware of the availability of contraceptive services in the study centre. Some of the study participants were not willing to use any form of contraceptive despite being sexually active; this could be due to myths and sociocultural taboos associated with contraceptive use. Adequate health education could also help in this regard.

The randomization done during the allocation of study participants and the control for potential confounders are some of the strengths of this study. The study is however hospital-based, and the results may not be generalizable to the whole population. Another limitation of this study is the fact that there is a potential for study participants to give a socially desirable answer during phone calls. However, the participants were adequately counselled on the importance of sincere responses during phone interviews.

Conclusion

Incorporation of structured antenatal contraceptive counselling, when compared with routine antenatal care, did not result in a significantly higher rate of postpartum contraceptive uptake. However, previous history of contraceptive use, six or more antenatal visits, and practicing the Islamic religion were found

to be independent determinants of postpartum contraceptive use. There is the need for deliberate efforts to encourage women to attend antenatal clinics in which contraceptive information would be provided during routine visits. Larger community-based randomized controlled studies will be needed in future to evaluate the effectiveness of some antenatal and postpartum interventions in improving postpartum contraceptive uptake.

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Conflicts of interest

There are no conflicts of interest.

References

1. Mohammed A, Woldeyohannes O, Feleke A, Megabiaw B. Determinants of modern contraceptive utilization among married women of reproductive age group in North Shoa Zone, Amhara Region, Ethiopia. *J Reprod Health* 2014;11:1-7.
2. World Population Data Sheet. Population Reference Bureau. 2019. Available from: <http://www.worldpopdata.org> [last assessed on March 13, 2020].
3. National Population Commission and ICF International. Nigeria Demographic and Health Survey. Rockville, MD, USA: National Population Commission and ICF International; 2018.
4. Alkema L, Raftery AE, Gerland P, Clark SJ, Pelletier F, Buettner T, *et al.* Probabilistic projections of the total fertility rate for all countries. *Demography* 2011;48:815-39.
5. Kumar M, Meena J, Sharma S, Poddar A, Dhaliwal V, Modi-Satish Chander Modi SC, *et al.* Contraceptive use among low-income urban married women in India. *J Sex Med* 2011;8:376-82.
6. United Nations. World Contraceptive Use, New York: United Nation, Department of Economics and Social Affairs, Population Division. 2013. Available from: <http://www.unpopulation.org> [last accessed on February 7, 2020].
7. Morse JE, Rowen TS, Steinauer J, Byamugisha J, Kakaire O. A qualitative assessment of Ugandan women's perceptions and knowledge of contraception. *Int J Gynaecol Obstet* 2014;124:30-3.
8. Ayiasi MR, Muhumuza G, Buicunya J, Orach GC. The effect of prenatal counseling on postpartum family planning use among early postpartum women in Masindi and Kinyadongo district Uganda. *Pan Afr Med J* 2015;21:138.
9. Eng J. Sample size estimation: How many individuals should be studied? *Radiology* 2003;227:309-13.
10. Adanikin AI, Onwudiegwu U, Loto OM. Influence of multiple antenatal counselling sessions on modern contraceptive uptake in Nigeria. *Eur J Contracept Reprod Health Care* 2013;18:381-7.
11. Zerai A, Tsui AO. The relationship between prenatal care and subsequent modern contraceptive use in Bolivia, Egypt and Thailand. *Afr J Reprod Health* 2001;5:68-82.
12. Smith KB, van der Spuy ZM, Cheng L, Elton R, Glasier AF. Is postpartum contraceptive advice given antenatally of value? *Contraception* 2002;65:237-43.

13. Akadri A, Odelola O. Breastfeeding practices among mothers in Southwest Nigeria. *Ethiop J Health Sci* 2020;30:697-706.
14. Coomson JI, Manu A. Determinants of modern contraceptive use among postpartum women in two health facilities in urban Ghana: A cross-sectional study. *Contracept Reprod Med* 2019;4:17.
15. Gebremedhin AY, Kebede Y, Gelagay AA, Habitu YA. Family planning use and its associated factors among women in the extended postpartum period in Addis Ababa, Ethiopia. *Contracept Reprod Med* 2018;3:1.
16. Tafere TE, Afework MF, Yalew AW. Counseling on family planning during Anc service increases the likelihood of postpartum family planning use in Bahir Dar city administration, Northwest Ethiopia: A prospective follow up study. *Contracept Reprod Med* 2018;3:28.
17. Akadri AA, Odelola OI. Progestogen-only injectable contraceptive: Acceptor prevalence and client experience at Sagamu, Nigeria. *Niger Postgrad Med J* 2017;24:178-81.
18. Adeyemi AS, Adekanle DA. Factor influencing the choice of contraceptive among the married women in Osogbo, Western Nigeria. *Niger Med Pract* 2009;55:56-60.
19. Bello OO, Agboola AD. Trends in contraceptive uptake at a tertiary health facility in Ibadan, Nigeria. *Int J Med Health Dev* 2020; 25:21-7.
20. Olakunde BO, Sam-Agudu NA, Patel TY, Hunt AT, Buffington AM, Phebus TD, *et al.* Uptake of permanent contraception among women in Sub-Saharan Africa: A literature review of barriers and facilitators. *Contraception* 2019;99:205-11.
21. Akman M, Tüzün S, Uzuner A, Baştul A, Kavak Z. The influence of prenatal counselling on postpartum contraceptive choice. *J Int Med Res* 2010;38:1243-9.
22. Azmat SD, Shaikh BT, Hameed W, Mustafa G, Hussain W, Asghar J, *et al.* Impact of social distancing on contraceptive use when complemented by vouchers: A quasi-experimental study in rural Pakistan. *PLoS One* 2013;8:e74260.