POSTPARTUM MODERN CONTRACEPTIVE UTILIZATION IN ADDIS ABABA: ANTEPARTUM DECIDEDNESS FOR POSTPARTUM UPTAKE

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ABSTRACT

INTRODUCTION: Family planning (FP) slows population growth and helps achieve national and international development goals. Family Planning counseling is the first intervention in family planning programs and can be done during late pregnancy. Antepartum FP counseling is not practiced adequately during the antenatal care (ANC) service delivery at which time women can decide to use Post-Partum Modern Contraceptive (PPMC). Women's antenatal decidedness rate to use PPMC is not known.

OBJECTIVE: To assess the prevalence of antenatal decidedness to use PPMC among pregnant women in Addis Ababa city.

METHODS: A cross-sectional study was conducted from January 10, 2020 to February 8, 2020 GC on a population of women who had their fourth ANC visits in 98 health centers in Addis Ababa. The calculated sample size was 422 and the sampling procedure was made in 2 stages: Cluster Sampling and Simple Random Sampling. Study subjects were enrolled in a continuous all-inclusive manner starting from the first woman who came on her scheduled 4th ANC visit on day one of the study period until the total number of study subjects was obtained. A semi-structured, anonymous, self-prepared and pre-tested questionnaire was used to collect data; and data collection was as an exit interview. Data was entered and analyzed using SPSS version 25 software.

RESULTS: During the routine ANC follow up only 153 (36.9%) women received FP counseling, while 262 (63.1%) women received the antenatal FP counseling from the study team. Three hundred eighteen (76.6%) have antenatally decided to use PPMC. The rate of antenatal decidedness to use PPMC was higher for those who had FP counseling by the study team compared to those counseled during the routine ANC follow up (77.9% Vs 74.5%). Religion, the round of ANC visit the FP counseling was given, and the number of topics covered during the FP counseling were found to be determining factors for women's antenatal decidedness to use PPMC.

CONCLUSION: The FP counseling service delivery rate during the routine ANC service is low. Women will decide to use PPMC antenatally if they get a FP planning counseling conducted during the ANC follow up. The FP counseling should include 4 major topics (available types, efficacy, advantages and disadvantages, and side effects of each method), and an adequate duration should be allocated for it. Further study to find out why ANC care providers at health centers are not providing FP counseling service to all of their clients is recommended.

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INTRODUCTION

Family Planning is a way of deciding how many children a woman chooses to have and when to have them. It is worth investing on family planning for it has the potential to reduce 32% of maternal deaths and 10% of newborn, infant & child deaths. Family Planning slows population growth contributing towards significantly reducing poverty and hunger; and helps to achieve national and international development goals[1].

Components of intervention in FP program consists of having an enabling policy to increase access to contraceptive methods including expanding method choice; ensuring availability of and access to contraceptive supplies, defining and implementing strategies to eliminate unmet need for family planning, health systems strengthening, and education and counseling for informed contraception decision making[1].

Family Planning counseling is the first intervention in FP programs aimed at supporting a woman and her partner in choosing the method of family planning that best suits them. It can be done during late pregnancy, after delivery and after an abortion. The Ethiopian national guideline of family planning has noted that FP counseling should be part of focused ANC services[2, 3].

Antenatal FP counseling is not practiced adequately which definitely contributes to a low PPMC uptake. In Ethiopia, there are no sufficient studies conducted to see the effect of routine antepartum FP counseling on women's antepartum decidedness to use PPMC[4].

According to the 2016 Ethiopian Demographic and Health Survey (EDHS), the decision making to use a FP method by women is made by the wife, the husband and jointly in 22%, 5% and 73% respectively[5].

In a study done in Durame town of Southern Ethiopia, the prevalence of Long Acting Reversible Contraceptive (LARC) method use among mothers during their extended postpartum period was 36.7% (95%CI: 32.2, 41.0) and the unmet FP need was 27.9%[6]. A study done in Shone town of Hadiya zone of Southern Ethiopia showed an overall LARC method use of 29.2%[7] again showing the low uptake of FP methods.

In a study done in Axum, Tigray showed that FP coun¬seling during pregnancy is one of the independent variables among the most important determinants of PPMC use,[8]. This determinant factor was also identified in another study done in Ethiopia[3, 7] as well as studies done in a county hospital in rural Kenya and in Malawi[9, 10].

A study done in Masindi and Kiryandongo districts in Uganda concluded that, antenatal FP counseling didn't affect postpartum contraceptive use among immediate postpartum mothers[11]. But in a study done in Bahir Dar city, Northwest Ethiopia, 22.7% of pregnant women were counseled about postpartum family planning at least once during their four ANC visits, and 38.5% of them used postpartum modern family planning compared to 13.4% who were not counseled at all during their four ANC visits ($p < 0.001$)[3] . One can see from this study that routine antenatal FP counseling was very low in spite of its positive impact on PPMC uptake. The aim of the study was to assess the prevalence of antenatal decidedness to use PPMC among pregnant women in Addis Ababa city.

METHODS

Study Design

This cross-sectional descriptive study was conducted in Addis Ababa, the capital city of the Federal Democratic Republic of Ethiopia (FDRE). The projected population of the city was 3,273,000 in 2015. The Addis Ababa City Administration Health Bureau (AACAHB) delivers maternal health care services through 6 hospitals and 98 (ninety-eight) health centers for the city's population. The health centers are distributed in 10 subcities. Most of the maternal & child health services including FP services are delivered by the health centers as the hospitals are to care for complicated pregnancies & deliveries. The bureau had 6,058 women who had their 4th ANC visit monthly (calculated from the

reports of each subcity submitted to and compiled by the bureau in the 6 months prior to the study period). The study was conducted from January 10, 2020 to February 8, 2020 GC.

The source population consisted of all women who had ANC follow up in all health centers in the city, and the study population consisted of all pregnant mothers who came for their scheduled 4th ANC visit to these health centers during the study period. Willingness to participate in the study was the inclusion criteria. Those who were not willing to participate were excluded.

Sample size

The sample size was determined using a single population proportion formula with a level of significance of 5%, Z = 1.96 (confidence level at 95%), and the margin of error d=0.05. The sample size calculated was 422.

The sampling procedure was a two-stage sampling: based on the average number of monthly 4th ANC visitors load of each subcity; the study population were clustered in 10 subcities, and the number of participants from each subcity were allocated proportionately to the 10 subcities – a cluster sampling. Then, among the health centers distributed in each subcity, one health center was selected by a lottery method – a simple random sampling (SRS). The study subjects in each health center were enrolled in a continuous all-inclusive manner starting from the first woman who came on her scheduled 4th ANC visit on day one of the study period until the total number of study subjects was obtained.

Operational definition:

Routine FP Counseling: was defined as a FP counseling given during any of the ANC follow up visits by the health professional who was providing the routine ANC service to clients.

FP Counseling by the study: was defined as a FP counseling given by the study team professionals to those study subjects who didn't get the service during the routine ANC follow up visits and are picked during the data collection process of the study.

A semi-structured anonymous, self-prepared and pre-tested questionnaire with both closed and open-ended questions was used. The data collection was conducted as an exit interview. For ethical reasons, those pregnant mothers who didn't get routine FP counseling were counseled by the study team on spot and their decidedness to use a PPMC was inquired and recorded in the questionnaire.

Data was entered, processed and analyzed using SPSS version 25 software. Data are presented as frequency distribution tables, and a Chi-square test was used to test for association between independent and dependent variables. Bivariate and multivariate logistic regressions were done to see associations between explanatory variables and antenatal decidedness to use PPMC. Associations were considered statistically significant when the P value is less than 0.05 with 95% confidence interval (CI).

Ethical consideration

Ethical clearance was obtained from the Research and Publication Committee (RPC) of the Department of Gynecology and Obstetrics, and IRB of College of Health Sciences, Addis Ababa University. Permission was also obtained from the study facilities to collect data. Participation was on voluntary basis and informed consent was acquired from every participant. The study did not involve vulnerable populations. Anonymity and confidentiality of patient personal information were protected through several mechanisms.

RESULT

The response rate was 98.3% and all of them were included in the analysis. The mean age was 26 years with a standard deviation of 4.1 and a median of 25 years. One hundred thirty-two (31.8%) were Muslim and 119 (28.7%) were either secondary school complete or college/university graduates. Among the employed professionals, only 2 (4.1%) had a managerial position (table 1).

Table 1: Sociodemographic characteristics and their association with antenatal decidedness to use PPMC among ANC attendants in Addis Ababa city health centers, Addis Ababa. January 2020 (n=415)

Characteristics	Category	Frequency (Percentage)	Chi Square	P – value
Age			1.543	0.819
	Less than 20	12 (2.9)		
	20-24	133 (32.0)		
	25-29	186 (44.8)		
	30-34	68 (16.4)		
	35 and above	16 (3.9)		
Religion			38.113	0.000
	Orthodox	259 (62.4)		
	Protestant	24 (5.8)		
	Muslim	132 (31.8)		
Marital Status			0.509	0.775
	Married	398 (95.9)		
	Single	16 (3.9)		
	Divorced	1 (0.2)		
	Separated	0 (0.0)		
	Widowed	0 (0.0)		
Education			12.256	0.016
	Can't read & write	70 (16.9)		
	Can only read & write	72 (17.3)		
	Completed primary education	154 (37.1)		
	Completed secondary education	75 (18.1)		
	College/university graduate	44 (10.6)		
Occupation			4.061	0.255
	House wife	296 (71.3)		
	Daily laborer	5 (1.2)		
	Employed as unskilled, semi-skilled or skilled laborer	65 (15.7)		
	Employed professional (specify)	49 (11.8)		
Employed professionals[a]			1.334	0.513
	Sales & Services	41 (83.7)		
	Clerical	6 (12.2)		
	Managerial	2 (4.1)		
Family monthly income			6.674	0.083
	Lowest quartile	69 (16.6)		
	Second quartile	102 (24.6)		
	Third quartile	165 (39.8)		
	Highest quartile	79 (19.0)		

a = Calculated for the total number of employed professional women (49 respondents).

Nearly half (49.4%) of the respondents had a preterm pregnancy at their 4th ANC visit and 194 (46.7%) were nulliparous (table 2).

Three hundred ninety-nine (96.1%) of the respondents had their antenatal FP counseling in one of their ANC visits, majority (75.9%) of which had it at their 4th ANC visit. The average duration of a single FP counseling session was 5 minutes or more for 300 (72.3%) and all the four FP counseling related topics were covered for 267 (64.3%) (table 2).

Table 2: Obstetric & FP counseling related variables & association with antenatal decidedness to use PPMC among ANC attendants in Addis Ababa city health centers, Addis Ababa. January 2020 (n=415)

Characteristics	Category	Frequency (%)	Chi square	P -value
GA in weeks at 4th ANC visit		20.824	0.000	
	Less than 37 weeks	205 (49.4)		
	37w to 38 weeks	113 (27.2)		
	39w to 40 weeks	75 (18.1)		
	41w to 42 weeks	22 (5.3)		
Gravidity			0.808	0.668
	Primigravida	179 (43.1)		
	Gravida II to V	232 (55.9)		
	Gravida VI to X	4 (1.0)		
	Gravida XI and above	0 (0.0)		
Parity			0.84	0.657
	Nulliparous	194 (46.7)		
	Para I to Para IV	219 (52.8)		
	Para V to Para IX	2 (0.5)		
	Para X and above	0 (0.0)		
Number of alive children among parous women			7.853	0.049
	0	4 (1.8)		
	1 and 2	181 (81.9)		
	3 and 4	33 (14.9)		
	5 and above	3 (1.4)		
Number of counseling sessions			1.716	0.424
	In one visit only	399 (96.2)		
	In Two Visits	10 (2.4)		
	In Three Visits	0 (0.0)		
	In all of their four visits	6 (1.4)		
Round of ANC visit the FP counseling was delivered[b]	8.983	0.030		
	At 1st visit	75 (19.0)		
	At 2nd visit	11 (2.8)		
	At 3rd visit	9 (2.3)		
	At 4th visit	304 (75.9)		
Duration of one FP counseling session			3.963	0.138
	Up to 3 min	82 (19.8)		
	> 3 but less than 5 minutes		33 (7.9)	
	5 minutes and above	300 (72.3)		
Number of topics covered at FP counseling session			14.352	0.002
	Only one topic	101 (24.3)		
	Two topics	39 (9.5)		
	Three topics	8 (1.9)		
	All four topics	267 (64.3)		

a = Calculated for parous women only (221 respondents).

b = Calculated for women who had a single antenatal FP counseling session (399 respondents).

Routine FP counseling was given to 153 (36.9%) and the study team had delivered the service for the remaining 262 (63.1%). FP counseling by the study team was carried out on the day of interview for a duration of five or more minutes and four topics were covered for each participant. The topics covered at the counseling session were the available types, efficacy, advantages and disadvantages, and side effects of each method.

Among those who had routine FP counseling, 137 (89.5%) had it during one of their ANC visits and the average duration of the counseling session was 3 minutes or less for the majority (65.4%). Besides, only one topic was covered for 100 (65.4%) of them and the majority (55.5%) had it at their first ANC visit.

Three hundred eighteen (76.6%) have decided to use PPMC of which 114 (74.5%) are among those who had routine FP counseling and 204 (77.9%) are among those who were counseled by the study team.

A Chi square test was done to look for a correlation between the independent variables and antenatal decidedness to use PPMC. An association was seen for religion, educational status, GA at the 4th ANC visit, number of alive children, the round of ANC visit the FP counseling was given, and the number of FP related topics covered during the FP counseling (tables 1 & 2). Bivariate and multivariate logistic regression analysis was carried out to see an association between these explanatory variables and antenatal decidedness to use PPMC, and only religion, the round of ANC visit the FP counseling was given, and the number of FP related topics covered during the FP counseling session maintained the association (table 3).

Table3: Bivariate and multivariate logistic regression test between selected explanatory variables and antenatal decidedness to use PPMC among ANC attendants in Addis Ababa city health centers, Addis Ababa. January 2020 (n = 415).

Explanatory Variables	Category	COR	CI	P - value	AOR	CI	P - value
Religion	Orthodox	4.157	2.559 – 6.750	0.000	3.062	1.792 – 5.230	0.000
	Protestant	8.105	1.830 – 35.896	0.006	6.905	1.510 – 31.573	0.013
	Muslim	1					
Educational level	Can't read & write	0.639	0.239 – 1.704	0.370			
	Can only read & write	1.514	0.508 – 4.511	0.457			
	Completed primary school	0.458	0.190 – 1.104	0.082			
	Completed secondary school	0.486	0.188 – 1.261	0.138			
	College/university graduate	1					
GA at the date of interview	Less than 37 weeks	0.206	0.047 – 0.907	0.037			
	37 – 38 weeks	0.528	0.113 – 2.458	0.416			
	39 – 40 weeks	0.650	0.131 – 3.215	0.597			
	41 – 42 weeks	1					
Number of alive children[a]	None	0.167	0.006 – 4.515	0.287			
	1 and 2	2.014	0.178 – 22.831	0.572			
	3 and 4	1.000	0.081 – 12.270	1.000			
	5 and above	1					
In which round of ANC visit was the FP counseling delivered[b]	At 1st visit	0.437	0.252 – 0.757	0.003	0.136	0.025 – 0.729	0.020
	At 2nd visit	1.107	0.233 – 5.255	0.899	0.312	0.032 – 3.062	0.318
	At 3rd visit	0.492	0.120 – 2.023	0.325	0.172	0.022 – 1.311	0.089
	At 4th visit	1					
Number of topics covered during the FP counseling	Only one topic	1.402	0.772 – 2.544	0.267	5.074	1.016 – 25.343	0.048
	Two topics	0.408	0.202 – 0.822	0.012	4.276	0.706 – 25.884	0.114
	Three topics	0.170	0.040 – 0.733	0.017	1.631	0.130 – 20.420	0.704
	Four topics	1					

a = Calculated for parous women only (221 respondents).

b = Calculated only for women who had a single antenatal FP counseling session (399 respondents).

DISCUSSION

In this study, the FP counseling rate during the routine ANC service delivery was low (36.9%). Though it is low compared to the rates in western countries[12] , this finding is comparable with other studies conducted in Ethiopia as well as other least developed countries[8, 13]. This implies that health care providers are missing this golden opportunity for FP counseling and help women to decide to use PPMC antenatally. The antenatal FP counseling was delivered by the study team for the majority (63.1%) of the participants and among all of the study participants, 76.6% have decided to use PPMC.

Though it was not statistically significant, the rate of antenatal decidedness to use PPMC was higher for those who were counseled by the study team than those counseled during the routine ANC follow up (77.9% Vs 74.5%). This is explained by the longer duration of the counseling session and coverage of all the four FP related topics by the study team. The lack of a statistical significance difference can be explained by the role of bias due to differential misclassification of exposure of study subjects and the nature of the study design (not being a case control study).

Religion, the round of ANC visit the FP counseling was given and the number of topics covered during the FP counseling are associated with antenatal decidedness to use PPMC. Orthodox and protestant Christians were 3 and 7 times more likely to decide to use PPMC than Muslims (AOR = 3.062, 95% CI; 2.559-6.750, P=0.000 and 6.905, 95% CI; 1.742-34.360, P=0.007). The reason for the Muslims' low decidedness rate could be related to their religious belief, and the finding is similar to a study done in Bale, Ethiopia[2]. The odds of antenatal decidedness to use PPMC for respondents to whom the FP counseling was provided at the 1st round of ANC visit was 0.1 times the odds for those respondents who had the FP provided at the 4th visit (AOR = 0.136, 95% CI; 0.025-0.729, P=0.020), whereas there was no evidence to suggest that respondents' antenatal decidedness to use PPMC is associated with the FP counseling provided at the 2nd or 3rd round of the ANC visit. This may be due to the higher positive experience of pregnancy by the study participants in the early periods of gestation that could have influenced them to decide not to use PPMC. The odds of decidedness to use PPMC for respondents to whom one topic was covered during the FP counseling session was 5 times the odds for those respondents who had four topics covered (AOR = 5.074, 95% CI; 1.016-25.343, P=0.048). However, there was no enough evidence to suggest that a relationship exists between antenatal decidedness to use PPMC and a FP counseling provided with a coverage of two and three topics. This finding is in contradiction with the general belief that says the chance of being decided is more likely when more topics are covered during FP counseling[14]. This may be explained by the likelihood that the length of time spent to each participant for the counseling was short resulting in respondents' having difficulty to make a decision when more than one topic is covered in a short duration allocated for the FP counseling. This explanation is supported by the finding of a short duration of counseling for the majority (75.2% participants counseled during the routine ANC had their counselling session for a maximum period of 3 minutes or less).

CONCLUSION

The FP counseling service coverage rate during the routine ANC service delivery is low. The topics covered during a FP counseling session at the routine ANC service did not include all the 4 major issues that must have been discussed. The FP counseling session was conducted mainly during the 1st ANC visit which made the respondents decision to use PPMC lower than those who were counseled by the study team at the 4th ANC visit. Significant number of respondents (23.4%) didn't decide to use PPMC. Further study to find out why ANC care providers at health centers are not providing FP counseling service to all of their clients is recommended. Allocating adequate length of time and including all the 4 major topics in the

discussion during the routine ANC FP counseling. Conducting the FP counseling at the late ANC period is recommended. A study to identify why significant number of women didn't decide to use PPMC antenatally is recommended.

DECLARATION

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Conflicts of interest

There are no conflicts of interest.

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