

# Utilization of post Abortion contraceptives and associated factors among Women seeking Abortion services at St. Paul Hospital Millennium Medical College in Addis Ababa, Ethiopia, 2023.

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## Abstract

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**Background:** Provision of family planning following an abortion service is an important opportunity to address unmet family planning needs of women and enhance their future reproductive health. In developing countries such as Ethiopia, post abortion family planning continues to be underutilized.

**Objectives:** The aim of this study was to assess utilization of post abortion contraceptives and associated factor among women seeking abortion services at St. Paul's Hospital Millennium Medical College in Addis Ababa, Ethiopia

**Methods:** This cross-sectional study was conducted at St. Paul's Hospital Millennium Medical College from April 20, 2023 to May 30, 2023 GC using pre-tested structured questionnaire. Data was collected from all Women of childbearing age having an index pregnancy with GA <28 weeks or 1 kilogram of fetus. Data were entered and analyzed using SPSS version 25.

**Results:** A total of 276 post-abortion women participated in the study with a response rate of 93.5%. Among all women included in this study, 207 (75%); used some form of family planning following the index abortion. In the multivariable logistic regression model, unmarried women were 3.4 times more likely to use family planning compared to widowed/separated ( AOR=3.4; 95% CI=1.51,7.8) and women who had post abortal family planning counseling were 4 times more likely to use PAFP than those who didn't receive counseling [AOR=3.99; 95%CI:1.319, 12.109].

**Conclusion:** This study shows that post abortion family planning utilization is low. Being unmarried and receiving post abortal family planning counselling were predictors of post-abortion family planning service utilization.

**Keywords:** Abortion, contraceptives Family Planning, utilization Ethiopia,

## Background

Globally, it was estimated that around 121 million unintended pregnancies occurred annually between 2015 and 2019, among which 73 million ended up in safe or unsafe abortion each year (1). Nearly all the unsafe abortions take place in developing countries(2,3), indicating that unplanned pregnancies and unsafe abortions are still important public health issues, especially among women from developing countries(4).

Ethiopia is one of the countries that has a fairly liberal abortion law, permitting women to obtain a safe and legal abortion under certain conditions such as rape or incest induced pregnancy, pregnancy with a serious physical or mental disability, pregnancy with a serious physical health or life risk, or pregnancy in unprepared and under aged woman (<18 years) (5). In Ethiopia, although the percentage of all women treated for abortion-related maternal complications was documented to decrease from 47% in 2008 to 39% in 2014, the annual public health cost of treating complications of unsafe abortions stands at US\$8.9 million(6). The World Health Organization (WHO) recommends a six month inter-pregnancy interval following abortion (spontaneous or induced) to ensure better maternal health (3). This recommendation is based on the fact that following pregnancy termination and resumption of sexual activity, women are at risk of becoming pregnant again as early as two weeks after the procedure(7). This is supported by the evidence that an inter-pregnancy interval shorter than six months increases the risk of obstetric complications such as preterm births, low birth weight, premature rupture of membranes and spontaneous abortion(8,9).

Different studies conducted over different settings indicate that age, marital status, educational level, type and level of health facility, sex preference of health care provider, the desire of having more children, parity, gravidity, partner refusal, women accompanied by their partner, previous live birth, fear of side effects, and lack of adequate information determined post-abortion family planning utilization(4,10–13). However, the few studies conducted in Ethiopia on this topic are predominantly in the rural areas of the country and are mainly before the implementation of the new health sector transformation plan (HSTP) that aimed to enhance the uptakes of such maternal health care services (14). Moreover, despite the efforts to improve maternal health in the country, post abortion family planning use is estimated to be still suboptimal as it

had been highlighted by several scholars(12,15,16).

Although post abortion family planning is one of the recommended preventive interventions to reduce post abortion morbidity and mortality, a number of studies point towards in developing countries such as Ethiopia. Abortion is a distressing experience that affects the mother in a variety of ways, ranging from psychological disorders such as depression (17) to maternal death, and particularly when it is unsafe, abortion contributes for 13% of maternal death, worldwide (7).

The WHO recommends a post abortion woman should avoid pregnancy for a minimum period of six months in order to reduce risks of adverse maternal and prenatal outcomes(9). In fact, the time of abortion is thought as a key opportunity to fulfill women's needs of effective contraception to prevent repeat unintended pregnancies (UPs) (18,19). Although greater use of contraception will not produce direct, immediate effects on maternal mortality or morbidity, it should gradually reduce women's recourse to unsafe abortion by preventing unplanned pregnancies, thereby putting women at less risk of lifelong injury or death (20). Hence, the aim of this study was to assess the utilization of post abortion family planning and associated factors among women seeking safe abortion service at St. Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia.

## Methods and materials

The study was conducted at St. Paul's Hospital Millennium Medical College MICHU clinic and CAC (Comprehensive Abortion Care) ward. St. Paul's is one of the largest referral centers in Ethiopia located in the capital city, Addis Ababa, in Gullele sub-city which was built by German Evangelic church during the Emperor Haile sellasei regime in 1939 E.C. The hospital serves about 500,000 patients annually on average and covers a catchment population of more than 5 million people from different parts of the country. On top of this, the referral hospital is delivers clinical service in a variety of activities including comprehensive maternity care.

The clinical service which receiving patients from 16 catchment health centers and numerous non catchment health centers and hospitals in Ethiopia. It provides around 10,000 deliveries per year which serving large portion of the population in the city. The outpatient maternity

service is delivered by OBGYN specialists, OBGYN residents, trained midwives, and nurses at five dedicated offices. The hospital has two clinics providing comprehensive abortion care to eligible women as per the national guideline. The clinics are run under OBGYN department, and they are staffed by eight trained midwives, clinical nurses and rotating physicians.

According to the hospital record reviews, currently, about 220 to 260 women attend abortion services at the outpatient unit of OBGYN department monthly. Apart from this, this tertiary hospital is the only governmental institution where a well-functioning fertility clinic is available. The study populations (respondents) were females who came for seeking safe abortion service. The study period was from April 20, 2023 to May 30, 2023 GC.

**Study design:** A facility-based, cross-sectional study was employed to assess PAFP utilization and associated factors among women seeking safe abortion service at SPHMMC, Addis Ababa, Ethiopia.

**Source population:** The source population for this study consisted of all women attending the SPHMMC clinic seeking safe abortion services.

**Study Population** women who sought safe abortion care at SPHMMC during the study period and met the inclusion criteria.

**Eligibility criteria:** Women eligible for inclusion in this study were those seeking abortion care for pregnancies with a gestational age (GA) of less than 28 weeks and/or fetal weight less than 1 kilogram, regardless of the type of abortion procedure they are undergoing. - women who voluntarily agree to take part in the study and are present at the facility during the designated data collection period.

**Exclusion criteria:** women facing immediate medical emergencies requiring urgent intervention, those diagnosed with severe psychiatric disorders, individuals who decline to participate in the study. and women diagnosed with Gestational Trophoblastic Disease (GTD).

## Data collection and tools

Data was collected through face-to-face interview using structured, pre-tested questionnaire. An Amharic version, questionnaire was used to collect data. The tool contained both closed and open ended questions specifically designed for the study and is adopted from previous similar studies(38). The questionnaire contained background characteristics, previous reproductive health history, future fertility desire and post

abortion family planning service-related questions. For data collector, half day training was given by the investigator to make her familiar with the data collection tool. The training was onsite.

This study assessed post abortion family planning utilization in relation with Socio-demographic characteristics such as age, marital status, educational level, occupation and monthly income, Previous obstetric variables: (parity, fertility plan, FP use history, previous abortion history), Present history variables: (post abortion FP counseling, reason for current abortion, PAFP information, gestational age).

## Results

### Socio-demographic characteristics of participants

In this study, a total of 276 women who came for abortion care service agreed to participate in the study, giving a response rate of 93.5%. Women's age ranged from 17 to 41yrs with a median age (interquartile range) of 26 (23–30) years and about two-thirds of all respondents (182; 65.9%) belonged to the age group from 20 to 29 years. Most, 241(87.2%), of the study participants were urban dwellers while the remaining ones (35; 12.8%) were rural residents. Majority (162; 58.7%) were Orthodox Christians by religion (Table 1).

majority were currently married (162; 59%) while (62; 22. %) claimed not to have ever married by the time of interview. In addition, 128(46.3%) of the respondents had attended secondary education whereas about a quarter 71 (25.8%) pursued their education up to a primary level. Similarly, among those with partners or husbands, 64 (23.4%) claimed to have attained a college diploma or more, with more than a third 58 ( 21.3%) attending up to a secondary educational level (Table 1).

One-fourth (69; 25%) of all women were self-employed while 62 (22.4%) were housewives (unemployed). while 78 (39.4%) did not mention their average household monthly income, more than one-third 78(39.4%) have a family income not more than 1000 ETB a month. (see Table 1).

**Table1:** Distribution of socio-demographic characteristics of women seeking safe abortion service from Jan 20, 2023 to May 20, 2023GC.at St. Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia

Variable	Frequency	Percentage
<b>Age group</b>		
≤19	16	5.9
20–24	86	31.1
25–29	96	34.8
30–34	60	21.8
≥35	18	6.4
<b>Residence</b>		
Urban	241	87.2
Rural	35	12.8
<b>Religion</b>		
Orthodox	162	58.7
Muslim	62	22.5
Protestant	52	18.8
<b>Current marital status</b>		
Unmarried	95	34.3
Married	166	60.1
Other (Divorced/separated, widowed)	15	5.6
<b>Educational status</b>		
No formal education	13	4.9
Primary education	71	25.8
Secondary education	128	46.3
College diploma +	64	23.1
<b>Partner's educational status(n=166)</b>		
Primary education	43	25.7
Secondary education	59	35.4
College diploma +	64	38.9
<b>Employment status</b>		
Self-employed	69	25.0
Housewife	62	22.4
Government employed	58	21.3
Student	45	16.2
Housemaid	29	10.4
Unemployed	13	4.8
<b>monthly income(n=198)</b>		
<500	43	21.7
501-1000	78	39.4
>1000	77	38.9

## Reproductive characteristics of response

the median age of menarche was 14 years, with most 239 (86.4 %) stating to have their respective menarche between the age of 12 and 15 years. Furthermore, regarding gravidity, nearly half 134 (48.7%) of all women reported to have been pregnant two to four times by the time of data collection, with around half were nulliparous 141(51.3%) (Table 2).

Moreover, 222 (80.3%) of participants declared not to have experienced any form of abortion prior to the index abortion, 54 (19.7%) women had

at least a single history of abortion. in 38 (13.8%) of the women, the index abortion was the second one whereas in 16(5.9%), it was cited to be the third one. Besides, well more than half of the women with positive history of abortion (30; 56.8%) claimed to have experienced their last abortion more than 2 years (Table 2)

## Reasons for PAFP acceptance and hesitancy

The most frequently mentioned reason for accepting the available modern contraceptives following abortion was the intention to prevent unintended pregnancy (n = 144, 69.9 %). Recommendation from a health professional, persuasive counseling by the service providers, and perceived health benefits were the next commonly mentioned reasons by respondents, as they were cited in 69 (33.6%), 39 (19.1%) and 39 (19.1%) of the users, respectively (Table 3)

On the other hand, discomfort in using modern contraceptives and perceived safety from recurrence of the problem were the most frequently mentioned reasons for refusal, constituting 33 (48.4%) and 23 (33.3%) of the hesitant population (Table 3).

Around half of the women had unintended pregnancy 146 (52.9%). Hundred fifty-six (56.4%) claimed to have used some sort of modern contraceptive previously. Only 32 (11.9%) stating to have previous of use PAFP. Most 241 (87.3%) of the abortions were induced ones. Most 236 (83.5%) of the women stated to have wish of future of pregnancy, with half 114 (48.1%) of them wishing to be get pregnant two years after the dates of data collection, as(see Table 2).

**Table 2.** Reproductive characteristics of women seeking safe abortion service from Jan 20, 2023 to May 20, 2023GCat St. Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia.

Variable	Frequency	Percent (%)
<b>Age at menarche</b>		
12–15 years	239	86.4
>15 years	37	13.6
<b>Gravidity</b>		
1	127	46.0
2-4	134	48.6
≥5	15	5.4
<b>Parity</b>		
Nullipara	193	51.3
Primipara	104	27.7
Multipara	79	21
<b>Number of live children</b>		
None	142	51.3
1 child	78	28.2
≥2 children	56	20.5
<b>Prior abortion history</b>		
Yes	54	19.7
No	222	80.3
<b>Order of index abortion</b>		
First	222	80.3
Second	38	13.8
Third	16	5.9
<b>Timing of last abortion (n=74)</b>		
<1 year	7	12.2
1–2 years	15	27
>2 years	30	56.8
I don't remember	2	4.1
<b>Index pregnancy was planned</b>		
Yes	130	47.1
No	146	52.9
<b>Use of contraceptives ever</b>		
Yes	156	56.4
No	120	43.6
<b>Use of PAFP ever</b>		
Yes	32	11.9
No	244	88.1
<b>Type of abortion</b>		
Induced	241	87.3
Spontaneous	35	12.7
<b>Want to become pregnant in the future</b>		
Yes	236	85.5
No	40	14.5
<b>Desired time for next pregnancy (n=236)</b>		
<1 year	93	39.6
1 to 2 years	29	12.3
>2 years	114	48.1

## Post abortion family planning utilization

Among all women included in this study, 207 (75%; 95%CI: 71, 80) used some form of PAFP following the index abortion while the remaining quarter (69; 25%) did not. (Table 2). The most commonly used forms of contraceptive were injectable Depo-Provera and implant, which were observed in 90(43.5%) and 77 (37.1%) of the women respectively. Most (201; 97.1%) of the women used the available PAFP immediately following the abortion procedure, with almost all (202; 97.5%) being satisfied with the PAFP service.

**Table 3.** Perceived reasons to hesitate post abortion family planning use among women seeking safe abortion service from Jan 20, 2023 to May 20, 2023GC at St. Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia

Variable	Frequency	Percent (%)
<b>Type of contraceptive used (n=207)</b>		
Injectable	90	43.5
Implant	77	37.1
Oral pills	33	15.9
Condoms	7	3.5
<b>Satisfaction with PAFP service (n=207)</b>		
Yes	202	97.5
No	5	2.5
<b>Timing of PAFP use (n=207)</b>		
Immediately	201	97.1
When it came to my mind	6	2.9
<b>Reasons for PAFP acceptance (n=207)</b>		
Prevention of unintended pregnancy	104	50.2
Recommended by a health professional	53	25.6
Post counselling	29	14.1
Perceived health benefits	6	2.9
I have enough children	15	7.2
<b>Reasons for hesitancy (n=69)</b>		
I don't feel comfortable to use it	33	48.4
I won't face the problem anymore	23	33.3
Lack of interest from my partner	13	18.3

## Factors associated with post abortion family planning utilization

In this study, sixteen potential factors, namely age group, residence, self-educational status, partner's educational level, religious affiliation, current marital status, age at menarche, parity, number of live children, prior history of abortion, wanted current pregnancy, type of abortion, future reproductive wish, awareness about PAFP, history of use of any modern contraceptives ever and history of PAFP use were considered in the regression analysis. In order to determine the factors associated with PAFP utilization, independent variables that yielded p value of  $\leq 0.2$  in binary logistic regression were taken to multiple regression model to yield adjusted odds of predicting PAFP utilization.

Accordingly, marital status, post abortion counseling, job, information about PAFP and prior knowledge about PAFP, were observed in the univariable analysis to be associated with utilization of PAFP among the respondents. To control for possible confounders, further multivariate analysis was performed, and factors that showed statistically significant association with PAFP utilization were marital status, counseling and knowledge about PAFP utilization, as shown (table 4).

**Table 4.** Factors affecting post abortion family planning utilization among women visiting Abortion clinic at St. Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia

Viable	Response	Family planning utilization		P-value	COR	P-value	AOR
		Yes	No				
Marital status	Married	74	88	<b>0.034*</b>	0.48(0.25,0.95)	<b>0.050**</b>	2(0.99,4.042)
	Unmarried	36	26	<b>0.002*</b>	0.3(0.132,0.64)	<b>0.003*</b>	3.4(1.51,7.8)
	Other(widowed/separated)	15	37	1.000		1	1
Counseling	No	18	5	<b>0.02*</b>	0.204(0.73,0.566)	<b>0.014*</b>	3.99(1.319,12.109)
	Yes	107	146	1		1	1
Job	self-employee	34	35	0.420	1.7(0.49,5.54)	0.352	0.55(0.153,1.95)
	House wife	24	38	<b>0.138</b>	2.5(0.74,8.7)	0.142	0.38(0.107,1.4)
	Government employed	30	28	0.523	1.49(0.44,5.11)	0.716	0.8(0.22,2.8)
	student	15	30	<b>0.074</b>	3.2(0.9,11.5)	0.5	0.22(0.06,0.9)
	House Maid	14	15	0.428	1.7(0.5'6.5)	0.301	0.5(0.12,1.94)
	Unemployed	8	5	1		1	1
Information about abortion	yes	101	119	<b>0.029*</b>	0.56(0.33,0.942)	0.485	1.3(0.7,2.4)
	No	24	32	1			
Knowledge about availability of PA FP	Yes	48	43	<b>0.082</b>	0.64(0.386,1.06)	<b>0.050**</b>	1.7(0.97,3)
	No	77	108	1		1	1

\*significant association \*\*marginal association

In particular, the odds of family planning utilization were 3.4 times as much among those who were unmarried (AOR=3.4; 95% CI=1.51,7.8) as compared with widowed/separated. Study participants who were counseled after abortion service more likely to utilize contraceptive compared to those who were not counseled after abortion service [AOR=3.99; 95%CI:1.319, 12.109].

## Discussion

The current study examined women seeking safe abortion services at SPHMMC, Addis Abeba, Ethiopia, with the goal of evaluating post-abortion family planning utilization and related characteristics. The present study showed that majority of the women utilized the available modern contraceptives, with the main reason for uptake being the intention of preventing unintended pregnancy. Moreover, it was revealed that PAFP uptake was affected by partner's educational category and prior history of using family planning.

Specifically, most of the women seeking abortion care utilized some type of family planning following abortion, with overall post-abortion FP utilization reaching 75.3%. This finding is similar to studies conducted in Eastern Ethiopia and Bahir Dar town, where about three-fourths (77.8% and 78.5%) of women observed to utilize post abortion family

planning methods(32,33). However, it was in sharp contrast to reports from North and North West Ethiopia, where the corresponding magnitudes were 59.2% at Debre Markos town (29), 61% to 64.8% at Bahir Dar town (11,34) and 61.5% at Shire town(16).In contrast, the contraceptive utilization rate obtained in the current study was lower than the finding recorded among Brazilian women (80.9%)(36). the current PAFP utilization profile is of concern given the WHO recommendation that every woman should abstain from pregnancy for at least the first six months following abortion in order to reduce risks of adverse maternal and prenatal outcomes(9).

The probable explanation for such discrepancies in post-abortion FP utilization rates could be the differences in study design employed, the time at which the study was conducted, quality of post abortion care, variety of contraceptives available, and background characteristics (including literacy levels) of the study population. For instance, the current study included only public health facility while the other Ethiopians report(29) included both public and nongovernmental health institutions. Additionally, the higher utilization rate observed in developed nations can be attributed to the better quality of service and health service coverage in these settings.

study conducted in Debre Markos showed that, married women were

44% less likely to utilize PAFP. Similarly, in this study also showed around 59% of married women less likely utilize PAFP than Unmarried women (40). The reason may be married women's decision on utilization of PAFP is influenced by their partners. (29).

The use of post-abortion contraceptives was found to be significantly correlated with family planning counseling in this study. This result was consistent with research by Debre Markos that found that women who got family planning advice were four times more likely to use contraceptives than those who were not counseled (29). This demonstrated that because women are more receptive to the message, the post-abortion period is the ideal time to offer contraceptive guidance.

In recent study clients with adequate post-abortion family planning knowledge were 1.72.48 times more likely to use it than those with no information. Knowledge of PAFP was substantially connected with post abortion family planning, according to a study done in Shire, Addis Abeba, Egypt, Brazil, and Nepal (15,40,43,44,45). One reason might be that customers who have enough information increase their awareness of and intend to undertake post-abortion family planning.

Of particular interest, the current study highlighted that history of not using modern contraceptive seems related with uptake of PAFP. In fact, this is in contrast to the existing literatures which independently demonstrated that a positive history of using contraceptive increases the odds of utilizing PAFP among women in the reproductive age group (15,33). This could be explained by the complex relationship between abortion and contraceptive use as well as the probability that women with positive history of using family planning could have unfavorable experiences with the contraceptives used including intolerance, history of defaulting and serious adverse reactions. Additionally, those women who have history of using family planning previously might have even experienced stigmatization (37) and objection from their partners' side. This is particularly plausible as the current study also showed the contribution of male partners to contraceptive use as indicated from previous Nigerian report (41). Finally, the psychological consequences following abortion such as grief, depression, and anxiety might have affected decision making with regard to contraceptive use, and should be taken into account when interpreting the study results (42).

## Conclusion

The findings of this study demonstrated that three in four women utilize post abortion family planning, with the most common reason being an intention to prevent unintended pregnancy. Moreover, it was revealed that factors that contributed to utilization of post abortion family planning among women seeking abortion care included being single, counseling and knowledge about the availability of PAFP.

## Abbreviations

GA : Gestational Age

PAFP: Post Abortion Family Planning

PAC : Post Abortion Care

SAC : Safe Abortion Care

## Declarations

### Consent for publication

Participants consented for unanimous sharing of compiled data as approved by the IRB of the college at SPHMMC.

### Ethical declaration

The study received ethical approval from the SANTE Medical College Ethical Review Board (ERB), and a support letter was sent to St. Paul's Hospital Millennium Medical College. Prior to their involvement in the study, each participant was provided with a detailed description of the study's goals and procedures. Consent for participation in the study was obtained through a written consent process. Participants were provided with a detailed written explanation of the study's purpose and procedures, ensuring a clear understanding of their involvement. Subsequently, participants were asked to provide written confirmation of their voluntary willingness to participate in the study.

Throughout the study, great care was taken to respect the participants' right to identity and confidentiality. All collected data were treated with strict confidentiality, and steps were taken to ensure that participants' personal information remained anonymous and protected.

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### Authors' contributions

EW conceptualized the research problem, designed the study, conducted fieldwork, collected and data analyzed, and drafted the

manuscript. AYW was involved in conceptualization, preparing the research proposal, and revising the final manuscript. All authors of the manuscript have read and agreed to its content.

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## Competing interest

All authors read and approved the final manuscript. The authors declare that they have no competing interests.

## Availability of Data and Materials

The datasets used in the current study or data collection tool are available from the corresponding author with a reasonable request.

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