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**Assessment of Post Abortion Contraceptive Intention and Associated Factors among Abortion Clients In Gambella Health Facilities, Gambella Town, South West Ethiopia**

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**ABSTRACT:**

**Background;** Promoting the use of contraceptive methods to prevent unwanted pregnancies is one of the most effective strategies to reduce abortion rates and maternal morbidity and mortality. Therefore, providing post-abortion family planning services that include structured contraceptive counseling with free and easy access to contraceptive methods is mandatory to break the vicious cycle between abortion and unintended pregnancy.

**Objective;** to assess prevalence of post abortion contraceptive utilization and its associated factors among women came for abortion service in health institutions at Gambella town, south West Ethiopia 2015.

**Methods:** Institutional based cross-sectional study was undertaken in one referral hospital, one health center and 4 private health institutions found in Gambella town from January 1<sup>st</sup> – March 30, 2015. Three hundred ninety-nine (399) study participants were included and systematic random sampling technique was used to select the study population. The data was collected by using Interview based pre-tested questionnaire. The collected data were entered in SPSS version 21 for cleaning, processing and analysis. Frequency distribution Bivariate and multivariate logistic regression were done to identify the associated factors.

**Result;** the post abortion utilization rate was 74.4%. Women with the age groups 20 -25 had 1.6 [(OR= 1.6, 95%CI (0.99, 2.39) times higher odds of Post abortion family planning utilization than the 20-24 age groups Respondents that have educational status of tertiary and above and those who counseled were 2.1 [(OR= 2.1, 95%CI (1.30, 3.36) and 3.3 [(OR= 3.3, 95%CI (1.9, 5.6) higher odds of post abortion family planning utilization than the illiterates and those didn't counseled respectively.

**Conclusion and Recommendation;** post abortion family planning utilization is relatively good but not satisfactory. Age, marital status, Educational status, PAFP counseling and previous history of abortion were the significant factors to PAFP utilization. The ministry of education should have to give due emphasis to increase the educational status of women and since most of the women with history of previous abortion didn't utilize PAFP, health professionals should have to give sufficient education on the purpose of contraception.

## INTRODUCTION

Postabortion clients are women and girls with a clear need for family planning. Even if a woman wants to have a child immediately, WHO guidelines recommend she have to wait at least six months after an abortion before getting pregnant again. Post-abortion care (PAC) includes three components: emergency treatment for complications of spontaneous or induced abortion, family planning counseling and service provision and, where financial and human resources are available, evaluation and treatment for sexually transmitted infections (STIs) as well as HIV counseling and/or referral for testing of post-abortion women; and community empowerment through community awareness and mobilization [1]. World Health Organization (WHO) has identified prompt treatment for complications of spontaneous or unsafely induced abortion as an essential element of obstetric care that should be available at every district-level health facility [2].

In 2008, 21% of pregnancies, or 44 million, were voluntarily terminated worldwide. Nearly half of those were considered unsafe [3] despite global efforts, in 2008, 47,000 women died from complications of unsafe abortion, and the percent of maternal deaths attributed to unsafe abortion remains unchanged at 13% worldwide [4]. Similarly in Africa in 2008, nearly all abortions were unsafe [3] and 41% of unsafe abortions in developing regions were among young women ages 15 to 24 years [5].

The World Health Organization (WHO) estimates that every year, nearly 5.5 million African women have an unsafe abortion. In Eastern Africa it is estimated that 18% of all maternal deaths are the result of complications of poorly performed abortions [6].

In Ethiopia, The induced abortion rate was estimated to be 23 per 1,000 women in

reproductive age group in 2008, and 101 per 1,000 was rate of unintended pregnancy [6]. The high proportion of unintended pregnancies contributes to one of the highest maternal mortality ratios in 676 maternal deaths per 100,000 live births. Family planning reduces maternal mortality by enabling women to prevent conception [7].

Providing post abortion service is a widely accepted public health strategy to break the vicious cycle of abortion – no contraception-unintended pregnancy and then repeated abortion and to reduce maternal mortality and morbidity from unsafe abortion and provide links between immediate abortion care service and comprehensive family planning/reproductive health services. Abortion care is one of the few contacts that women visit health facilities and thus becomes an opportunity for receiving family planning and other reproductive health services [8]. Therefore, providing post-abortion family planning services that include structured contraceptive counseling with free and easy access to all kinds of contraceptive methods can be suitable [9,10].

contraception following an induced abortion is highly recommended for preventing another unintended pregnancy and repeat abortion, because even repeated safe abortion is still associated with negative subsequent health consequences like increased risk of subsequent placenta previa, ectopic pregnancy, preterm birth, and possibly subfertility and breast cancer, thus increasing modern and long-acting contraceptive utilization is optimal [11].

Although post abortion contraception is mandatory little is known about globally or regionally on the number of women who adopt contraception following an induced abortion. Specifically up to the search of the investigators in the study area there is no study conducted. It's hoped that this study will give insight about PAFP in the area. Therefore, this study aimed to assess

prevalence and factors associated with post abortion family planning utilization among women came for abortion service in Gambella town health facilities.

## Method

### Study area, design and Period

A facility based cross-sectional design was conducted in Gambella town's Private and Public Health facilities which provide safe abortion or emergency treatment of incomplete abortion from January 1<sup>st</sup> – March 30, 2015. Gambella town is found in Gambella Regional State at a distance of 753 km from Addis Ababa with a total population of 44953 according to 2013 population projection of which reproductive age women accounts 38% of the total population. One referral hospital, one health centers and four private health facilities are found in the town. These health institutions gave comprehensive abortion health service for Gambella town and surrounding population including reproductive health services, abortion and family planning activity, for reproductive age group.

### Population

#### Source population

All women came for abortion care service in Gambella town health institutions during data collection period.

#### Study population

Women systematically selected from the source population and meet the inclusion and exclusion criteria.

#### Sample size determination

The sample size was determined using single population proportion formula. Utilization proportion was taken from similar study

conducted in Debre Marcos town which was 59.2%.

$N$  = Sample size

$Z_{\alpha/2}$  = Confidence interval = 95%

$d$  = Margin of error = 5%;

$P$  = prevalence of post abortion contraceptive = 59.2%

$$n = Z_{\alpha/2}^2 \times P(1-p)/d^2 \\ = 371$$

Non-response rate of (10%) = 37

The total sample size of the study is 408 of women seeking abortion care.

### Sampling procedure

All public and private health institutions who give abortion service within the town were included. The sampling allocation was based on the six months average number of client flow for abortion services in each of the health institution. Based on the average load, samples were proportionally allocated for specific facilities. The data collection period took three months in the health institutions. The allocated sample for each institution was collected from August to October and the allocated sample divided for each institution for three months. Systematic random sampling method was used to select the study participant

### Data Collection procedure

After extensive review of relevant literatures interviewer administered semi-structured questionnaire was developed in English and translated to local language and back to English to see consistency. The questionnaire contains socio-demographic characteristics, previous reproductive health history, future fertility desire and post abortion family planning service related questions. Eight female diploma nurses were recruited for data collection and the

clients were interviewed after discharge was decided and just before the client left the respective health institution as exit interview.

#### Data quality assurance

Prior to actual data collection training was given for data collectors and supervisors on the instrument used and pretest was done in Mettu hospital on 5% of the sample size (21 individuals). Every day the collected data were reviewed and checked for completeness and consistency by supervisors and principal investigator. Problems encountered were reported to supervisors and principal investigator for immediate action.

#### Data processing and analysis

The collected data were entered in SPSS version 21 for cleaning, processing and analysis. Logistic regression was done to identify the associated factors, those variables having P-value  $\leq 0.25$  during the bivariate analysis were selected as a candidate for multi variable logistic regression and finally p-values  $<0.05$  during the multivariate analysis was taken as statistical significance. The degree of association was expressed using Adjusted odds ratio (OR) with 95% C-I.

#### Ethical clearance

Ethical clearance was obtained from the research ethics committee of the College of health and medical science at Mettu University. Letter of permission was obtained from the Gambella city administration and Zonal department health office. Before data collection all the study participants were informed about the purpose of the study and finally their written consent was obtained prior to interview.

## RESULT

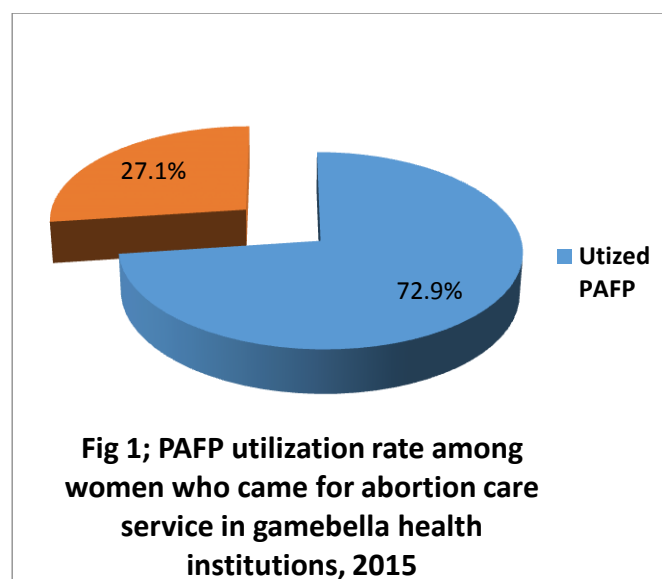
### Socio-demographic characteristic

A total of 399 women came from abortion care service were interviewed for the study, making response rate 97.8%. Majority of the respondents

165 (41.4%) of women's were in the age group 20-24. From those women's participated 171 (42.9%) were single followed by married which accounts 150 (37.6%). From the respondents 170 (42.6%) were Anguak and 41.6% were Nuerin ethnicity. Only 10.5% of the participants were illiterates and around 52.1% of women attained secondary school. Regarding the occupation 44.1% were students. (Table 1)

### Previous and current obstetric and contraceptive History

From the total women involved in the study 291 (72.9%) utilized post abortion contraceptive. The study revealed that from the total respondents, 298 (74.7%) of respondents were reported that they never give birth and 59 (14.8%) had a history of previous abortion. Majority of the respondents 95% had information for different family planning services. Eighty nine percent of the Respondents had unwanted, unplanned and unsupported pregnancy and came for induced abortion among this 295 (73.9%) terminated the pregnancy by medication abortion and the rest were terminated by manual vacuum aspiration. Among the Respondents 175 (44%) got post abortion contraceptive counseling in both public and private health institutions (Fig1, Table 2)



**Table 1: Socio-demographic characteristic of women who came for abortion care service in Gambella health institutions, 2015**

Variable	category	frequency	Percentage (%)
Age	15-19	68	17
	20-24	165	41.4
	25-29	103	25.8
	30-34	47	11.8
	>35	16	4
Ethnicity	Angnuak	170	42.6
	Nuer	166	41.6
	Amhara	27	6.8
	Others	36	9
Marital status	Un married	171	42.9
	Married	150	37.6
	Divorced/window	78	19.5
Educational level	Illiterate	42	10.5
	Read and write	44	11
	Elementary	72	18
	Secondary	208	52.1
	Tertiary and above	33	8.3
Occupation	House wife	121	30.3
	Government employee	69	17.3
	Student	176	44.1
	others	33	8.3

**Table 2:obstetric history of women who came for abortion care service Gambella health institutions, 2015**

Variable	Category	Frequency	Percentage
Give birth ever	yes	298	74.7
	No	101	25.3
History pervious abortion	yes	59	14.8
	No	340	85.2
Type of procedure	MA	295	73.9
	MVA	104	26.1
PAFP Counseling	yes	175	43.9
	No	224	56.1

### Factors associated with post abortion contraceptive utilization

On Bivariate analysis age, marital status, educational status, occupation, type clinic choose, history of previous abortion, post abortion family planning counseling variables had associated with utilization of post abortion contraceptive. Age, Marital status, educational status, post abortion family planning counseling and previous history of abortion were the variables that showed significant association on multivariate logistic regression. Women with the age of > 35 had 45 % less likely to utilize PAFP, age groups 20 -25 and 30 -34 had 1.6 [(OR= 1.6, 95%CI (0.99, 2.39) and 1.04 [(OR= 1.04, 95%CI (1.01, 4.15) times higher odds of PAFP utilization than the 20-24 age groups respectively married women had 55 % [(OR= 0.45, 95% CI (0.3, 0.98) less likely to utilize PAFP and similarly those clients who had previous history of abortion had 0.93 times less likely to utilize PAFP . Respondents that have educational status of tertiary and above and those who counseled were 2.1 [(OR= 2.1, 95%CI (1.30, 3.36) and 3.3 [(OR= 3.3, 95%CI (1.9, 5.6) higher odds of PAFP utilization than the illiterates and those didn't counseled respectively.

**Table 3; multi variable Analyses of factor associated with PAFP among women who came for abortion service in Gambella health institution**

Variable	category	Post Abortion Modern Contraceptive Method Provided			
		Yes	No	COR (95% C I)	AOR (95% C I)
Age	15-19	49	19	1.06 (1.01, 1.14)	1.43 ( 1.01, 3.47)
	20-24	121	44	1	1
	25-29	75	28	1.03 (1.02, 1.06)	1.61 (0.99, 2.39)
	30-34	34	13	1.05 (1.01, 1.09)	1.04 (1.01, 4.15)

	>35	12	4	0.92 (0.41, 1.96)	0.55 (0.28, 1.07)
<b>Marital status</b>	Un married	148	23	1.	1
	Married	96	54	0.28 (0.06, 0.53)	0.45 (0.3, 0.98)
	Divorced/window	47	31	0.24 (0.03, 0.84)	0.23(0.14, 0.87)
<b>Educational level</b>	illiterate	34	8	1	1
	Read and write	32	12	1.6 (1.08, 3.35)	1.57, (1.36, 6.83)
	Elementary	52	20	1.63 (1.25, 6.79)	1.7(1.03,2.75)
	Secondary	153	55	1.52 (1.03, 2.01)	2.21, (1.81, 5.55)
	Tertiary and above	20	13	2.78 ( 1.12, 4.67)	2.1(1.30, 3.36)
<b>Occupation</b>	House wife	92	29	1.52 (1.01, 4.4)	0.3 (0.08, 1.08)
	Student	119	57	1	1
	government employee	56	13	2.1 (1.59, 2.39)	1.13 (0.29,4.37)
	Others	24	9	1.3 (0.58, 1.07)	1.21 (0.45, 5.14)
<b>Kind of clinic</b>	government	57	71	0.38 (0.21, 0.92)	0.66 (0.296,1.51)
	Private	184	87	1	1
<b>PAFP counseling</b>	Yes	81	94	1	
	No	179	45	4.6 (2.78,8.33)	3.3 (1.9, 5.6)
<b>Previous abortion history</b>	yes	32	92	0.18 (0.04,0.62)	0.93 (0.56, 3.16)
	no	182	93	1	

## DISCUSSION

In this study post abortion contraceptive utilization was 72.9% which is higher than the study done in Debre Marcos (59.2%) and Dessie (47.5) but lower than the study in Addis Abeba (86%) and other developing countries. The disparity may be in Debre Marcos and Dessie lower number of respondents had history of previous abortion as compared to this study

124(31.1%)but in the Addis Abeba study majority of the respondents were from NGO clinics. based on different literatures NGO clinics have higher retention of post abortion contraceptive than government or private clinics. Even though the percentage of women who use PAFP is greater than the women who didn't use, we cannot say it is satisfactory because most of the women who came to get abortion care service had

unintended/unplanned pregnancy, they all need to use contraception to avoid similar incidents [12, 13, 14, 15].

In this study age of client shows significant association with post abortion family planning utilization in which clients with the age of 15 to 19, 25 – 29, and 30 -34 had 1.4, 1.6 and 1.04 times higher odds of PAFP utilization than the 20 - 24 age clients respectively and age group above 35 had 0.55 times Lower PAFP retention than 20- 24 age groups. This result is in line with the study done in three big regions of the country namely Amhara, Oromiya and SNNPR which shows age group 20 – 24 and 25-29 had 1.63 and 1.07 higher odds of PAFP utilization and > 40 had 0.48 times lower odds of PAFP utilization. In contrary the study done in Dessie didn't show significant association with age [15, 13].

Similarly as the study done in Tigray and Addis Ababa Marital status of client is significantly associated with PAFP utilization, married women were 55 % likely to utilize PAFP than the single women. The possible reason could be Married women involve their partner and there may be partner disapproval. Two-sided decision is not as easy like single and also married women less likely to fear unwanted pregnancy than unmarried. Unmarried have strong desire to use contraceptive due to fear of cultural out cast out cast and social discrimination [16, 17, 18].

Women who read and write had 1.57 times higher odds of taking PAFP and those with elementary, secondary and tertiary & above had 1.7, 2.21 and 2.7 times higher odds of utilizing PAFP respectively as compared to those who are illiterate. This study is supported by a study done in Pakistan, Tanzanian and Addis Ababa. This might be educate individuals can access information and the will have more knowledge about reproductive health right. As a result they will pass informed decisions. Furthermore, educated women's are more concerned about their

carrier development and they would put their child desire aside

[18, 19, 20]

In this study women counseled about post abortion family planning had 3.3 times higher odds utilizing it. This result is in line with the study in DebreMarkos and Kenya, those counseled were 4.2 and 5 Times higher odd utilizing respectively. This result will tells us that counseling had significant effect on PAFP use [12, 15].

In contrary to different researches done in Ethiopia and other developing countries this study does show association with type of health facility whether they are public , private or NGOs this might be in our study area only public and private health facilities deliver the service but in those literature majority of the clients were from NGO clinics [12, 14, 11].

The study includes all facilities that deliver abortion service, the high sample size and to minimize recall bias the interview was held immediately after they leave the abortion room this are the strength of this study. Despite the strength the study also have limitation like it does not identify whether the method they reported adopting was chosen or simply prescribed. Thus method adoption could be a factor of method availability and provider bias, not simply women's preferences and social desirability bias is also the limitation of the study.

## CONCLUSSION AND RECCOMENDATION

In conclusion the PAFP utilization is relatively good but not satisfactory. Age, marital status, Educational status, PAFP counseling and previous history of abortion were the significant factors to PAFP utilization in Gambella town health institutions. Therefor the federal and regional ministry of health should have to work together to increase the PAFP utilization rate and have to invite different NGO clinics to work on the area.



The ministry of education should have to give due emphasis to increase the educational status of women and since most of the women with history of previous abortion didn't utilize PAFP, health professionals should have to give sufficient education on the purpose of contraception and have to tell that abortion is the last option and consequences of repeated abortion. Finally the recommendation goes for researchers to do further investigation on longitudinal way.

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