Post-Abortion Family Planning Utilization and Associated Factors Among Women Seeking Abortion Service: Cross-Sectional Study

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Research

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Abstract

Background - Ethiopia is one of the countries which suffer with highest unintended pregnancies and unsafe abortion. The aim of this study was to assess the utilization of post-abortion family planning and associated factors among women seeking abortion service in Asella town health facilities 2019.

Methods: A facility based cross-sectional study design was conducted among women who came for abortion service from July 15 to October 15, 2019. Two hundred seventy-six participants were included using systematic random sampling technique. Both descriptive and logistic regression analysis were conducted. In multivariate analysis, variables which had p-value < 0.05 was considered as significantly associated with the outcome variable.

Results: Postabortion family planning utilization among study participants was 146 (53.7%) (95% CI=47.4, 59.2). Formal education (AOR=4.45: 95% CI: (1.18, 16.74) , previous history of abortion (AOR=0.35; 95% CI: (0.14, 0.85), positive attitude (AOR=2.62; 95% CI: (1.09, 6.27), counseled on post abortion family planning utilization (AOR=3.12; 95% CI: (1.30, 7.51) were significantly associated with post abortion family planning utilization.

Conclusions: In this study, nearly fifty percent of the respondents did not utilize Postabortion Family Planning (PAFP). Educational status, history of pervious abortion, decision when to have a child, attitude toward PAFP utilization and counseling about PAFP were significantly associated with post-abortion family planning use. The health care providers who give abortion service should give counseling for all women who get abortion service. More accents should be given to misperception of PAFP to change the negative attitude of utilization of PAFP.

Background Of The Study

Post abortion family planning (PAFP) is the initiation and use of family planning methods at the time of management of an abortion or before fertility returns after the abortion [1]. Using PAFP reduces unintended pregnancies and repititions of abortions. It also reducethe risks of adverse maternal and perinatal outcomes for pregnancies following induced abortion [2]. Unintended pregnancies were the vast majority cause of abortions[3].

Globally, estimated 210 million pregnancies occur each year and 44% of these were unintentional [4–6]. Of the unintentional ones, 56% was end in an abortion [3]. The unintended pregnancy mainly affect the adolescent age (15–19 years) which account about 10 million unintended pregnancies. About 5.6 million of this unintended pregnancy ended by abortions [5, 7]. In addtiotion, from the unintended pregnancies occurred between 2015 and 2019 years, 61% of them ended in abortion [8]. Out of worldwide induced, abortion half of them were unsafe abortion, contributing about 13% of all matenal deaths [7, 9, 10]. Almost all 98% of unsafe abortion had taken place in developing countries [6].
The estimated unintended pregnancy rate in developing regions is 65 per 1,000 women aged 15–44, as of 2010–2014. Among the highest rate regions, Africa is the one which consists of 89 per 1,000 abortion [3]. In many African countries, a high proportion (15–30%) of hospital gynecological admissions is due to complications of unsafe abortion [11]. On the other hand, unsafe-abortion account 40 per 100,000 live births maternal mortality ratio in developing regions, but the Eastern Africa region is accounted more than twice of this which was 100 per 100,000 [5].

Integrating post-abortion family planning services could decrease unintended pregnancy and repeat abortions[12]. More than one-fourth of mortality Can be prevented when women use contraceptive consistently and correctly [5]. In addition, provision of post-abortion contraceptive services helps as one safeguarding of the reproductive health of the women. However, according to one report, about 50 – 20% women did not uptake post abortion family planning. According to a study done in 10 countries in Asia and sub-Saharan Africa, 23% of women left the health facility without a contraceptive method after receiving abortion care [4, 13]. This leads women to have high risk of unintended pregnancy, which ends up with unsafe and repeated abortions [14, 15].

In Ethiopia, about 42% of all pregnancies were unintended and 620,300 were ended by abortions. The annual abortion rate was 28 per 1,000. In the other world, the adolescents age were among the highest-risk group; of their pregnancy, 44% were unintended and 46% of this ended up in abortion [13, 16]. The abortion rate is highest in urban area; for instance, in Addis Ababa 92 per 1,000 [3, 4]. The studies done in Ethiopia showed that among women who got abortion service. It is one-fifth did not receive post-abortion contraceptive [17] and the incidence of repeated abortion was 30% [4]. To avert this, Ethiopia had set a comprehensive strategy of abortion care which improves access of information and methods for uptake of post-abortion family planning. It authorizes health care providers to offer safe abortion and post abortion care mainly post abortion family planning services for women who want it [18]. Despite these efforts, still, service data revealed a low rate of uptake of contraception after abortion care in most facilities [6]. The provision of post-abortion contraceptive services helps as one of safeguarding of the reproductive health of the women. Further, it can improve contraceptive acceptance and help break the cycle of repeated unwanted pregnancies. Therefore, this study assessed post-abortion contraceptive utilization and associated factors among women who were seeking abortion service at Asella town health facilities.

**Methods**

**Study area, Design and Population**

Facility based cross-sectional study design was conducted from July 15 to October 15, 2019, in Asella town. Asella is the administrative town of Asri Zone and located 175 kilo meters to Southeast capital city of Ethiopia, Addis Ababa. The total population of the town was 110,433 and 24,406 of them was women of child bearing age [19]. According to the town health office 2019 report, in the town there are one referral hospital, two health centers, two private hospitals and two nongovernment clinics[20]. A woman who
came for abortion service were systematically selected and included in study. However, woman who was critically sick and unable to give the response was excluded.

**Sample size determination and Sampling procedure**

The sample size was determined using formula for a double population proportion stat calc of Epi Info statistical software Version 7. A 95% confidence level, power of 80%, and an assumption of the ratio of unexposed to exposed equivalent to one was assumed for the calculation. Based on this, the sample size was calculated to be 384. After correction formula was applied and adding 5% non-response rate the final sample size was **279**. The women who got the abortion service for the 3 consecutive months, on average, were (N=871) in health facilities which included in the study. From the seven health facilities, four were included in the study. Those were one government Hospital which was selected purposely because it is the only government hospital in Asella town, and other study areas were selected by lottery methods one government health center, one private hospital and one NGO clinic. The sample size was allocated proportionally by population size formula based on their client load of three months antecedent for each health facility. The study participants were selected using systematic sampling technique with interval of three. The woman who came for abortion service On the first day of data collection was considered as the first respondent and then, each respondent corresponding to the skip interval was selected.

**Data collection tool and data collection procedure**

Data were collected using structured and pre-tested questionnaire. The tool contained information related to socio-demographic characteristics, health service, reproductive health and personal factors. The questionnaire was initially prepared in English language and then translated into Afan Oromo and Amharic languages. It was translated back to English language to check for any inconsistencies and understandability. One day training was given for both data collectors and supervisors. The training consisted of the purpose of the study, enumeration procedures, and how to conduct interview. After data collection, all completed questionnaires were checked for completeness and cleaned manually.

**Data processing and analysis**

Data were checked for its completeness, cleaned and entered using Epi Info version 7 and then exported in SPSS version 21 for analysis. Data were analyzed using descriptive statistics and logistic regression. Descriptive statistics such as frequency, mean and standard deviation were computed. From logistic regression, bivariable and multivariable were used. All variables with P-value <0.05 in bivariable analysis were moved to multivariable regression to control confounding effect. Adjusted odds ratios along its 95% confidence interval (95% CI) were used to measure the strength of associations. Variables at p-vale <0.05 in multivariable logistic regression have been considered as significant association with utilization of post abortion of family planning.

**Results**
Socio-demographic of participants

A total of 279 participants were interviewed with the response rate of 272 (97.5%). One hundred thirty (48.2%) women were aged between 26-35 years. The mean age and standard deviation of the respondants were 27.3 ±5.7 years. Regarding education 235 (86.4%) had formal education. More than two third of the respondants live in household with ≤ 5 family size. About monthly income, 118 (43.4%) of respondants had 2000-4000 Ethiopian birr. Nearly, 46.0% of the respondents got service at nongovernment organization health facilities (See Table 1 below).

*NGO-nongovernment organization; **ETB-Ethiopian birr

Reproductive characteristics

Two hundred forty four (89%) women were gravid 1-3 and 154 (56.6%) nulliparous. Of the intention of the current pregnancy which leads to abortion, unwanted pregnancy accounts 168 (61.8%). More than half 148 (54.4%) of the participants did not have a desire to have a child in the nearby future (see Table -2).

Knowledge and Attitude toward post abortion family planning

Less than half (44.5%) of participants had good knowledge and 182 (66.9%) had a positive attitude on postabortion family planning respectively (figure-1).

Utilization of PAFP and Service Received

Utilization of post abortion family planning among women who seek abortion care was 146 (53.7%) (95% CI=47.4, 59.2). Regarding counseling of post abortion family planning165 (60.7%) women who seek abortion care were counseled and 107 (39.3%) did not.

Factors associated with utilization of PAFP

In bi-variate analysis, variables which had a P-value <0.05 were educational status, time to reach health facility, history of abortion, decision to have child, discussion with partner /husband, knowledge about PAFP, attitude toward PAFP and counseled on PAFPPAFP utilization were moved to multivariate model. In multivariate analysis, women who had formal education were 4.45 times more likely to uptake PAFP compared to women who had not formal education (AOR=4.45: 95% CI: (1.18, 16.74). Women who had no history of abortion were (AOR=0.35; 95% CI: (0.14, 0.85) less likely to utilize PAFP compared to women who had previous history of abortion. In addition, women who had positive attitude were 2.62 times (AOR=2.62; 95% CI: (1.09, 6.27)) more likely to utilize PAFP compared to women who had poor attitude. Moreover, women who counseled on PAFP utilization were 3.12 times (AOR= 3.12; 95% CI : (1.30, 7.51) more likely to utilize PAFP compared to their counterparts (see Table-3).

Significant at P<0.001=***; at P<0.01=** and P<0.05=*, AOR= Adjusted Odds Ratio; CI=Confidence Interval; COR= corde odd ratio
Discussion

The use of post-abortion contraceptive is very important for preventing unintended and repeated abortion. However, this study revealed that the prevalence of the utilization of postabortion family planning is 53.7%. Similar result was also reported in Desse (47.5%) [21] and Debre Markos (59.2%) [22].

As compared to the study conducted in Shire town (61.5%) [23], Gambella (74.4%) [24], Central town of Tigray (80.4%) [25] and Addis Ababa (68.8%) [26], our finding is lower. This might be due to the respondents of the study done in central town of the Tigray (97.8%) and Addis Abeba; they 80% were counseled and most of them had high educational status as compared to our study. The other possible reason might be due to the residence and various misconceptions about family planning services difference among study settings.

The current study was higher than the study conducted in Debrberhan (45.8%) [27] and Kenya (31%) [28]. The Debrberhaan study design was a cohort study which could be a reason for the discrepancy from of current study. For the kenyan study, the possible reasons might be cultural and the health care system difference between the two countries.

Concerning the factors affecting post-abortion family planning utilization educational level, history of abortion, women decision when to have child, positive attitude toward PAFP and counseled on PAFP was found to be significantly associated to use post-abortion family planning after getting the service.

In the current study, educational level of study participants had statistically significant association with PAFP utilization: women who had formal education were more than four times more likely to utilize PAFP methods as compared to those who did not have formal education. This finding is consistent with studies done in Gambella [13], Shire town [5], Debre Markos [3] and Addis Ababa [4]. There are the fact that educated women can access information, have more knowledge about reproductive health right and could pass informed decisions about their child desire with carrier development put aside.

Respondents who had not history of abortion were less likely to use post abortion family planning than women who had previous history of abortion. This result was in line with study done in Addis Ababa [2] and Luanda (Angola) [16].

Respondents who were counseled on post abortion family planning were more likely to utilize post abortion family planning than respondents who were not counseled. Similarly, the studies conducted in Gambella [13], Debre Markos [3] and Shire town [5] showed that women who had counseled was significantly associated with postabortion contraceptive utilization. Also, a study conducted on women in low income countries showed that postabortion counseling had an effective tool to increase the usage of contraceptives [29]. This clearly indicated that postabortion family planning counseling make real difference on postabortion contraceptive utilization. Limitation of this study was that cross-sectional design was used and therefore we cannot report cause and effect.
Conclusions

In this study nearly fifty percent of the respondents did not utilize PAFP. Educational status, history of previous abortion, decision when to have a child, attitude toward PAFP utilization and getting counseling about PAFP were significantly associated with post-abortion family planning use. About two-fifths of the respondents did not counselled. The health care providers who give abortion service should give counseling for all women who got abortion service. More accents should be given on misperception of PAFP to change the negative attitude of utilization of PAFP. Educational empowerment of women has to be still focused on as women who had education more likely to prevent unintended pregnancy and its consequences.

Abbreviations

PAFP
Postabortion Family Planning; WHO: World Health Organization; ANC: Antenatal Care; COR: Crude Odd ratio; AOR: Adjusted Odd Ratio, ETB: Ethiopian birr; NGO: Nongovernmental Organization;

Declarations

Ethical Consideration

Ethical clearance was obtained from Arsi University, college of health sciences ethical review committee. Then, official letter of cooperation was written to health facilities. Information about the study was given to the participants, including purpose and procedures, potential risk, benefit and ensures the right of participants to withdraw from the study at any time. Informal consent was obtained from participants before starting the interview. In order to protect the confidentiality of information name and other identification was not included in a questionnaire.

Consent for publication

Verbal consent was obtained from the study participants after clarifying the aim of the study because there is no any specimen taken from the respondent. The respondents had the right to respond fully or partially to the questionnaire. All the information given by the respondents was used for research purposes only, and confidentiality was maintained by omitting the name of the respondents.

Availability of data and materials

The datasets that used in this study for analysis and other information are available currently on the hands of corresponding author. Therefore, I can provide it if requested.

Declaration of interest

There were no conflicts of interests for any of the authors.
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Author Contributions:

DW, GA & AJ conceived and designed the study. BW, DW GA & AJ performed analysis and interpretation of the data. BW, GA & AM assisted the analysis. BW & DW prepared the manuscript. GA & AJ critically reviewed the manuscript. All authors read and approved the final manuscript.

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**Tables**

**Table-1: Socio-demographic characteristics of utilization of postabortion family planning among women who seek abortion care services in Asella Town, Southeast Ethiopia 2019.**
| Variables                  | Categories     | Frequency | Percent |
|---------------------------|----------------|-----------|---------|
| Age (in years)            | 15-24          | 48        | 17.6    |
|                           | 25-34          | 131       | 48.2    |
|                           | 35-44          | 93        | 34.2    |
| Residence area            | Urban          | 174       | 64.0    |
|                           | Rural          | 98        | 36.0    |
| Educational status        | No formal education | 37    | 13.6    |
|                           | Formal education | 235   | 86.4    |
| Occupation                | Housewife      | 124       | 45.6    |
|                           | Employee       | 90        | 33.1    |
|                           | Student        | 49        | 18.0    |
|                           | Unemployed     | 9         | 3.3     |
| Monthly income            | <2000 ETB**    | 85        | 31.3    |
|                           | 2000-4000 ETB**| 118       | 43.4    |
|                           | >4000 ETB**    | 69        | 25.3    |
| Marital status            | Married        | 179       | 65.8    |
|                           | Single         | 78        | 28.7    |
|                           | Divorced/widowed | 15    | 5.5     |
| Time to reach health facility | ≤30 minute  | 173       | 63.6    |
|                           | >30 minute     | 99        | 36.4    |
| Type of health facility   | Public         | 72        | 26.5    |
|                           | Private        | 75        | 27.5    |
|                           | NGO*           | 125       | 46.0    |

Table-2: Reproductive characteristics of utilization of post abortion family planning among women seek abortion care services in Asella Town, Southeast Ethiopia, 2019.
| Variable                        | Category     | Frequency | Percent (%) |
|--------------------------------|--------------|-----------|-------------|
| Gravidity                      | 1-3          | 242       | 89.0        |
|                                | ≥4           | 30        | 11.0        |
| Parity                         | 0            | 59        | 21.7        |
|                                | 1-3          | 154       | 56.6        |
|                                | ≥4           | 59        | 21.7        |
| History of abortion            | Yes          | 49        | 18.0        |
|                                | No           | 223       | 82.0        |
| Gestational age in weeks       | >12 Weeks    | 106       | 39.0        |
|                                | ≤12 Weeks    | 166       | 61.0        |
| Current pregnancy intention    | Unwanted     | 168       | 61.8        |
|                                | Mistimed     | 104       | 38.2        |
| Decision when to have child    | Both         | 55        | 20.2        |
|                                | Husband      | 176       | 64.7        |
|                                | Women        | 41        | 15.1        |
| Discussion with partner / husband | Yes           | 81        | 29.8        |
|                                | No           | 191       | 70.2        |

Table 3: Multivariable logistic regression of factors associated with utilization of PAFP among women seeking abortion care services in Asella Town, Southeast Ethiopia, 2019
| Factors                        | Utilization of PAFP | COR (95% CI) | AOR (95% CI) | P-Value |
|-------------------------------|---------------------|--------------|--------------|---------|
|                               | Yes  | No   |                |         |         |
| Educational status           | No formal | 25  | 12  | 1          | 1       |
|                               | Formal   | 101 | 134 | 2.76 (1.33, 5.77) | 4.45 (1.18, 16.74)* | 0.03 |
| Time to reach health facility | ≤30  | 113 | 60  | 3.77 (2.24, 6.35) | 1.52 (0.64, 3.60) | 0.34 |
|                               | >30(minute) | 33  | 66  | 1          | 1       |
| History of abortion          | Yes   | 16  | 33  | 0.47 (0.20, 0.88) | 0.35 (0.14, 0.85)* | 0.02 |
|                               | No    | 113 | 110 | 1          | 1       |
| Decision when to have child  | Both  | 39  | 16  | 1          | 1       |
|                               | Husband | 90  | 86  | 2.33 (1.21, 4.47) | 1.94 (0.68, 5.51) | 0.21 |
|                               | Wife   | 17  | 24  | 3.44 (1.47, 8.06) | 4.67 (1.25, 17.54)* | 0.02 |
| Discussion with partner      | Yes   | 63  | 18  | 4.55 (2.507, 8.27) | 2.45 (0.83, 7.29) | 0.11 |
|                               | No    | 83  | 108 | 1          | 1       |
| Knowledge about PAFP         | Good  | 84  | 37  | 3.26 (1.97, 4.00) | 1.33 (0.49, 3.57) | 0.58 |
|                               | Poor  | 62  | 89  | 1          | 1       |
| Attitude toward PAFP         | Positive | 106 | 76  | 1.74 (1.05, 2.90) | 2.62 (1.09, 6.27)* | 0.03 |
|                               | Negative | 40  | 50  | 1          | 1       |
| Counseled on PAFP            | Yes   | 89  | 28  | 5.46 (3.20, 9.34) | 3.12 (1.30, 7.51)* | 0.01 |
|                               | No    | 57  | 98  | 1          | 1       |

**Figures**
Figure 1

Knowledge and Attitude toward post abortion family planning utilization among women who seek abortion care in Asella town, Southeast Ethiopia, 2019