

# Utilization of Implant Contraception and Factors Associated among Women Attending Family Planning Clinic of Ejere Health Center, Ejere Woreda, West Shewa Zone of Oromia region, 2016

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## Abstract

**Background:** Research finding shows that long acting hormonal contraceptives are less utilized among FP users; but more effective than short acting hormonal contraceptive methods. **Objective:** The main objective of the study was to assess Implant contraception utilization and associated factors among women attending FP clinic of Ejere health center in Ejere woreda. **Methods:** An institutional based cross sectional study design was used to collect data from 272 women attending FP clinic from March to April of 2016. Systematic random sampling technique was used to approach the study subjects until the required sample size was collected. Then the collected data was analyzed using SPSS window version 20. **Result:** The study finding showed that about 87.6% of the respondents know implant as contraceptives but the utilization of implant was only 20.6%. Respondent's educational status was significantly associated with knowledge and utilization of implant contraceptive. Respondents who attended college or university were 9.519 times more knowledgeable about implant than those who couldn't read and write at AOR=9.519 (1.208, 74.985),  $p=0.032$ ). Mothers who attended primary school were 2.580 times using implant as contraception than those who couldn't read and write at AOR=2.580 (1.255, 5.305),  $p=0.01$ . **Conclusion and Recommendation:** Even if most of respondents have knowledge about implant contraceptive still the practice of implant among FP users is very low. To overcome this gap the health care facilities should prepare guide line to improve the away of counseling on long acting contraceptive than short acting contraceptives and health care workers should update themselves with new guide line to counsel client on long acting contraceptive than short acting contraceptives and improve FP counseling on implant utilization.

**Keywords:** Implant contraception, utilization, FP users, Ejere

## 1. INTRODUCTION

Hormonal contraceptive implants are a reversible long acting contraceptive which release a progestin hormone, either levenogestrel or etonogesterel in the body. It is inserted under the skin of women's upper arm by trained health professional and can give a continuous protection for three to five years depending on the number of rods inserted (1).

Regarding the mechanism of action, implants work by releasing a small amount of progestin hormone steadily into the blood stream which prevents pregnancy by thickening the cervical mucus that blocks sperm from meeting the released egg and by preventing ovulation (release of eggs from the ovaries) to various degrees (2).

According to the world health organization of 2007 reports, implants are more than 99.9% effective when inserted correctly that means less than one woman in 1000 will get pregnant in the first year of using Implanon. Implanon prevents ovulation in every cycle, throughout almost the entire three years of its labeled length of use (3).

According to Ethiopian demographic health surveys of 2011 report the maternal mortality ratio for Ethiopian women was 676 deaths per 100,000 live births, which is one of the highest figure in the world. The fertility rate is 4.8 children per women. Apart from the high fertility, the large variation in fertility between rural and urban areas and between regional states in Ethiopia calls for attention (4). Demographic research has shown that socio economic and cultural factors influence fertility through biological and behavioral mechanisms such as the use of contraception, which has a direct effect on fertility. But contraceptive use which plays the major role in influencing fertility is very low in Ethiopia, (45%) in DHS of 2015. In contrary to underutilization of modern contraceptive in the country many women who want to space or limit child bearing are not able to do so; hence there is a high unmet need for contraception in the country (5).

Although, over the last two decades, Ethiopia has made progress in increasing awareness and utilization of modern contraceptives, most of these users are using short acting modern contraceptive methods like injectable contraceptive and oral contraceptive pills are being the main method used by FP users (4). Hence, the main objective of this study was to assess the implant contraception utilization and associated factors among women attending family planning clinic of Ejere Health Center.

## 2. METHODS AND MATERIALS

**2.1. Study Area and Period:** The study was done from March to April of 2016 in Ejere health center of Ejere town. Ejere town is located at 42 km away from Addis Ababa to the west direction and 70 km away from Ambo University. The total population of the town is 15443, of which 7543 were males and 7900 were females. There is 1 health center, 3 health posts, 4 private clinics, and 2 private drug stores in the town.

**2.2. Study Design:** institutional based cross-sectional study design was used for data collection

### 2.3. Population

**2.3.1. Source population:** All women attending FP clinic of Ejere Health Center

2.3.2. Study population: All sampled women attending FP clinic of Ejere Health Center

#### 2.3.3 Inclusion and Exclusion Criteria.

##### Inclusion Criteria:

❖ All women attending FP clinic of Ejere Health Center were included in the study

##### Exclusion criteria:

- Unmarried family planning users and critically ill clients were excluded.

### 2.4. Sample Size Determination

The sample size was determined by using the following statistical formula:

$$n_i = \frac{(Z_{\alpha/2})^2 p(1-p)}{d^2} \text{ where } n_i = \text{minimum sample size}$$

$Z_{\alpha/2}$  = level of confidence interval at 95% (1.96)  
 $d$  = margin of sample error tolerated (at 0.05)  
 $p = 20.1$ , prevalence of implant contraceptive in Nekemte, Oromia region (25)

$$n_i = \frac{(1.96)^2 \times 0.201(1-0.201)}{(0.05)^2} = 247$$

By adding 10% of non-response rate; the total sample size is 272

### 2.5. Sampling Techniques

The respondents will be selected by systematic random sampling technique by calculating “k” value.  $K = N/n$ , where, k- sampling interval, n- sample size, N-  $N_0$  of planned FP users in Ejere health center for the last two months. The first mother was chosen randomly between 1-k and the data was collected until the needed sample was obtained.

### 2.6. Data Collection Methods and analysis

The data was collected from women who are attending FP clinic of Ejere Health Center with structured questionnaire by face to face interview. The data was collected by five trained nurses on data collection procedures includes the relevance of the study, objective of the study and confidentiality of the respondent’s information. The data collection tool was prepared first in English language then it was translated into Afan Oromo to interview the respondents.

To ensure the quality data collection process pre-test was done in Ginchi health center and the data collectors were trained on data collection process. During data collection process every questionnaires were checked for completeness of the data on each day. After the data was collected it was checked and cleaned for completeness to analysis and logistic regression was done to determine association between women’s implant utilization and different socio-demographic variables by declaring statistical significance at p-value of <0.05 using SPSS window version 16.

## 3. Ethical Consideration

The ethical approval and letter of permission was obtained from Ambo University CMHS Department of Nursing to the Ejere health center manager. During data collection all respondents were asked their permission and verbal consent was obtained prior to the interview from family planning users. In addition, confidentiality of information was assured and moreover, to ensure confidentiality the name of respondents was not written in the consent form.

## 4. Results

### 4.1. Socio-demographic characteristics

Out of the total 272 family planning users included in the study, 267 (98.2%) of the respondents were responded to the questionnaires with only 5 (1.8%) were non-respond rate. The mean age of participants was  $26 \pm 6.2$  years. Concerning their ethnicity, the majority 227 (85.0%) of the respondents were Oromo, and regarding educational status, the majority 109 (40.8%) of the participants were illiterate or not read and write and 228 (85.4%) of the

respondents were Orthodox in religion. As to their monthly income, the majority 175(65.5%) of them were obtaining less than 1000 birr per month. (See table 1 below)

**Table 1:** Distribution of socio demographic characteristics of FP users at Ejere Health Center, west Shewa zone, west Ethiopia, June 2016

Variable	Characteristics	Response	
		Frequency	Percent
Age (in years)	≤18	18	6.7
	19-23	81	30.3
	24-28	87	32.6
	29-33	43	16.1
	34-38	25	9.4
	≥39	13	4.9
Ethnicity	Oromo	227	85.0
	Amhara	32	12.0
	Guraghe	8	3.0
Mothers' educational status	Can't read and write	109	40.8
	Can read and write	22	8.2
	Primary school	73	27.3
	Second/prep school	44	16.5
	College/university	19	7.1
Husbands' educational status	Can't read and write	68	25.5
	Can read and write	48	18.0
	Primary school	63	23.6
	Second/prep school	50	18.7
	College/university	38	14.2
Occupation	House wife	136	50.9
	Farmer	48	18.0
	An employee	24	9.0
	Student	11	4.1
	Merchant	36	13.5
	Others	12	4.5
Religion	Orthodox	228	85.4
	Protestant	34	12.7
	Muslim	5	1.9
Income	≤1000	175	65.5
	1001-2000	44	16.5
	2001-3000	27	10.1
	>3000	21	7.9
Media within the house	yes	164	61.4
	No	103	38.6

#### 4.2. Reproductive health characteristics

Out of respondents, 164(61.4%) were between the age of 16-20 years and about 134 (50.4%) had got their first child between the age of 19-23 years. The majority of respondents 148 (55.4%) were gave birth at health institution even if there was a home delivery, regarding decision making in having a child about 232 (86.9%) of respondents were decided in discussion with their husband to have a child. (See table 2 below).

**Table 2:** Reproductive history of reproductive age group married women at Ejere health center attending family planning clinic. June 2016

Variables	Characteristics	Response	
		Frequency	Percent
Age at marriage	≤15	51	19.1
	16-20	164	61.4
	21-25	38	14.2
	≥26	14	5.2
Gravidity	0	25	9.4
	1-2	139	52.1
	3-4	56	21.0
	5-6	26	9.7
	>6	21	7.9
Parity	0	39	14.6
	1-2	136	50.9
	3-4	55	20.6
	5-6	21	7.9
	>6	16	6.0
Age at first child birth	≤18	63	23.6
	19-23	134	50.2
	24-29	28	10.5
	≥30	4	1.5
Number of alive child	0	39	14.6
	1-2	141	52.8
	3-4	50	18.7
	5-6	22	8.2
	>6	15	5.5
History of abortion	Yes	33	12.4
	No	234	
Place of delivery of current child	Institution	148	55.4
	Home	79	29.6
Decision makers in having a child	Wife	10	3.7
	Husband	25	9.4
	Both in discussion	232	86.9

#### 4.3. Knowledge about implant contraceptive methods at EHC

The majority of respondents 234(87.6%) were knew implant as contraceptive method and about 95.1% of the respondents were got the information from health care workers and/or mass media. (See table 3 below)

**Table 3:** knowledge of implant contraceptive by reproductive age group women at Ejere health center FP clinic, June 2016

Variables		Responses	
		Frequency	Percent
Heard contraceptive methods	Yes	263	98.5
	No	4	1.5
Know implant as contraceptive method	Yes	234	87.6
	No	33	12.4
Know site of insertion	Yes	149	63.7
	No	85	36.3

#### 4.4. Practicing Implant contraceptive as FP methods

Among the study respondents 169(63.4) were using injectable contraception and only 55 (20.6%) were using implant contraception. About 40.6% of the respondents were not used implant as contraceptives due to fear of the procedure while 38.2% were prefer other methods to use than the implant as contraceptive methods (See table 4 below).

**Table 4:** Practice of implant at FP clinic of EHC, Ejere woreda of west Shewa zone, Oromia region, June 2016

Variables	Characteristics	Response	
		Frequency	Percent
Methods of Contraceptive use	Pills	40	14.5
	Injectable	169	63.4
	Implant	55	20.6
	IUCD	3	1.5
Reason for not using implanon	Fear of procedure	86	40.6
	Fear of side effect	35	16.5
	Method not available	10	4.2
	Prefer other methods	81	38.2

#### 4.5. Factors associated with Knowledge about implant among FP users

In multiple logistics analysis: mothers educational status was significantly associated with the knowledge of implant as contraception and those who attended college or university were 9.519 times more knowledgeable about implant than those who couldn't read and write at AOR=9.519 (1.208, 74.985), p=0.032). Respondents who attended college or university were 2.418 times more knowledgeable about implant than those who couldn't read and write at AOR=2.418 (1.073, 5.448), p=0.033 (See table 5 below)

**Table 5:** AOR 95% CI of selected variables with knowledge of mothers in EHC, June 2016

Variable	Knowledge		P-Value	AOR	95%CI
	Good Knowledge	Poor knowledge			
Educational status	can't read and write	64(24.0%)	45(16.9%)	1:00	
	can read and write	15(5.6%)	7(2.6%)	.299	1.692 (.627, 4.567)
	primary school	55(20.6%)	18(6.7%)	.051	1.941 (.997, 3.780)
	Second/prep.	34(12.7%)	10(3.7%)	.033*	2.418 (1.073, 5.448)
	College/ university	18(6.7%)	18(6.7%)	.032*	9.519 (1.208, 74.985)

#### 4.6. Factors Associated With implant utilization among FP users

In multiple logistics analysis: mothers educational status was significantly associated with the utilization of implant as contraception Mothers who attended primary school were 2.580 times using implant as contraception than those who couldn't read and write at AOR=2.580 (1.255, 5.305), p=0.01) (See table 6 below).

**Table 6:** AOR 95% CI of selected variables with implant utilization in EHC, June 2016

Variable	Practice		P-Value	AOR	95%CI
	practiced	Not practiced			
Educational status	can't read and write	59(22.1%)	50(18.7%)	1:00	
	can read and write	9(3.4%)	13(4.9%)	.118	.442 (.159, 1.229)
	primary school	52(19.5%)	21(7.9%)	.010*	2.580 (1.255, 5.305)
	Second/ prep school	25(9.4%)	21(7.9%)	.311	1.524 (.675, 3.441)
	college or university	18(6.7%)	1(.4%)	.054	10.841 (.963, 122.003)

### 5. DISCUSSION

This study reveals that 90.6% of the study respondents were mentions at least one long acting contraceptive methods while 87.6% of them have mention implant as contraceptive methods. The main source of the information was mass media and health professionals; which accounts 254 (95.1%). This is relatively higher than the study conducted in Agarfa District of Oromia region which shown 53.9% of the participants had known Implant as contraceptive methods and the source of information was health professionals 72.2 % (6). This difference is due to difference in socio-demographic characteristics and year of study among the study participants.

According to this study, the result showed that implant contraception utilization among study participants in the study area was 20.6%. This is comparable with the study finding obtained from Nekemte town which was 20.1 % (7). The main source of information to use implant as contraceptive among family planning users in study area was health care workers and mass media. This finding is consistent with the study done in south eastern Ethiopia which shows that the source of information was health care workers and mass media (8). The main reason cited for non-user of implant were fear of procedure (40.6%), fear of side effect (38.2%), want child in the near future (16.6%) and the other participants have a concern about the negative effect on the return of fertility after taking implants and fear on insertion and removal (6, 9).

There was a significant association between educational status of mother and the knowledge of mothers about implant as contraceptive methods. Mothers educational status was significantly associated and those who

attended college or university were 9.519 times (AOR=9.519, (1.208, 74.985) at  $p=0.032$ ) knowledgeable about implanon than those who couldn't read and write and mothers having positive attitude about implant were 2.066 times (AOR=2.066, (1.185, 3.600),  $p=0.01$ ) more knowledgeable about implant than those with negative attitudes about implant. There was also a significant association between educational status of mother and the utilization of implant as contraceptive methods. Mothers whose attended primary school were 2.580 times (AOR=2.580, (1.255, 5.305),  $p=0.01$ ) more utilized implant as contraceptive methods than those who couldn't read and write. This finding was similar with study done in Nekemte town on predictors of modern contraceptive method utilization. Women's education, monthly income, respondents' fertility desire, showed significant association with utilization of modern contraceptive methods (7, 10).

## 6. Conclusion and Recommendation

The study finding showed that respondents knowledge about Implant were high (87.6%) but the practice of implant contraceptive is low (20.6%). Some of the reasons for non-use of implant were due to fear of procedure (40.6%), prefer other methods (38.2%), fears of side effects (16.5%). Most of the study respondents were limited to using a short acting contraceptive method (78%); particularly Depo-Provera (63.4%) and oral contraceptive pills (14.5%). Therefore, strengthening FP program; especially on long acting contraceptives by increasing awareness on long acting contraceptive methods and updating the knowledge and skills of health care providers to provide better FP counseling and services to their customers.

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