

# Intention to Use Long Acting and Permanent Contraceptives Methods and Associated factors Among Family Planning Clients in Nekemte Town Oromia Regional State, West Ethiopia

# By

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## Abstract

**Background**: Long acting and permanent methods (LAPMs) of family planning are essentially important to achieve health related Millennium Development Goals as well as to meet individuals and couple's needs. Worldwide, it is estimated that 210 million pregnancies occur each year, some 80 million are unintended and 33 million of these are due to ineffective use of a contraceptive method. An increase in the use of effective contraceptive methods results in reducing unintended pregnancies and the incidence of abortion. However, utilization of LAPMs is very low as family planning users are still concentrated on short-term methods, which requires repeated revisit to health institution to resupply. Yet, the level of and barriers to the use of LAPMs are not well explored.

**Objectives**: The objective of this study was to assess intention to use long acting and permanent methods and associated factors among family planning clients in Nekemte Town.

**Methods:** Health facility based cross-sectional study was conducted on randomly selected 388 subjects in March 2015 in Nekemte Town. The sample subjects were selected from all health facilities providing family planning services considering proportional to sample size. Data were collected using an interviewer-administered questionnaire, entered to Epi Data version 3.1 and analyzed using SPSS version 21 statistical software.

**Results:** A total of 383(98.7%) mothers participated in the study. prevalence of intention to use LAPMs was 200(52.2%) and 176(46%) of respondents had negative attitude towards intention to use LAPMs. Intention to use LAPMs was higher among respondents who had supportive attitude toward LAPMs (AOR=2.1; 95% CI: 1.3-3.4), attended primary (AOR=2.6; 95% CI: 1.2-5.8), secondary (AOR= 5.2; 95% CI: 2.2-12.6) and higher (AOR=7.6; 95% CI: 2.9-19.7) education. Intention to use LAPMs was also higher among mothers who had no myths and misconception on LAPMs (AOR= 2.1; 95% CI: 1.2-3.6) and who had perceived IUCD and/ or implants don't cause illness (AOR= 2.0; 95% CI: 1.2- 3.5). Those mothers who had no functional television had lower intention to use LAPMs was, fear of side effects 84(45.9%), husband disapproval 57(31.1%) and fear of infertility after use 20(10.9%).

**Conclusion:** The intention to use LAPMs among respondents was low, presence of myths and misconception, lack of education and supportive attitude toward LAPMs adversely affected intention to use the methods. Fear of side effects, husband disapproval, and fear of infertility were some of the reasons for not intending the use of LAPMs.

**Recommendation:** Information, education and communication/ behavioral change communication/ should address factors hindering intention to use LAPMs, particularly to raise positive attitude, addressing problems related to rumors, myths and misconception and side effects.

## Acknowledgments

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# Acronyms and abbreviations

AOR	Adjusted odd ratio
CI	Confidence interval
CPR	Contraceptive prevalence rate
DMPA	Depot medroxy progesterone acetate (Depo provera)
ECSA	Ethiopian Central Statically Agency
EDHS	Ethiopian Demographic and Health Survey
FMOH	Federal Ministry of Health
FP	Family planning
HEWs	Health extension workers
HIV	Human immune virus
IUCD	Intra uterine contraceptives devices
LAPMs	Long acting and permanent methods
LARC	Long acting reversible contraception
MC	Modern contraceptives
MCH	Mother and child health
MMR	Maternal mortality ratio
MSIE	Marie Stopes International Ethiopia
NGOs	Non-governmental organizations
OCP	Oral contraceptives pills
RH	Reproductive health
SPSS	Statistical package for social sciences

TFR	Total fertility rate
STI	Sexually transmitted infection
UNICEF	United Nations Children's Fund
UNFPA	United Nation Population Fund
USAID	United State Agency for International Development
WHO	World Health Organization

## **1. Introduction**

## **1.1 Background**

Family planning (FP) is defined as the ability of individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. It is achieved through use of contraceptive methods. FP is a means of promoting the health of women and families and part of a strategy to reduce the high maternal, infant and child mortality (1). It is a low cost yet effective way to lower maternal mortality by reducing the number of high-risk births, pregnancies that are too early, too close, too many, or too late pose adverse health consequences for the mother, child, and family (2).

FP is critical to individual health and well-being and to a country's economic development. Global experience confirms that without broad availability and use of effective modern FP methods, fertility levels would remain unsustainable high, the problem of maternal and child mortality would continue to be intractable, and national development would be held back (3).Waiting at least two years from the previous birth to attempt another pregnancy reduces the risk of illness and death for mothers, as well as new born, infants, and children. In addition to the health benefits, spacing births allows parents to devote more time to each child in the early years, easing pressures on the family's finances and giving parents more time for income-generating activities (4).

Modern contraceptives (MC) methods are broadly divided in to two categories. These are short acting and long acting and permanent methods (LAPM) (5). LAPMs is: intrauterine contraceptives devices (IUCD), implants, female sterilization and vasectomy. IUCD and implants are long-acting reversible contraceptives (LARC) methods; when they are removed, return to fertility is prompt. Copper-containing IUCD is effective for up to 12 years. Implants, depending on the type, last for up to 3–7 years. Female sterilization and vasectomy on the other hand are permanent methods and irreversible (6).

LAPMs are appropriate choices for people who want safe and effective protection against an unintended pregnancy. The long-term effectiveness and reversibility of the IUCD and implants make these methods suitable for women and couples who want to space their pregnancies, for young people who want to delay marriage and parenthood, and for women who discontinue other methods but still want to avoid pregnancy. Vasectomy and female sterilization are best suited for individuals and couples who are certain they do not want more children although LARCs are also options for women who want to stop childbearing (7).

According to the World Health Organization (WHO) medical eligibility criteria for contraceptive use, almost all women can use IUCD, implants, and/or sterilization, and almost all men can use vasectomy (8). LAPMs are also cost effective for programs over time, can result in cost savings for governments, and contribute directly to reaching national and international health goals (8). LAPM are critical to the contraceptive method mix and choice, because they prevent unwanted pregnancies, avert abortions, and help to reduce maternal and child mortality, are highly effective, safe, and generally low cost over time, not require continuous resupply, suitable for a range of reproductive intentions for delaying, spacing, or limiting births and appropriate for almost all women, Can be used over a longer period of time, with less discontinuation rate (9).

LAPMs are highly effective 1 in 125 women or even many fewer become pregnant in the first year of use with various LAPMs, whereas failure rates with resupply methods are 1 in 33 (injectables), 1 in 12 oral contraceptives pills (OCP) and 1 in 7 (condoms) (4). Percentage of women experiencing unintended pregnancy with in the first year of typical use for OCP is (8%), injectable (3%), female sterilization (0.5%) ,male sterilization (0.15%), implanon (0.05%), IUCD (0.8%) and percentage of women continuous use after one year of use for OCP is (68%), injectable (56%), IUCD (78%),implanon (84%), Female and male sterilization 100% (8).

LAPMs offer great cost-effectiveness overtime. The IUCD, vasectomy and implants are considered the three most cost-effective methods when used for at least 3years (3). From study in the United States annual medical costs of unprotected pregnancy were estimated to

be \$4.5 billion, and 53% of these were attributed to imperfect contraceptive adherence. If 10% of women aged 20–29 years switched from OCP to LARC, total costs would be reduced by \$288 million per year. Imperfect contraceptive adherence leads to substantial unintended pregnancy and high, avoidable costs. Improved uptake of LARC may generate health care cost savings by reducing contraceptive non-adherence (10).

LAPMs effectively prevent unwanted pregnancy, abortion, maternal morbidity, and transmission of HIV to newborn, all drain scarce health system resources. LAPMs do not require continuous resupply, thus reducing the on-going burden on health care providers and systems. Discontinuation of LAPMs is much lower than with continuous resupply methods. Discontinuation rates worldwide after one year was much lower for implants (6%) and IUCD (16%) than for OCP (48%) and injectables (49%) (4).

Contraceptive use has increased worldwide over the last decade. Yet, Africa like many other regions of the developing world continues to have a high unmet need for FP. Approximately 25% of women and couples in sub-Saharan Africa who want to space or limit their births were not using any form of contraception (3). Unmet need for MC was still very high in 2012, especially in sub-Saharan Africa (53 million [60%] of 89 million), south Asia (83 million [34%] of 246 million), and western Asia (14 million [50%] of 27 million). Moreover, a shift in the past decade away from sterilization, the most effective method, towards injectable drugs, led to increases in unintended pregnancies (11).

### **1.2 Statement of the problem**

WHO report of 2012 indicated that globally, there were 2 million women who didn't want to get pregnant but aren't able to did anything about it. There are also 21.6 million unsafe abortions each year, 8 million disabilities or complications from unsafe abortions. Three millions of those do not get the care they need and 47,000 women die every year due to pregnancy-associated conditions (12). Throughout history, in every country, women find themselves faced with a pregnancy they did not intend. Some of them were unable to get contraception, some unable to negotiate using contraception with their partners and for others, their methods may have failed (13).

Worldwide there were an estimated 287 000 maternal deaths yielding 210 maternal deaths per 100 000 live births among 180 countries in 2013. Developing countries account for 99% (286 000) of the global maternal deaths, the majority of which are in sub-Saharan Africa (179 000) accounting for 62% (14). It is estimated that 210 million pregnancies occur each year, 80 million are unintended and 33 million of these are due to ineffective use of a contraceptive method (15). Approximately one-third of maternal deaths could be avoided annually if women who did not wish to become pregnant had access to and used effective contraceptives (16).

Each year, nearly 50 million of the 190 million women who become pregnant undergo abortions to terminate unwanted pregnancies, and about 13% of maternal deaths are caused by complications of abortion (16). More than half of all pregnancies are unintended, and globally, large disparities exist in access to the most effective methods of contraceptives (15). More than 350 million couples worldwide have limited or no access to effective FP methods, especially to LAPMs, the most effective and cost-effective of all (4). Using contraception clearly indicates that a woman does not want to become pregnant. Yet every year millions of women become pregnant while using contraception. If LAPMs were used in place of less-effective methods, it substantially reduces the number of unintended births and induced abortions, and can help families and countries achieve their health goals (17).

The utilization of LAPM is very low, FP users are still concentrated on short-term methods, which requires repeated revisit to health institution to resupply (4).From Demography and Health survey data of 20 countries the contribution of contraceptive failure to unintended births and induced abortions is substantial. On average, one of every three unintended births resulted from contraceptive failure. In four countries, more than half of unintended births were conceived while the women were using contraception. More than half of all induced abortions in the six countries studied resulted from contraceptive failure. First year contraceptive failure rates for permanent methods are almost zero, and LARCs are also highly effective. But in average failure rate for short-term methods were 4.6%. Induced abortion rates would be reduced by between one and two thirds if LAPMs were used (17).

Ethiopia is the second most populous nation in Africa next to Nigeria with 95.9 million in 2014 (18). It is fast growing with 2.7% per year. The maternal mortality ratio (MMR) is 676 per 100 000 women aged 15 to 49, with an estimated 32% of all maternal deaths related to unsafe abortions (19, 20). From Ethiopian Demographic and Health Survey(EDHS) of 2011, total fertility rate (TFR) was 4.8, contraceptives prevalence rate (CPR) for all women age 15-49 was 29% with 27% were user of MC, The most common MC used by each group of women were injectables (21%), and 25% of currently married women had an unmet need for FP services, 16% had a need for spacing, and 9% had a need for limiting (19, 21).

LAPMs utilization rate was very low, which include female sterilization (0.1%), IUCD (0.8%) and implants (3.4%). The prevalence of LAPMs in Oromia is also similar to national level, female sterilization (0.2%), IUCD (0.3%), implant (3.4%) and user of any modern methods accounted for 24.9% in Oromia. Twelve-month contraceptive discontinuation rate for all methods was 37% in 2011. The highest rate was pill (70%), followed by the male condom (62%) (19).

FMOH has been giving increased attention to expanding the FP method mix, especially the expansion of LAPMs, even at the lower service delivery level. MC services are made accessible nearly at all major urban areas in Ethiopia and at lower or no cost (22), but the utilization and intention to use LAPMs remained low (19). Similar to national and regional level its utilization is very low in the present study area, so scientific evidence is important for planner and decision makers. This study has assessed intention to use and associated factors of LAPMs, The findings of this study is believed to contribute to the scale up of LAPMs and indicator for potential demand for LAPMs of contraceptives.

## 2. Literature Review

#### 2.1 Intention to use long acting and permanent contraceptive methods

Intention to use is predictive of future use of those methods. From the study conducted on prevalence and factors affecting use of LAPMs in Jinka town showed that Three fourth (76.1%) of the women had ever heard about implants. Almost two third of women had intention to use LAPMs (23). From cross-sectional study conducted on intention of women to use LAPMs in Wolaita showed 38% of women had the intention to use LAPMs. The women who had no myths and misconceptions on LAPMs and women who attained secondary and higher level of education were found to have more intention to use LAPMs (24).

As shown from study conducted in Adgirat town Intention to use LAPMs was 48.4%. Intention to use LAPMs was higher among women who knew at least one of LAPMs and women who do not want to have birth within the next two years. Intention to use LAPMs was less among women who perceive poor support from their husbands and those who perceive LAPMs are harmful for the womb. Concern on return of fertility and insertion and removal procedures were also another factors (25).

### 2.2 Factors affecting utilization of LAPMs

#### 2.2.1 Socio-demographic factors

From Study done in Pakistan majority (65%) believed that contraception is not permitted in religion (26). Beside this several barriers identified to use modern contraceptive methods in general and to the use of LAPMs in particular. The barriers mentioned ranges from lack of knowledge, cultural and religious beliefs (27-29).Maternal age is an area where FP has perhaps had its greatest impact. As shown from studies done in Malawi, Kelala town, Jimma and Jinka (Ethiopia) showed age of mother is significant association with contraceptives use (23, 26, 30, and 31).The numbers of living children in the family also influence the tendency of contraceptive use (26).

#### 2.2.2 Reproductive factors

High parity restricts women educational and economic opportunities, thereby limiting their potential for empowerment broadly, as well as their ability to safeguard the health and economic well-being of the family and community at large. Low educational attainment further perpetuates high fertility, as these women tend to have less knowledge and access to FP options (32).

#### 2.2.3 Socio-economic factors

Educated women are more likely to know about contraceptives and approaches services providers than uneducated women. Education is the most important factor associated with better knowledge about contraceptive methods and it's utilization (33-48). Women whose partners completed, and secondary plus level of education were more likely to use contraceptives than uneducated one (39, 40). Utilization of contraceptives is also affected by difference in availability of social services such as access of information to FP message. It is also affected by residence of clients (32, 41). According to Ethiopian Mini Demography and Health Survey (EMDHS) of 2014 currently married women in urban areas are more likely than their rural counterparts to use any MC (21). Both LAPM and other methods use were greater in urban areas than rural areas (49).

Occupation and marital status of women has also effects on utilization of contraceptives. As indicated by study done in Kelala, North Ethiopia, occupation of women has statistically significant association with contraceptives use (30). From study conducted in Malawi showed, work status is one of the determinants of contraceptive use .Study done in Tigray region northern Ethiopia also support the above literature (26, 43).

Woman's contraceptive knowledge and it is utilization is influenced by socio-cultural norms such as husband dominance and opposition to use, and low social status of women. Support, discussion with partner or spousal communication is important factor that affects use of LAPMs (39, 40, 50-52). From study done in Pakistan, the perception that her in-laws support FP use was the strongest determinant of her intentions to use contraceptive methods. The

strongest obstacle to a woman's forming an intention to use contraceptive methods was her belief that FP decisions were made by husband and fears that FP would harm a woman's womb lowered woman's intentions to use methods requiring procedures, such as the IUCD and female sterilization (49).

Exposure to mass media contributes to an effective way towards contraceptive use. Exposure to information on television, radio and print media can increase knowledge and awareness of new ideas, social changes, and opportunities can affect an individual's perceptions and behavior, including those about FP methods. In EDHS2011 among Women age 15-49 34% via radio and 18% via television reported exposure to family planning messages (19).

#### 2.2.4 Individual related factors to intention to use LAPMs

Presence of myths and misconceptions were factors that affects contraceptives utilization. Women who had no myths and misconceptions on LAPMs were found to have more intention to use LAPMs compared to women who had myths and misconceptions (24, 53). A key factor hindering FP use is the fear of side effects such as, excessive bleeding, infertility, or cancer and other beliefs like if a woman does not give birth to all of the children in her womb; she may develop cancer (29).Use of LAPMs, particularly implants is growing steadily. However, many FP users are continuing to rely on short-term methods mainly the injectables, partly because of misconceptions about LAPMs such as it can weaken women bodies and impair their ability to perform manual labor (19, 31).

Fear of side effects is one of the main limiting factors to use LAPMs of contraceptives (25, 26, 54, and 55). As indicated from studies, participants perceived the method to be linked with excessive weight gain weight loss and amenorrhea. Knowledge of female sterilization was limited, the method was generally perceived as one that a woman would select not out of choice, but rather out of necessity, in cases where another pregnancy could threaten her life or when other methods had failed. Male sterilization was a relatively unknown method. Participant's likened male sterilization to castration (29). The study showed that the main reasons for not accepting LARC was developing side effects and fear of infertility (43).

Knowledge of contraceptive has significant association with the use of LAPMs (25, 39). Having information on MC was positively associated with its use. Lack of knowledge was the most common reason why potential clients had not undergone the procedure for permanent methods (54). Study in Sudan showed almost two thirds of the women with good knowledge of FP reported using the MC (44). From Ethiopian MDHS2014 proportion of all women who knew about female sterilization, male sterilization, IUCD and implants were 38.6%, 10.1%, 37.2% and 75% respectively (21). Lack of adequate knowledge on LAPMs encouraged many couples to choose the more familiar short-acting methods. A previous users who had a negative experience can help spread misinformation about LAPMs (53).

From study on five region of Ethiopia by MSIE identified the following as key drivers of modern FP use: easy availability of the method, social and spousal support and communication, knowledge about economic and health benefits of FP and correct knowledge of effectiveness and side effects about specific modern methods. It also showed that almost all urban and rural respondents were aware of short-term FP methods wich is not the case for LAPMs. It also indicated urban (77%) and rural (47%) of the respondents were aware of at least one long-term method. Only one-third of urban respondents and 17% of rural respondents had heard of permanent methods (53).

As indicated from different studies the main limiting factors to use LAPMs were lack of knowledge and perception of LAPMs (39, 50). But Study conducted in Rwanda found no evidence that lack of knowledge of contraceptive methods were barriers to FP use and factors associated statistically with increasing the likelihood of not using a method was hearing FP message in the media (56). Knowledge of permanent methods is limited to tubal ligation as shown from study in Pakistan that only 22% of women had knowledge of vasectomy as permanent method in men (45). Study in Nigeria indicated that Knowledge about LAPMs varied by method. However, misinformation about the IUCD abounds, including its perceived side effects and the belief that it is harmful to a woman's sex partner (29).

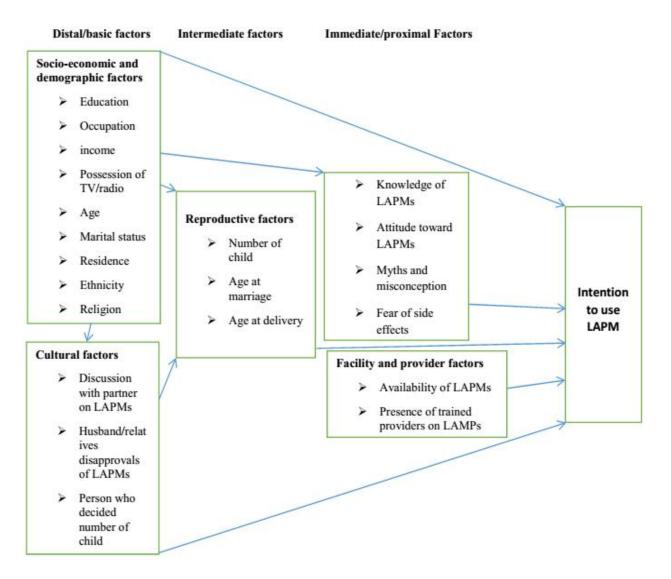
#### Attitude toward LAPMs, method availability and switch

Study in some part of Ethiopia showed that more women had negative attitude to practice LAPMs. The women who had a positive attitude were found to have more intention to use

LAPMs compared to women who had a negative attitude (24, 34, and 44). Study in Cape Town, South Africa indicated method convenience or availability and health care provider recommendations were found to most commonly influence method choice (50), and when women choose to use FP methods, they had no option for LARC (30). Study in Pakistan revealed that 19.4% of the women discontinued use of their IUCD at ten months and, of these women, side effects, excess menses and lack of comforts were the main reason cited for discontinuation (57).

As shown above from different literature socio-demography and reproductive variables of the study participants were associated with utilization of contraceptive use, in contrast to this, study conducted in Goba town (54) showed there was no association with socio demographic variables to LAPMs of contraceptives use. This study has assessed the associations of reproductive, demographic, socio-economic and other individual related factors with intention to use LAPMs of contraceptives.

# **Conceptual framework**



**Figure 1. Conceptual framework** 

# Significance of the study

The result of this study is expected to be useful for governmental and non-governmental organization to design appropriate intervention plan to improve utilization of LAPMs and give priority to the area that needs great attention. The findings could also be helpful for health care system in decreasing frequency of visits by clients and decrease problem of contraceptives failure rates, it saves time for clients from repeated revisit to health facility for resupply methods, they use their time for other activities. In addition, the result of this study is also help as a base line for program planners.

# **3. OBJECTIVES**

# **3.1 General Objective**

To assess intention to use long acting and permanent contraceptives methods and associated factors among family planning clients in Nekemte town, March, 2015

## **3.2 Specific objectives**

- 1. To assess intention to use long acting and permanent methods of contraceptive among family planning client in Nekemte town
- 2. To assess knowledge of long acting and permanent methods of contraceptives among family planning clients in Nekemte town
- 3. To assess attitude toward long acting and permanent methods of contraceptives among FP clients in Nekemte town
- 4. To identify factors associated with intention to use long acting and permanent methods of contraceptives among family planning client in Nekemte town

# 4. METHODS AND MATERIALS

## 4.1 Study area and period

The study was conducted in Nekemte town, Oromia Regional State in March, 2015. This town is 334km to the west from Addis Ababa. Administratively subdivided in to six administrative sub-cities, each of them has two kebeles. According to 2007 Ethiopian national census projected to 2015, Nekemte Town has population of 104,806 of whom 53,484 males and 51,322 are females. According to Nekemte Town Health Office reports, there are 2 health centers, 1 referral hospital 5 non-governmental clinics, 44 private clinics, 31 drug venders, 6 drug whole sales and 11 pharmacies in the town. The roads cross the town in four directions, to Addis Ababa, to Asosa, to Jimma and to Bure.

## 4.2 study design

Health facility based cross sectional study design was used.

## 4.3 .1 Source population

Source population was all women of short-term family planning users from health facilities in Nekemte Town.

## 4.3.2 Study population

The study population was a randomly drawn sample of short- term family planning users in health facilities providing FP service in Nekemte Town.

## 4.3.3 Inclusion criteria

All women who were short term family planning users and came to health facilities for FP services during data collection period and had willingness to participate in the study was included.

### 4.4 Sample size determination and sampling techniques

#### 4.4.1 Sample size determination

The sample size was determined using a formula for estimation of single population proportion with assumption 95% confidence level, 5% margin of error and 48% proportion of women who intended to use LAPMs in future (25).

The required sample size was:

n=
$$\frac{(Z\alpha/2)^2 P (1-P)}{d^2} = \frac{(1.96)^2 (0.48 \times 0.52)}{(0.05)^2} = 384$$

Assumption:

P= proportion of women who intended to use LAPMs =48%

d=Margin of error (d) =5%

Z /2= standardized normal distribution at 95% CI=1.96

Since, N <10,000

Using finite population correction formula

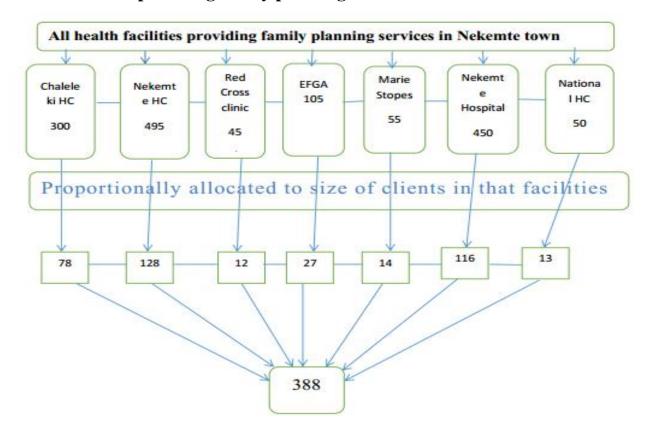
$$nf = \frac{n}{1 + \left(\frac{n}{N}\right)} = \frac{384}{1 + \left(\frac{384}{4321}\right)} = 353$$

Hence, the calculated sample size was 353. Adding a 10 % (35) non-response rate gives the required sample size n = 388

#### 4.4.2 Sampling technique

The sample subjects were selected from all health facilities providing FP services in the town considering proportion of client flow, which was observed from Nekemte town quarter report of October-December, 2014 to sample size. Systematically selected short term FP attendants in health facilities were included in to the study. Systematic random sampling technique with k=N/n=1500/388=4 was used. Then using lottery method the first client to be interviewed was identified and using sampling interval of 4, interviewing clients was continued until allocated sample size of that facility was reached.

To assess facilities and provider related factors, interview with ten FP service providers was done and seven of the health facilities providing FP services in the town were assessed for availability of LAPMs supplies and presence of trained FP providers.



## Health facilities providing family planning services in Nekemte Town

## Figure 2. Schematic presentations of sampling techniques, Nekemte Town, March 2015

$$ni = \frac{Ni}{N} \times nf$$

Where

ni	Sample of FP clients in each health facility
Ni	Total FP clients in each health facilities
Ν	Total number of FP clients in Nekemte Town
nf	Finite corrected population
i	Each health facility providing FP services in Nekemte Town

## 4.5. Measurement and variables

## 4.5.1 Variables

## 4.5.1.1 Dependent variable

Intention to use LAPM

## 4.5.1.2 Independent variables

- ➢ Residences
- $\succ$  Education
- ➤ Ethnicity
- ➢ Religion
- ➤ Maternal age
- ➢ Occupation
- > Marital status
- Partner's education
- Partner's occupation
- > Number of children
- > Monthly income
- ➢ Age at marriage

- ➤ Age at first delivery
- Person who decided number of child
- Discussion with partner on FP methods
- Discussion with
   HEWs/other HP on LAPMs
- ➢ Knowledge of LAPM
- Attitude toward LAPMs
- Myths and misconception about LAPMs
- Possession of functional TV/radio

#### 4.5.2. Measurements

Knowledge of study participants was measured by using a total number of 10 items of knowledge questions, which was taken from literature (43) with minimum score 0 and maximum 10. The score is computed by adding each response. It was then categorized based on percentage of knowledge of different characteristics of LAPMs of contraceptives as "high" those who knew 8 and above, "moderate" those who knew 6-7 and "low" those who knew less than or equal to 5.

Similarly, attitude of FP clients were measured using likert scale whether the clients strongly agree, agree, neutral, disagree and strongly disagree toward LAPMs. Then attitude toward LAPMs was categorized into "strongly disagree/disagree "as "disagree", "neutral" as it is and "strongly agree/agree" as "agree". To check association with intention to use LAPMs, attitude of FP clients towards LAPMs were categorized as positive attitude to those scored above the mean and negative attitude to those scored the mean and below the mean on attitude score after computing the response of the items.

#### **4.6 Data Collection procedures**

The questionnaire was adopted from different literature (19, 24, 25, 43) developed for similar purposes by different investigators. The questionnaire was translated in to Afan Oromo and back to English by independent persons to ensure its consistency. The questionnaire was pretested in Gimbie health center, which is located in West Wollega zone and based on the result, it was modified as necessary. Interviewers administered pre-tested structured questionnaire was used for data collection. Data were collected by six diploma nurses under supervision of one BSc nurse and one public health officers. All systematically selected short-term FP users were interviewed from each health facilities. One or two of FP service providers were interviewed per each health facility.

### 4.7 Data quality management

To assure quality of data properly designed data collection instrument was used. Six diploma nurses as data collectors and one BSc Nurse and one BSc public health officer as a supervisor who are fluent in local language was recruited then two days training was given on questions in the questionnaire, on interviewing techniques, purpose of the study, and importance of privacy, discipline and approach to the interviewees and confidentiality of the respondents.

The questionnaire was translated from English to Afan Oromo and then translated back to English by another person to check for consistency. Questionnaire was pre-tested before data collection on 5% of FP clients in Gimbie health center in West Wollega Zone, and necessary correction was made. The collected data were daily reviewed and checked for completeness and consistency by both supervisors and principal investigator. Then Epi data version 3.1 was used to enter data.

## 4.8. Data processing and analysis

Data were checked for completeness and entered into E pi data version 3.1 and transported to SPSS version 21 statistical software for analysis. After cleaning data for inconsistencies and missing value in SPSS descriptive statistics such as mean, Standard deviation (SD), percent and frequency was performed. Bivariate analysis was done in binary logistic regression and all independent variables which have association with the dependent variable at p value of less than 0.25 were selected for multivariate binary logistic regression analysis. Multicolinarity was checked before running multivariate binary logistic regression. Then multivariable logistic regression using step-wise selection method was done to identify predictors of intention to use LAPMs at P value < 0.05. Finding was presented using Odds Ratio (Or) and their 95% confidence intervals. Data from FP service provider interview were translated and analyzed manually and presented in narrative ways.

## 4.9 Operational definition and definition of terms

Long acting and permanent contraceptives method (LAPM); are those contraceptives that protect pregnancy from three years to life long. (Implants, IUCD, tubal legation and vasectomy)

**Implant**: a small rod that is inserted under the skin in the upper arm by health care providers wich releases a hormone and protects pregnancy from three to five years based on their types.

**Tubal legation (female sterilization**): Surgical contraceptive methods, whereby the fallopian tubes undergo bilateral ligation or interruption.

**Male sterilization (vasectomy):** Surgical contraceptive method, whereby the vas deferens undergoes bilateral ligation or interruption.

**Intention to use LAPM:** clients those are not using LAPM at time of data collection but have planned to use this method at any time in future.

**Short-term family planning users**: are those FP clients who have been using condoms, OCP and DMPA (Depo Provera)

FP clients: clients come to use short term methods (Depo provera, OCPs and condoms).

## 4.10. Ethical considerations

Clearance was obtained from the ethical review board of Jimma University College of Public Health and Medical Sciences and permission to conduct the study in health facilities was secured from Oromia Regional Health Bureau, Nekemte Town Health Office and respective health facilities. Informed verbal consent was obtained from each study participants after clear explanation about the purpose of the study, Confidentiality and privacy of the respondent were maintained. Detail explanation to the study participants on the fact that data collection procedure had no any harm to them and other community and data were used only for research purpose in aggregated manner.

## 4.11. Dissemination plan

The result of this study will be presented to Jimma University College of Public Health and Medical Sciences academic staff. It will also be communicated to Oromia Regional Health Bureau and Nekemte Town Health Office. The findings may also be presented in different seminars, meetings, workshops and attempts will be made to publish in peer-reviewed national and international journals.

## 5. Result

#### 5.1 Socio demographic characteristics of the respondents

A total of 383 respondents were included in this study (98.7%). The mean age of study participants were 24.9 (SD= $\pm$ 4.6) with a range of 15 to 40 years. Considerable number of the study participants (48.3%) were within the age group of 15-24 years. Among the study participants, majority (83%) were Oromo, 207(54%) were protestant, and 293(76.5%) were urban dwellers. Almost all (97.9%) of them were married. One hundred twenty (31.5%) of them had attended primary education and about half (50.9%) of them were housewives (Table1)

Regarding to intention to use LAPMs with socio demographic variables more than half 98(53%) of the respondents were in 15-24 age groups, protestant 117(56.5%), Urban 172(58.7%), those attended higher education 68(70.8%) and employed 51(67.1%) had intention to use LAPMs (Table1). From socio demographic variables residence, ethnicity, educational status, occupation of participants, partner's education and occupation has significant association with intention to use LAPMs (Table1)

Characteristic		N (%)	Intention to	use LAPMs	COR(95%CI)	<b>P-value</b>
			Yes, N (%)	No, N (%)		
Age	15-24	185(48.3)	98(53.0)	87(47.0)	1.0	
	25-34	178(46.5)	93(52.2)	85(47.8)	0.9(0.64,1.47)	0.890
	34	20(5.2)	9(45.0)	11(55.5)	0.7(0.29, 1.84)	0.499
Ethnicity	Oromo	318(83.0)	178(56.0)	140(44.4)	1.0	
	Amhara	49(12.8)	19(38.8)	30(61.2)	$0.5(0.27, 0.92)^*$	0.027
	Gurage	16(4.1)	4(25.0)	12(75)	$0.2(0.05, 0.71)^*$	0.013
Religion	Orthodox	130(33.9)	63(48.5)	67(51.5)	1.0	
	Muslim	43(11.2)	17(39.5)	26(60.5)	0.7(0.34, 1.40)	0.310
	protestant	207(54.0)	117(56.5)	90(43.5)	1.4(0.89, 2.15)	0.259
	Others**	3(0.8)	3(100.0)	0(0.0)		0.999
Residence	Urban	293(76.5)	172(58.7)	121(41.3)	$3.2(1.9, 5.2)^*$	< 0.001
	Rural	90(23.5)	28(31.1)	62(68.9)	1.0	
Educatio	Illiterate	64(16.7)	13(20.3)	51(79.7)	1.0	
nal status	1-8 grade	120(31.3)	57(47.5)	63(52.5)	3.6(1.7, 7.2.)*	< 0.001
	9-12 grade	103(26.9)	62(60.2)	41(39.8)	5.9(2.9, 12.)*	< 0.001
	12+ grade	96(25.1)	68(70.8)	28(29.2)	9.6 (4.5, 20.2)*	< 0.001
Marital	Married	375(97.9)	198(52.8)	177(42.2)	1.0	
status	Others	8(2.1)	2.0(25.0)	6(75.0)	0.3(0.1,1.5)	0.265
Occupati	Housewife	195(50.9)	91(46.7)	104(53.3)	1.0	
on	Merchant	68(17.8)	32(47.1)	36(52.9)	1.0(0.6, 1.8)	0.955
	Employed	76(19.8)	51(67.1)	25(32.9)	$2.3(1.3, 4.1)^*$	0.003
	Others***	44(11.5)	26(59.1)	18(40.9)	1.6(0.8, 3.2)	0.139
Partner	Illiterate	21(5.6)	5(23.8)	16(76.2)	1.0	
Educatio	1-8 grade	94(24.9)	39(41.5)	55(58.5)	2.3 (0.8, 6.7)	0.139
nal status	9-12 grade	120(31.7)	61(50.8)	59(49.2)	3.3 (1.1, 9.6)*	0.028
	12+ grade	143(37.8)	93(65.0)	50(35.0)	5.9(2.1, 17.2) <sup>*</sup>	0.001
Partners	Farmer	74(19.7)	27(36.5)	47(63.5)	1.0	
Occupati	Merchant	67(17.9)	29(43.3)	38(56.7)	1.3(0.7, 2.6)	0.411
on	Employed	133(35.5)	81(60.9)	52(39.1)	$2.7(1.5, 4.9)^*$	0.001
	Other	101(26.9)	61(60.4)	40(39.6)	$2.6(1.4, 4.9)^*$	0.002

Table 1. Socio demographic characteristics of study participants (n=383) and intention to use LAPMs, Nekemte Town, March 2015

\*\* Catholic

\*\*\* Daily labor, waiter, students...

\*significant at p-value <0.25

#### 5.2 Socio economic status of the study participants

Above half 108 (54.3%) of respondents have monthly family income of greater than 2000 Ethiopian Birr (ETB) and about a quarter 90(23.5%) of respondent have monthly family income of less than 1000 ETB. The median family income was 2500ETB, the range lies between 200 to 9000 ETB. More than half of the participants reported they have television 225(58.7%) and radio 245(64%). Majority 327(85%) of study participants were accessible to any FP messages in the past few months. The sources of the messages were, from health professionals 217(66.2%), neighbors/friends/relatives 38(11.6%), schools 10(3%) and mass media 123(37.5%). Above three fourth 295(77%) of participants were discussed with HEWs and or other health professionals on the practice of LAPMs of contraceptives in the last few months. Majority 326(85%) of the respondents discussed with their partner on FP methods.

#### **5.3 Reproductive characteristic of the respondents**

Nearly half 178 (47%) of the respondents were married at age of less than eighteen and 261 (80.3%) of them gave birth at the age of greater than or equal to 18. The mean age of FP clients at marriage and first delivery was 19.2 (SD = $\pm$ 2.7) and 20.7 (SD=  $\pm$ 2.7) years respectively. Fifty eight (15.1%) of the respondents have never given birth. Two hundred thirty three (71.7%) of the respondents had gave birth of less than or equal to 2 children. The median number of born children to the respondents was two, ranging from 1 to 9 children. Nearly above three fourth 292(76.5%) of the respondents do not want to have child within the coming 2 years or soon. Three forth 220(75.3%) of the respondents decided their number of children after joint discussion with their husbands whereas 48(12.5%) and 20(5.2%) decided their number of children by husband and wife respectively.

From socio-economic and reproductive variables, those respondents who reported they had functional television 128(56.9%) and radio 140(57.1%), family monthly income of less than one thousand ETB 52(57.8%), age at marriage greater than eighteen 121(60.5%) and age at first delivery greater than eighteen 143(54.8%) had intention to use LAPMs. Those respondents who had less than or equal to two children 129(55.4%) and those mothers decided their number of child by joint discussion with their husbands 178(57.1%) had also intention to use LAPMs (Table2). Possession of functional radio and television, age at

marriage and age at first delivery, number of child and person who decided number of children participants want to have has significant association with intention to use LAPMs in bivariate binary logistic regression (Table2).

Characteristic		Intention to	use LAPMs	COR(95%CI)	<b>P-Value</b>
		Yes, N (%)	No, N (%)		
Have functional TV	Yes	128(56.9)	97(43.1)	1.0	
	No	72(45.6)	86(54.4)	0.6(0.42,0.96)*	0.029
Have functional	Yes	140(57.1)	105(42.9)	1.7(1.14, 2.64)*	0.010
radio	No	60(43.5)	78(56.5)	1.0	
Income in Ethiopian	<1000	52(57.8)	38(42.2)	1.3(0.80,2.16)	0.280
Birr	1000-2000	42(49.4)	43(50.6)	0.9(0.56,1.56)	0.810
	>2000	106(51.)	102(49)	1.0	
Age at marriage	<18	77(43.3)	101(56.7)	1.0	
	18	121(60.5)	79(39.5)	$2.0(1.33, 3.03)^*$	0.001
Age at delivery	<18	23(35.9)	41(64.1)	1.0	
	18	143(54.8)	118(45.2)	$2.2(1.23, 3.80)^*$	0.008
Number of child	2	129(55.4)	104(46.6)	1.0	
	3	37(40.2)	55(59.8)	$0.5(0.33, 0.88)^*$	0.014
Who decided	Husband	16(34.8)	30(65.2)	1.0	
number of child	Wife	4(20)	16(80)	0.5(0.13, 1.64)	0.236
	Both	178(57.1)	134(42.9)	2.5(1.30, 4.76)*	0.006

Table 2. Socio-economic and reproductive variables on intention to use LAPMs of
contraceptives, Nekemte Town, March, 2015

\*significant at p-value <0.25

### 5.4 Family planning service provider's interview in Nekemte Town March, 2015

Ten family planning service providers from public, private for profit and non-governmental health facilities were interviewed and seven facilities were also observed for availability of LAPMs of contraceptives supplies, equipment's and trained providers on LAPMs. From the total of ten FP providers interviewed, eight were females, two midwifes, four health officers and four clinical nurses in profession with 13.8 mean years of work experiences.

Out of the seven health facilities observed, three of the health facilities had trained health providers on all forms of LAPMs, two of the facilities had trained providers only on implants, one facility had trained provider on IUCD and implants, and one of the other facility had no trained providers on all form of LAPMs (Table3). Regarding, availability of LAPMs supplies, three of the facility had only implants, one facility had both implants and IUCD and the other three of the facilities had all the necessary supplies and equipment's for LAPMs of contraceptives services (Table3)

Table 3. Supplies of LAPMs and trained FP providers on LAPMs in health facilities inNekemte Town March, 2015

S	Health	LAPMs available				Trained provider on LAPMs			
n.	facilities	Implan	IUCD	Tubal	Vasecto	Implant	IUCD	Tubal	vasect
		ts		ligation	my	S		ligation	omy
1	Red cross C.	$\checkmark$		NA	NA	$\checkmark$		NA	NA
2	Chalaleki HC	✓		NA	NA			NA	NA
3	Nekemte HC	$\checkmark$	$\checkmark$	NA	NA	$\checkmark$	$\checkmark$	NA	NA
4	Nekemte R/H	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	~	$\checkmark$	$\checkmark$	$\checkmark$
5	National HC	$\checkmark$				~			
6	FGAE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
7	MSIE	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

 $\checkmark$ : Presence of supply (equipment's) or trained providers

: absence of supply (equipment's) or trained providers

NA: Not Applicable

#### 5.5 Knowledge of study participants on LAPMs of contraceptives

All the study participants had heard at least one type of long acting and permanent contraceptives methods. From the total study participants, 98.2%, 89.6%, 41% and 13.1% had heard about implants, IUCD, tubal ligation and vasectomy respectively. Vasectomy and tubal ligation were the least known methods from LAPMs of contraceptives. Majority 341(89%) of the study participants aware that IUCD can protect pregnancy for more than 10 years, 264(69%) them had awareness that women become immediately pregnant when IUCD is removed and 172(44.9%) of women had information that IUCD has no interference with sexual intercourse or desire. Majority of women 363 (94.8%) had awareness that implant can protect pregnancy from 3-5 years and 307(80%) of them had knowledge that implant requires minor surgical procedure during insertion and removal. From the total respondents, 304(79%) of them were aware that women become pregnant immediately when implant is removed. Regarding to permanent methods of contraceptives, 243(63.4%) and 109(28.5%) of FP clients had awareness that female sterilization and male sterilizations are not reversible (Table4).

Family planning provider interviewee and who was trained on LAMPs said "Majority of our clients know implants and IUCD but I don't think that clients know about permanent methods particularly male sterilization. They hear and trust what their neighbors or friends said than what we advise or counsel them. Due to minor side effects clients want to discontinue using of these methods which can easily be corrected through advises...."

One of FP service provider said "I have taken training on all form of LAPMs including tubal ligation and vasectomy. Client prefer short term methods due to low awareness on LAPMs in general, even most of the client don't know the availability of male sterilization methods, and client consider female sterilization when other option of FP methods are not appropriate for her. Clients were not properly counseled by providers due to shortage of time...."

After computing knowledge score of the respondents about LAPMs of contraceptives 101(26.4%), 77 (20.1%), 205(53.5%) of the respondents had low, moderate and high knowledge on LAPMs of contraceptives respectively.

Characteristics			Number (%)
Do you know about long acting &permanent metho	ds (LAPMs) of	Yes	383(100)
contraceptives?		No	0(0.00)
	Implants	Yes	376(98.2)
	1	No	7(1.8)
	IUCD	Yes	343(89.6)
Type of LAPM known*		No	40(10.4)
	Tubal	Yes	157(41.0)
	ligation	No	226(59.0)
	Vasectomy	Yes	50(13.1)
		No	333(86.9)
IUCD can prevent pregnancy for more than 10years	S	Yes	341(89.0)
		No	26(6.8)
		Not sure	16(4.2)
Implant can prevent pregnancies for 3-5 years		Yes	363(94.8)
		No	12(3.1)
		Not sure	8(2.1)
After female sterilization pregnancy is not possible		Yes	243(63.4)
		No	89(23.3)
		Not sure	51(13.3)
Women become pregnant immediately when impla	ant is removed	Yes	304(79.4)
		No	31(8.1)
		Not sure	48(12.5)
Women become pregnant immediately when IUCD	is removed	Yes	264(68.9)
		No	32(8.4)
		Not sure	87(22.7)
IUCD has no interference with sexual intercourse o	r desire	Yes	172(44.9)
		No	91(23.8)
		Not sure	120(31.3)
Implants require minor surgical procedure during i	nsertion and	Yes	307(80.2)
removal		No	38(9.9)
		Not sure	38(9.9)
Vasectomy is not reversible		Yes	109(28.5)
		No	96(25.0)
		Not sure	178(46.5)

## Table 4 Knowledge of study participants about LAPMs of contraceptives (n=383) in Nekemte Town March, 2015

\*Multiple answers are possible

#### 5.6 Attitude of study participants toward LAPMs of contraceptives and its side effects

Nearly half 189(49%) of the participants disagree that insertion and removal of implant is not painful. Thirty three percent (126) of participants disagreed that using implant and/or IUCD do not restrict from normal activities or hard work. Nearly half 185(48%) of the respondent disagreed that IUCD cannot harm womb and above one-fourth 112 (29.2%) of the participants disagreed that their husband support LAPMs use. Nearly one quarter 100(26%) of participants didn't agree that tubal ligation and vasectomy is acceptable. One hundred sixty two (42.3%) of participants disagree that implant and/or IUCD cannot cause irregular bleeding. Regarding level of attitude, the mean attitude score is 33.3 (SD= $\pm$ 6. 9). From total respondents, nearly half 176(46%) had negative attitude to have intention to use LAPMs (Table5).

One FP service provider said "...Short term contraceptives are the most preferred methods in our facility, clients are not rely on LAPMs. Most of the time, the reason clients mentioned for not using LAPMs was fear of side effects. Hearing of rumors from neighbors or relatives, such as, it causes infertility, harm womb, moves to other body parts like abdomen and head. Specifically, IUCD may remove or slip out during hard work, implant cause weight loss were the main challenges to provide IUCD and implant here. The influence of partners especially those partners not presented during counseling on FP methods at health facility is also another problem on acceptance of LAPMs. Most of the clients return to health facility within two weeks after insertion for removals, due to disagreement with their husbands."

## Table 5. Attitude of study participants toward LAPMs and its side effects, NekemteTown, March, 2015

characteristics	Disagree	Neutral	Agree
	N (%)	N (%)	N (%)
Insertion and removal of implant is not pain full	189(49.3)	85(22.2)	109(28.5)
Using implant and IUCD cannot cause irregular bleeding	162(42.3)	83(21.7)	138(36.0)
Using IUCD and /or implant don't restrict from normal activities/hard work	126(32.9)	56(14.6)	201(52.5)
		$(2(1 \land 4))$	2(((0.5)
Insertion of IUCD device doesn't cause lose to privacy	54(14.1)	63(16.4)	266(69.5)
Operation for female /male sterilization(surgical method)	100(26.1)	79(20.6)	204(53.3)
is acceptable			
IUCD cannot harm womb	185(48.3)	67(17.5)	131(34.2)
Husband support LAPMs use	112(29.8)	59(15.6)	207(54.8)
For me irregular bleeding due to using implant is not severe	137(35.8)	76(19.8)	170(44.4)
For me loosing privacy during IUCD insertion is not shame full	58(15.1)	59(15.4)	266(69.5)
For me by using IUCD devices restricted from different work activity is highly unacceptable	33(8.6)	36(9.4)	314(82.0)

### 5.7 Myths and misconception about long acting and permanent contraceptives methods

Nearly half 183(47.8%) of the study participants had misconception that implant freely moves in the body and lost at time of removals, 156(40.7%) participants had heard myths or rumor that implant and/or IUCD cause illness and 248(64.8%) heard myths and misconception about LAPMs of contraceptives methods in general.

One FP services provider said "... there is misconception and rumor; for users of implant they think as, it is difficult to carry heavy thing like wood, water.... As my understanding utilization of LAPMs depends on how clients are counseled, addressing the problem of misconception which needs great energy, especially on rumors which says IUCD and implants lost in the body and causes illness may improve utilization." There is also rumors and misconception in the community about LAPMs as another provider of FP illustrated as follows: "There is some shift from Depo provera to implants. Clients differ on accepting LAPMs based on their educational status. Mostly educated use these methods, because those who have education can easily understand when you counsel them than uneducated. Obstacle to provide LAPMs here is that they came with rumors from the community like some woman became ill after using implants or IUCD..."

#### 5.8 Intention to use LAPMs of contraceptives among study participants

The prevalence of intention to use LAPMs was 200(52.2%) (95% CI: 47.2-57.2).Majority 162 (81%) of the participants had intention to use LAPMs within the coming 12 months. Implant 137(68.5%) was the most preferred participants intended to use followed by IUCD 51(25.5%).Intention to use permanent method was 12(6%), of these only 1(0.5%) had intention of vasectomy. The main reasons cited by FP clients for not intending to use LAPMs contraceptives were, fear of side effects 84(45.9%), husband disapproval 57(31.1%) and fear of infertility after use 20(10.9%). some clients mentioned that not acceptable in religious 5 (2.7%) and to have more children 11(6.0%).

A 31years FP provider from one of the facility said, "clients were highly preferred to use implants particularly implanon (three years protection) but they have no interest to use other methods of LAPMs. This may be due to awareness they have on implants. There is also problem of discontinuation rate due to side effects and partner influence or opposition. Irregular bleeding is reason some clients raised when they came for removals. In other word this indicates ways of our counseling that may not include all option of LAPMs during counseling."

#### 5.9 Knowledge, attitude, myths and misconception on intention to use LAPMs

From 327 participants those who had exposure to any FP message in the last a few months 179(54.7%) of them had intention to use LAPMs. Seventy three (59.3%) of respondents who had exposure to mass medias messages on FP, 164(55.6%) those who had discussion with HEWs/ or other health professionals (HP) on LAPMs, 126(61.5%) those had high knowledge level of LAPMs and 135(65.2%) of respondents who had favorable attitude toward LAPMs had intention to use LAPMs, whereas from 176 participants who had unfavorable attitude 111 (63.1%) of them had no intention to use LAPMs. Majority of respondents who had no myths and misconception on LAPMs 96(71.1%), had no fear that implant is freely moves in the body 127(63.5%) and not believed that LARC cause illness 148(65.2%) had also intention to use LAMPs (Table6).

Respondents who had discussion on LAPMs with HEWs or other health professionals, those who had exposure to any FP massage in the last few months, high knowledge level of LAPMs and attitude of participants to ward LAPMs, fear that implants freely moves in the body and misinformation that implants or/and IUCD cause illness are significantly associated with intention to use LAPMs of contraceptives on bivariate binary logistic regression analysis (Table6)

## Table 6. Knowledge, attitude, myths and misconception on intention to use LAPMsNekemte Town, March, 2015

Characteristic		Intention to	) use	COR(95%CI)	P-value
		LAPMs			
		Yes, N (%)	No, N (%)	-	
Exposed to any FP	Yes	179(54.7)	148(45.3)	2.0(1.13, 3.61)*	0.018
Message in the last	No	21(37.5)	35(62.5)	1.0	<u> </u>
Exposed to Mass media	Yes	73(59.3)	50(40.7)	1.4(0.87, 2.14)	0.279
message	No	106(51.7)	99(48.3)	1.0	<u></u>
Had discussion on	Yes	164(55.6)	131(44.4)	1.8(1.12, 2.93)*	0.016
LAPMs with HEWs	No	36(40.9)	52(59.1)	1.0	
Knowledge level of	Low	44(43.6)	57(56.4)	1.0	
LAPMs	Moderate	30(39)	47(61.0)	0.8(0.45, 1.51)	0.537
	High	126(61.5)	79(38.5)	2.1(1.27, 3.35)*	0.003
Attitude toward LAMPs	Negative	65(36.9)	111(63.1)	1.0	<u></u>
	Positive	135(65.2)	72(34.8)	3.2(2.11, 4.87)*	< 0.001
Implant freely moves	Yes	73(39.9)	110(60.1)	1.0	<u></u>
in the body and lost	No	127(63.5)	73(36.5)	2.6(1.74, 3.96)*	< 0.001
Implants/or IUCD	Yes	52(33.3)	104(66.7)	1.0	<u></u>
(LARC) cause illness	No	148(65.2)	79(34.8)	3.8(2.44, 5.76)*	< 0.001
Myths and	Yes	104(41.9)	144(58.1)	1.0	]
misconception LAPMs	No	96(71.1)	39(28.9)	3.4(2.17, 5.34)*	< 0.001

\*significant at p-value <0.25

#### 5.9 Factors associated with intention of respondents to use LAPMs of contraceptives

Socio-demographic and economics, reproductive and other individual related factors like attitude, knowledge were tested for presence of association with intention to use LAPMs. Variables such as residence, education, occupation, possession of functional television, exposure to any FP message, discussion with HEWs on LAPMs, age at marriage, myths and misconception about LAPMs, knowledge and attitude toward LAPMs are found to be significantly associated with intention to use LAPMs in bivariate binary logistic regressions (Table1,2 and 6). These factors were further analyzed using multivariate binary logistic regressions. Finally educational status, attitude toward LAPMs, myths and misconception about LAPMs, misinformation like implants or/and IUCD cause illness and possession of functional television were statistically significantly associated with intention to use LAPMs (Table7).

The result of multivariate binary logistic regression analysis shows, controlling other variables such as reproductive and other socio demography factors, attainment of primary and above level of education was positively and significantly associated with their intention to use LAPMs. Women who attained primary education were 2.6 times more likely to have intention of LAPM use compared to uneducated (AOR=2.6; 95% CI: 1.2-5.8) one, women who attended secondary education were 5 times (AOR= 5.2; 95% CI: 2.2- 12.6) more likely to have intention to use LAPMs compared to uneducated women. Women who attended higher education were 7.6 times (AOR=7.6; 95% CI: 2.9-19.7) more likely to have intention to use LAPMs compared to uneducated women.

Moreover; controlling other factors, women who had positive attitude were found to be two times more likely to have intention to use LAPMs compared to women who had negative attitude towards LAPMs (AOR=2.1;95% CI :1.3-3.4). Furthermore, women who understand that IUCD and/ or implants don't cause illness were two times more likely to have intention to use LAPMs as compared to those who perceived that IUCD and/or implant cause illness (AOR= 2.0; 95% CI: 1.2- 3.5). There was significant association of intention to use LAPMs among women who had no myths and misconception about LAPMs (AOR= 2.1; 95% CI: 1.2-3.6) compared to women who had myths and misconception about LAPMs. Those who had no functional television were 45% less likely to have intention to use LAPMs as compared to those who have functional television (AOR=0.55; 95% CI: 0.32-0.96) (Table7).

Characteristics (n	=383)	Intention to	o use LAPMs	COR(95%CI)	AOR(95%CI)	P-value
		Yes, N (%)	No, N (%)			
Educational level	Illiterate	13(20.3)	51(79.7)		1.0	
	1-8 grade	57(47.5)	63(52.5)	3.549(1.7, 7.2*	2.6 (1.2, 5.8)**	0.020
	9-12 grade	62(60.2)	41(39.8)	5.9(2.9, 12.)*	5.2 (2.2, 12.6)**	< 0.001
	12+ grade	68(70.8)	28(29.2)	9.6 (4.5, 20.2)*	7.6 (2.9, 19.7)**	< 0.001
Residence	Urban	172(58.7)	121(41.3)	3.2(1.9, 5.2)*	2.1(0.8, 5.9)	0.142
	Rural	28(31.1)	62(68.9)		1.0	
Partner education	Illiterate	5(23.8)	16(76.2)		1.0	
	1-8 grade	39(41.5)	55(58.5)	2.3 (0.7, 6.7)	0.7(0.2,2.7)	0.617
	9-12 grade	61(50.8)	59(49.2)	3.3 (1.1, 9.6)*	0.7(0.2,2.7)	0.577
	12+ grade	93(65.0)	50(35.0)	5.9(2.1, 17.2)*	0.9(0.2,4.6)	0.937
Occupation	Housewife	91(46.7)	104(53.3)		1.0	
	Merchant	32(47.1)	36(52.9)	1.0(0.6, 1.8)	0.7(0.4,1.5)	0.394
	Employed	51(67.1)	25(32.9)	$2.3(1.3, 4.1)^*$	0.7(0.3,2.1)	0.543
	Others	26(59.1)	18(40.9)	1.6(0.8, 3.2)	0.9(0.4,2.4)	0.890
Partner	Farmer	27(36.5)	47(63.5)		1.0	
occupation	Merchant	29(43.3)	38(56.7)	1.3(0.7, 2.6)	0.4 (0.2, 1.0)	0.060
	Employed	81(60.9)	52(39.1)	$2.7(1.5, 4.9)^*$	0.6 (0.3, 1.3)	0.197
	Others	61(60.4)	40(39.6)	$2.6(1.4, 4.9)^*$	0.9(0.4, 2.1)	0.927
Ethnicity	Oromo	178(56.0)	140(44.4)		1.0	
•	Amhara	19(38.8)	30(61.2)	$0.5(0.3, 0.9)^*$	0.7(0.3,1.5)	0.326
	Gurage	3(20.0	12(80)	$0.2(0.1, 0.7)^*$	0.5(0.1,2.6)	0.436
Have function	Yes	128(56.9)	97(43.1)		1.0	
TV	No	72(45.6)	86(54.4)	0.6(0.42,0.96)*	0.55(0.3,0.9)**	0.035
Have function	Yes	140(57.1)	105(42.9)	$1.7(1.2, 2.6)^*$	1.3(0.7,2.1)	0.409
radio	No	60(43.5)	78(56.5)		1.0	
Exposed to FP	Yes	179(54.7)	148(45.3)	$2.0(1.1, 3.6)^*$	0.8 (0.3, 1.9)	0.628
message	No	21(37.5)	35(62.5)		1.0	
Discussed with	Yes	164(55.6)	131(44.4)	$1.9(1.1, 2.9)^*$	1.1 (0.6, 2.2)	0.730
HEWs/HP LAP.	No	36(40.9)	52(59.1)		1.0	
Age at marriage	<18	77(43.3)	101(56.7)		1.0	
	18	121(60.5)	79(39.5)	$2.0(1.3, 3.0)^*$	1.2 (0.7, 2.0)	0.427
Discussed with	Yes	185(57.3)	138(42.7)	4.0(2.1, 7.8)*	1.6 (0.7, 3.7)	0.252
partner on FP	No	13(25.0)	39(75.0)		1.0	
Number of birth	2	129(54.4)	104(44.6)		1.0	
	3	37(40.2)	55(59.8)	$0.5(0.3, 0.9)^*$	0.9(0.4, 2.1)	0.791
Age at first	<18	23(35.9)	41(64.1)		1.0	
delivery	18	143(54.8)	118(45.2)	$2.2(1.2, 3.8)^*$	1.3(0.5,2.9)	0.566
Who decide	Husband	16(34.8)	30(65.2)		1.0	
number of	Wife	4(20.0)	16(80.0)	0.5(0.1, 1.6)	0.3(0.1, 1.2)	0.077
children	Both	178(57.1)	134(42.9)	$2.5(1.3, 4.8)^*$	1.5(0.7, 3.3)	0.319
Implant moves	Yes	73(39.9)	110(60.1)		1.0	
freely and lost	No	127(63.5)	73(36.5)	$2.6(1.7, 4.0)^*$	1.4 (0.8, 2.3)	0.213
LARC cause	Yes	52(33.3)	104(66.7)		1.0	
illness	No	148(65.2)	79(34.8)	3.8(2.4, 5.8)*	2.0 (1.2, 3.5)**	0.015
Myths on	Yes	104(41.9)	144(58.1)		1.0	
LAPMs heard	No	96(71.1)	39(28.9)	3.4(2.2, 5.3)*	2.1 (1.2, 3.6)**	0.012
Knowledge level	Low	44(43.6)	57(56.4)		1.0	
on LAPMs	Moderate	30(39.0)	47(61.0)	0.8(0.5, 1.5)	0.8(0.4, 1.6)	0.580
	High	126(61.5)	79(38.5)	2.1(1.3, 3.4)*	1.4(0.8, 2.4)	0.268
Attitude toward	Negative	65(36.9)	111(63.1)		1.0	
LAPMs	Positive	135(65.2)	72(34.8)	3.2(2.1, 4.9)*	2.1 (1.3, 3.4)**	0.005

## Table 7. Multivariable logistic regression analysis on factors affecting intention to useLAPMs of contraceptives among respondents in Nekemte Town March, 2015

\* Significant in COR at p-value <0.25, \*\* significant in AOR at p-value <0.05

### 6. Discussion

This health facility based cross sectional study identified prevalence of intention to use LAPMs of contraceptives and associated factors. The prevalence of intention to use LAPMs in current study is 52.2%. This finding is in line with study conducted in Mekelle Town, northern Ethiopia (53.5%). But, it is higher than finding in Wolaita zone (38%), southern Ethiopia, Goba Town, south east Ethiopia (28.3%) and lower than study conducted in Jinka town, southern Ethiopia (68%) (23, 24, 54, 58). This discrepancy could be explained by difference in study area and setting.

The result of this study show that all the participants heard at least one method of LAPMs and high proportion had awareness about implants and IUCD but low awareness on vasectomy and tubal ligation. This finding is in line with study conducted in Adigrat Town that showed knowledge of implants (94.2%), IUCD(84%), tubal ligation(49.7%), EDHS2011 that showed information about MC was over 97.4% and Rwanda where over 95% of participants know implants (19, 25, 56) but higher when compared with finding Butajira south central Ethiopia that showed knowledge of tubal ligation (19%), Vasectomy( 8.2%), implants (74.4%) and IUCD( 13.1% ) (33).This difference could be due to repeated promotions or advertisements of these methods by different organization over a period of time.

Women who had positive attitude were found to be two times more likely to have intention to use LAPMs compared to women who had negative attitude (AOR=2.1;95% CI :1.2-3.4). This finding is comparable with study conducted in Mekelle town that showed more than half(53%) of married women had negative attitude towards practicing of LAPMs, Wolaita zone in which women who had a positive attitude were found to be 2.5 times more intention to use LAPMs compared to women who had a negative attitude toward LAPMs and Arba Minch Town, southern Ethiopia that showed mothers who had positive attitudes towards LARC were 3 times more likely to utilize than those who had negative attitudes (24,34, 43).

Women who attended primary, secondary and higher level of educations were found to be 2.6 times, 5 times and 7.6 times more likely to have intention to use LAPMs compared to women

who had no education respectively. This finding is in agreement with the study conducted in Arba Minch Town, Kelala Town in [Ethiopia], Pakistan, Rwanda, Iran, Sudan, India and Malawi (26, 30, 34, 38, 42, 44-46). This could be due to the fact that educated women can acquired information from different sources such as internet, written materials. Educated women also more likely to know about contraceptives and approaches FP service providers than uneducated one. This finding is different from study conducted in Goba town that showed there was no statically significant association with LAPMs use and socio-demography (54).

Significant numbers 248(64.8%) of women had myths and misconception to have intention to use LAPMs which is statistically significant (AOR=2.1; 95% CI: 1.2-3.6). This finding is comparable to the finding of Wolaita zone (67.2%), Pakistan that indicated women who had no myths and misconceptions on LAPMs were found to had more intention to use LAPMs compared to women who had myths and misconceptions, and Kenya where a number of participants cited fear of methods shift or expulsion in relation to implants and IUCD and individuals had misinformation that implant could get lost in the body via blood stream, Sudan and Jinka town southern Ethiopia that many participant raised misconception about IUCD during heavy work (23, 24,45,47, 57).

Nearly half 183(48%) of women perceived that implant freely moves in the body and lost at time of removals. Similarly 156(40.7%) of participants perceived that IUCD and/ or implant cause illness wich is significantly associated with their intention to use LAPMs (AOR= 2.0; 95% CI: 1.2- 3.5). wich is comparable with study conducted in Nigeria on factors underlying the use of LAPMs of FP, that indicated there was wide spread belief that the IUCD makes the user more prone to sexually transmitted infection (STI) and infection of the pelvis (29). This could be due to presence of rumors or misunderstanding regarding to LAPMs.

In present study those respondents who had no functional television were 45% less likely to have intention to use LAPMs as compared to those who had functional television (AOR=0.55; 95% CI: 0.32-0.96). This finding is comparable with study conducted in Arba Minch town where strong predictor of long acting contraceptives utilization was the possession of functional radio/or television, and odds of utilizing LARC was four times higher for mothers who had functional radio or television in their home as compared to those

who hadn't (34). This might be due to getting information about FP from mass media that increase awareness.

Nearly half 183 (48%) of respondents had no intention to use LAPMs. Some of the reason they mentioned for not intending to use was fear of side effects and fear of infertility after use. This result is in line with finding of Kelala town (38.90%), Adgirat town fear of side effects (34.5%) and fear of infertility after use (21.1%), Agarafa district (45%), and Jimma zone in [Ethiopia], Nigeria, Rwanda and Kenya (25, 29, 30, 32, 40, 48, and 56). This could be due to high prevalence of myths and misconception regarding to LAPMs.

All most all FP service providers interviewed mentioned high discontinuation rate of LAPMs; the major reason said for discontinuation is side effects (bleeding), partner's influence, rumors, myths and misconception from neighbors and community. This result is in agreement with study in Pakistan that revealed 19.4% of the women discontinued use of their IUCD at ten months and of these women, the majority (69.4%) cited side effect was the main reason for discontinuation. Lack of comfort and excess menses were also the other reason raised for method switch (57). This could be due to inadequate counseling before insertion of these methods on possible side effects of the methods.

Majority of participants 162(81%) intended to use one of the LAPMs in the coming 12 months. Most of the participants wanted to use implants followed IUCD. It is comparable to the study conducted in Mekelle Town that 71% implants, 29% IUCD and Adigrat Town 71.3% implants, 24% IUCD intended to use (25, 58). This could be the result of implanon and IUCD scale up program, due to availability of different type of implants (22), might be due to their reversibility, more health providers can provide LARC since they are non-surgical. This is also important base for availing different methods of contraceptives based on this needs. But in current study intention to use permanent method was very low, this could be due to low knowledge of clients to ward permanent methods or majority of clients were spacers.

In current study, from a total of 323(86.1%) of respondents who had discussed on FP methods with their partners 184(57%) of them had intention to use LAPMs. Above one quarter 57(31%) of the respondents main reason why they were not intended to use LAPMs was due to partner's opposition. This result is in agreement with finding in Kelala town that showed reasons reported by women who were not using contraceptives were partner disapprovals, Goba town, and Pakistan that showed women inability to discuss FP methods with their partners and her perception that husband was the decision maker regarding contraceptives affect their intention to use LAPMs (30, 45, and 54). This might be the result of male dominance or most of the decision is made by husbands including reproductive health matters.

In present study 126(33%) of participants believed that IUCD and/or implants restrict from normal activities or hard work, and 185(48%) of participants fear that IUCD can harm women womb. This finding is in line with study in Pakistan in wich low uptake of IUCD was due to Fear that FP methods could harm a woman's womb lowered a woman's intention to use IUCD (41). This could be due to women had misconception about IUCD and its side effects such as, it causes irregular bleeding and restrict from routine activities or hard work, and harm womb and privacy concern during insertion and removals of methods.

The result of this study shows that 123(35.5%) of respondents source of information about FP was mass media wich is comparable with result of EDHS 2011,that showed 34% and 18% source of information for FP was radio and television respectively (19). This could be the result of advertisement or promotion of FP methods via mass media.

The study tried to include health facilities from public, private for profit and nongovernmental clinic to include FP clients from different perspectives. The study also tried to discovery some important information concerning to LAPMs from providers experiences and facility sides including availability of LAPMs and presences of trained FP services providers on LAPMs. Although husband play an important role in realization of reproductive goals, no any information was obtained from husband perspectives about LAPMs and knowledge and attitude of partner's to ward LAPMs and support to wives concerning LAPMs use was also not assessed wich may also affect intention of women to use LAPMs of contraceptives.

### 7. Conclusion

Depending on the result of this study it is concluded that intention to use LAPMs of contraceptives in Nekemte Town was low and significant proportion of FP clients had negative attitude to have intention to use LAPMs. Some of the factors cited by majority of FP users from not intending to use LAPMs were fear of side effects, husband disapproval, and fear of infertility after use wich is resulted from high prevalence of myths and misconception about LAPMs in the community.

Majority of women had high knowledge concerning LAPMs except that of vasectomy and tubal ligation, but significant number of respondents had unfavorable attitude to have intention to use LAPMs. The low intention to use LAPMs particularly IUCD, tubal ligation and vasectomy mostly related to non-supportive attitude, presence of myths and misconception about LAPMs such as implant or IUCD cause illness and not having educations.

Attainment of primary and above level of education, having supportive attitude toward LAPMs, had no myths and misconception about LAPMs and possession of functional television were positively and significantly associated with intention to use LAPMs of contraceptives.

Health care providers were major source of FP message for clients but there is some gab on awareness of LAPMs particularly on vasectomy and tubal ligation. Majority of the participants don't want to have child within the coming two years but their intention to use LAPMs was low, wich shows counseling gap on some option of FP methods based on their reproductive needs or intention.

### 8. Recommendation

Nekemte Town Health Office, Oromia Regional Health Bureau and all non-governmental organization (Engender health, MSIE, FGAE) working on LAPMs services should continue advertising of LAPMs through different medias.

Nekemte Town Health Office, all health facilities providing FP services in Nekemte Town should design appropriate health education program especially at community level to address problems of rumors, myths and misconception on LAPMs.

Health service providers, HEWs should strengthen awareness raising activities on LAPMs, Information education and communication/behavioral change communication/ should be on factors hindering intention of clients to use LAPMs, particularly to raise favorable attitude toward LAPMs. They should encourage satisfied clients to share their experiences to non-users by using different opportunities to raise supportive attitude and to address problems of perceived fear of side effects.

Family planning service providers should counsel on all option of contraceptives based on client needs. Emphasize should be given to uneducated mothers. Increasing involvement of male's partners during visit for FP service because significant proportion of FP clients has no intention to use LAPMs due to husband dis-approvals.

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### Annex

My name is \_\_\_\_\_\_\_. I am student of master's degree in public health from Jimma University. I am interviewing FP client's intention to use LAPMs of contraceptives and associated factors. I would like to ask few questions which take around 20 minutes. Your name will not be written in this form and will never be used in connection with any of the information you tell me. You do not have to answer any question that you do not want to answer and you may end this interview at any time you want to. However, your honest answers to these questions will help me in identifying the factors influencing utilization of long acting and permanent contraceptive methods and improve the family planning services, particularly LAPMs. I would appreciate your cooperation in responding to this survey questions.

Are you willing to participate in this study?

Yes_(continue interviewing)	No_(say thank you)
Name of data collector	Sign Date
Name of Supervisor	sign Date

#### Part one: Socio-demographic characteristics of the study participants

QN.	Question	Response	Skip
101	Respondent age ( in years)		
102	What is your ethnicity?	1.Oromo	
		2.Amhara	
		3.Gurage	
		4.Others (specify)	
103	What is your religion?	1.orthodox	
		2.Muslim	
		3.protestnt	
		4.other (specify)	

Question	Response	Skip
Resident	1.urban	
	2.rural	
What is your educational status	1.no education (illiterate)	
	2.primary education (1-8)	
	3.secondary education (9-12	
	4.higher education (12+)	
What is your marital status	1.single	
	2. married	
	3.divorced	
	4.widowed	
	5.other (specify)	
If married, what is your partner's educational	1.no education (illiterate)	
level?	2.primary education (1-8)	
	3.secondary education (9-12	
	4.higher education (12+)	
What is your occupation?	1.house wife	
	2.merchant	
	3. employed	
	4.other (specify)	
If married, What is your husband occupation?	1.farmer	
	2.merchant	
	3.employed	
	4.other (specify)	
	Resident         What is your educational status         What is your marital status         If married, what is your partner's educational level?         What is your occupation?	Resident1.urban 2.ruralWhat is your educational status1.no education (illiterate) 2.primary education (1-8) 3.secondary education (9-12 4.higher education (12+)What is your marital status1.single 2. married 3.divorced 4.widowed 5.other (specify)If married, what is your partner's educational level?1.no education (illiterate) 2.primary education (1-8) 3.secondary education (9-12 4.higher education (1-8) 3.secondary education (9-12 4.higher education (12+)What is your occupation?1.no education (illiterate) 2.primary education (9-12 4.higher education (12+)What is your occupation?1.house wife 2.merchant 3. employed 4.other (specify)If married, What is your husband occupation?1.farmer 2.merchant 3.employed

## Part two socio-economic status of study participants

QN.	Question	Response		Skip
201	What is your monthly income in Birr?			
202	Does the household own?	1.Television	1.yes	
			2.no	
		2. Radio	1.yes	
			2.no	
203	Do you have been exposed to any family	1 yes		
	planning messages in the past few months preceding this data collection?	2 no		
204	If yes to Q203 from what source?	<ol> <li>Health profe</li> <li>Neighbors/f</li> <li>/relatives</li> <li>Mass media</li> <li>School</li> <li>other (specified)</li> </ol>	riend 1	
205	In the last few months, have you discussed the practice of LAPMs with a HEW/other health professionals?	1. Yes 2. no		

## Part three Reproductive history of the study participants

QN.	Question	Response	skip
301	If ever married, what was your age when you married?	years	
302	Have you ever given birth?	1. yes	
		2. no	
303	How old were you when you have your first	years	
	child?		
304	Number of births you gave?		
305	Do you want to have a child within two years	1.yes	If
	(Soon)?	2.no	"Yes"
			skip to
			Q.307

QN.	Question	Response	skip
306	If Q305 is No, why?	1. To space	
		2. To limit	
		3.Other(specify)	
307	Do you discuss with your partner on FP	1.yes	
	methods?	2. no	
308	Who decide/will decide on your number of	1.husband	
	children you want.	2.wife	
		3. Joint discussion	

## Part four. Knowledge of LAPM of contraceptives methods

QN.	Question	Response	Skip
401	Do you know about long acting &permanent	1.yes	
	methods (LAPMs)	2.no	
402	If yes to Q401 which one you know (more	1.Implants	
	than one answer is possible)	2.IUCD	
		3.female sterilization	
		4.male sterilization	
403	IUCD can prevent pregnancies for more than	1. yes	
	10 years	2. no	
		3. not sure	
404	Implant can prevent pregnancies for 3-5	1. yes	
	years	2. no	
		3. not sure	
405	After female sterilization pregnancy is not	1. yes	
	possible	2. no	
		3. not sure	
406	Women become pregnant immediately when	1. yes	
	implant is removed	2. no	
		3. not sure	
407	Women become pregnant immediately when	1. yes	
	IUCD is removed	2. no	
		3. not sure	
408	IUCD has no interference with sexual	1. yes	
	intercourse or desire.	2. no	
		3. not sure	
409	Implants require minor surgical procedure	1. yes	
	during insertion and removal	2. no	
		3. not sure	
410	Vasectomy is not reversible	1. yes	
		2. no	
		3. not sure	

## Part five. Intention of family planning clients to use LAPM

QN.	Question	Response	skip
501	Do you/your partner want to/intend to use	1.Yes	
	any LAPMs at any time in future?	2. No	
502	If you are not intended to use LAPMs,	1.Husband disapproval	
	would you tell me the main reasons?	2.Fear of side effect	
		3.To have more children	
		4.Fear of infertility after use	
		5.I don't know the methods	
		6.other(specify)	
503	If "Yes" to Q 501, do you intend to use	1. Yes	
	LAPMs in the next 12 months?	2. No	
504	If "Yes" to Q.501, which one do you want?	1.IUD	
		2.Implant	
		3.Female sterilization	
		4.Male sterilization	

## Part six: Attitude of Family Planning users toward LAPM

		level of agreement				
Q N.	Question	strongly disagree (1)	disagree (2)	neutral (3)	Agree (4)	Strongly agree (5)
601	Insertion and removal of implant is not pain full	1	2	3	4	5
602	Using implant and IUCD cannot cause irregular bleeding	1	2	3	4	5
603	Using Intra uterine and implant contraceptive device don't restrict from normal activities/hard work	1	2	3	4	5
604	Insertion of Intra uterine contraceptive device doesn't cause lose to privacy	1	2	3	4	5
605	Operation for female /male sterilization(surgical contraceptive method) is acceptable	1	2	3	4	5
606	IUCD cannot harm womb	1	2	3	4	5
607	Husband support LAPM use	1	2	3	4	5
608	For me irregular bleeding due to using implant is not severe	1	2	3	4	5
609	For me loosing privacy during IUCD insertion is not shame full	1	2	3	4	5
610	For me by using IUCD devices restricted from different work activity is highly unacceptable	1	2	3	4	5

## Part seven: Myths and misconceptions about LAPMs

Question	Response	skip
Implant moves freely in the body and lost at the time	1.yes	
of removal	2.no	
Implant and/or IUCD cause illness	1.yes	
	2.no	
Myths and misconceptions about LAPMs heard	1.yes	
	2.no	
	Implant moves freely in the body and lost at the time of removal Implant and/or IUCD cause illness	Implant moves freely in the body and lost at the time1.yesof removal2.noImplant and/or IUCD cause illness1.yes2.no2.noMyths and misconceptions about LAPMs heard1.yes

## Thank you for your attention

### Afan Oromo version questionnaire

Maqaan koo \_\_\_\_\_\_. Ani Universitii Jimmaadhan digirii 2<sup>ffaa</sup> fayyaa ummataa irratti barachaa jira. Mamilaa karora maatiitiif dhufan fedhaa isaan garaa fulaa duraatti karoora maatii yeroo dheeraa fi dhabbataa fayyadamuuf qabanii fi maltuu akka isaan akka hin fayyadamnee isaanii akka taasiisee irraattin gaafachaa jira. Gaaffilee murasaa naannoo daqiiqaa 20 fudhatuun isin gaafadha. Maqaan keessan asirratti hin barreeffamuu, tasaa odaffannoo isin naa lataniinis walitti hin qabsiifamuu. Gaaffii deebisuu hin barbannee kamiyyuu deebissuu dhisuu dandeessuu, yeroo barbadannii kamittiyyuu addaan kutuu ni dandeessuu. Haata'uu malee obsaa fi xiyyeffannadhaan yoo gaaffilee kana naa deebistaan maliif akka karoora maatii kan yeroo dheraaf dhabbataa akka isaanii hin fayyadamnee fi rakkoon maalii akka isin hin fayyaadamnee akkaa isin taasiisee beekuuf naa gargaraa, deebiin isin naa laattaan fooyya'insaa tajajiilaa karoora maatiitiifi keessumattuummoo karoora maatii kan yeroo dheeraa fi dhabbataatiif ga'ee guddaa taphataa.

Gaaffanoo kana keessatti hirmachuuf fedha qabduu?

Eeyyee (gafachuu itti fufii)

lakkii (galatoomii jedhii)

Maqaa nama odeffannoo guuree	mallattoo	guyyaa
Maqaa to'ataa	mallattoo _	guyyaa

Lakk	gaaffii	deebii	Irraa darbii
101	umurii ( waggaadhaan)		
102	Saba	1.Oromoo	
		2.Amharaa	
		3.Guragee	
		4.kan biroo(haa ibsamuu)	
103	Amantii	1.orthodoxii	
		2.Muslimaa	
		3.prostantii	
		4.kan biroo (haa ibsamuu)	
104	Teessoo	1.magaalaa	
		2.baadiyyaa	
105	Sadarkaa barumsaa	1.hin barrannee	
		2.sadarkaa 1 <sup>ffaa</sup> (1-8)	
		3. sadarkaa 2 <sup>ffaa</sup> (9-12)	
		4.sadarkaa ol'aanaa (12+)	
106	Halaa fudhaa fi herumaa	1.hin herumnee	
		2. kan herumtee	
		3.adda baanee/wal hikan	
		4.abban mana kan irraa du'ee	
		5.kan biroo (haa ibsamuu)	
107	Yoo kan herumtee ta'ee, sadarkaan barumsaa abbaa manakeeti maal fakkataa?	1.hin barranee	
	varumsaa auuaa manakeeti maal fakkataa?	2.sadarkaa 1 <sup>ffaa</sup> (1-8)	
		3. sadarkaa 2 <sup>ffaa</sup> (9-12	
		4.sadarkaa ol'aanaa (12+)	
108	Hojiinkee maalii?	1.hadhaa manaa	

## Kutaa 1<sup>ffaa</sup> Odeeffannoo/raagaa dhunfaa hirmatoota

Lakk	gaaffii	deebii	Irraa darbii
		2.daldaltuu	
		3.Hojjettuu	
		4.kan biroo (haa ibsamuu)	
109	Kan herumtee yoo ta'ee hojiin abbaa manaa	1.qonnaan bulaa	
		2.daldalaa	
		3.hojjettaa	
		4.kan biroo (haa ibsamuu)	

Kutaa 2 <sup>ffaa</sup> Halaa	dinagdee hawasumm	aa mamiloota
	annagaee na (abannin	

Lakk	gaaffii	deebii		Irraa darbii
201	Galiin ji'atti argattan qarshiidhaan meeqa?			
202	Manni keessan kanneen kana qaba?	1.Televijinii	1.Eeyyee 2.Lakkii	
		2. Radiyyoo	1.Eeyyee 2.Lakkii	-
203	Ji'oota murasaa darbaan keessaa Odeffannoo karooraa maatii dhageeesse beektaa?	1.Eeyyee 2.Lakkii		
204	Yoo gaaffii 203 Eeyyee ta'ee, maddii isaa kami?	<ol> <li>Ogeessaa f</li> <li>ollaa/dhiba</li> <li>subqunnam</li> <li>azeexa)</li> <li>Mana baru</li> <li>kan biroo(l</li> </ol>	ntaa/fiiraa tii(TV,Radio,g msaa	
205	Ji'otaa murasaa darbaan keesaa waa'ee karooraa maatii yeroo dheeraa ykn dhabbataa ogeessaa extenshinii fayyaa ykn ogeessaa fayyaa biiroon mari'ateettaa?	1.Eeyyee 2.Lakkii		

## Kutaa3<sup>ffaa</sup> Halaa wal hormataa mamiltoota

Lak.	gaaffii	deebii	Irraa darbaa
301	Yoo kan herumtee tatee, waggaankee meeqa turee yeroo herumtee?	waggaadhan	
302	Kana duraa deessee beektaa?	1.Eeyyee	
		2.Lakkii	
303	Yoo G302 eeyyee ta'ee umuriin kee meeqa turee yeroo mucaa jalqabaa deessee?	waggaadhan	
304	Bay'innaa ijoollee deessee?		
305	Waggoota laman kana keessa ijoollee	1.Eyyee	Yoo eeyyee
	godhachuu nibarbaddaa (dhi'ootti)?	2.Lakkii	ta'ee 307 tti darbii
306	Yoo gaaffiin 305 lakkii ta'ee, maaliif?	1. gargaar buutuuf	
		2. dhabuuf	
		3.kan biroo (haa ibsamuu)	
307	waa'ee karoora maatii abbaa manaakee	1.Eyyee	
	waliin mari'atee beektaa	2.Lakkii	
308	Baay'inna ijoollee barbadaniii eeyyetuu	1.abbaa warraa	
	murtessaa?	2.hadha warraa	
		3.lamanuu	

# Kutaa 4<sup>ffaa</sup> Gaaffannoo beekumsii karoora maatii yeroo dheeradha fi dhabbataa ittin madalamuu

Lakk	gaaffii	deebii	Irraa darbii
401	Waa'ee karoora maatii yeroo dheeraa fi dhabbataa beektaa?	1.Eyyee 2.Lakkii	
402	Yoo gaaffiin 401 eeyyee ta'ee kamiin beektaa(tokko ol deebisuun ni danda'amaa)	1.Impilantii (kan hirree jalaa galuu)	
		2.kan gadameessa (looppii)	
		3.karoora dhabbataa kan dubartoota (tubal ligation)	
		4.karoora dhabbataa kan dhiira (vasectomy)	
403	Looppiin ulfaa waggaa 10 oliif ittisuu	1. ееууее	
	danda'aa?	2. lakkii	
		3. sirriitti hin beekuu	
404	Impilantiin ulfaa waggaa 3-5tti ittisaa	1. eeyyee	
		2. lakkii	
		3. sirriitti hin beekuu	
405	Karoora maatii dhabbataa kan dubartoota	1. ееууее	
	ergaa fayyadamuu eegalanii booda ulfa'uun hin danda'amuu	2. lakkii	
		3. sirriitti hin beekuu	
406	Battalumaa impilantiin ba'een dubaartiin ulfa'uu ni dandeessi	1. eeyyee	
		2. lakkii	
		3. sirriitti hin beekuu	
407	Battalumaa looppiin ba'een dubartiin ulfa'uu	1. eeyyee	
	ni dandeessi	2. lakkii	
		3. sirriitti hin beekuu	

Lakk	gaaffii	deebii	Irraa darbii
408	Looppiin fedha ykn wal qunnamtii salaa	1. ееууее	
	irratti rakkoo hin qabu	2. lakkii	
		3. sirriitti hin beekuu	
409	Implantiin yeroo ba'uu fi galuu baqaqsaa	1. eeyyee	
	xiqqoo barbaaddi	2. lakkii	
		3. sirriitti hin beekuu	
410	Karoorri maatii dhabbattaa kan dhiraa ergaa	1. eeyyee	
	fayyadamuu jalqabanii bodaa dubaatii deebisuun hin danda'amuu	2. lakkii	
		3. sirriitti hin beekuu	

# Kutaa 5<sup>ffaa</sup> Fayyaadamaa karoora maatii yeroo dheeraa fi dhabbataa irratti karoora mamiltootni gara fulduratti qaban

Lak	gaaffii	deebii	yaada
501	Garaa fuladurratti yeroo kamiiyyuu ati ykn abbaan warraakee mala Karoora maatii yeroo dheeraa fi dhabbataa fayyadamuu ni barbadduu?	<ol> <li>eeyyee</li> <li>lakkii</li> </ol>	
502	Yoo G501 lakkii ta'ee sababin isaa maalii?	<ol> <li>1.abbaa warraakoo ish hin jedhu</li> <li>2.midhaa xiqqoo malichan wal qabateen sodadhee (side effect)</li> <li>3.ijoollee baay'een godhachuu barbadaa</li> <li>4.dhala nama dhabsiisaa</li> <li>jedheen sodadhaa</li> <li>5.malicha hin bekuu</li> <li>6.kan biroo (haa ibsamuu)</li> </ol>	
503	Yoo G501 eeyyee taa'ee, ji'oota 12 dhufan keessatti fayyadamuu ni barbadaa?	<ol> <li>eeyyee</li> <li>lakkii</li> </ol>	

Lak	gaaffii			deebii	yaada
504	Yoo G501 eeyyee fayyadamuu barbadaa?	taa'ee	kamiin	<ol> <li>1.kan gadameessa (looppii)</li> <li>2.impilantii(kan irree gogaa jalaa galuu</li> <li>3.karoora maatii dhabbataa kan dubbartoota(Tubal ligation)</li> <li>4.karoora maatii dhabbataa kan</li> </ol>	
				dhiiraa(vasectomy)	

## Kutaa 6<sup>ffaa</sup> Ilaalchaa mamiltootni karoora maatii yeroo dheeraa fi dhabbaataa irratti qaban

		Sadarkaa itti waligaltee					
	Gaaffii/yaada	Baay'ee itti walii hingaluu	Itti walii hin galuu	Giddu galeess aa	Ittin walii gala	Baay'ee ittin waligala	
		(1)	(2)	(3)	(4)	(5)	
601	Impilantii galfachuufi bafachuun baay'ee nama hin dhukkubsuu	1	2	3	4	5	
602	Impilantii fi looppii fayyadamuun dhiigaa yeroo hin eggannee namatti hin fiiduu	1	2	3	4	5	
603	Impilantii fi looppii fayyadamuun hojii guyyaa ofirraa ykn hojii jabaa akka hin hojjennee nama hin dhorku.	1	2	3	4	5	
604	Looppii galfachuun iccitii dhunfaa ofii nama jalaa hin cabsuu	1	2	3	4	5	
605	Karoorri maatii dhabbataa kan dhiiraa fi dubartoota fayyadamun fudhatamaa ni qaba	1	2	3	4	5	
606	Looppiin gadameessa hin miidhuu	1	2	3	4	5	
607	Abban warrakoo fayyadamaa karoora maatii kan yeroo dheeraa fi dhabbataa nideggeraa	1	2	3	4	5	
608	Anaaf dhiigni yeroo isaa hin eegnee sababa impilantii fayyadamuun natti dhufuu baay'ee natti hin ciimuu	1	2	3	4	5	
609	Anaaf sababa looppii galfachuuf jecha iccitiin dhunfakootii cabuun baay'ee na hin qanneessuu	1	2	3	4	5	
610	Anaaf sababa looppii fayyadamurraan kan kaa'ee hojiilee irraa hafuun tasa fudhatamaa hin qabu	1	2	3	4	5	

# Kutaa 7<sup>ffaa</sup> Hubannoo dogoggoraa karooraa maatii Kan yeeroo dheeraa fi dhabbataa irratti jiru

Lak	gaaffii	Deebii/yaada	Irraa darbii
701	Implantiin salphatti qaama keessa deemuun	1.Eeyyee	
	yeroo bafachuuf jedhan ni miliqaa	2.Lakkii	
702	Impilantiin fi/ykn looppiin dhukkubaa nama	1.Eeyyee	
	qabsiisaa	2.Lakkii	
703	Karoora maatii dhabbataa fi kan yeroo dheeraa	1.Eeyyee	
	irratti odeeffannoon dogoggoraa dhaga'ameera	2.Lakkii	

### Galatomaa!

### Interview Guide for family planning Service Providers

Introduction of Interview Process

Explain the purpose of interview

I am Gemechis Hambissa came from Jimma university college of public health and medical sciences. I would like to talk in your experience in providing FP services including LAPM in this FP unit. I am assessing intention to use LAPMs of contraception and associated factors among FP clients. The interview will take less than 30 minutes and all the information that you provides me will be kept confidential. This means that all the interview response will be used for research purpose in aggregate manner and the result of this study is for the improvement of FP services in general, LAPM in particular.

Are you willing to participate in this interview? Yes \_\_\_ No \_\_\_\_ Health facility\_\_\_\_\_ Qualification of interviewee: \_\_\_\_\_

Sex of the interviewee: \_\_\_\_\_ Age \_\_\_\_ Date: \_\_\_\_\_

- 1. Are you well trained to appropriately counsel and provide LAPM?
- Preference of modern contraceptives method in your clinic?
   Why? (Empowerment (woman decision, Fear of side effect, Knowledge and perception
- 3. Is there any shortage of LAPM in your facility?
- 4. What could be some of the reason why client would avoid using of LAPM?
- 5. What types of clients are using LAPMs in your health facility? (Marital status, Age, Educational status, Occupation)
- 6. What are the challenges in providing LAPM here?
- 7. What do you think should be done to improve up take of LAPM?
- 8. What is the common reason for a client who discontinued LAPM who report discontinuation?
- 9. What can you say about the future intention of clients to use LAPMs?

Is there anything else that you would like to tell me about any of the issues that we have discussed so far?

#### Thank you for your time and contribution.

## Check list to assess supplies of LAPMs and trained FP providers on LAPMS in health facilities providing FP services in Nekemte Town March, 2015

S n	Health faciliti es	LAPM available			Trained provider on LAPMs				Rema	
		Implants	IUCD	Tubal ligation	vasecto my	Implant	IUCD	Tubal ligation	vasectom y	- rk
1										
2										
3										
4										
5										
6										
7										