

**ADDIS ABABA UNIVERSITY  
FACULTY OF PUBLIC HEALTH  
SCHOOL OF NURSING AND MIDWIFERY**

**ASSESSMENT OF KNOWLEDGE, ATTITUDE AND  
PRACTICE TOWARD LONG ACTING REVERSEBLE  
CONTRACEPTIVE AMONG WOMEN WHO VISIT FAMILY  
PLANNING UNIT OF SELECTED HEALTH CENTER IN  
ADDIS ABABA**

Thesis Submitted To School Of Nursing and Midwifery, Addis Ababa  
University, As Partial Fulfillment of The Requirements For The  
Degree Masters of Nursing.

June, 2012

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## **Acknowledgment**

First of all I would like to thank to the almighty God who gave me patience and power to finish this thesis. And I want to thank my advisor Ato Berhane G/Kidan(assist. professor) whose all round support, encouragements and comments in a range of aspects of this thesis work starting from proposal development to the write up of this outcome. I would like to express my thanks to the School of department of Nursing and Midwifery, school of Medicine and Addis Ababa University for giving me the chance to conduct this thesis. Besides, I would like to acknowledge all data collectors, supervisors and participants of survey.

Finally, my appreciation goes to all my instructors, friends and families for their advice, moral support through the whole process of this study.

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## **Acronyms**

AAAHB- Addis Ababa Administrative Health Bureau

AOR- Adjusted Odd Ratio

CI- Confidence Interval

COR- Crude Odd Ratio

FP - Family Planning

FMOH- Federal Ministry Of Health

HE- Health Centre

HIV-Human Immunodeficiency virus

IUCD – Intra Uterine Contraceptive Device

IUS-Intra Uterine system

LAPM- Long Acting and Permanent Method

LARC - Long acting Reversible Contraceptive

S/C- Sub-City

STI-Sexual Transmitted Infection

UK-United Kingdom

UNFPA - United Nations Fund Population Association

USA- United State of America

WHO - World Health Organization

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## Abstract

**Background-** The provision of effective contraception is fundamental to the practice of women's health care. Long-acting reversible contraceptive (LARC) methods are highly effective in preventing unintended pregnancies. However, their uptake is low in much of both developed and developing world. In Ethiopia, currently usage of LARC is low due to inadequate awareness of their effectiveness, convenience, cost effectiveness, and suitability for a wide variety of women. And also there is misconception about use of LARC which leads to wrong attitude of women in using it.

**Objective:** To assess the knowledge, attitude and practice of the women age groups of 15-49 towards long acting reversible contraceptive in selected health centers in Addis Ababa, Ethiopia in 2012.

**Methods:** Institutional based cross- sectional study has been conducted at selected health center in Addis Ababa on participants who are in the age group between 15-49, with a total of 422 women. Data was collected using structured questionnaire and a pre-test has been conducted on 10% of comparable groups, entered and analyzed using SPSS version 17.

**Result :** In this study the mean age of the study was 27. The proportion of women who have knowledge about IUCD and implant was 26.3% and 30.3% respectively. The main source of information for LARC was health institutions and mass media. Implant was better in practice by the participants (13.7%) compared with IUCD (6.7%). There was a correlation between knowledge and practice of LARC ( $p < 0.05$ ). Out of the total participants of this study 46.6% of them showed good attitude towards LARC in general.

**Recommendation** – more effort should be taken by the FMOH to increase knowledge of the community and health professional towards LARC in collaboration with regional health bureaus and NGOs.

# **1 Introduction**

## **1.1 Background**

The widespread adoption of family planning represents one of the most dramatic changes of the 20th century. The growing use of contraception around the world has given couples the ability to choose the number and spacing of their children and has had tremendous lifesaving benefits. Yet despite these impressive gains, contraceptive use is still low and the need for contraception high in some of the world's poorest and most populous places. Contraception is an important part of the lives of many women, with needs varying according to age. For many people throughout the world, control of their own fertility is difficult as they do not have access to contraception. The national Institute for Health and Clinical Excellence UK guidelines (2005) describes how important it is for women to make an informed choice about what type contraceptive method will suit their lifestyle best. (1,2)

In Africa there is a large unmet need for FP services as evidenced by the low Contraceptive prevalence rate of 28% with sub-Saharan African at 21% yet the world average is 59%. There is an increased prevalence of unwanted and unplanned pregnancies that have resulted in unsafe abortions thus increased maternal and perinatal morbidity / mortality. FP therefore seeks to control fertility, give birth spacing, reduces unwanted and unplanned pregnancies and reduces unsafe abortions. By practicing FP women exercise their sexual and reproductive health right and are empowered. Some of the factors that influence acceptance and continuation of FP include low education and status of women in society, low male involvement in FP, low accessibility, availability and acceptability of modern methods, religious and cultural beliefs, inequity distribution of facilities and skilled personnel.(3)

Family planning has the potential to reduce 32% of maternal death, 10% of newborn, infant and child deaths. It decreases 71% of unwanted pregnancies: eliminating 53 million unintended pregnancy, 22 million fewer unplanned births, 25 million fewer induced abortion and 7 million fewer miscarriages. And also can avert 80% of HIV sexual transmission with consistent and correct use of condoms. Modern contraceptive methods the decline in unintended pregnancy and unsafe abortion would reduce the cost of post

abortion care to about \$ 230 million a year. No single contraceptive method is ideal, although all are safer than carrying a pregnancy to term. The effectiveness of a given method of contraception is dependent on the efficacy of the method itself, compliance, and appropriate use. Knowledge of the advantages and disadvantages of each contraceptive is essential for counseling an individual about the methods that are safest and most consistent with his or her lifestyle. Discrepancies between theoretical and actual effectiveness emphasize the importance of patient education and compliance when considering various forms of contraception. (4)

Long-acting reversible contraception (LARC) methods have very high efficacy and low burden to users after their initiation. The American College of Obstetricians and Gynecologists recommend that women be offered LARC as first-line contraceptive methods. These methods, which include intrauterine devices (IUD) or systems (IUS) and contraceptive implants, avoid the need for frequent visits for resupply, are highly cost effective, and allow a rapid return to fertility after their removal. However, while LARC methods are extremely effective against pregnancy, they offer no protection against the transmission of HIV and other sexually transmitted infections (STIs). (5)

Long-acting reversible contraceptives (LARC) are methods which the user does not have to use either daily (as with the pill) or for each act of sexual intercourse (as with condoms). They are highly effective in preventing unintended pregnancies. For many women taking a pill every day can be a bit of a chore, particularly as missing a pill can reduce the effectiveness of their contraceptive cover. However, there are alternatives. There's a group of contraceptives that can provide longer term cover (from a few of months to up to 10 years) with minimum maintenance. Although they're designed to last for a while, they are fully reversible so if the user change his/her mind and decide to have a baby, the fertility may return some time after the user stop using them.(6)

Implants are capsules containing progesterone, which are inserted, under local anesthetic, into the inner aspect of the non-dominant upper arm. The steroid is released in to the circulation, producing a change in the cervical mucus which prevents spermatozoa penetration, disturbance of the maturation the endometrium and suppression of ovulation. The action of implant is quickly reversible and ovulation can return within 21 days of

removal. This makes it suitable also for women wishing to 'space' pregnancies. IUCDs are contraceptive devices inserted into the uterus. They contain copper, which increase contraceptive efficacy. IUCD is the most popular method in some countries and 156 million women use IUCDs world-wide. (7)

In Ethiopia female reproductive age group consists 23.4% of the total population with a fertility rate of 5.3. Maternal mortality Ratio is 470.0 per 100,000, contraceptive acceptance ratio 61.9% and adolescence fertility rate (birth per 1,000 women ages 15-19) is 102.0, and also usage of contraceptive among married women 15-49 years old is 14.7. According to Ethiopian Ministry of Health the amount of distributed contraceptives to the different regions of the country is increasing from time to time. As the ministry's report there are different kinds of contraceptives which are being distributed by the ministry and different NGOs. As the report showed total distributed number of Implants and IUD in 2007 was 957,294 all over the country. As one of the regions of Ethiopia, Addis Ababa received a total of 4,033 Implant and IUD from the ministry only. ( 8)

## 1.2 STATEMENT OF THE PROBLEM

Worldwide, at least 200 million women want to use safe and effective family planning methods, but are unable to do so because they lack access to information and services or the support of their husbands and communities. And more than 50 million of the 190 million women who become pregnant each year have abortions. Many of these are clandestine and performed under unsafe conditions. Unintended pregnancies are associated with significant levels of morbidity and mortality. Abortion is usually a significant result of an unintended pregnancy. An important proportion of maternal deaths, which amount to nearly 600,000 annually in the world, is due to induced abortions, especially those performed under unsafe conditions. Because of this, limiting the number of unplanned or unintended pregnancies is one of the most important ways of decreasing mortality and morbidity associated with abortions and pregnancies. (9, 10)

Globally, young people use less effective contraception and use contraception less consistently than adults, although unintended pregnancy often poses far more negative consequences for adolescents than adults. Adolescent girls ages 15-19 are twice as likely to die during pregnancy as women in their 20s, and the risks are much higher for girls younger than 15. In fact, pregnancy and childbirth-related complications are the leading cause of death of girls ages 15-19 worldwide, killing 70,000 girls annually and leaving millions more with lifelong disabilities or chronic ailments. Yet each year, 16 million girls ages 15-19 give birth, and up to 4 million more adolescent pregnancies end in unsafe abortion. (11,12)

In America the age group of contraceptive user women has a great impact on choosing what type of contraceptive they prefer and this has a tremendous result of increasing unintended pregnancy. Almost nine percent of teen's ages 18-19 using highly popular oral contraceptive pills got pregnant within the first year. Male condoms yielded a 17.7 percent pregnancy rate in the same time period. Failure rates are particularly high among teens because they are less likely than adults to use these methods consistently and correctly. Meanwhile, teen users of long-acting reversible contraceptives (LARCs)—the injectable contraceptive Depo-Provera, the intrauterine device (IUD), and the contraceptive implant—only experienced a 4.3 percent pregnancy rate within the first year. As a result, the U.S.,

with one of the worst family planning records in the developed world, experience 800,000 annual teen pregnancies, 80 percent of which are unintended. (13)

LARC methods are more cost-effective than the combined oral contraceptive pill because they reduce the likelihood of unplanned pregnancy. For instance in UK Condoms and oral contraceptives need consistent and correct use and have annual failure rates of around 15% and 8% respectively, compared with 0.1% for intrauterine contraceptive devices (IUCDs) and 0.05% for contraceptive implants. IUCDs and implants are also more cost-effective than injectable contraceptives, which depend on women returning for a repeat injection every 3 months. However, in the UK only around 12% (6) of women currently use LARC, and unfounded anxieties about side effects are common. Given the level of unintended pregnancy in the United States, it is somewhat surprising that hormonal implants and injectables—methods that are long-acting, reversible, highly effective and convenient—have not attained the popularity enjoyed by other medical methods. Knowing the reasons why women have so far spurned these methods might lead to the design and implementation of interventions and targeted social marketing to promote their use. (14)

Use of contraception, recognized as an important means of preventing maternal mortality and promoting birth spacing conducive to better infant health, is quite low in Guinea. Awareness of at least one method of family planning among married women of reproductive age is 70.3%. (Knowledge of any modern method is slightly lower, at 69.1 %). A closer examination of family planning awareness shows knowledge skewed toward the pill (63.2%), injectables (54.9%), and condoms (55.1%). Knowledge of more effective, more long-acting methods is considerably lower, with knowledge of female sterilization, the intrauterine device (IUD), and vasectomy at 32.5%, 15.3%, and 3.9%, respectively. The prevalence of any of these three methods does not exceed 0.5%, compared with 4.2% for any modern method. (15)

In Ethiopia, contraceptive Acceptance rate is tremendously increasing; in the year 2001 the rate was 15% and it reached 61.9% at the year 2009. But contraceptive prevalence is very low; only 14.7% of married women of reproductive age use any family planning (FP) method. The unmet need for FP remains high, with one in three currently married women not able to meet their FP needs. There are no published literatures which are more close to knowledge, attitude and practice towards long acting reversible contraceptives, but as some

related papers showed overall awareness of FP methods is high, at 87%, and awareness of long-acting methods is significantly lower. For example, only 15% of all Ethiopian women and only 4% of couples (both partners) were aware of the intrauterine device (IUD). Nationwide, current use of the IUD is extremely low-2.1%, Implants 3.4% among all women. (8,16)

Even though the improvement of distribution and availability of contraceptives is well known, the clear knowledge and attitude of the women who are in need of contraceptive toward LARC i.e. IUD and Implants has a great impact of using it. These contraceptives are such contraceptives which give a long time guarantee without repeated intervention of the women who are using it and also it reduce maternal, infant and child mortality and morbidity rate. To do such a thing it is very helpful to determine why most women did choose other contraceptive like oral pills or why women didn't show interest to use LARCs as it has great efficacy and safety. Therefore, this study were assess the knowledge of the women, factors affecting the attitude of them and the core reasons why LARCs is not practiced among women with the age group 15-49 at selected health centers in Addis Ababa.

### **1.3 Significance of the study**

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 family planning. Approximately 21 percent of women and couples in sub-Saharan Africa who want to space or limit their births are not using any form of contraception.

More than half of the people in Africa are younger than 25 years old, so unmet need is only expected to increase as these individuals enter their reproductive years (3). Over time, the use of LARCs has not kept pace with that of short-acting methods, such as oral contraceptives and injectables. Data from demographic and health surveys from four sub-Saharan countries show that the proportion of women currently using LARCs is significantly lower than the proportion using short-acting methods. In many countries in the region, including Ethiopia, fewer than 4 percent of women who are using contraception are using LARCs. Thus there is a need to assess knowledge, attitude and practice towards LARCs and in diverse developing country setting including Ethiopia.

The knowledge, attitude and practice of LARC study using in countries like Ethiopia might contribute a lot to existing research outputs and future studies on the area. In particular, the study were help the selected respondents to assess knowledge, attitude and practice on the LARC issues. In addition, it will also help policy makers to arrange training and other educative actions depending on the outcome of the research. The study might also help as a stepping stone for future researche on the area.

## 1.4 Conceptual frame work

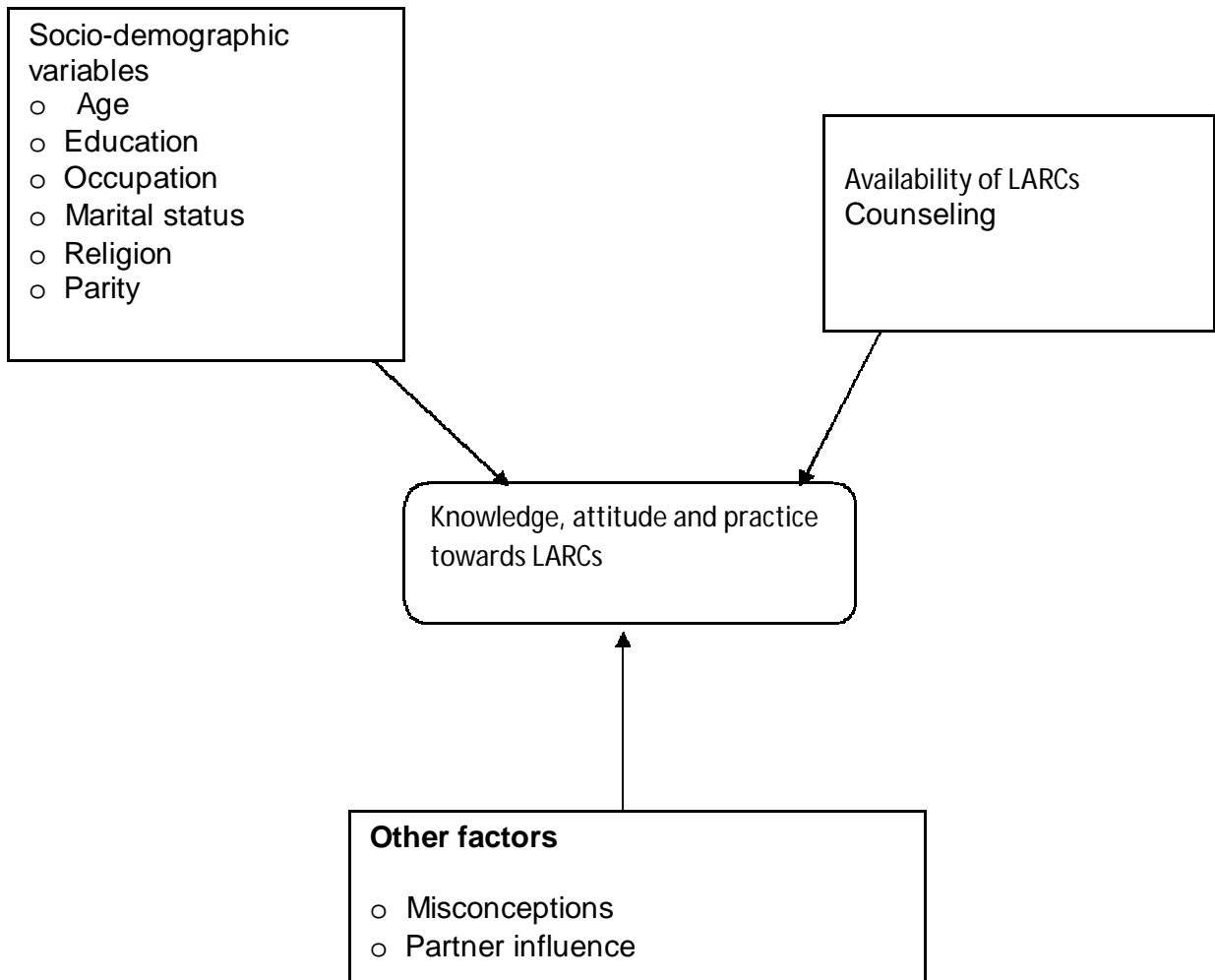


Figure 1 Conceptual frame work on assessment of knowledge, attitude and practice of women who are in reproductive age grouped towards LARCs.

Source ....adopted from the research done in Batu East Shoa, Ethiopia on demand for long acting and permanent contraceptive methods and associated factors among family planning service users by Anley Haile (16)

## **2. Literature review**

### **2.1 Long acting reversible contraceptive**

Long-acting reversible contraception (LARC) methods, including intrauterine contraceptives and implants, have a proven record of very high effectiveness, many years of effectiveness, convenience, cost effectiveness, suitability for a wide variety of women and, in general, high user satisfaction. LARC methods make up a very small share of world contraceptive use. For example, implants and IUCs account for only about 2% of contraceptive use in the USA.(17)

### **2.2 Knowledge towards long acting reversible contraceptives**

Having clear knowledge on the LARC helps women to use it without any doubt. Different studies have assessed the contribution of knowledge to usage of LARC and few of such studies are presented as follows:

A study conducted in rural Midwestern state, USA. The result showed although half of the telephone-survey respondents had heard of Mirena®<sup>®</sup>, a hormonal intrauterine device, less than a quarter had specific knowledge about the device. Those who had heard of the device had, in most cases, obtained their information from television commercials. Out all participated focus-group only 3.6% were using a LARC. As the conclusion of the researcher's conclusion, In addition to having a significant lack of accurate information, the women had a number of misconceptions about LARCs. Most believed that the devices were only appropriate for older women who had completed their families.(18)

According to a study conducted by Katherine J surveyed the knowledge and attitude of selected reproductive-aged women in the area of Saint Lois, USA on intrauterine contraception. From the research findings, almost 8% of respondents were currently using or had previously used intrauterine contraception and up to one half of survey respondents were unable to correctly answer knowledge questions about intrauterine contraception use and safety. Current and past intrauterine contraception users were more likely to be knowledgeable about intrauterine contraception. As the conclusion of the study showed,

reproductive-aged women's specific knowledge of the benefits and risks of intrauterine contraception was limited and more educational interventions were needed to increase women's knowledge about the effectiveness and benefits of intrauterine contraception.(19)

Similarly, a study conducted in Cambodia Vong Sreytouch showed that Knowledge of modern contraceptives was found to be universal: 99.3% of respondents had heard about contraceptives regardless of educational level and socioeconomic status. All except one woman (more than 99%) had heard about contraceptives and knew at least one modern method. Though this study reveals high knowledge of contraceptives among respondents, the knowledge varies from one method to another. The most popular methods known by respondents are the pill and injectable contraceptive, which accounted for 95% and 83% respectively. The condom is the third most popular method cited by respondents, followed by the IUD. However, male sterilization is the least well-known method for respondents. In addition, about 15% of respondents know other alternatives, which include traditional methods, such as calendar-based methods and withdrawal (20). All the above studies are undertaken in U.S.A and Asian countries. May the conclusion be different for African based studies?

According to the study conducted in Guinea showed that Knowledge of the IUD varied across participants and groups. For the most part, women in the ever user groups had heard of the IUD. In each of the men's groups, respondents were more equally divided in terms of knowledge. Among nonusers, knowledge was low, with only a few participants in a couple of the focus groups reporting that they had heard of the IUD. Knowledge among individual respondents was low as well. Information sources for the IUD included friends, family, and health facilities, both in Guinea and neighboring Mali. (21)

The other study on Africa is in Ethiopia, West Shoa Zone at Ambo town, the knowledge result showed that of the total participants with knowledge on LAPMs 37.2% didn't know any characteristics of IUCD. Out of those with knowledge of IUCD only 2.4% and 58.4% participants had very good and good knowledge on IUCD, respectively. Moreover, 13.5% reported that IUCD as very effective and, 57.1% as long acting (usually used for more than ten years). 94.3% didn't know that it is not good for female at high risk of getting STIs. Only 9.8%, 33.1% and 15.2% of participants responded that it had no effect on breast feeding, is immediately reversible and had minimal side effect, respectively. Of those who

have had knowledge about LAPMs, 2.4% know nothing about implants. Among knowledge respondent on implant, 3% and 79% had very good and good knowledge, respectively. Moreover, greater than three fourth of the participants know that long acting, 46.6% of the participant know that it is immediately reversible and 40.5% know that it is insertion and removal requires minor surgical procedure. Besides, no more than 8.8% participants know that it is very effective and only 12.8% responded that it had no effect on breast feeding. (22)

### **2.3 Attitude towards LARC**

A qualitative study conducted in two cities in Scotland UK. The result showed that trained interviewers sought spontaneous views of unintended pregnancy and contraception in general. Attitudes towards LARC were discussed both before and after women were given detailed information about the methods. The result indicated that women were poorly informed about LARC, had firm but incorrect beliefs about their safety and side effects, disliked any method which involved an invasive procedure and/or vaginal examination, and had rather a low opinion of advice given by health professionals. Accurate information was not wholly successful in dispelling negative views of LARC. As they concluded many factors influence contraceptive choice. Attitudes towards methods are complex and may be difficult to change. Some barriers to LARC, including the need to see a health professional, cannot be overcome but giving more information about ease of use, reversibility, effects on weight and the positive experiences of other women, as well as describing these methods as lasting rather than long-acting, may help improve acceptability. (23)

Other study conducted in Wellington South, New Zealand were asked about past use of contraception, their understanding of pregnancy, risk, reasons for method choice, and views on long-acting methods. As the result of the study, there was a lack of prior knowledge about LARC methods (particularly intrauterine devices [IUD] and implants). Once information was provided, these methods were generally viewed favorably. Cost was a key factor in contraceptive choice, prohibiting choice of the Mirena<sup>®</sup> levonorgestrel intrauterine system (LNG-IUS) or an implant for many women. Other important factors that determined method use and choice were familiarity with methods, whether or not they contained

hormones, likely effect on periods, and other side effects. The researchers concluded that access issues relating to LARC methods (including cost and awareness) need to be urgently addressed. When discussing post abortion contraceptive options, women would benefit from simple explanations about LARC: their appropriateness for women of all reproductive ages, reversible nature, mechanisms of action, impact on menstruation, and other potential side effects.(24)

## **2.4 Practice of LARC**

A prospective cohort study was conducted in the St. Louis region USA. The result showed that each participant provided the contraceptive method(s) of her choice at no cost to her for three years duration. Among women who were not using a contraceptive method or were willing to start a new method at the time of enrollment, more than two-thirds 67%: 65.3%, 69.0% chose a long-acting reversible contraceptive method. Among LARC users, 47% chose a levonorgestrel IUC, 9% chose copper IUC, and 11% chose the etonorgestrel subdermal implant. With regard to other contraceptive methods, 6% chose DMPA, 27% chose combined hormonal methods (12% vaginal ring, and 3% transdermal patch). LARC user's compared to users of other reversible methods of contraception were more likely to be recruited at an abortion clinic report greater parity or a history of abortion. Women who reported black or other race, being single or never married, or one or no lifetime partners were less likely to choose LARC than other reversible contraceptive methods. The study done in USA showed that majority of the women chose a levonorgestrel IUC and the rest women chose other method (25)

On the other hand, cross sectional study conducted in India showed that a total of 55.2% subjects were aware of contraceptive methods, mostly barrier (52.7%), IUCD (46.1%) and oral pills (43.2%), but only 31.7% had ever used barrier contraception, IUCD 10.3% and oral pills 3.3%. Permanent methods were known to nearly 50% subjects but acceptance was very less, (5% only). Emergency contraception was known to 13.8% subjects. As the researcher's conclusion majority of women have favorable attitude towards family planning, but use of long acting new methods is still low in the selected urban population which needs to be promoted.(26)

Summary, one can learn the following from the review of related documents on knowledge, attitude and practice of LARC. Knowledge towards use of LARC is limited regardless of the economic development of the countries (America, Asia and Africa) where the respondents are dwelling. Similarly, there is misconception about use of LARC which leads to wrong attitude of women in using it. Finally, it has been seen that even if the women have knowledge and access to LARC, the probability of using LARC is very low. Since research on LARCs among women of reproductive age group remains very limited in Ethiopia. Thus, the finding of this study were help to promote utilization of LARCs and to identify the factors associated with knowledge, attitudes and practices towards LARCs; and also were assist to plan health promotion and educational strategies that are appropriate for the reproductive age group women. In addition, this study was help to address the health issue of these age group women in Addis Ababa, Ethiopia.

## **3. Objectives**

### **3.1 General objective**

- Û To assess knowledge, attitude and practice of women who are within the age group of 15-49 towards LARCs in health centers at Addis Ababa.

### **3.2 Specific objective**

- Û To assess knowledge of women in reproductive age group towards LARCs.
- Û To assess attitudes of women in reproductive age group towards LARCs.
- Û To assess practice of women in reproductive age group towards LAR Cs.
- Û To determine factors affecting knowledge, attitude and practice of women in reproductive age group towards LARCs.

## **4. Material and Method**

### **4.1 Study area**

The study was conducted in Addis Ababa, the capital city of Ethiopia. Its area is 530 sq. km. Based on 2007 census, Addis Ababa has an estimated number of populations 3,038,096 with an annual population growth rate of 2.1%. From the total population number of female portion is 52.4%. The reproductive age group i.e. 15-49 that covers 65.5% and the age group from 15 to 24 consist of 28.1% of the total population. The city is divided in to ten small administrative sub-cities called Kifleketma. The health service for the population of the city is provided by governmental and nongovernmental, Hospital, health centers and clinics. There are 13 hospital and 39 health center under the government's administration and also 2 hospital, 3 health center and 31 clinics under nongovernmental organization.

The availability of private health facility is increased from time to time. For instance there are 30 hospitals and more than 700 different level private clinics providing different health service (AAAHB).

### **4.2 Study period**

The study was conducted from September to May 2012.

### **4.3 Study design**

Institutional based cross- sectional study was conducted at selected health centers in Addis Ababa on the women who are at the age group between 15-49 from September to May 2012

### **4.4 Population**

#### **4.4.1 Source of population**

All women who were in reproductive age group (15-49) appeared to health centers for family planning service in Addis Ababa.

#### **4.4.2 Study population**

All women who were using any kind of contraceptive or who were going to start to use any contraceptive in the selected health center were involved at the time of the study.

#### 4.5 Sample size determination

The following assumptions was considered to determine the required sample size by applying single population proportion formula of 50% (considering the women KAP towards LARC; 50 % was taken due to absence of reliable previous study that show KAP of women toward LARC)

Level of significance =0.05%

Marginal of error (d) =5%

And the formula is 
$$n = \frac{z^2 (a/2)^2 * p (1-p)}{d^2}$$

$z (a/2) = z$ - core at 95% confidence interval ,i.e. 1.96

$d =$  marginal error =0.05 i.e. 5%

There for to calculate sample size(n)= 
$$\frac{(1.96)^2 * 0.5 * 0.5}{(0.05)^2}$$

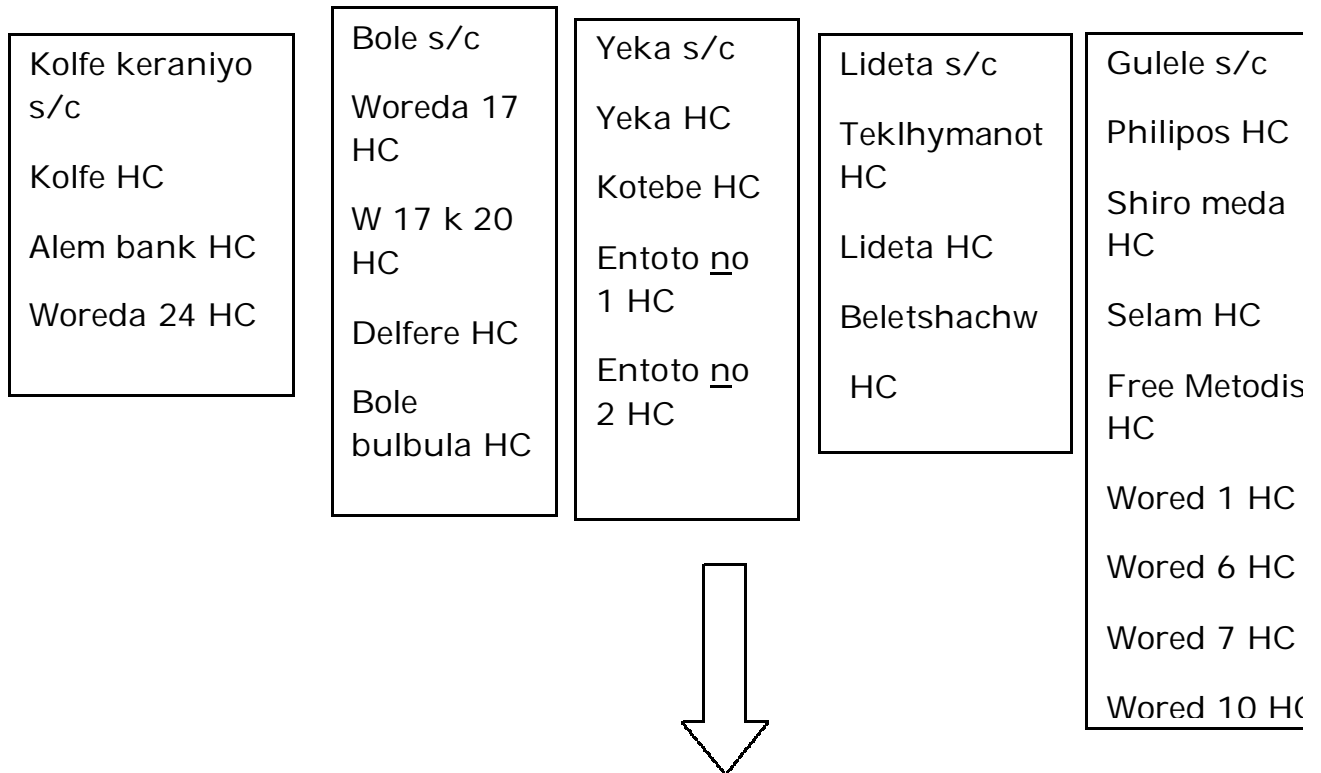
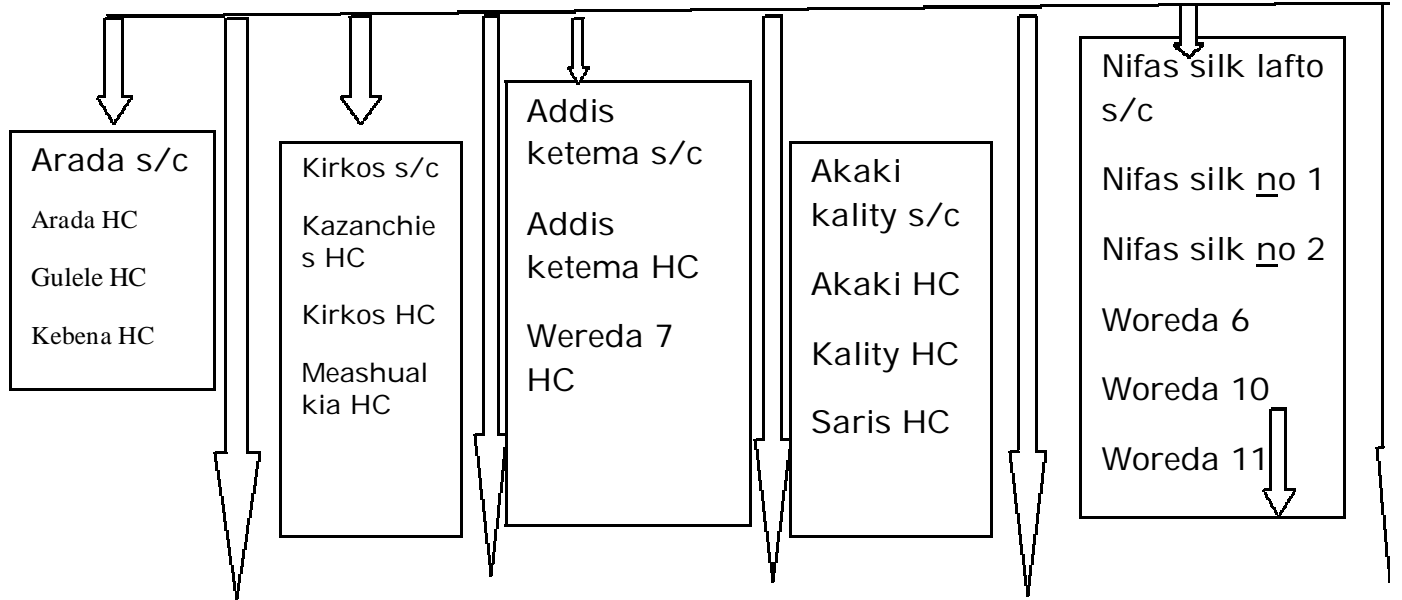
**n=384**

Hence, the calculated sample size is 384. Adding a 5 % non-response rate were given the required minimum sample size (n) =**422**.

#### 4.6 Sampling method and procedure

The schematic description of the sampling method and data collection is as in below figure.

Addis Ababa town, Governmental Health centers



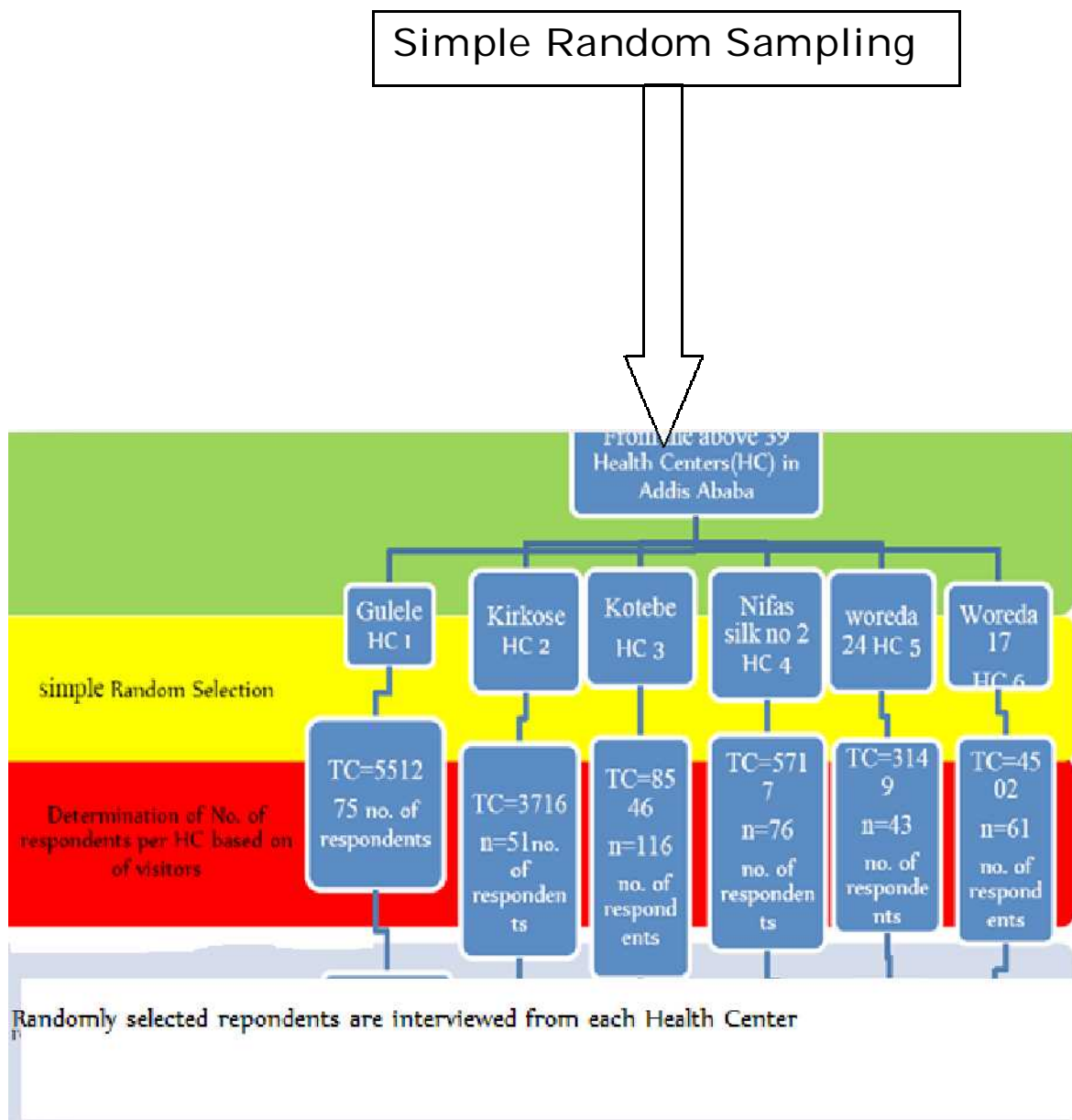


Figure 2: Schematic Description of Sample Selection

As depicted in the above figure, the sampling technique followed different steps with different sampling techniques to have a population representative sample. The study was conducted in six health center which was selected by using simple random sampling. As all the six health facility are found in different sub-city in the town. From these selected health

centers 422 samples with the consideration of non-response rate (10% contingency) were selected.

To select study subjects from each selected health center simple random sampling was being used and clients who came to the health centers for family planning services during data collection period was interviewed. The number of clients for each health center were determined by the current flow of clients. The interview was made at exits.

#### **4.7 Data Collection procedures**

Data was collected from 403 clients at family planning clinic using interviewer administered structured questioner. Questionnaires contain 35 items and focused on demographic characteristic, women's obstetric information, Knowledge, attitude and practice towards LARCs. The instrument was prepared based on the objective by reviewing the different related literature knowledge, attitude and practice and scale is adopted from Dashe Negewo. Assessment of factors affecting women's intention to use long acting and permanent contraceptive method scale was used with some modification (21). The questioner was prepared originally in English and then translated in Amharic. Data collection was being conducted by 3- trained health worker (diploma, nurses) who is not working at that specific health center to reduce interviewer bias and 1 BSc nurse supervisor to supervise the 3 enumerators. A two days training regarding data collection was given to data collectors and supervisor by the principal investigator. Each and every data collected on the data collection format was cross checked by the principal investigator.

#### **4.8 Study Variable**

##### **4.8.1 Dependent Variable**

- Ü Knowledge, attitude and practice of the women towards long acting reversible contraceptive

##### **4.8.2 Independent Variable**

- Ü Age of the participant
- Ü Educational background of the participant

- Ü Number of parity
- Ü Occupational behavior of the participant
- Ü Ethnicity
- Ü Religion
- Ü Sources of information
- Ü Number of alive children

#### 4.9 Operational definition

- ✚ LARC- long acting reversible contraceptive those are useful as a family planning for three to twelve years which includes IUCD and implant.
- ✚ Implants- are capsules containing progesterone, which are inserted, under local anesthetic, into the inner aspect of the non-dominant upper arm (useful for three to six years).
- ✚ IUCD- is contraceptive devices inserted into the uterus which contain copper and increase contraceptive efficacy(useful for ten to twelve years)
- ✚ Good Knowledge who know four distinct of the above characteristics of both LARCs (implant and IUCD) from knowledge question
- ✚ Poor Knowledge – those who know one distinct to three characteristics of both LARCs (implant and IUCD) from knowledge question
- ✚ Good Attitude- those who score equal to or above average, (25) in composite measure for attitude on LARC from 25 points, maximum possible score.
- ✚ Poor Attitude- those who score below average, (24), in composite measure for attitude on LARC from 40 points maximum possible score.
- ✚ Practice- is the overt behavior, habit or custom that a person does, carry out in her daily life.
- ✚ Ever use – a women who ever used any of LARCs.

#### 4.10 Inclusion and Exclusion criteria

**Inclusion** -All women above 15 years old and below 49 years old were included in the study.

**Exclusion**- Women with the age group above 49 and below 15 years old, pregnant women, and women who are not willing to participate.

#### **4.11 Data entry and analysis**

After checking the completeness of the questionnaires by the principal investigator, the data was entered by using data analysis software SPSS, version number 17. Frequency and percentage of different variables were computed for description as appropriate. Odd ratios (crude and adjusted) with 95% confidence interval were computed to assess the degree of association between the dependants versus socio-demographic variables.

#### **4.12 Data quality assurance**

The developed data collection questionnaire was pre-tested (10%) before the actual data collection; in order to assure the quality of data, to revise and rearrange the questioner based on the response obtained from the participant. All the necessary trainings were given to the data collectors. The principal investigator was rechecking the completeness of the questionnaires at the spot and any ambiguity or miss were cleared out at the spot.

#### **4.13 Ethical clearance**

Permission was obtained from Addis Ababa University College of health science, department of nursing and midwifery Institutional Review Board (IRB). The selected health centers were informed about the objective of the study through a supporting letter from the department of nursing and midwifery and written permission were obtained from those selected health centers. All subjects were giving written informed consent prior to study. All the recorded data was kept in a secured place.

#### **4.14 Dissemination of results**

Primarily this study would be presented to Addis Ababa University health Science College and also serves as an input for the FMOH, Addis Ababa health bureau and other partners working on family planning program. Finally the findings may be published in national and international journals for dissemination

## 5. Results

**Table 1-** Distribution of Socio- demographic characteristics question of the study participant among reproductive age group (15-49) in selected health centre in Addis Ababa town, Ethiopia February to April 2012

<b>Variables Number</b>		<b>Frequency</b>	<b>%</b>
<b>Age in a year</b>	15-24 years	142	35.2
	25-34 years	201	49.9
	35-49 years	58	14.4
<b>Marital status</b>	Single	58	14.4
	Married	329	81.6
	Divorced	11	2.7
	Widowed	5	1.2
<b>Religion</b>	Orthodox	254	63.3
	Protestant	66	16.4
	Muslim	79	19.6
	Catholic	2	0.5
	Others	2	0.5
<b>Ethnicity</b>	Amhara	176	43.7
	Oromo	74	18.4
	Tigre	27	6.7
	Gurage	99	24.6
	Others	27	6.7
<b>Educational level</b>	Illiterate	52	12.9
	Read and write	21	5.2
	Elementary school (1-8)	114	28.3
	Secondary (9-12)	126	31.3
	College and above	89	22.1
<b>Occupation</b>	House wife	189	46.9
	Government employee	76	18.9
	Merchant	38	9.4

	Daily laborer	56	13.9
	Student	25	6.2
	Others	19	4.7
Total alive children	1-2	144	35.7
	3-4	201	49.9
	>5	58	14.5
House hold facility	Radio	318	78.6
	Television	277	68.7

The above table 1 showed that four hundred three women of reproductive age group participated in the quantitative survey making a response rate of 95%. Two hundred one (49.9%) of the respondents were in the age group of 25-34 with mean and median ages of 27years respectively (minimum 17 years and Maximum 47 years,SD-5.7years). Three hundred twenty nine (81.6%) participants were married, followed by singles, 58(14.4%) and divorce, 11 (2.7%). Orthodox is the major religion contributing for 254(63.6%) followed by Muslim,79 (19.6%) and Protestant, 66(16.4). Around half of the participants, (43.7%) were Amhara by ethnicity, followed by Gurage, 99(24.6%), Oromo 74(18.4%) and Tigre -27(6.7%). More than three fourth of participants, (81.7%) have formal education and above, out of which 89(22.1%) have college and above education. One hundred eight nine of the respondents were housewives followed by governmental worker, 76(18.9%) and merchant, 38(9.4%). Concerning household items, 318(78.9%) and 277(68.7%) of the households of participants had Radio and Television respectively.

**Table 2** Distribution of Knowledge questions on LARCs of the study participant among reproductive age group (15-49) in selected health centre in Addis Ababa town, Ethiopia February to April 2012

<b>Variable</b>		<b>Frequency</b>	<b>%</b>
Knowledge of any LARCs	Yes	350	86.8
	No	53	13.2
LARCs prevent unwanted pregnancy	Yes	289	71.7
	No	114	28.3
LARCs used to child spacing	yes	174	43.2
	No	229	56.6
LARCs used to decide on the family size	yes	172	42.7
	No	231	57.7
LARCs prevent maternal and child mortality and morbidity	Yes	27	6.7
		376	93.3
Know $\geq$ 3 general uses of LARCs	Yes	91	22.6
	No	312	77.4
Method of LARCs known	IUCD	315	78.2
	Implant	320	79.4
Sources of information	Governmental Health facility	211	53.4
	Family members	8	2
	Friends	40	9.9
	Mass media	125	31.1
	NGO	14	3.5
	Others source	4	1

As can be seen from table 2 concerning awareness on long acting reversible contraceptive (LARC), 350(86.8%) know LARCs. Two hundred eighty (69.5%) of those with knowledge were married women followed by singles 54 (13.4%). Three fourth of those with knowledge on LARCs, had modern education and above, while 21(5.2%) illiterates had not.

Concerning the use of LARCs as any contraceptive methods, 289(71.7%) and 174(43.2%) reported LARC as useful to prevent unwanted pregnancy and child spacing respectively. Furthermore, 27(6.7%) of the participant reported the use of LARCs for Prevention of maternal and child mortality and morbidity and 172(42.7%) to limit the number of family size. From the LARCs (Implant and IUCD) known by respondents, Implant was known by 320(79.4%) participants followed by IUCD, 315(78.9%). Two hundred eleven (52.4%) of those with knowledge about LARCs got the information from health institution followed by mass media 125 (31%). Ninety one(22.6%)participants knew greater than three general uses of LARCs.

**Table 3:** Distribution of the characteristics of knowledge question of LARCs of the study population among reproductive age group (15-49) in selected health centre in Addis Ababa town, Ethiopia February to March 2012

<b>Characteristics of IUCD</b>	<b>Yes &amp;%</b>	<b>No &amp;%</b>
It is very effective	95(23.6%)	308(76.4%)
It is long acting	278(69%)	125(31%)
No effect on breast feeding	17(4.2%)	386(98.6%)
Not good for female at high risk of getting STIs	82(20.3%)	321(79.7%)
No interference with sexual intercourse	28(6.9%)	375(93.1%)
Immediately reversibly	130(32.3%)	273(67.7%)
Has minimal side effect	40(9.9%)	363(90.1%)
know nothing about IUCD	88(21.8%)	315(78.2%)
<b>Knowledge Level</b>		
Good knowledge	106(26.3%)	
Poor knowledge	297(73.7%)	
<b>Characteristics of Implant</b>		
It is very effective	120(29.8%)	283(70.2%)
It is long acting	286(71%)	117(29%)
No effect on breast feeding	19(4.7%)	384(95.3%)
Insertion and removal require minor surgical procedure	71(17.6%)	332(82.4%)
No interference with sexual intercourse	31(7.7%)	372(92.3%)
Immediately reversible	135(33.5%)	268(66.5%)
Has minimal side effect	35(8.7%)	368(91.3%)
know nothing about implant	76(18.8%)	327(81%)

<b>Knowledge level</b>		
Good Knowledge	122(30.3%)	
Poor knowledge	281(69.7%)	
<b>Knowledge level on LARC(IUCD and implant)</b>		
good knowledge	188(46.7%)	
poor knowledge	215(53.3%)	

Table 3 showed of the total participants with knowledge on LARCs, 88 (21.8%) did not know any characteristics of IUCD. Out of those with knowledge of IUCD only 106(26.3%) and 297 (73.7%) participants had good and poor knowledge on IUCD, respectively. Moreover, 95(23.6%) reported that IUCD as very effective and 278(69%) as long acting (usually used for more than ten years). Three hundred twenty one (79.7%) do not know that it is not good for female at high risk of getting STIs. Only 17(4.2%), 130(32.3%) and 40 (9.9%) of participants responded no effect on breast feeding, is immediately reversible and had minimal side effect, respectively.

Of those who had knowledge about LARCs, 76(18.9%) know nothing about implants. Among knowledge respondents on implant, 122 (30.3%) and 281 (69.7%) had good and poor Knowledge, respectively. Moreover, around three fourth of the participants know that it is long acting (used for up to five years), 135 (33.5%) of the participants know that it is immediately reversible and 71 (17.6%) know that it's insertion and removal requires minor surgical procedure. Besides, no more than 120 (29.8%) participants know that it is very effective and only 19(4.7%) responded that it had no effect on breast feeding. Thirty one (7.7%) and 35(8.7%) of the participants know that implant has no interference with sexual intercourse and has minimal side effect respectively. Furthermore, 188(46.7%) and 215(53.3%)of participant had reported good and poor knowledge on both LARCs respectively.

**Table 4:** Distribution of Attitude question on LARCs of the study participant among reproductive age group (15-49 in selected health centre in Addis Ababa town, Ethiopia February to April 2012

<b>Attitude questions and response</b>		<b>Frequency</b>	<b>percentage</b>
<b>Support use of LARCs.</b>	Strongly disagree	8	2
	disagree	197	48.9
	uncertain	12	3
	Agree	168	41.7
	Strongly Agree	16	4
	<b>Total</b>	403	100
<b>Communication with friend/Husband.</b>	Strongly disagree	21	3
	Disagree	95	23.6
	Uncertain	21	5.2
	Agree	234	58.1
	Strongly Agree	41	10.2
	<b>Total</b>	403	100
<b>Friend/Husband attitude on LARCs</b>	Strongly disagree	32	7.9
	Disagree	93	23.1
	Uncertain	100	24.8
	Agree	156	38.7
	Strongly Agree	22	5.5
	<b>Total</b>	403	100
<b>Need to know more on LARCs</b>	Strongly disagree	4	1
	disagree	75	18.6
	Uncertain	6	1.5
	Agree	257	63.8
	Strongly Agree	61	15.2
	<b>Total</b>	403	100
<b>Tried to know more</b>	Strongly disagree	13	3.2

<b>on LARCs.</b>	Disagree	263	65.3
	Uncertain	2	.5
	Agree	118	29.3
	Strongly Agree	7	1.7
	<b>Total</b>	403	100
<b>Responsibility in using LARCs</b>	Wife	117	29
	Husband	-	-
	Both	284	70.5
	Others	-	-
	<b>Total</b>		
<b>Large family has problem on economy</b>	Strongly disagree	8	2
	disagree	15	3.7
	Uncertain	4	1
	Agree	266	66
	Strongly Agree	110	27.3
	<b>Total</b>	403	100
<b>Large family has problem on MCH</b>	Strongly disagree	5	1.2
	disagree	16	4
	Uncertain	8	2
	Agree	268	66.5
	Strongly Agree	105	26.1
	<b>Total</b>		
<b>Attitude on LARCs (composite measure)</b>	Positive attitude	293	72.7
	Negative attitude	110	27.3

Table 4 showed the attitude towards LARC, respondents were asked to respond on eight positive structured attitude questions with five choices strongly agree, agree, uncertain, disagree and strongly disagree. More than half of the respondents have positive and supported use of long acting reversible contraceptives. Of the total respondents,

184(45.7%) Participants communicate about LARCs with their husband/friend and 275 (68.3%) of those who communicate with their partner /friends support use of LARCs.

Regarding their partners/husbands attitude, 178(44.2%) of participants said that their friend /husband supported use of LARCs and 112(31%) of participants explained that their husband/friend is against use of long acting reversible contraceptive. Moreover,318(79%) of participants need to know more about LARCs and of those who wanted to know more,125 (31%) had also tried to know more about 88(21%) participants did not want to know more, about LARCs. Concerning the participant's response to responsibility of using LARCs majority, 284(70.5%) answered that it is couple's responsibility and 117 (29%) said that it is wife's responsibility.

Three hundred seventy six (93.3%) and 373(92.6%) believed that having large family size poses great problem on economy and maternal and child health respectively.

Answers for attitude questions were used based on likert scale and those participants who responded an average and above were considered as they had positive attitude and those responded less than the average were considered as they had negative attitude.

In general, about 293(72.7%) of the participants have positive attitude towards LARCs and 110 (27.3%) of the participants have negative attitude.

**Table 5:** Distributions of practice of LARCs questions of the study participant among reproductive age group (15-49) in selected health centre in Addis Ababa town, Ethiopia February to April 2012

Variable	Frequency	%
Have you ever used LARCs		
Yes	77	20.1
No	326	79.9
Types of LARCs use		
IUCD	26	6.5
Implant	55	13.6
Availability of LARCs		
Yes	403	100
No	0	0
Where did you get the service?		
Gov. Health institution	78	99.5
Private	2	.5
Reasons for not practicing LARCs		
Fear of side effect, medical problem and fear of infertility	232	56.7
Partner disapproves	32	7.9
To get Pregnant	62	15.4
lack of knowledge, sinful, cultural taboo and others	118	29.3

Table 5 showed of the total respondents, only 77(20.1) used long acting reversible contraceptives (IUCD and Implant) once in their life and the rest 326(79. 1%) did not practice any of the LARCs. Furthermore,76(99.5) of ever users got the service from government health institutions. Concerning the reasons for not practicing LARCs before: 232 (56.7%) did not participate due to fear of side effect and medical problem as well as fear of infertility; 118(29.3%) related to lack of knowledge, sinful, cultural taboo and others.

Moreover, 62 (15.4) of the participants did not use since they want to be pregnant and 32 (7.9%) because of husband disapproval.

**Table 6:** Association of LARC of dependant variable to socio-demographic variable of the study participant among reproductive age group (15-49) in selected health centre in Addis Ababa town, Ethiopia February to April 2012

Variable	knowledge of LARC		COR(95% CI)	AOR(95% CI)
	Good (%)	Poor (%)		
Age (years)				
15-24	16.2	19.2	1.193(.453-3.149)**	2.216(1.141-4.303)**
25-34	26.7	23.4	2.184(.912-5.229)**	2.988(1.577-5.661)**
35-49	4	10.5	1	1
Educational status				
Read & Write only	.5	4.7	39.704(3.005-524.632)	4.750(1.051-21.462)*
1-8	9.4	18.9	110.334(8.218-1.481)**	17.100(3.808-76.783)*
9-12	20.1	11.7	99.967(6.753-1.480)	17.774(3.884-81.339)*
College & above	14.4	7.7	18.247(1.215-272.134)**	1.727(.335-8.907)**
Illiterate	2	10.9	1	1
Occupation				
house wife	15.4	31.7	.280(.057-1.377)	.081(.023-.286)
daily labourer	3.2	5.7	.494(.128-1.912)	.130(.041-.409)
Government employee	13.2	10.7	.994(.210-4.704)	.614(.184-2.054)
Merchant	7.7	1.7	4.729(.902-24.789)	1.181(.299-4.668)
Student	3.7	1	.653(.126-3.386)	.339(.087-1.318)

Other	3.5	2.7	1	1
Total alive children				
1-2	39.2	38.5	7.019(.883-55.793)*	10.703(2.468-46.422)
3-4	6.9	9.7	7.683(.981-60.161)*	7.538(1.633-34.796)*
>5	.5	5.2	1	1

\* Significant association

Table 6 illustrate the selected socio demographic and reproductive health and other factors such as:- age, education level, occupation and family size, as an independent variable were measured with dependant variable (knowledge on LARCs and attitude on LARCs) using binary logistic regression for the presence of association and as a prediction for dependant variables. As a result, Variables like respondent's age, educational status of women occupation of respondent total number of alive children, were found to be significantly associated with LARC knowledge.

**Table 7:** Association of LARC of dependant variable to socio-demographic variable of the study participant among reproductive age group (15-49) in selected health centre in Addis Ababa town, Ethiopia February to April 2012

Variable	attitude		COR(95% CI)	AOR(95% CI)
	Positive (%)	Poor (%)		
Age (years)				
<20	27.2	8.2	1.390(.553-3.492)*	2.684(1.404-5.129)*
20-34	37.9	12.3	1.346(.600-3.021)*	2.520(1.370-4.636)*
>35	8	6.5	1	1
Educational status				
Read & Write only	2	3.2	2.584(.915-7.301)*	3.382(1.290-8.868)
1-8	19.2	9.2	5.543(1.837-16.720)*	7.682(2.844-20.748)*
9-12	25.8	5.5	10.267(2.039-51.701)*	22.479(6.708-75-325)
College & above	20.9	1.5	.877(.285-2.700)	1.016(.358-2.882)
Illiterate	5	7.9	1	1
Occupation				
house wife	29	17.9	1.485(.352-6.268)	.383(.112-1.302)
daily labourer	8.2	5.7	3.133(.494-19.856)*	4.800(1.078-21.370)*
Government employee	17.9	1	1.120(.312-4.019)	.433(.138-1.357)

Merchant	8.7	1	4.558(.879-23.643)	2.267(.499-10.294)
Student	3.7	1	2.159(.352-13.220)	1.956(.381-10.026)
Other	5.5	1	1	1
Total alive children				
1-2	60.5	3.7	2.085(.639-6.805)*	6.30(2.699-16.287)*
3-4	10.2	6.5	1.534(.484-4.860)	2.957(1.100-7.948)
>5	2	17.1	1	

**\*Significant association**

Table 7 as describe the variables which were significantly associated with attitude of LARCs on a binary logistic regression analysis by removing those variables that lost their significance. As a result, attitude on long acting reversible contraceptive was found to be an important predictor of intention to use LARCs. (AOR, 22.48 95%CI (6.71 – 75.32). Those with good attitude on LARCs were *about* 22 times intended to use LARCs than those with poor attitude on LARCs.

Moreover, knowledgeable women on LARCs had 2.6. times had positive attitude on LARCs than those without knowledge (AOR,2.62 95% CI(1.30 -3.24 ) Taking those women with greater than five alive children as a reference category, those with 1-2 alive children had 6.6 times intention to use (AOR6.63 95% CI(2.69-16.39) and those who had 3-4 alive children were 2.9 times intended to use LARCs (AOR,2.95 95% CI (1.10-7.95) .

**Table 8** Results of binary logistic regressions for possible explanation of practice of LARC variable to socio-demographic variable of the study participant among reproductive age group (15 – 49) in selected health centre in Addis Ababa town, Ethiopia February to April 2012.

Variable	practice		COR(95% CI)	AOR(95% CI)
	yes	no		
Age (years)				
15-24	15	127	2.135(786-5.798)	1.764(.742-4.145)
25-34	51	150	.858(.366-2.013)	.613(.289-1.299)
35-49	11	49	1	1
Educational status				
Read & Write only	1	20	.355(.043-2.947)	.267(.034-2.114)
1-8	18	100	.217(.026-1.810)	.192(.025-1.500)
9-12	26	64	.213(.022-2.080)	.128(.016-1.005)
College & above	25	45	.374(.041-3.397)	.321(.037-2.788)
Illiterate	7	96	1	1
Total alive children				
1-2	61	252	.245(.028-2.183)	1.290(.794-2.090)
3-4	15	52	.227(.026-1.980)	
>5	1	22	1	1

\*Significant association

**Table 8** shows sociodemographic variables were not significantly associated with practice of LARCs on a binary logistic regression analysis.

## Discussion

The study was to assess the knowledge, attitude and practice of women who are within the age group of 15-49 towards LARCs in health centers located in Addis Ababa.

Among the respondents about 86.% knew about LARCs and among which only 22.6% of them knew more than three general uses of LARCs. The knowledge of the respondents with specific knowledge of LARC was 26.6% and 30.3% for IUCD and implant respectively which was similar for IUCD but lower for implant based on EDHS 2011 findings (26.3% for IUCD, 67.3% for implant). Compared with other study conducted in rural Midwestern state of USA, this knowledge level is low. Basically, the comparison might not be appropriate as this study is conducted on developed country respondents who have high access to mass medias as source of information.(8,18)

Even compared to the study made in Ambo Ethiopia, the knowledge level of the respondents is low which was 62.8% on IUCD. This high knowledge level can mainly be attributed to the respondents education level( 87.1% are literate) and with high access to household facilities like radio and television.(22)

The result of this study indicated that there is much need for strengthening education, information and counseling services for long acting reversible contraceptive.

Regarding the attitude of the respondents towards LARCs, positive attitude were (72.7). Less than half of the respondents (45.7%) discussed about LARCs use with their husband and majority of such women use LARCs. Moreover, more than half of the respondents' (68.3%) husbands support the use of LARCs. The result of the respondent from this study is high compared to study conducted in Ambo Ethiopia, where good attitude 47.2%. This difference might be due to the recent provision of training and expansion of services by government and NGOs working in the area and could also be attributed to their access to learn the advantage of LARC.

It is obvious that even though a respondent might have knowledge and good attitude towards LARC, this can not guarantee the practice of the respondent. For example, a study made in India showed that among 52.7% of the population who have knowledge about LARC, only about 31.7% use it. Similarly this study has come out with the result that only 20.1% of the respondents use LARCs despite the positive attitudes as indicated above.

On the other hand, this result is high compared to that of EDHS 2011 which were 2.8% for implants increment by 10.8%. This difference might be due to the recent provision of training and expansion of services by government and NGOs working in the area. The main reason for not using LARCs is indicated to be fear of side effects which accounts for about 42.% of the respondents answer among other factors and poor counseling.(8, 26)

Generally the knowledge level of the respondents about LARCs is low compared to other researches conclusion. This might be attributed to the education level of the respondents and their access to learn about it. Their attitude towards the use of LARCs is also not bad. However, despite this, the practice of women in LARCs is very low. This is mainly due to the fact that fear on the side effect of the contraceptive, medical problem and fear of infertility.

As expected the binary logistic regression analysis showed that strong association existed between education and knowledge of LARCs. For example women with high school and beyond level have good knowledge on LARC as compared to those who were illiterate and with no formal education. [AOR(95%CI)17.774(3.884-81.339)]. Those with knowledgeable on LARCs were about 17 times intended to use LARCs than those without knowledge on LARCs.

The effect of education on LARC has an impact on intention to use LARCs. Women with high school education have a high probability of using LARC than those with no education. This findings support evidence obtained from different international literature that effects of formal education used to increasing knowledge and positive attitude towards LARCs.(8)

As one would expect, the number of born children strongly influence women attitude of LARCs. Women who had one to two ever born children had positive attitude than those women who had five and above ever born children (AOR (95%CI) 6.30(2.699-16.287) and women who had 3 to 4 ever born children. Those who had one to two ever born children on LARCs were about 6 times intended to use LARCs than those who had three and above ever born children on LARCs. Positive attitude was found to be an important predictor of LARC use.

This study showed that practice had no any association with other independent variable. For example, formal education who have completed grade twelve was not associate with

practice [AOR(95% CI).128(.016-1.005)]. Those who had formal education are less likely to use LARC than illiterate.

Generally the result showed that age, education and number alive children had strong association with knowledge and attitude.

## 7. Strength and Limitation

### Strengths of the Study

- ✓ Data collectors (health professionals) were trained and supervised by supervisor and principal investigator. In addition, regular check –up for completeness and consistency of data was made on daily bases.
- ✓ This study is one among the few studies, which assess KAP for LARCs.

### Limitations of the study

- ✓ Since the study was institutional based, that might undermine generalizing the result to the general population.
- ✓ The study is conducted only in the town that doesn't represent the great majority of the rural community.
- ✓ Lack of adequate literatures in Ethiopian situation, which prevents further elaborating the discussion.
- ✓ Courtesy bias, where respondents' answers may be based on what they think the researcher want to hear may not be completely eliminated although efforts were made to explain that only genuine answers would help achieve the objectives of the study.

## **8. Conclusion**

This study showed that the proportion of women who have knowledge about IUCD is 26.3% which is almost similar with EDHS 2011 report 26.6%, but the proportion of women who have knowledge about (30.3%) is lower compared with report (67.8%). Beyond its effectiveness practice of LARC has a positive impact on reducing maternal death, but the result of this study indicates practice of IUCD and implant, 6.7% and 13.7% respectively. When compared this result with report of EDHS 10.5% and 2.8% for IUCD and implant, it seems the practice of IUCD is reduced by 3.9% and practice of implant is increased by 10.6%.

Even though 72.7% of the participants of this study showed positive attitude for LARC in general, their practice was very low, i.e 6.7% and 13.4% for IUCD and implant respectively. The main reasons for this poor practice are misconception, age, poor knowledge, disagreement of partner, lack of counseling from health professional and also fear of side effect of using LARC.

## 9. Recommendation

Based on the findings of this study, the following recommendations were given to the responsible bodies:-

### Policy level

- Ø More effort should be added by the FMOH to increase the knowledge of the community specially the reproductive age group women about LARC.
- Ø Collaboration with regional health bureau and NGOs to implement training for health professional should be up graded to high level.

### Program level

- Ø Information education communication (IEC) must be implemented on misconception and rumors on LARC.
- Ø Continuous and progressive education on LARC should be delivered by regional health bureau for the community.
- Ø Husbands/sex partner should be involved in LARC implementation.
- Ø Some sort of incentive should be available for those who use LARC.

### Institutional level

- Ø Health professional should give emphasis on elimination of rumors on LARC by giving strong education for the reproductive age group women.
- Ø Word of mouth- encouraging clients to tell their friends and family about their satisfaction with LARC.
- Ø Services should be convenient to the clients taking in to careful consideration the personal needs of clients such as confidentiality and respect.

### Research

- Ø Detailed and large study which incorporate theories and considers perspectives of NGO, service providers and health service managers views on similar issues be conducted.

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## **Annex A: English version Study Information Sheet (SIS)**

- Ø **Title of the project:** assess knowledge, attitude and practices towards long acting reversible contraceptive among women in reproductive age group in selected health center at Addis Ababa town..
- Ø **Background of the study:** Long acting reversible contraceptive is an important aspect of reproductive health and plays a major role in the prevention of unintended pregnancy. It is therefore a significant factor in reduction of induced abortion rates and improvement in maternal health care.
- Ø **Objective:** to assess knowledge, attitude and practices towards long acting reversible contraceptive among women in reproductive age group in selected health center at Addis Ababa town.
- Ø **Significance of the study:** The investigation towards long acting contraceptive knowledge, attitude and practices among women reproductive age group is attracted attention of new generation research and it is limited researched area in Ethiopia. The aims of this study to assess knowledge, attitude and practices towards long acting reversible contraceptive among women in reproductive age group in selected health center at Addis Ababa town. It will also provide baseline data for other researchers, programmers and policy makers especially the finding will be useful in the development of reproductive health programs.
- Ø **Study site and period of the study:** The study will be conducted in the Addis Ababa town which is the capital city of Ethiopia. This study will be done from September 2011 to May 2012.
- Ø **Confidentiality:** The response of study participant is completely confidential. Their names not included in the study and will never be used in connection with any of the information they give.
- Ø **Rights of participation:** Participants are not forced to be participated (Voluntary Participation).
- Ø **Termination of the study:** participants are free to withdraw from the study at any time, and this will not have any impact on their subsequent management.
- Ø **Address of principal investigator:** [Tel:+251911659795](tel:+251911659795)or +2519-26835000

## **Consent form**

**Addis Ababa University, school of medicine and college of health sciences,  
Department of nursing and midwifery consent form for a study on  
<Assessment of knowledge, attitude and practice towards Long Acting  
Reversible Contraceptives among women in reproductive age group in  
selected health centers Addis Ababa>**

**Service in governmental health centers family planning clinics of Addis  
Ababa town.**

## **Greeting!**

Hello! My name is \_\_\_\_\_ I am working in the research team of Addis Ababa University, school of medicine and college of health sciences, Department of nursing and midwifery. This is a study to be conducted with the objective of assessing knowledge, attitude and practice towards long acting reversible contraceptive among women of age groups 15 - 49 in health center Addis Ababa town". We believe this study would help to increase your awareness towards long acting reversible contraceptive. Therefore, you are kindly requested to participate in this study and provide information required from you.

I am going to ask you some questions about long acting reversible contraceptive. Your participation in this study is completely on voluntary bases and you have the right to refuse, to take part or to interrupt the interview at any time. But the information that you will give us is quite useful to improve future intervention.

We would like to assure you, your name will not be mentioned in anywhere. The information that you will give us will be kept confidential and only be used for the research purpose.

Are you willing to participate in this study?

1. Yes                      Signature \_\_\_\_\_
2. No                        Signature \_\_\_\_\_

If the answer is yes, Thanks! Conduct the interview

If the answer is no, Thanks! Transfer to other respondent. Don't them to participate in the study.

Name of the interviewer \_\_\_\_\_ Signature \_\_\_\_\_

Date of the interview \_\_\_\_\_ month \_\_\_\_\_ 2012

Time of the interview, Started at \_\_\_\_\_

Finished at \_\_\_\_\_

Name of the supervisor \_\_\_\_\_ Signature \_\_\_\_\_

Date of Checking \_\_\_\_\_ Month \_\_\_\_\_ 2012

Remark 1. Complete \_\_\_\_\_

2. Incomplete \_\_\_\_\_

I, the undersigned individual am oriented about the objective of the study. I have informed that all of my information will be kept confidential and used solely for this study.

In addition, I have been well informed that my name will not be asked and unique identification is not required.

I have the right not to discuss issues that I do not want to. If I want to withdraw from the study any time along the discussion process. I will not be obliged to continue or give reasons for doing so.

However, my agreement to participate in this study is with the assumption that, the information that I provide

During the discussion will help greatly to increase the demand of LARCs.

Signature -----

Date-----

## ANNEX – B

### Questionnaire (English version)

Addis Ababa University, school of medicine and college of health Sciences, Department of nursing and midwifery

### Structured client Assessment of knowledge, attitude and practice

#### Questionnaire

Thank you for being our client. Our goal is to assess your knowledge, attitude and practice towards LARCs and increases your awareness towards LARCs and its effectiveness and give a long time guarantee in case of lack of awareness. In order to do these please take a few minutes to give us your candid evaluation of your experience. You are kindly requested to give your honest opinion whether they are positive or negative.

Read the questions carefully and make sure the respondents understand the question. Mark/write the response given by the respondent on the space provided. According to the question the respondents can select one option, select more than one option, or give a word/words. Age should be completed in complete years.

Questionnaire code -----

Date of interview -----

#### Instruction for interviewer

#### Part one -Socio-demographic and economic characteristics questioner

S.no	Question s	Answers	Remark
1	What is your age(in completed years)	.....	
2	What is your marital status?	1Married 2Divorced/separated/	

		3widowed 4 Single	
3	Ethnic group	1 Oromo 2 Amhara 3 Tigre 4 Gurage 5 Others (specify )	
4	What is your religion?	1 Orthodox 2 Muslim 3Protestant 4catholic 5 Others	
5	How many living children do you have?		
6	Do you want to have any children/any more children?	1 Yes 2 No 3 Don't want to talk	
7	If Yes, how many?		
8	When?		
9	What is the highest level of school you have completed?	1.Illiterate 2. Read and write 3.Primary[1-8] 4.Secondary[9-12] 5. college and above	
10	What is your occupation?	1House wife 2Government employee 3Daily labourer 4Merchant 5Student 6 Other specify	

11	Total monthly income of family or household?	enter the No. in birr-----	
12	Do you have any of the following? Radio Television	1 .yes 2. No 1. Yes 2. No	

**Part two- Knowledge of LARCs questioner**

	Questions	Answer	Remark
13	Do you know about LARC(methods used for many years)	1 Yes 2 No 3 Don't want to talk	
14	If yes what are the general uses of LARC do you know? (tick all mentioned)	1. helps for prevention of unwanted pregnancies 2. Prevention of possible maternal and child death and ill health. 3. limiting family size 4. child spacing 5. others-----	
15	Which method LARC do you know?	1. IUCD 2. Implant	
16	If know what is your source of information? (circle all mentioned by the respondent)	1 health institution 2. family 3. friend 4. mass media 5. NGO 6. others-----	
17	What do you know about IUCD? (circle all mentioned by the respondent)	1. it is very effective 2. it is long term 3. no effect on breast feeding 4. not good for female at high risk of	

		<p>getting STI</p> <p>5. no interference with sexual intercourse</p> <p>6. immediately reversible (becoming pregnant quickly when removed)</p> <p>7. has minimal side effect</p> <p>8. I do not know</p> <p>9. other specify-----</p>	
18	<p>What do you know about implant? (circle all mentioned by the respondent)</p>	<p>1. it is very effective</p> <p>2. it is long term</p> <p>3. no effect on breast feeding</p> <p>4 not good for female at high risk of getting STI</p> <p>5. insertion and removal require minor surgical procedure</p> <p>6. no interference with sexual intercourse</p> <p>7. immediately reversible (becoming pregnant quickly when removed)</p> <p>8. has minimal side effect</p> <p>9. I do not know</p> <p>10. other specify-----</p>	

**Part three- Attitude towards LARCs questioner**

No	Questions	Answer	Remark
19	Do you discuss about LARC method with your husband or friends?	<p>1. Strongly disagree</p> <p>2. Disagree</p> <p>3. Uncertain</p> <p>4. Agree</p> <p>5. Strongly agree</p>	
20	Do you support using LARC?	1. Strongly disagree	

		<ul style="list-style-type: none"> <li>2. Disagree</li> <li>3. Uncertain</li> <li>4. Agree</li> <li>5. Strongly agree</li> </ul>	
21	Is it good to use LARC for contraceptive?	<ul style="list-style-type: none"> <li>1. Strongly disagree</li> <li>2. Disagree</li> <li>3. Uncertain</li> <li>4. Agree</li> <li>5. Strongly agree</li> </ul>	
22	What is your partner's attitude towards using LARC?	<ul style="list-style-type: none"> <li>1. supporting</li> <li>2. against</li> <li>3. neutral</li> <li>4. donot know</li> <li>5. not applicable</li> <li>6. any other idea,-----</li> </ul>	
23	Do you want to know more about LARC?	<ul style="list-style-type: none"> <li>1. Strongly disagree</li> <li>2. Disagree</li> <li>3. Uncertain</li> <li>4. Agree</li> <li>5. Strongly agree</li> </ul>	
24	Do you try to know more about LARC?	<ul style="list-style-type: none"> <li>1. Strongly disagree</li> <li>2. Disagree</li> <li>3. Uncertain`</li> <li>4. Agree</li> <li>5. Strongly agree</li> </ul>	
25	Who is responsible to practice contraception, including LARC?	<ul style="list-style-type: none"> <li>1. wife</li> <li>2. husband</li> <li>3. both</li> <li>4. I do not know</li> <li>5. others, explain-----</li> </ul>	
26	Does large family negatively	<ul style="list-style-type: none"> <li>1 Strongly disagree</li> </ul>	

	affect economic condition?	2. Disagree 3. Uncertain 4. Agree 5. Strongly agree	
27	Does large family affect the health condition of mothers and children?	1. Strongly disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly agree	

#### Part four- Practice of LARCs questioner

No	Question	Response	Remark
28	Have you ever used LARC methods?	1. yes 2. no	
29	If yes to Q No. 28 which method	1. IUCD 2. Implant	
30	If yes to Q No. 28 when did you start?	Entering the starting age	
31	If yes to Q No. 28 how long did you use it?	-----	
32	Where did get the service?	1. governmental 2. non governmental	
33	Is it available at a time you need?	1. yes 2. no	
34	If no to Q No. 33 why?	1. lack of trained man power 2. lack of	

		material/drug/	
35	If you do not practice any of LARC what is/are the reason?	<ol style="list-style-type: none"> <li>1. fear of side effect</li> <li>2. Medical problem</li> <li>3. Fear of infertility</li> <li>4. Partner disapproves</li> <li>5. To get pregnant</li> <li>6. It is sinful</li> <li>7. Cultural taboo</li> <li>8. Lack of knowledge</li> <li>9. Service unavailable</li> <li>10. I didn't start sexual Intercourse yet</li> <li>11. Others, specify-----</li> </ol>	

## ANNEX C scoring system

### Knowledge scoring system

Variable	score
Very effective long acting-----	1
Immediately reversible -----	1
Has minimal side effect-----	1
no interaction with medicine -----	1
No effect with breast feeding -----	1
No supply /frequent/ clinic visit -----	1
No effect on sex performance and sensation full effective-----	1
Protect from ovarian cancer -----	1
Not good for STI prone women-----	1
Need safe and simple surgery -----	1

## Attitude scoring system

Characteristics (attitude factors) score given

Do you communicate with husband?

Strongly disagree-----1

Disagree -----2

Uncertain-----3

Agree -----4

Strongly agree-----5

Supportive use LARCs

Strongly disagree-----1

Disagree -----2

Uncertain-----3

Agree -----4

Strongly agree-----5

Friend husband attitude on LARCs

Strongly disagree-----1

Disagree -----2

Uncertain-----3

Agree -----4

Strongly agree-----5

Is it good to use LARCs

Strongly disagree-----1  
Disagree -----2  
Uncertain-----3  
Agree -----4  
Strongly agree-----5

Need to know more on LARCs

Strongly disagree-----1  
Disagree -----2  
Uncertain-----3  
Agree -----4  
Strongly agree-----5

Tried to know more on LARCs

Strongly disagree-----1  
Disagree -----2  
Uncertain-----3  
Agree -----4  
Strongly agree-----5

Responsible to using LARCs

Wife-----1  
Husband-----1  
Both-----2

Do not concern me-----0

I do not know-----0

Large family has problem on economy

Strongly disagree-----1

Disagree -----2

Uncertain-----3

Agree -----4

Strongly agree-----5

Large family has problem on mother and child health

Strongly disagree-----1

Disagree -----2

Uncertain-----3

Agree -----4

Strongly agree-----5



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CONSENT FORM

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<b>19</b>	<p>?? ??? ? ? ? ? ? ?  ???? ? ? ? ? ? ? ?  ???? ? ?  ??? ??????  ?????? ? ???? ? ?  ? ? ? ? ? ?  ?? ? ? ? ? ? ?</p>	<p><b>1</b> ??? ? ? ? ? ? ?  <b>2</b> ? ? ? ? ? ?  <b>3</b> ? ? ? ? ? ? ? ? ?  <b>4</b> ? ? ? ? ? ?  <b>5</b> ? ? ? ? ? ? ? ?</p>	
<b>20</b>	<p>???? ???? ? ? ?  ???? ? ? ? ? ? ? ?  ???? ? ? ? ? ? ?</p>	<p><b>1</b> ??? ? ? ? ? ? ?  <b>2</b> ? ? ? ? ? ?  <b>3</b> ? ? ? ? ? ? ? ? ?</p>	

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<b>23</b>	<p>????? ? ? ? ? ? ? ?</p> <p>? ? ? ? ? ? ? ? ? ? ? ? ?</p> <p>? ? ? ? ? ? ? ? ? ? ? ? ?</p> <p>?? ? ? ? ? ? ? ? ? ? ? ?</p> <p>? ? ? ? ? ? ? ? ? ? ? ? ?</p> <p>? ? ? ? ? ? ? ? ? ? ? ? ?</p>	<p>1 ? ? ? ?</p> <p>2 ? ?</p> <p>3 ? ? ? ? ?</p> <p>4 ? ? ? ? ? ?</p> <p>5 ? ? ? ? (? ? ? ? ?)</p>	
<b>24</b>	<p>?? ? ? ? ? ? ? ? ? ? ? ?</p> <p>? ? ? ? ? ? ? ? ? ? ? ? ?</p> <p>???? ? ? ? ? ? ? ? ? ? ? ?</p> <p>???? ? ? ? ? ? ? ? ? ? ? ?</p> <p>???? ? ? ? ? ? ? ? ? ? ? ?</p>	<p>1 ? ? ? ? ? ? ? ? ? ? ?</p> <p>2 ? ? ? ? ? ? ?</p> <p>3 ? ? ? ? ? ? ? ? ? ? ?</p> <p>4 ? ? ? ? ? ? ?</p> <p>5 ? ? ? ? ? ? ? ? ? ? ?</p>	
<b>25</b>	<p>?? ? ? ? ? ? ? ? ? ? ? ?</p> <p>? ? ? ? ? ? ? ? ? ? ? ? ?</p> <p>???? ? ? ? ? ? ? ? ? ? ? ?</p> <p>???? ? ? ? ? ? ? ? ? ? ? ?</p>	<p>1 ? ? ? ? ? ? ? ? ? ? ?</p> <p>2 ? ? ? ? ? ? ?</p> <p>3 ? ? ? ? ? ? ? ? ? ? ?</p> <p>4 ? ? ? ? ? ? ?</p> <p>5 ? ? ? ? ? ? ? ? ? ? ?</p>	

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## Annex F Bibliography

### CURRICULUM VITAE

#### 1 Personal Information

Name	Takelech Moges
Sex	Female
Marital status	Married
Religion	Ethiopian orthodox
Date of birth	8/18/1978
Place of birth	Wollega, Gimbi
Addressee	Tele:
	Mobile 251911659795/0926832000
	e-mail <a href="mailto:takmoges@yahoo.com">takmoges@yahoo.com</a>

#### Educational Background

- Ü (2006-2009) Jimma University first degree in clinical nursing with Point Average of (GPA) 3.5 with distinction.
- Ü (1995-1997) Nekemet Health Science College (diploma in clinical Nursing)
- Ü (1993-1994) Shimeles Habte high school Addis Ababa.
- Ü (1991-1992) Gimbi Comprehensive high school Gimbi.
- Ü (1983-1990) Dagmawi Adewa`Dill Junior and Secondary School Gimbi

#### Working experience

- Ø Currently studying masters' degree in Reproductive and Maternal Health Nursing at AAU.
- Ø Working as accredited Assessors for clinical nurse
- Ø Worked as a head of medical ward at Ras Desta Damtew Hospital from April 2004-September 2011.
- Ø Worked as a MCH Nurse at Adama Health center from May 2001-March 2004.
- Ø Provided training to community which was world vision while working in Adama Health center
- Ø Worked in Dembi Dollo Hospital as staff nurse from Dec. 1997-April 2001

### **Training and certificate**

- STI management - Addis Ababa Health bureau
- Management of high risk pregnancy- Oromia health bureau
- § Basic HIV and VCT-trianing-Addis Ababa Health bureau and collaborate with OSSA
- § Integrated management on Mother and Child Health Care – Oromia health beruae
- § Assessors course - TEVT
- § Tools development – Ministry of Education
- § National HINARI/Ptolemy Library service
- § Bed side nursing on blood transfusion -WHO
- § Computer training on MS-word, excel and access

### **Language**

Amharic, Afan Oromo and English

### **Hobbies**

Reading books

**Reference -** Teresa Belete -Tel. 251911502699

## Annex G - DECLARATION

I, the under signed, declare that this is my original work and has never been presented in this or any other university and that all the source materials used for the thesis have been properly acknowledged.

Name Takelech Moges

Signature \_\_\_\_\_

Date \_\_\_\_\_

Adviser

Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_