ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

DEMAND FOR LONG ACTING REVERSIBLE CONTRACEPTIVE METHOD AND ASSOCIATED FACTORS AMONG MARRIED WOMEN IN SEBETA TOWN, OROMIA REGIONAL STATE, ETHIOPIA,2018

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This thesis, by Galgalo Oljira Gutema is accepted in its present form by the board of examiners as fulfilling for the degree of masters in General public health.

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ACRONYMS AND ABBREVETION

EMDHS Ethiopia mini Demographic Health Survey

CSA Central Statistical Agency

CPR Contraceptive prevalence rate

CUC Current use of contraceptive

LARCs Long acting reversible contraceptives

LACMs Long acting contraceptive method

F/P Family planning

IUD Intra Uterine Device

HP Health profession

WHO World Health Organization

GC Gregorian calendar

H/C = Health center

H/F = Health facilities

HFKS= Hausa/Fulani/Kanuri/Seriberi

LAF/P = Long acting family planning

MWAG = Married women age group

SSA = Sub- Sahara Africa

SNNPR= Southern Nation, Nationality and people of republic

TFR= Total fertility rate

U5M= Under Five Mortality

HEW = Health Extension Worker

ABSTRACT

Background: - Demand for long acting contraceptive methods is one of the key factors for total fertility rate and reproductive health issues. Report globally and in Africa including Ethiopia, about 210 million women become pregnant worldwide and one-third of pregnancies ends in miscarriage and stillbirth. Based on the reports in 2012 contraceptive use prevented 218 millions of unplanned pregnancies in developing countries in turn, 55 millions of unplanned births, 138 millions of abortions , 25 million miscarriages and 118,000 maternal deaths.

The Sub-Sahara Africa region's unmet need for family planning is the highest in the world (48.8 million women) and half of the married women of reproductive age (MWRA) want to space or limit the number of children they have. However, only 2.7 million MWRA use long-acting contraception. A comparison of results from the past EDHS surveys reveals that the largest increase was observed in the use of short acting(from 3% to 23%),where as the increment of long acting methods were very low(Implanon increase from1% to 8% and IUD to 2%) until 2016

Objective: The aim of this study was to assess demand for long acting reversible contraceptive and associate factors among married women in Sebeta town, Oromia Regional State, South West Ethiopia.

Method: A community based cross sectional study was conducted, from December 2018 – February 2019. Multi stage sampling technique (Town-kebele-Got-House hold) was used to select 518 study participants. Pre tested structured Amharic version questionnaire was used to collect the data through face to face interview. Data was entered in to Epi Info and analyzed by using SPSS version 21. Bivariate and multivariate analyses were applied to identify factors associated to demand for long acting contraceptive methods by using logistic regression model. Odds ratio with 95% CI was used to assess the association between the independent variables and demand for long acting contraceptive methods.

Result:- The total demand for LARCs was 262 (51.1%). Of which 149(29.04%) of the respondents, had unmet need for LARCs and 113(22.03%) of the respondents were met need. Being merchant in occupations (AOR=2.1,95%CI=[1.14,3.45]), college and above educational level [AOR=3.13;95%CI;8.44,11.631], women married at age greater than or equal to 18years [AOR=2.37;95%CI;1.18,4.76], having three or four children(AOR = 10.32, 95% CI = [2.98,59.45]), time to desire for child after two years [AOR = 4.05; 95% CI: 1.74,9.45], heard about LARCs method in the last three months [AOR = 7.95; 95% CI: 4.41,14.36] and joint decision maker[AOR=5.66,95% CI: 1.39,22.97]. were factors significantly associated with demand for LARCs.

Conclusions: The study showed that more than half of respondents had demand for LARC. Variables such as being merchants in occupation, college and above educational level, age at first marriage, number of alive children, time to desire for child after 2 years, decision maker, and heard about LARCs in the last three months were significantly associated with having higher demand for LARCs.

Recommendation:- Based on this study the demand and unmet need for LARC was found high, so it is better to increase contraceptive utilization. The government should promote education of women beyond secondary school. Strengthening information about LARC and empowering women to participate in decision making are very important.

1. INTRODUCTION

1.1 Background

Family planning is defined as the ability of individuals and couples to await and attain their desired number of children and the spacing and timing of their births. Family planning broadly grouped into two categories. These are long term(long-acting and permanent methods (intrauterine devices, implants, and sterilization)) and short term method (pills, spermicidal, Injectables, male and female condoms, foam tablet and cervical cup)(1).

In order to promote women's reproductive health and prevent the risk of unwanted pregnancies, the use of effective contraceptive methods is paramount important. Intrauterine devices and contraceptive implants are the most effective reversible contraceptive methods and it provides effective contraception for an extended period of time without requiring the user's action with low burden to the users after initiation and allow a rapid return to fertility after their removal and they are cost effective(2).

Demand for long-acting contraceptive methods is one of the key factors to protect women and couples against unwanted pregnancies. However, the proportion of women using these methods was lower than the proportion who desires to use the methods. Increasing demand for these methods will improve utilization of the methods; in turn, it will decline total fertility rate. If demand is not met, on the other hand, the number of unwanted pregnancy and abortion is more likely to increase(2).

According to World Health Organization (WHO): report globally and in Africa including Ethiopia, unplanned pregnancies as well as unsafe abortion continue to be a main problem of reproductive health. About 210 million women become pregnant worldwide and one-third of pregnancies ends in miscarriage and stillbirth(3).

Based on the reports in 2012 contraceptive use prevented 218 millions of unplanned pregnancies in developing countries in turn, 55 millions of unplanned births, 138 millions of abortions , 25 million miscarriages and 118,000 maternal deaths(4).

Worldwide, the demand for modern family planning methods among married or in-union women increased from 75 per cent in 2000 to 78 per cent in 2017 and the demand for long acting was increase from 20percent to 45 percent. In Africa the demand was lower, with 41% in 2000 and 56% in 2017,where as the demand for long acting reversible contraceptive increase from 23 percent to 33.2 percent in same year(5). Large differences are observed across sub- regions as well. In 2000, Eastern Asia, Northern Europe, Western Europe, Northern America and Australia/New Zealand the demand for modern methods of family planning is more than 80 per cent, while the demand for long acting reversible contraceptive was less than 40 percent(5).

In sub-Saharan Africa, 25 percent of women had an "unmet need for long acting reversible contraceptive," meaning that they would prefer to stop having children or delay their next birth, but are not using contraceptive. And the met need and unmet need for long acting reversible contraceptive vary greatly. In Southern Africa the long acting reversible contraceptive use rate was 8 percent and unmet need was 16 percent. In Sub-Saharan Africa total demand for long acting reversible contraceptive method as Regions, is 28% in 2016(6).

When examined in relation to contraceptive prevalence, there is gap between demand and utilization of family planning in countries such as Kenya, Madagascar, Malawi, and Zambia, decline in unmet need has corresponded with an increase a convergence of demand and supply of family planning. In contrast, in other countries, such as Eritrea, Ghana, Mali, and Senegal, the gap has remained wide and consistent(7).

According to EDHS, the total demand for family planning among currently married women age 15-49 has increased over time, from 45% in 2000, to 58% in 2016 and the demand for long acting reversible contraceptive has also increased over the same period, rising from 26% in 2000, to 32% in 2016(met need for long acting reversible contraceptive method increase from 1% to 10% and unmet need for long acting reversible contraceptive method decrease from 25% to 22%) in 2016(8).

The Ethiopian Ministry of Health (EMOH) has made a special attention and effort to expansion of mixed method services for long acting reversible contraceptive method aim provide 20% of family planning(1).

Increase the demand for these methods can decline fertility rate in the course of spacing and limiting family size in turn help to improve maternal and family health and socioeconomic development of a country. The aim of this study was to assess demand for long acting contraceptives and associated factors among married women of reproductive age group in Sebeta town.

1.2. Statement of the problem

The Sub-Saharan Africa region's unmet need for family planning is the highest in the world (48.8 million women) and half of the married women of reproductive age (MWRA) want to space or limit the number of children they have.

However, less than one in seven MWRA (14.7 million) are using a modern method of contraception, of which only 2.7 million MWRA use long-acting contraception (9).

A comparison of results from the past EDHS surveys reveals that the largest increase was observed in the use of short acting(from 3% to 23%),where as the increment of long acting methods were very low(Implanon increase from1% to 8% and IUD to 2%) until 2016(8).

The prevalence of demand for long acting contraceptives study done in Debre Tabor(17%,) Goba town(18%) are similar, whereas different in Debre-markos town which was 52.4%(10-13).

Majority of study done on demand for long acting contraceptive were institutional based and they recommend community based study to address women those who didn't go to health facility(12, 13).

To answer the reason why large gap happed between the study of demand for long acting contraceptive done in Debre-tabor, Goba and Debre-Markos, to address women not went to HF and add variable information heard within the last three months. In addition to this in Sebeta town there is no study conducted that determined the magnitude of demand for LARC and identified the factors that influence it among married women of reproductive age group. This study will significantly contribute to identify the demand for long acting reversible contraceptive services and associated factors among married women of reproductive age group, especially for the studied Woreda including zone.

1.3 Rational of the study

Using family planning to meet the need for spacing and limiting births has the potential to prevent thousands of cases of maternal mortality over the next decade. The risk that a woman will die as a result of pregnancy, childbirth, or unsafe abortion is approximately one in 16 in sub-Saharan Africa. In each of 16 sub-Saharan countries studied, between 72,000 and 1.1 million child deaths are expected to be averted over the next decade if all women who want to space or limit their births succeed(14).

In Ethiopia few studies were carried out to show the demand for long acting reversible contraceptive and associated factors among married women; however, there was no study done on unmet need and demand for long acting contraceptive methods among married women in Sebeta town which was published.

There for it is important to assess what client characteristics affect the demand for long acting reversible contraceptive and what are myth and misconception in community considered as barriers of the LARCs for demand.

The finding of this study helps to modify the way of planning, and implementation of provision of long acting reversible contraceptive to increase its demand among married women. May help all program managers in Woreda health office in Sebeta town and Oromia Liyu zone Health Bureau including, stakeholders working on family planning service to act on identified by this study for low demand for long acting reversible contraceptive.

2. LITERATURE REVIEW

2.1 Introduction

Voluntary family planning has been widely adopted throughout the world. More than half of all couples in the developing world now use a modern method of contraception for healthy timing, spacing, and limiting of births to achieve their desired family size. Few other public health measures have demonstrated so great a life-saving, health, and economic impact for such a low cost. Family planning has saved the lives of millions of mothers and their children and has improved the well-being of families and communities. The success of family planning has not been consistent across countries or even within countries. In some countries, the level of contraceptive use has remained low or risen slowly over the years. Even in countries where modern-method use is relatively widespread, there are populations without access to family planning services(15).

2.2. Utilization of modern contraceptive

Contraceptive use is highest in China (83%); whereas the lowest contraceptive use prevalence in Asia was in Afghanistan. Five countries in Eastern Africa (Kenya, Malawi, Rwanda, Zambia and Zimbabwe) also had contraceptive prevalence levels of 50 percent or more in 2015. In contrast, 17 countries of Africa had contraceptive prevalence levels below 20 per cent. This group includes the populous country of Nigeria, where contraceptive use was at less than half the level in Ethiopia (16 percent and 36 percent, respectively). Less than 10 per cent of married women of reproductive age were using contraception in Chad, Guinea and South Sudan in 2015(16).

The study finding from Zimbabwe showed that, none of the respondents was using permanent method of contraception while condom was used by 17% of the respondents. The main long acting contraceptives: the Implant and intrauterine were used by 4% of the respondents(17).

IUD use is much more common in southeast Asia while condom use is most prevalent in sub-Saharan Africa, most likely in part because of the high levels of concern about HIV in that region(18).

The regional variation in modern contraception prevalence rate where Addis Ababa, Amhara and some parts of Gambela and Benshangul Gumuz regions have high contraceptive prevalence. When the results were sub-divided by zone, the central and southwestern parts of the country had high prevalence of modern contraceptive use. The eastern and southern part of the country had lower prevalence of modern contraception use(19).

According to EDHS 2016, contraceptive prevalence Rate of the four regions: Oromia, Tigray, Amhara and SNNP revealed current use modern contraceptive method was 35% in Tigray, 40% in Amhara, 28% in Oromia and 40% in SNNP respectively and as country CPR was 35%. Contribution of LARCs is low compared to other modern contraceptive method to national CPR(8).

According to study done in Bati town, Amhara region shows that from all respondents 70.9% of women used short term method, out of these inject able 90%, pills 8.5%, condom 1.5%. Whereas 29.1% were using LARCs consisting (82% implants and 18% IUCD(20).

2.3. Demand for long acting reversible contraceptive method

Health survey done in North America 2006-2010 showed that 62% of women age 15-44 age groups and sexual active were used any methods of contraceptive. Among these users, the most highly used methods were female sterilization 17%, pill 17%, condom 10% and other methods were 8 %(21)

According study done in Iran in 2014, 27.2 percent of respondents were using LARCs at the time of survey. Among those who use temporary methods, 8.6 percent said that they wanted to have another child in the next two years, and 20 percent wanted to have another child with in 2 years. Thus, the percent of women who use temporary methods and don't want to have another child is equal to 61.5 percent. If this percent is added to the percentage of women who use permanent methods (9.8 percent), the total demand for LARCs was 71.35 percent and the difference between the usage and demand for LARCs is equal to 43.65(22).

According to EDHS, 2016 data shows that 22 percent of currently married women have an unmet need for family planning services, 13 percent for spacing and 9 percent for limiting. As mentioned above, 36 percent of married women are currently using a contraceptive method and nearly six in ten currently married women in Ethiopia 58% have a demand for family planning(8).

According to study conducted in Debre Markos Town in 2014 more than half (52.4%) of respondents had demand for LARCs; of which 32.9% had an unmet need for LARCs 16.4% for spacing & 16.6% for limiting). About 19.5% were using the long acting reversible methods 11.0% for spacing & 8.5% for limiting. Among the total demand only 37.1% were satisfied whereas majority 62.9% was unsatisfied for the demand of LARCs in which they required it for spacing or limiting. The top reasons mentioned not used LARCs were; fear of side effects 58.4%, respondents opposed 41.3%, health concerns 37.0%, preferring short term36.3% and religious prohibition 24.2% (10).

According to study conducted in Bahir Dar Town in 2015, the total demand for long acting contraceptive methods was 36.7 %. Of which, 28.4 % was met need and 58.3 % was unmet need for long acting contraceptive methods. Women who had four or more children were four times more likely to have the demand for LARCs as compared to those who had one child or had no child at all. Desire to give birth was found to be a strong predictor of demand for LARCs. Women who had desire to give birth after two years were six times more likely to have demand for LARCs than Women who had no birth intension were eight times more likely to have demand for LARCs as compared to those who intended to have birth within two years(23).

2.4. Factors Affecting Demand for Long Acting Contraceptive Methods

According to study conducted in east London, South Africa, the knowledge of Implanon use among the participants was poor. Most of the participants did not know if one easily become pregnant after the discontinuation of Implanon 68.1%, and they believe that- Implanon is not better than other methods of contraception 81.5%. More than 64.3% of participants doubted the efficacy of Implanon, where as 81% of the participants not sure as Implanon cannot cause permanent infertility(24).

According to study conducted in Ibadan, South West Nigeria women with secondary or higher education and resided in urban showed higher demand and use of long acting contraception than less educated. Only10 percent of women with no education use contraception, while 53 percent of

women with secondary education use contraceptive. The demand of LARCs is higher among women with higher levels of education (high school and diploma) women who have less perception of the costs of contraception, more children ever born and no desire for childbearing. Particularly more educated women generally go for implant compared to other methods. Specifically, women with tertiary education choose implant and IUCD above Injectables contraceptives(25).

Partner support through discussion about family planning has been found to be factors affecting the use of family planning services(25).

There was significant variation observed in current use of contraceptive among women of reproductive age in Nigeria by religion, however, this study shows that it is significantly lowest among Muslim women. The study also found that current use of contraceptive varied significantly among women across all categories of association between ethnicity and religion thereby justifying their predictor effect on current use of contraceptive. The odd for Catholics women and Other Christians are significantly higher compare with Muslim women, but is not significant for women of other religion. This is the cultural belief of most of these women that God has placed Children in the womb of a woman and until they are given birth do not stop(26).

Also, Islam permits polygamy and the women believed that they can gain much of their husband's attention when they are often pregnant for him. This explains the findings in Ethiopia that women who had polygamous marriage were by half less likely to use modern contraceptive methods than women in monogamous marriage(26).

According to EDHS, 2011, 98% participants heard about modern contraceptive method. More than nine women in every ten have heard about the pill and Injectables. More than nine men in every ten know about the male condom as well as about the pill and Injectables. LAM is the least known modern method. Only 3 percent of all women and of all men interviewed have heard of this method(27).

According to study done in Bombe District, Southern Ethiopia shows that the utilization prevalence of LARCs was varied with age range of respondents. For every one year increase in age, the likelihood of having the LARCs of contraception use was increased. In other ways, while effects of other variables in the model held constant, participants age from 35-49 had more demand to use long acting and permanent contraceptives than women whose age ranges from 15 to 34(28).

According to study conducted in Goba Town, Bale zone in 2012 showed that their husband/partner approves partners using LARCs (67.6%) than decision made by both partners 64.6%(11). According to study done in Debre-Tabor town in 2015 showed that respondents who have more frequent discussions with their husbands or partners had 3.89 times higher demand than those who have discussion once or twice about long acting contraceptive methods(12).

According to study conducted in Gesuba Town, southern Ethiopia in 2015, 76.3%of participants have information about LARCs of contraceptive, out of which 96.7% of them mentioned about implant and 68.5% about intrauterine contraceptive device(29).

Thirteen point six percent of the respondents mentioned Health professions as a source of information. The purpose of using LARCs, 51.8% used to limit family size, whereas, 51.0% will prevent unwanted pregnancy. Generally, 54.8% of the respondents had a negative attitude towards LARCs of contraceptive, whereas, 45.2% of them had a positive attitude. In addition 8.3% of them mentioned husband disapproval, 30 9.2% medical reason, and 33.3% of them mentioned need for pregnancy as the reason and also women less than 30 years old were about three times more likely to accept LARCs as compared with those with age greater than or equal to 30 years(29).

According to study conducted in the Bench – Majizone in 2017, south west Ethiopia stated that 59.25% of participants know as IUCD cannot interferes sexual intercourse and 74.85% of the study participants had knowledge about the Implant prevents pregnancy for 3-5 years but 17.91% participants did not know as IUCD can prevent pregnancy for 12 years. Majority of participants aware about modern family planning. Of these respondents 98.15% of about long acting family planning methods were heard message through mass media and 44.1% heard from health professional. 65.02% of married women had positive attitude towards LARCs, where as 34.9% of married women had negative attitude towards LARC(30).

2.5. Conceptual framework

Conceptual frame work has been developed for this paper after a reviewing of the relevant literatures. As shown in the figure socio-demographic factors, individual behavioral factors, predisposing factors and reproductive history of the mother have a link with demand for long acting contraceptive methods.

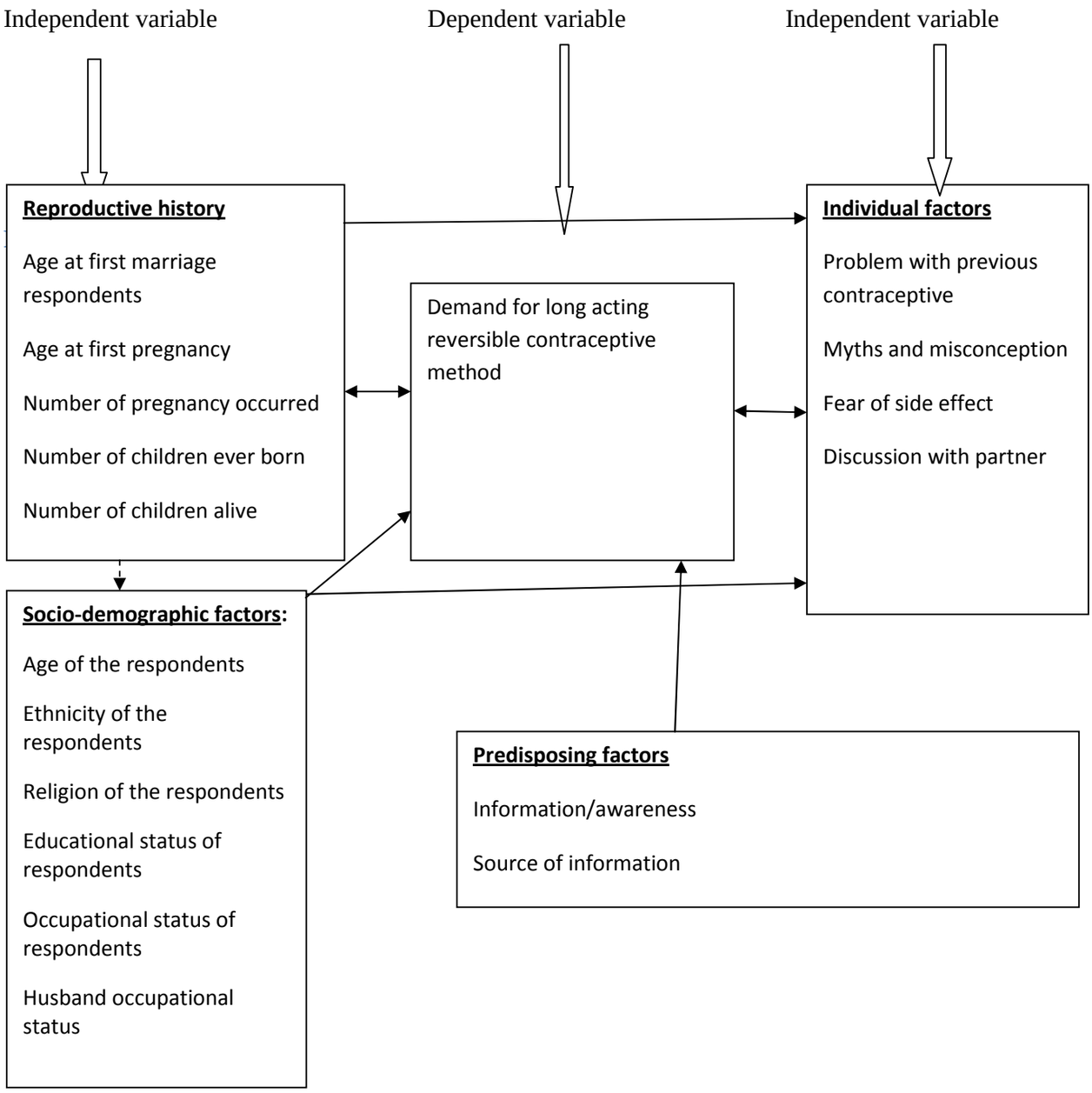


Figure 1 Analytical conceptual framework of factors associated with demand for long acting contraceptives method.

2.6 Research Questions

1. What is the demand for long acting reversible contraceptives among married women of reproductive age in Sebeta town, Southwest, Ethiopia.
2. What factors influence the demand for long acting reversible contraceptive among married women of reproductive age in Sebeta town, Southwest, Ethiopia.

3. OBJECTIVE

3.1. General Objective

The general objective of this study was to assess demand for long acting reversible contraceptive methods and associated factors among married women of reproductive age in Sebeta town ,Southwest, Ethiopia, 2019

3.2. Specific objective

- To assess demand for long acting reversible contraceptive among married women of reproductive age in Sebeta town, Southwest, Ethiopia.
- To assess factors associated with the demand for long acting reversible contraceptive method (LARCS) among married women of reproductive age in Sebeta town, Southwest, Ethiopia.

4. METHODOLOGY

4.1. Study Area

The study was conducted in Sebeta town. Sebeta town was located at 25Km Southwest of Addis Ababa. The town was divided in to ten kebeles (small administrative regions). Based on the 2007 population and housing census, the total population size of the town was 75,680 of which 37,704 were male and 37,976 were females and the total numbers of households in the town were 27,300(31).

However, the town has recent years seen a strong annual growth rate, and population counts in Nov, 2018 are growing closer to 178,264. According to information from the town's health office there are four government Health center, and one hundred forty one private clinics. Out of these three government Health centers and seventy private clinics providing reproductive health services including LARCs.

4.2. Study period:- Study period was conducted from December 2018 – February 2019.

4.3. Study design: Community based cross sectional design was used.

4.4. Source population: All women married in the reproductive age who were living in Sebeta Town, Southwest, Ethiopia.

4.5. Study population: Selected married women in the reproductive age group who lived in the Sebeta town and fecund.

4.6. Inclusion and Exclusion

4.6.1 Inclusion criteria- Urban married women.

4.6.2 Exclusion criteria - Couple with sterility .
- Married women with hearing and communication impairment.
- Married women those who are seriously ill.
- Not volunteer to participate in the study .

4.7. Sample size determination

The sample size was calculated for the demand of LARCs using (single population sample calculation formula) using EPI info version 7 assuming that 24.4% of proportion of demand for long acting method user from a previous study done in Batu town, Eastern Shoa Zone Oromia regional state (13) 95% level of confidence, 1.5 design effect and 4.75% margin of error.

The calculated sample size was 471.Considering 10% non-response rate; the final required sample size was 518.

The calculated sample size for second objective by using double population formula by using p2 from demand for long acting method for non user study done in Goba town14%(11) was 497 Considering a 10% non-response rate.

Since the sample size of first objective was larger than the second objective, the first sample size was selected which was = 518.

4.8. Sampling technique or procedures

Multi stage sampling procedures were used to identify the study subjects(Oromia Liyu zone-Sebeta town-kebeles-Households). Totally 6 kebeles were selected by using simple random sampling from ten kebeles. Then population proportional allocation technique was used to select number of households from each kebeles based on their population size. Married women of reproductive age for interview were selected using:- systematic random sampling technique. Households were selected every 35th interval (i.e. by dividing the total households(H) to the sample size (h)) using the first selected household as reference. The first household was selected from house number listed 1- 35 started from kebele one by lottery method. There was no more than one married women within reproductive age in a household.

Sampling procedure in Summary form

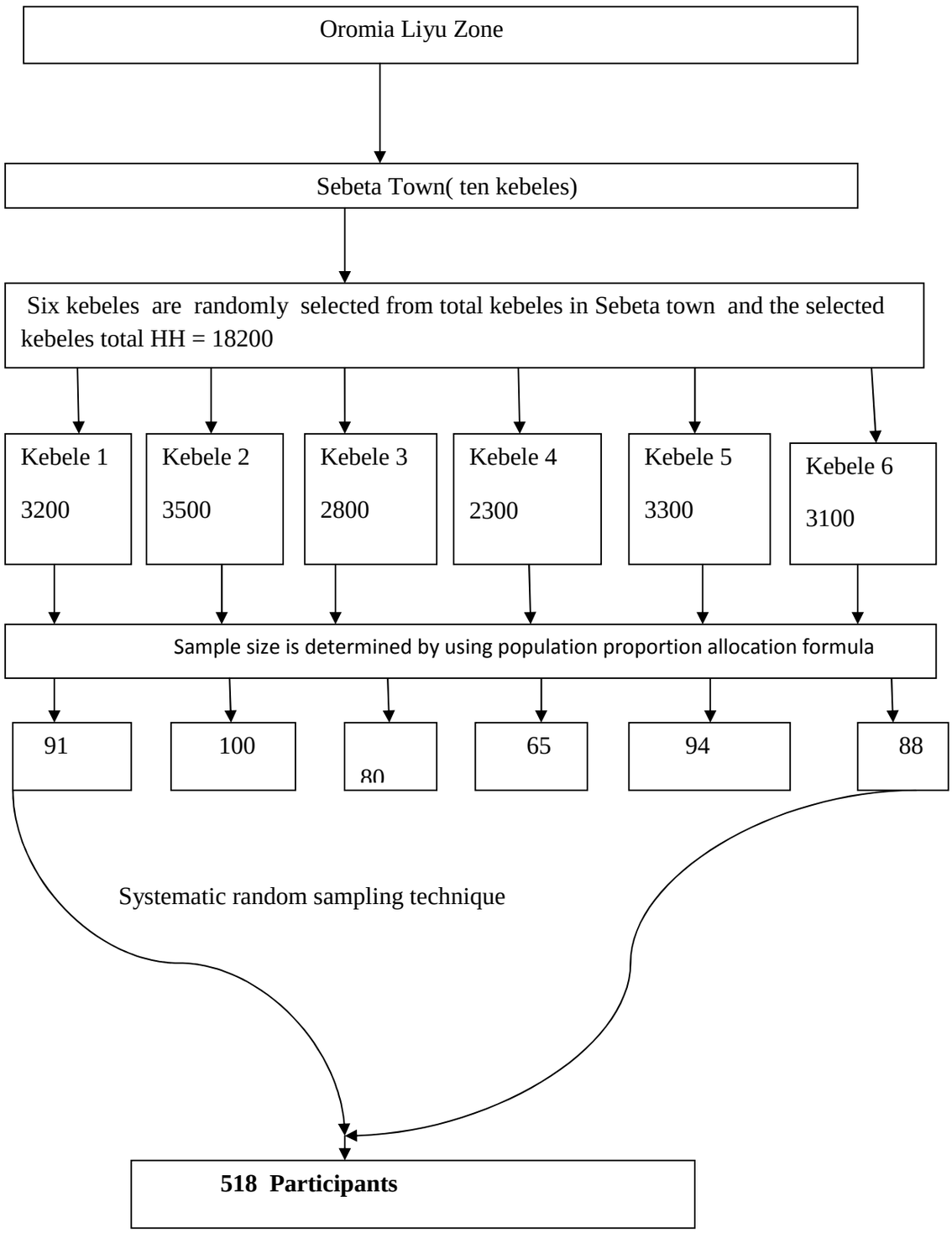


Figure 2: Sampling procedure of factors affecting demand for long acting family planning among women

4.9. Data collection procedures

The data was collected by using questionnaires to assess the status of current demand for long acting reversible contraceptives. Data was collected by face to face interview using structured and pre tested questionnaires in appropriate place. Twelve private health workers were collected data and three health officers as supervisors. To decrease non response rate during interview when the respondent was not found in the house at least two visit were done before dropping the participants. The supervisors' and principal investigator were closely supervised the performance of the data collectors in the field on a daily basis.

4.10. Data Quality management

The questionnaires was adapted from different studies considering the local situation of the study area. Questionnaires were prepared first in English language then translated to local language (Amharic) for data collection. To check whether the translation consistent with the English version the questionnaire was back translated to English to keep consistency of the questionnaires.

The two days of training was given for twelve private health workers as data collectors and three health officers as supervisors. The training was based on main issues like the clarity of the wording to make sure that the respondents interpreted all questions in a similar way; eliminating probable causes of ambiguity and confusion, research ethics, sampling, data collection tools, and interview techniques to familiar with and standardize their interviewing technique and to ask question in consistent manner.

Then, the questionnaire was pretested by using 27 respondents in similar setting which was out of the selected kebeles, one week before the data collection. Then necessary corrections were made before the actual data collection. The filled questionnaires were checked for cleanness and completeness daily by supervisors and principal investigators.

4.11. Data processing and analysis

Data was cleaned for completeness, consistencies, coded and entered in to Epi info version7 and then export to SPSS version 21 for analysis. Descriptive statistics, including frequencies and proportions were used to summarize the variables.

Both bi-variable and multivariable logistic regression analyses were carried out.

Bivariate analysis was conducted primarily to check the variables which had an association with the dependent variable individually. Then variables with a p-value of less than 0.05 in the bivariate analyses were entered into the multivariate logistic regression analysis. Both Crude Odds Ratio (COR) and Adjusted Odds Ratio (AOR) with 95% confidence intervals were assessed to identify factors influencing demand for LARCs methods.

4.12. Study Variable

4.12.1.Dependent:

- Demand for long acting reversible contraceptive

4.12.2. Independent variable

- Socio-demographic factors:
- Reproductive history
- Individual factors
- Predisposing factors

4.13. Operational definition

- ***Long acting reversible contraceptive :-*** In this study such as Intra-Uterine contraceptive Device (IUCD) and Implanol were categorized as long acting reversible methods.
- ***Demand for long acting reversible contraceptives :*** Both women who were using long acting reversible contraceptive methods (met need) and women who desired to use but not used due to any reason (unmet need)
- ***Unmet need for long acting reversible contraceptive:-*** women who had the desired to use Implanol or IUCD for delay or limit pregnancy but did not use the methods due to any reason .
- ***Unmet need for spacing*:-** A women who does not want to have pregnancy soon after delivery or want to space for two years but not using any of LARC.
- ***Unmet need for limiting*:** - A women who want to decrease their number of children, but not using any of LARCs.
- ***Met need for long acting reversible contraceptive:-*** Women who use Implanol or IUCD.
- **Reproductive age women**: Women age between 15-49 years.
- **Sterility**: When a couple unable to conceive after having had unprotected intercourse at least for a year.
- **Myths/misperception**:- False perception/rumor/ about LARC in community.

4.14. Ethical Considerations

Ethical clearance was obtained from Research and Ethics Committee of School of Public Health Addis Ababa University College of Health Sciences. Formal letter of support was written by the school to Sebeta town administration and Health Office. Sebeta town also wrote a support letter to each selected kebele administration of Sebeta town. The purpose of the study was discussed with local authorities and with respondents before data collection. Explanation was given to participants on their voluntarily participation and informed consent from each respondent was taken.

The rights of the respondent not to participate in the research were respected and written consent was taken to take information. Respondents were granted from any risk as of this research participation but may not benefit directly, but the information gathered is helpful to improve the family planning service provision by encouraging demand responsive program.

The privacy of the respondent was kept by interviewing woman in separate place where the participant feels free to express her feelings and ideas. Information of respondent in the research was not given to anyone else without the prior permission from the respondent if required was ensured and data was stored in a file, without the name of study participants. Individual participant data was coded on each respective questionnaire and accessed only by research team members and not disclose to others.

4.15. Dissemination of results

The findings of the study will be submitted to, School of Public Health, Addis Ababa University. It will also communicated to all relevant organizations and bodies who can make use of the study finding like Oromia Liyu Zone Health Bureau and Sebeta Town Health Office. Effort will be made to present in international and national conferences and to publish on peer reviewed journals.

5. RESULTS

5.1. Socio demographic characteristics of respondents

A total of 513 married women in the reproductive age were participated in the study with the response rate of 99%. The mean age of the study participants was 29.035 and SD ± 5.1 years. Majority of the study subjects were Oromo in ethnicity 230 (44.8%) followed by Gurage 128(25%). Majority of the respondents 242(47.2%) were Orthodox Christian followers and followed by Muslim religion 185(36.1). Concerning educational status 57(11%) of the respondents had no formal education, whereas 273(53.2%) had secondary and above education. Three hundred ninety (76%) of respondents were housewife followed by merchants 77(15%) . Three hundred forty five (67.3%) of the respondents' husband occupation were merchants followed by governmental employees 108(21.1%)(Table 1)

Table 1 Socio-demographic characteristics of study participants in Sebeta town, Southwest, Ethiopia, 2019, (n=513)

Variables	Frequency	Percent
Respondents age in years		
15-19	16	3.1
20-24	54	10.5
25-29	220	42.9
30-34	110	21.4
35-39	65	12.7
40-44	27	5.3
45-49	21	4.1
Ethnicity		
Oromo	230	44.8
Amhara	92	17.9
Gurage	128	25.0
Silte	43	8.4
Others	20	3.9
Religion		
Orthodox	242	47.2
Muslim	185	36.1

Protestant	86	16.8
Respondents Occupational status		
House wife	390	76
Employee	33	6.4
Private business/merchant	77	15.0
Private employee	13	2.5
Husbands Occupation		
Employee	108	21.1
Private business/merchant	345	67.3
Daily laborer	20	3.9
Driver	35	6.8
Private employee	5	1.0
Respondents Educational status		
No formal education	57	11.1
Primary school	183	35.7
Secondary school	194	37.8
College/University	79	15.4

5.2. Reproductive history of the respondents

One hundred thirty one (25.5%) of the respondents were married before 18 years while the remaining 382 (74.5%) were married at the age of 18 years and above. The median age of their first marriage was 21 years.

Sixty-four(12.5%) of the respondents had their first pregnancy before 18years while 429(83.6%) of the respondents had their first pregnancy at 18years and above. Their median age was 22 and their mean age was 21years with SD ± of 3.343years at their first pregnancy. One hundred forty five (30.5%) of the respondents had their first birth before 20 years old while 330(69.5%) of the respondents were at the age of 20 years and above of their first birth. Currently 20 (4%) of the participants didn't have children while 173(33.7%) had three and more alive children. Forty eight (9.4%) of respondents were pregnant during the study period. Out of these, 22 (45.8%) were wanted pregnancies, while 8 (16.7%) were not wanted at all. From study participants 62(14.8%) desired to have a child within two years, whereas317 (75.7%) of the participants desired to have a child after two years(Table2).

Table 2 Reproductive history of married women in the reproductive age in Sebeta town, Southwest, Ethiopia, 2019,(n=513)

Variables	Frequency	Percent
Age at first marriage		
Age less than <18	131	25.5
Age greater than equal to ≥18	382	74.5
Ever been pregnancy		
No	20	4
Yes	493	96
Age at first pregnancy occurred		
Age < 18	64	12.5
Age ≥18	429	83.6
Age at first birth		
Age less than 20	145	30.5
Age greater than 20	330	69.5
Children ever born		
No	20	4
Yes	493	96
Number of alive children currently		
0	28	5.5
1-2	312	60.8
3-4	143	27.9
≥5	30	5.8
Desire for more child		
No	74	15
Yes	419	85
When to have next child		
Within two years <2yrs	62	14.8

After two years >2yrs	317	75.7
I don't decide	40	9.5
Current pregnancy		
No	465	90.6
Yes	48	9.4
Status of current pregnancy		
Wanted	22	45.8
Wanted later	18	37.5
Not wanted at all	8	16.7

5.3. Modern contraceptive utilization among married women of reproductive age

From the total respondents, 380 (74.1%) have used modern contraceptive methods whereas 133(25.9%) not used . In the study area, the most used family planning methods was Injectables 203 (39.6%) and the least used was condom 5(1%) [Figure 3].

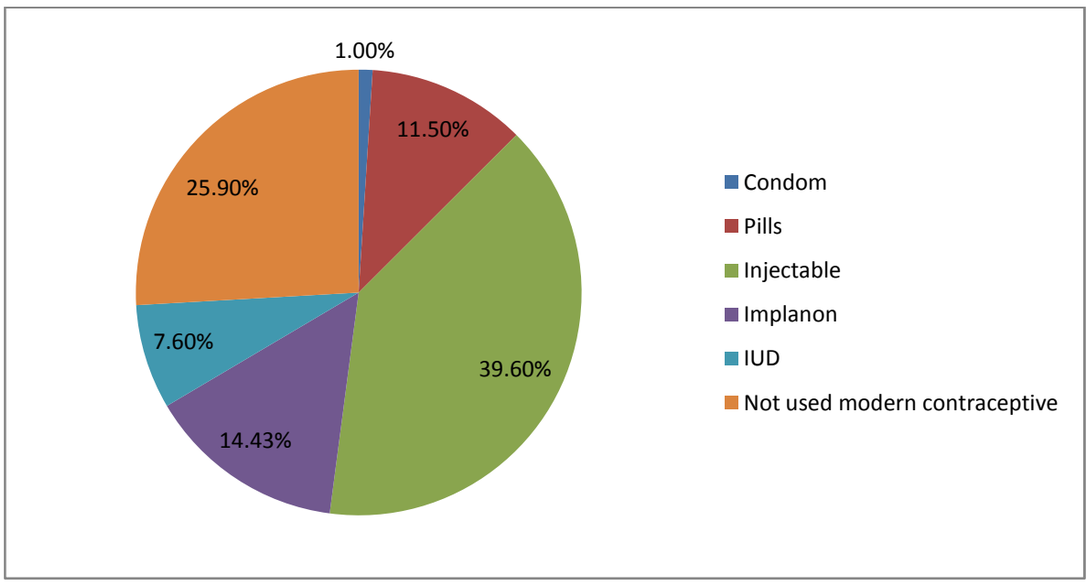


Figure 3 Pie chart presentation of modern contraceptive users' among married women in Sebeta town, Southwest, Ethiopia,2019.

5.3. Demand for long acting contraceptive methods

Demand for long acting reversible contraceptive methods in the study area was 51.1%. This was the current use of long acting reversible contraceptive methods (met need) and the method desired but not used due to any reason (unmet need). Long acting reversible contraceptive users (met need) were 113 (22.03%) and unmet need for long acting reversible contraceptives were 150 (29.04%). At the time of data collection, from total unmet need for long acting reversible contraceptive 133(89.3%) were used short acting contraceptive method and 16(10.7%) of the respondents were not used any type of family planning [Table 3].

Table 3 Demand for LARCs among married women of reproductive age in Sebeta town, Southwest Ethiopia,2019,(n=513)

Variables	Frequency	Percent
Demand to long acting reversible contraceptive		
No	251	48.9
Yes	262	51.1
Current utilizing of LARCs		
No	149	29.04
Yes	84	22.03
Reason for not to use LARCs		
Fear of side effect	55	36.9
Husband opposed	25	16.8
Heard from others as it is not good	21	14.1
Want to become pregnant	20	13.4
Previous inconvenient	15	10.1
Infrequent sex	13	8.7
Method type preferred		
IUD	29	7.6
Implanon	55	14.43

5.4. Current utilization of long acting reversible contraceptive

The current utilization rate of long acting reversible contraceptive method among the study participants was 113 (22.03%). Of these, 74 (14.43%)were using Implanol and 39 (7.6%) intra uterine contraceptive device (IUCD). The utilization of long acting reversible contraceptive methods varied with the age of respondents. The high proportion of users for spacing were observed in the age group of 25-29 and 30-34 years and the lowest were in age group of 45-49. The proportion of users for limiting was higher in age group of 35-39 and 40-44.[Figure 4].

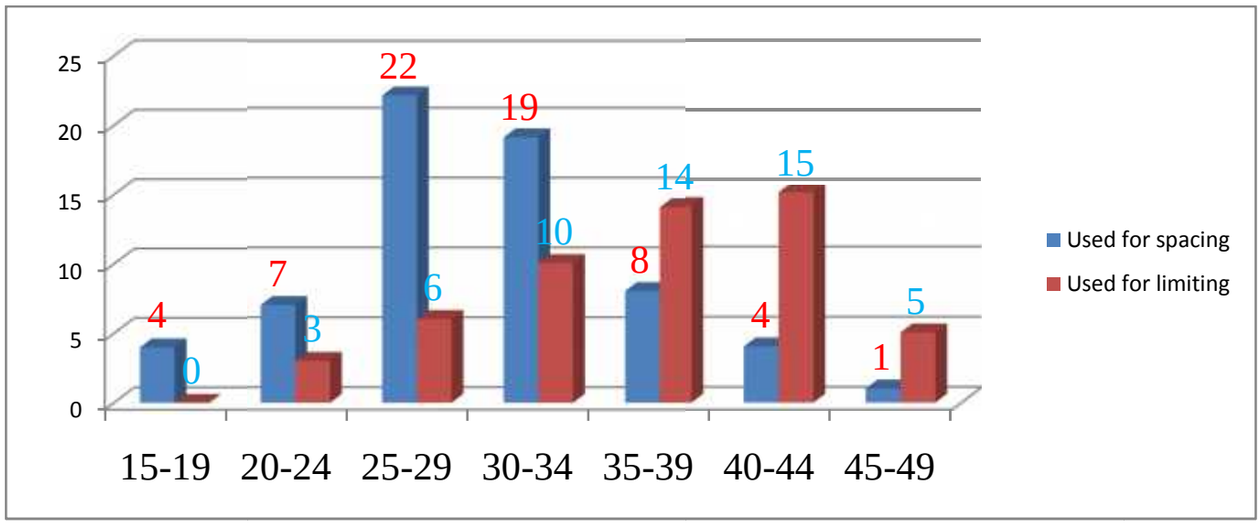


Figure 4 Graphic presentation of current long acting contraceptive users by age groups and purpose of utilization in Sebeta town, Southwest, Ethiopia,2019.

5.5. Unmet need for long acting reversible contraceptive methods

Total unmet need for long acting reversible contraceptive methods was found 149(29%). Of these, (69.5% for spacing and 30.5% for limiting. Unmet need for long acting reversible contraceptive methods for spacing was higher in the age group of 20-34 years and for limiting it was high in the age group of 35-44 years[Figure 5].

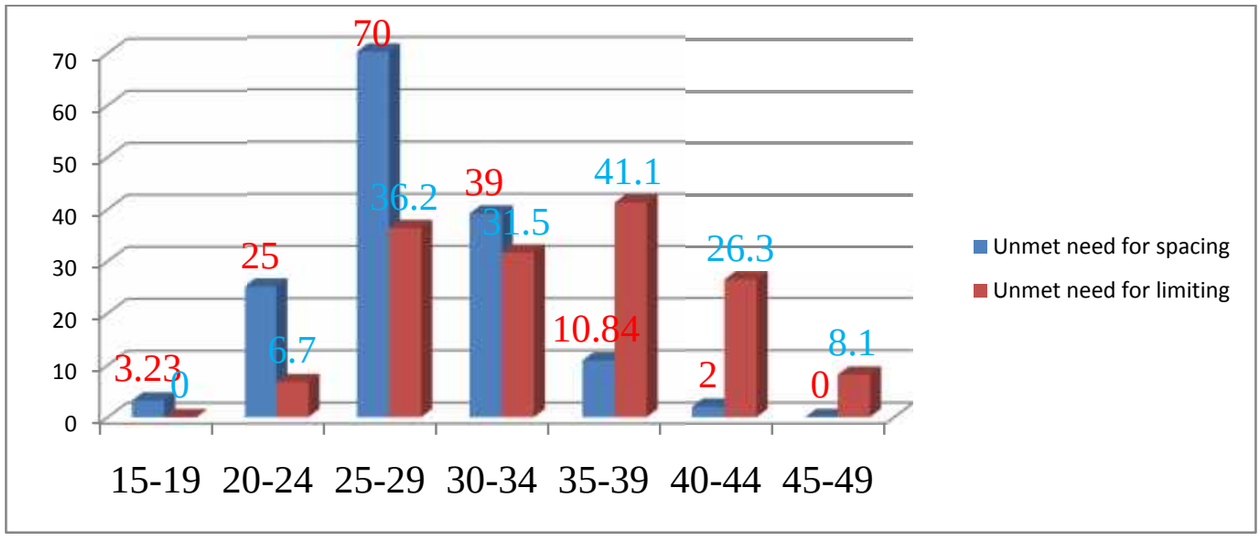


Figure 5 Graphic presentation of unmet need for long acting contraceptive method and purpose by age groups in Sebeta town, Southwest, Ethiopia,2019

The major reasons of unmet need for long acting reversible contraceptive method were:- fear of side effect, husband opposed, heard from others as it is not good and want to become pregnant [Figure 6].

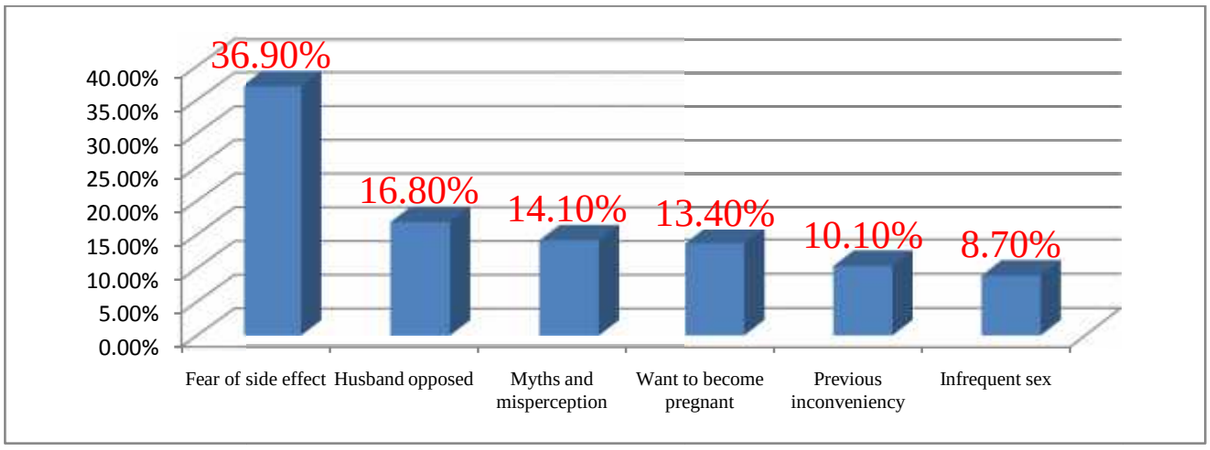


Figure 6 Reason reported for not using LARCs by married women of reproductive age in Sebeta town, Southwest, Ethiopia, 2019.

5.7. Discussion with partners, and sources of information about LARCs

Two hundred two (55%) of the respondents heard about long acting reversible contraceptive method, where as 231(45%) of the respondents not heard in the last three months. 350 (92.1%) of respondents have discussed about contraceptive methods with their husband in the last twelve months and 30(7.9%) of the respondents didn't discuss with their husband. From the total discussion 282(80.6%) decision were given by both partners, self 54(15.4%) and 14(4%) decision were given by husbands. [Table 4].

Table 4 Awareness and discussion with partners about LARC among married women in the reproductive age in Sebeta town, Southwest,Ethiopia,2019

Variables	Frequency	Percent
Heard about LARCs in the last three months		
Yes	282	55
No	231	45
Discussion with partner		
No	30	7.9
Yes	350	92.1
Who make decision		
Husband	14	4
Joint decision	282	80.6
Self	54	15.4

Among the source of information, the major source was media and health professional 103(36.5%) followed by media only100(35.5%)[Figure 7]

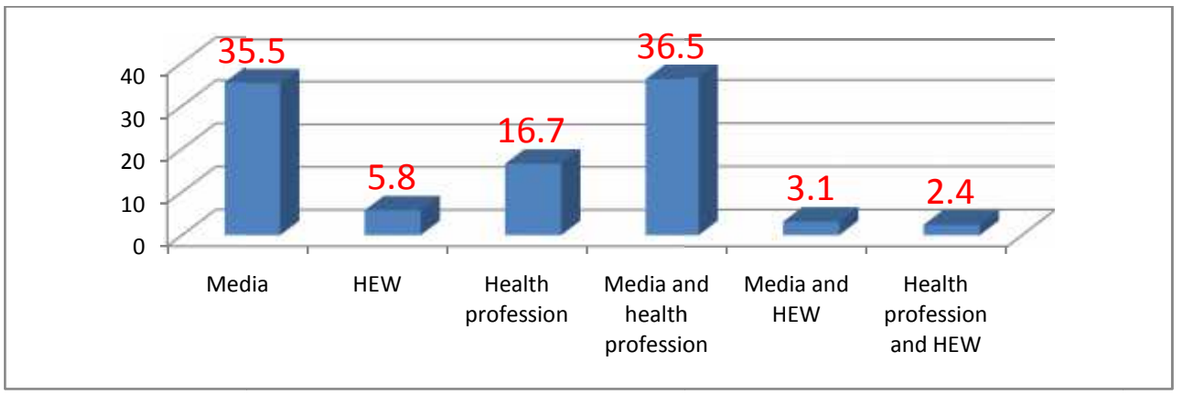


Figure 7 Graphic presentation of source of information respondents heard LARCs among married women in Sebeta town, Southwest, Ethiopia.

5.9. Factors associated with demand for long acting contraceptive method

5.9.1. BIVARIATE ANALYSIS

The bivariate analysis was done to identify factors affecting demand for LARCs by considering factors those shows association on other similar studies and potential association with the dependent variable in this study. The results of the bivariate analysis shows that age category from 25-29 [COR: 2.082(1.19, 3.62)], 30-34[COR: 2.875(1.55, 5.34)], 35-39[COR: 2.313(1.15,4.64)],occupation being private business /merchants [COR: 2.27(1.36, 3.78)], Secondary level of education [COR: 2.32(1.26, 4.29)], College/University [COR: 4.5(2.17, 9.34)], Age at first marriage [COR: 2.63(1.74,3.98)], Age at first pregnancy [COR: 2.89(1.64,5.13)], Number of children currently alive 3-4[COR: 6.81(2.25,20.62)], Time of desire for child after two years [COR: 6.68(3.77,11.83)], Don't decide [COR: 2.69(1.33,5.45)], Current contraceptive user [COR: 13.42 (7.64, 23.58)], Spousal discussion [COR: 4.87(2.241,10.571)], Joint decision maker [COR: 9.099(2.474,33.46)], Self decision maker [COR: 6.233(1.551,25.05)], and heard about LARC in the last three months [COR: 8.234(5.528,12.26)], significantly associated with demand for LARCs [Table 5]..

Table 5 Bivariate analysis for factors affecting demand for long acting reversible contraceptive among married Women in Sebeta town, 2019(n=513)

Independent variable	Demand for LARCs		COR 95 CI	PV
	Yes	No		
Age of the respondents				
15-24	24	46	1	-
25-29	126	116	2.082(1.19,3.62)	0.01
30-34	69	46	2.875(1.55,5.34)	0.001

35-39	35	29	2.313(1.15,4.64)	0.018
40-49	8	14	1.1(.403,2.97)	.858
Respondent occupation				
House wife	178	204	1	
Employee	21	12	2.021(.967,4.22)	0.061
Private business/merchant	51	26	2.27(1.36,3.78)	0.002
Private employee	12	9	2.59(.785,8.58)	.117
Level of Education				
No formal education	20	37	1	
Primary education	78	105	1.37(.74,2.55)	0.313
Secondary education	108	86	2.32(1.26,4.29)	0.007
College/university	56	23	4.5(2.17,9.34)	0.000
Age at first marriage				
<18years	44	87	1	
≥18years	218	164	2.63(1.74,3.98)	0.000
Age at first pregnancy				
< 18years	20	44	1	
≥18 years	238	191	2.89(1.64,5.13)	0.000
Time of desire for child				
Within two years	17	71	1	
After two years	216	135	6.68(3.77,11.83)	0.000
I don't decide	29	45	2.69(1.33,5.45)	0.006
Current contraceptive user				
No	16	117	1	
Yes	264	134	13.42(7.64,23.58)	
Spousal discussion				
No	10	23	1	
Yes	237	112	4.87(2.241,10.57)	0.001

Decision maker				
Husband	5	9	1	
Joint decision	201	81	9.099(2.474,33.4)	0.001
Self	34	20	6.233(1.551,25.0)	0.01
Heard about LARC in the last three months				
No	174	57	1	
Yes	205	76	8.234(5.528,12.2)	0.003

5.9.2. MULTIVARIABLE ANALYSIS

In the bivariate analysis variables those shows association at 0.05 level of significance was transferred in to multivariable analysis to control confounding variables and test the association of each variable with the dependent variable. Based on the result of multivariable analysis Age of women category, occupational status, level of education, age at first marriage, age at first pregnancy, number of children alive, Time of desire for child, current contraceptive users, spousal discussion, Decision maker and heard about the methods within the last three months were found to be positively associated with demand for long acting contraceptive methods.

The odds of demand for long acting contraceptive among women who were merchants were 2.1 times higher compare to house wives (AOR = 2.1,95% CI = [1.14,3.45]).

The odds of demand for long acting contraceptive among women with education college and above level were 3.13 times higher than women with no formal education (AOR = 3.13, 95% CI = [8.44, 11.63]). Moreover the odds of demand for long acting contraceptive among women who were married first at 18 and above years old were 2.37 times higher than women who first married at the age less than 18 years(AOR = 2.37,95% CI = [1.18,4.76]).

The odds of demand for long acting contraceptive among women having three or four children were 8.5 times higher than those women who hadn't children(AOR = 8.5, 95% CI = [2.56,15.54]).

The odds of demand for long acting contraceptive among women who were desired to have child after two years were 4.05 times higher than women who were desired child within two years (AOR = 4.05,95% CI = [1.74,9.45]).

The odds of demand for long acting contraceptive among women who were decided with their husband or partners were almost 5.66 times higher than women their husbands decided alone (AOR = 5.66, 95% CI = [1.39,22.97]).

The odds of demand for long acting contraceptive among women who were heard about long acting contraceptives were almost 8 times higher than women who were not heard [AOR = 7.95; 95% CI: 4.41, 14.36]. [Table 6].

Table 6 Multivariable analysis for factors associated with Demand for LARCs among married women of reproductive age in Sebeta town, Southwest, Ethiopia, 2019(n=513)

Independent variable	Demand for LARCs		COR 95% CI	AOR 95% CI	P-value
	yes	No			
Respondent occupation					
House wife	178	204	1	1	
Employee	21	12	2.021(.967,4.221)	.76(.22,2.61)	0.66
Private business/merchant	51	26	2.265(1.357,3.78)	2.1(1.14,3.45)	0.027
Private employee	12	9	2.265(1.357,3.78)	1.8(.76,4.32)	0.18
Level of education					
No formal education	20	37	1	1	
Primary education	78	105	1.374(.741,2.549)	1.64(.625,4.308)	.315
Secondary education	108	86	2.323(1.258,1.25)	1.18(.43,3.22)	0.74
College/university	56	23	4.50(2.173,9.338)	3.13(8.44,11.631)	.0088
Age at first marriage					
<18years	44	87	1	1	
≥18 years	218	164	2.63(1.74,3.98)	2.37(1.18,4.76)	0.016
Number of children currently alive					
0	5	24	1	1	
1-2	168	143	2.44(0.9,7.53)	3.5(2.68,10.65)	0.001
3-4	76	67	9.4(3.44,31.45)	8.5(2.56,15.54)	0.001
≥5	13	17	4.59(1.27,16.53)	6.192(.86,44.46)	.070
Time of desire for child					
Within two years	17	71	1	1	
After two years	216	135	6.68(3.77,11.83)	4.05(1.74,9.45)	0.001
I don't decide	29	45	2.69(1.33,5.45)	7.15(1.85,27.66)	0.004
Decision maker					
Husband	5	9	1	1	
Joint decision	201	81	9.099(2.47,33.46)	5.66(1.39,22.97)	0.015
Self	34	20	6.233(1.55,25.0)	5.17(1.12,23.99)	0.036

Heard about LARC in the last three months					
No	174	57	1	1	
Yes	205	76	8.234(5.53,12.27)	7.95(4.41,14.36)	0.000

6. DISCUSSION

This study found that demand for LARC of respondents was 51.1%, of which 29% had an unmet need for LARCs (69.5% for spacing and 30.5% for limiting). This finding was higher than a cross-sectional study done at Goba Town and Debre Tabor town that showed the demand for LARC were 18% and 17% respectively(11, 12). This might be because of the high information access and relatively higher level of education and better awareness on the LARCs options. It might be also because of the relatively high access for the service and might be due to study time, study setting and study area differences and also better awareness and promotion on the methods especially through mass media, than the time of the previous studies that increase the use of LARCs.

It is almost comparable with study done in Debre -markos town 52.4% . But the utilization of LARCs methods was 22.1% which was higher than study done in Debre-markos which was 19.5%, where as unmet need for LARC(29%) was lower than the study done in Debre-markos which was 32.9%(10).This may be due to the difference of products and information access. This study was lower than study conducted in Iran which was 71% (22). This high discrepancy might be due to the study setting, sample size, socio cultural and awareness of the participants on the methods.

The unmet need of LARCs (29.1%) of this study was lower than study done in Congo which was 52%(32) . The reason for this may be due to the differences in time, socio-cultural, geographical and study settings.

In multivariate logistic regression analysis, occupational status of respondents, educational level, age at first marriage, number of children alive, time to desire for child, decision maker and heard about LARCs in the last three months had significant association with the demand of long acting reversible contraceptive.

The odds of demand for long acting reversible contraceptive among merchant women were 2.1 times higher than among women who were house wives. Which was similar with study done in Batu town(13). This finding was different from the study done in Dendi district west Ethiopia where the odds of demand for long acting reversible contraceptive among merchant women were 0.24 times or 76% less among women who were house wives(33). The difference might be due to sample size, study design, study area and also study time gap between the two studies i.e. merchants in this study might have better awareness and attitude to use these methods than merchants in the Dendi district town in which the study done was six years ago.

Women educational status was identified as one of the major associated factors for demand for long acting reversible contraceptive methods. The result of the study indicated that the odds of demand for long acting reversible contraceptive among women attending college and above was 3.13 times higher than among women who did not have formal education. This result was in line with the result of study done in Batu town which showed that, the odds of demand for long acting reversible contraceptive among women who attended above secondary school was 3.8 times higher than among women who were illiterate(13). This might be due to the fact that better educated women have better access to health care information, have greater autonomy to make decisions and have greater ability to use quality health care services and also higher education allows women to better understanding the benefits and the side effects of LARC.

The odds of demand for long acting reversible contraceptive among women married at age greater than or equal to 18years was 2.37 times higher than women married at age less than 18 years. This result was in line with the result of study done in Uganda(34). The possible explanation might be due to women age less than 18years, they hadn't enough information about long acting reversible contraceptive method when compared with women who were age at marriage greater or equal to 18 years. And also might be due to majority of women less than 18years prefer short acting contraceptive method.

The odds of demand for long acting reversible contraceptive among women having three or four children was 8.5 times higher than those women who hadn't children. It was similar with the finding of the study done in Batu town and Dendi District which indicated that; the odds of demand for long acting reversible contraceptive among women who had five or more children was 6 and 5.9 times higher than women who had no child and 1-2 children respectively(13, 33). The reason might be due to the more children the women have the more likely they wanted to space or limit their number of children they had and more likely use LARCs.

Our study showed that the odds of demand for long acting reversible contraceptive among women who wanted to have a child after two years were 4.05 times higher than among women who have wanted children within two years. This was similar with study done in Debre Birhan District that, the odds of demand for long acting reversible contraceptive among women who wanted to have a child after two years was 5.6 times higher than among women who wanted children within two years(35). This might be due to the fact known of long acting reversible contraceptives provide effective and efficient contraception for an extended period of time without requiring the user's action with low burden on the users.

The odds of demand for long acting reversible contraceptive among women who were decided with their husband or partners were 8.6 times higher than women whom their husbands decided alone. This finding was almost in line with the study done in Debre Tabor and Dendi District(12, 33). This told us partners joint decision making support to build the women confidence to take long acting reversible contraceptives. And also empowering women to participate in any decision making might be improve the demand for long acting reversible contraceptive.

The study showed that, the odds of demand for long acting reversible contraceptive among women who were heard about long acting reversible contraceptives was 5.9 times higher than among women who were not heard. It is Similar with study conducted in Debre - markos where the odds of demand for long acting reversible contraceptive among women who have heard of at least one LARCs method were about 6 times more likely to have demand for long acting reversible contraceptive than those who didn't heard(10). And also It is Similar with study conducted in Rwanda where the odds of demand for long acting reversible contraceptive among women who received information about LARCs method were higher than women did not received information(14). This might be increasing the awareness of long acting reversible contraceptive improve the demand for long acting reversible contraceptive.

7. STRENGTH OF THE STUDY

- The study was community based study .
- The questionnaires were adopted from validated instrument and pre-test in the same local context too.
- Study subjects were selected using multistage sampling technique help to avoid selection bias with high response rate.

8. LIMITATION OF THE STUDY

- Study is conducted only in the town, which does not including rural community. So, it might be difficult to generalize the result to the general population.
- The study design is cross sectional; therefore it may be difficult to establish temporal relationship.
- The study assessed only client perspective. Other perspectives such as Professional counseling, availability of adequate supply, and availability of trained professionals were not accessed that have an influence on women's demand for long acting reversible contraceptive.

9.CONCLUSION

The study showed that more than half (51.1%) of respondents had demand for LARC; of which 22% were met need and 29.1% were an unmet need.

Occupational status, level of education, age at first marriage, number of alive children, time of desire for child after 2 years, decision maker, and heard about LARCs in the last three months were significantly associated with having higher demand for LARCs .

10. RECOMMENDATIONS

To Sebeta Health Bureau and Administration

- Demand and unmet need for LARC was found high so it is better to utilize the opportunity to provide the service to meet the need.
- The government should continue to promote education of women beyond secondary school, since formal education significantly increases the demand for long acting reversible contraceptive methods.
- Since merchant women had high demand, focus more on the utilization of LARCs.
- More information should be given for women less than 18 years, in order to increase demand for LARCs.
- It is better to discuss strategies to keep girls in school to prevent early marriage.
- Encourage, open communication and decision making among couples about fertility intentions, desired family size, and family planning.
- The local government should empowering women to participate in decision making.
- Strengthening the IEC to decrease myths and disseminating correct and detailed information about LARC is critical.

- Participants who have ever heard about LARC in last three months were found high demand for LARC compared to those who have not heard. So, it is better to promote the information on LARC and disseminate the information using mass media, health professionals and other communication channels.

To Research Institutes and researchers

- . In order to clearly understanding influencing factors further study needs to be conducted using mixed(Quantitative and qualitative) methods by including both urban and rural married women residents including husbands' perception and acceptance toward LARC use by their couples.

11. REFERENCE

1.FMOH.National Guideline for Family Planning Services in Ethiopia. FederalDemocraticRepublic of Ethiopia, Ministry of Health . 2011.

2.Organization WH. Packages of interventions for family planning, safe abortion care, maternal, newborn and child health. WHO; 2010.

3.WHO. Global,regional, and national levels and causes of maternal mortality during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. The Lancet 2014;384. 2013.

4.WHO. Unsafe abortion: global and regional estimates of the incidence of unsafeabortion and associated mortality in 2011.

5.Nation U. W. Family planning highlight. 2014.

6.WHO. Reproductive health in sub-Saharan Africa. Population Reference Bureau. 2008.

7.Sharan M, Ahmed S, May J, Soucat A. Family planning trends in Sub-Saharan Africa: progress, prospects, and lessons learned. Yes Africa Can. 2011;445:258643-1271798012256.

8.E.S.A. Ethiopian demographic and health survey. 2016.

9.Mumah J, Machiyama K, Kabiru CW, Odwe G, Obare F, Huda FA, et al. Reasons for unmet need for family planning, with attention to the measurement of fertility preferences in Kenya and Bangladesh. 2017.

10.Bulto GA, Zewdie TA, Beyen TK. Demand for long acting and permanent contraceptive methods and associated factors among married women of reproductive age group in Debre Markos Town, North West Ethiopia. BMC women's health. 2014;14(1):46.

11.Takele A, Degu G, Yitayal M. Demand for long acting and permanent methods of contraceptives and factors for non-use among married women of Goba Town, Bale Zone, South East Ethiopia. Reproductive health. 2012;9(1):26.

12.Yalew SA, Zeleke BM, Teferra AS. Demand for long acting contraceptive methods and associated factors among family planning service users, Northwest Ethiopia: a health facility based cross sectional study. BMC research notes. 2015;8(1):29.

13.Haile A, Fantahun M. Demand for long acting and permanent contraceptive methods and associated factors among family planning service users, Batu town, Central Ethiopia. Ethiopian medical journal. 2012;50(1):31-42.

14.Ndaruhuye DM, Broekhuis A, Hooimeijer P. Demand and unmet need for means of family limitation in Rwanda. International perspectives on sexual and reproductive health. 2009:122-30.

15.Yacobson I, Christopherson K, Michaelides T. Facts for family planning. 2012.

16.Alkema L, Kantorova V, Menozzi C, Biddlecom A. National, regional, and global rates and trends in contraceptive prevalence and unmet need for family planning between 1990 and 2015: a systematic and comprehensive analysis. The Lancet. 2013;381(9878):1642-52.

17.Siraha P. The reasons for low utilization of long acting contraceptives amongst HIV positive women at Harare post test services clinic, Zimbabwe: Stellenbosch: Stellenbosch University; 2013.

18.Cleland J, Bernstein S, Ezeh A, Faundes A, Glasier A, Innis J. Family planning: the unfinished agenda. The Lancet. 2006;368(9549):1810-27.

19.Lakew Y, Reda AA, Tamene H, Benedict S, Deribe K. Geographical variation and factors influencing modern contraceptive use among married women in Ethiopia: evidence from a national population based survey. Reproductive Health. 2013;10(1):52.
20.Nejimu Biza MA RP. Long acting reversible contraceptive use and associated factor among contraceptive users in Amhara Region, Ethiopia,. . 2016.
21.Finer LB JJ, ML. K. Changes in use of long-acting contraceptive methods in the United States, 2007–2009. Fertility and sterility. 2012; 98(4):893-7.
22.Hosseini H, Torabi F, Bagi B. Demand for long-acting and permanent contraceptive methods among Kurdish women in Mahabad, Iran. Journal of biosocial science. 2014;46(6):772-85.
23.Gelagay AA, Koye DN, Yeshita HY. Demand for long acting contraceptive methods among married HIV positive women attending care at public health facilities at Bahir Dar City, Northwest Ethiopia. Reproductive health. 2015;12(1):76.
24.K.P.Mrwebi, D.T. Goon, E.O.Owolabi, :. OvAaAIA. long acting reversible contraceptive use: knowledge and attitude of reproductive age women in Buffalo M etropolitan Municipality, East London south Africa.
25.Olajumoke Adako1, Fola Oyinola, fulure O. Demand for Long Acting Reversible Contraceptives and Associated Factors among Women Accessing Family Planning Service in ARFH ModelClinic Ibadan, South West Nigeria,. Adv Practice Nurs 2016.
26.Obasohan PE. Religion, ethnicity and contraceptive use among reproductive age women in Nigeria. International Journal of MCH and AIDS. 2015;3(1):63.
27.E.S.A. Ethiopian demographic and health survey. 2011.
28.Geta W, Asseffa N, Mekonnen N. Utilization of Long Acting and Permanent Contraceptive Methods and Associated Factors among Married Childbearing Age Women in Bombe District, Southern Ethiopia. Reprod Syst Sex Disord. 2018;7(223):2.
29.Belayneh F, Abreha S, Meskele M. Knowledge, attitude and factors associated with the use of long acting and permanent contraceptive methods among women of reproductive age in Gesuba Town, Southern Ethiopia. Journal of Biology, Agriculture and Healthcare. 2015;5(21):16-7.
30.BamlakuBirie: Ya. Assessment of Knowledge, Attitude andUtilization of Long Acting Family Planning Method among Women of Reproductive Age Groupe in Mizan-Aman Twon, Bench-Majizone, South West Ethiopia, . 2016.
31.ES. A. Housing and population census. 2007(report.).
32.Mathe JK, Kasonia KK, Maliro AK. Barriers to adoption of family planning among women in Eastern Democratic Republic of Congo. African journal of reproductive health. 2011;15(1).
33.Sahilemichael A, Temesgen K. Gemechukejela (2015) Determinants of long acting reversible contraceptives use among child bearing age women in Dendi District, Western Ethiopia. Journal of Women's Health Care.4(4).
34.Khan S, Bradley S, Fishel J, Mishra V. Unmet need and the demand for family planning in Uganda. Further analysis of the Uganda Demographic and Health Surveys 1995-2006. 2008.
35.Desalegn M. Status of modern contraceptive use among married women in Debre Birhan district Ethiopia. . 2014(;16:10:).

12. Appendix

12.1 Information and consent form English version

1. Name of Kebele ----------
2. Questionnaire identification number ----------

Introduction: My name is ----------; I work in this region. I am a member of the research team of School Addis Ababa University Medical Faculty School of Public Health. I would like to inform you that you and I would have a short discussion concerning this study. Before we go to our discussion, I will ask you to listen carefully to what I am going to read to you about the purpose and general condition of the study and tell me whether you agree or disagree to participate in this study. I am interviewing married women of reproductive age group who are living in this Kebele about assessment of unmet need for family planning. You are selected to be one of the participants in the study. The study will be conducted through interview. The information you give us is confidential and will be used only for study purpose. A code number will identify every participant and no names will be used. If a report of result is published, only summarized information of the total group will appear. The interview is voluntary and you have the right to participate or not to participate at any time during the interview. Your refusal will not have any effect on services that you or any members of your family receive. However, your participation is important to fulfill the study and design family planning services for users in your district and similar setups.

Consent

Are you willing to participate in the study? 1. Yes 2. No

Thank you

If the study subject agrees to participate in the study, start the interview.

Interviewer signature certifies that the informed consent has been given verbally.

Name ---------- Signature ----------

Date ---------- Month ---------- 2013

Result: completed ---------- Refused ----------

Partially completed ---------- Others (specify) ----------

Checked by supervisor = Name ---------- Signature ---------- Date

12.2 Structured questionnaires English version

Addis Ababa University Medical Faculty School of Public Health to assess the demand for long acting reversible contraceptive and associated factors among married women of reproductive age group(15-49) in Sebeta town Oromia liyu zone, Oromia region.

Identification

Question number	Questions	Response	Skip to question
001	Questionnaire code	----------	
002	Date of interview	----------	
003	Name of zone	----------	

004	Name of woreda	----------	
005	Name of the kebele	----------	
006	Name of Goti	----------	
007	House no	----------	
008	No of Family members	----------	

Part I. Demographic and socio-economic Characteristics

Question number	Questions	**Response**	**Skip to question**
101	How old are you?	1. ---------- years	
102	What is your religion?	1.Orthodox 2.Muslim 3.Protestant 4.Others(specify)	
103	To which ethnic group do you belong?	1.Oromo 2.Amhara 3.Gurage 4.Others(specify)	
104	What is your current educational status?	1. No formal education 2. Primary school 3.Secondary high school 4. College/University	

105	What is your current occupation?	1. House wife 2. Employee 3.Private business/merchant 4. Daily laborer 5.private employee 6. Others	
106	What is the main occupation of the family head/spouse?	1. Employee 2.Private business/merchant 3. Daily laborer 4. Driver 5. Private employee 6. Other	

Part II Reproductive health Characteristics

Question number	**Questions**	**Response**	**Skip to question**
201	At what age did you first married?	1.---------- age of year	
202	Have you ever been pregnant?	1. Yes 2. No	
203	How many times pregnancies occurred in your life	Enter No = ----------	
204	If answer to question number 202 is yes, how old were you when you first got pregnant?	1. ---------- year 2. I didn't remember	
205	Now I would like to ask you about all the births you have had during your life. Have you ever give birth?	1. Yes 2. No	
206	If answer to question number 205 is yes, how old were you when you born your first child?	1. ---------- year	

207	How many birth have you had during your life time?	Enter total number ---	
208	Number of living children?	No ----------	
209	Do you have a desire to have children in the future	1.Yes 2.No	
210	If yes, to question Q209, when do you want to have a child	1.With in the next two years 2.Atleast after 2 years 3.I don't know	
211	Are you currently pregnant?	1. Yes 2.No	
212	If the answer is yes to Q211, Is the pregnancy?	1.Wanted now 2. Wanted later 3.Not wanted at all	
213	If the answer is yes to Q211, After the child you have expecting now, would you like to another child or not to have any more children?(for pregnant women)	1. Yes 2.No	
214	If the answer to question 213 is yes, how long would you like to wait before the birth of another child?	1. < 2years 2. > 2years 3. Not yet decided	

Part III Related contraceptives

301	Are you currently using any modern contraceptive method ?	1.Yes 2.No	
302	If yes, Q=301 what was the method?	1.condom 2.Pill 3.Injectables 4.IUD 5.Implant	

		6.TL 7.Vasectomy 8.Diaphragm 9.Jaddle	
303	Do you have demand for long acting contraceptive	1.Yes 2.No	
304	If yes Q 303, are you utilizing now	1. Yes 2.No	
305	If yes to Q 304, which method	1.Implanon 2.IUD 3.Jaddle	
306	Purpose of utilization	1. For spacing 2.For limiting 3.For spacing and limiting	
307	If No to Q304, what was the reason	1. Fear of side effect 2.Husband opposed 3.Heard from others as it is not good 4. Want to become pregnant 5.Previous inconvenient 6.Infrequent sex	
308	Do you intended to use LARCs within a period of 12 months starting from the birth that occurred.	1. Yes 2. No	
309	If the answer to question 308 is yes, the reason intending to use?	1. For spacing 2. For limiting 3. For spacing and limiting	

310	If the answer to question 307 is no , would you tell me the main reason?	1.Fear of the side effect 2. I am pregnant 3.I want to become pregnant 4. Religious prohibition 5. Previous use inconvenient 6. Heard from others as it is not good 7. Use calendar method 8. Myths and misperception 9. Breast feeding	
311	From where do you get the family planning?	1. Government Hospital 2. Private Hospital 2.Health center 4.Private clinic 5. Pharmacy	
312	Have You had a problem with the method you are using now?	1.Yes 2.No	
313	Did you ever told by health worker about the side effect or problems you might have with the method?	1. Yes 2. No	
314	If the answer is yes to Q313, Did you ever want to discuss the problem with your provider?	1.Yes 2.No	

315	If the answer is yes to Q314, Did the provider suggest what you should do (action you should take) to solve the problem?	1.Yes 2.No	
225	If the answer is yes to Q315, Were you satisfied with the advice ?	1.Yes 2.No	

Part IV Related (knowledge/awareness, culture, privacy and attitude)

Question number	Questions	**Response**	**Skip to question**
401	Do you know at least one LARCS?	1.Yes 2.No	
402	If the answer is yes to Q401, Which LARC do you know?	1.Implant 2.IUD 3.Female sterilization 4.Vasectomy 5. Jaddle	
403	Is LARC important?	1. Yes 2. No	
404	What do you think about the importance of long acting contraceptive?	1.For spacing 2.For limiting 3. Prevent mother and child death	
405	Have you heard about LARC in the last three months?	1. Yes 2. No	
406	If the answer yes to Q 304 which of the following is the most preferred source to get LARCs services information?	1. Media 2.HEW 3. Health Professional 4. Peers 5.Other(specify)	
407	Have you discussed with your partner about which method to use?	1.Yes 2.No	

408	If the answer is yes to Q407, Who is the decision maker?	1.Husband 2.Decide together 3. Self	
409	Did you have enough privacy during your exam	1.Yes 2.No	
410	Do you believe that the information that you shared about yourself with the provider will be kept confidential	1.Yes 2.No 3.I don’t know	
411	Do you have heard myths about LARCs from the community	1. Yes 2. No	
412	Which long acting contraceptive	Name ----------	
413	Based on Q412, what is that problem?	Tell ----------	

12.3 Information and consent form Amharic version

አዲስ አበባ ዩኒቨርስቲ የጤና ሳይንስ ኮሌጅ የጤና አጠባበቅ ትምህርት ቤት

የ ጥና ት መረ ጃ መስ ጫ

መግ ብያ

ጤና ይስ ጥል ኝ ስ ሜ ---------- ይባ ላ ል እኔ የ ምሰ ራቤት ጥና ት የ ሚስ ራዉ በ አ ቶ ገ ልገ ሎ አ ል ጅራ፤ ከ አ ድስ አ በ ባ ዩ ኒ ቨ ር ስ ቲ የ ህ ብረ ተሰ ብ ጤና ትምህ ር ት ቤት ነ ዉ፡ ፡ በ አ ሮ ሚያ ክ ል ል አ ሮ ሚያ ል ዩ ዞ ን ስ በ ታ ከ ተ ማ ለ ረ ጅ ም ጊ ዜ የ ቤተሰ ብ መጣኔ ዘ ዴ ዎ ች ለ ማጥና ት በ ተ ዋ ቀ ረ ዉ ቡድን ዉስ ጥ አ ባ ል ነ ኝ፡ ፡ በ ጥና ታ ችን ዉስ ጥ በ ህ ብረ ተሰ ቡ ወሳ ጥ ያ ሉት ያ ገ ቡ ሰ ቶ ች የ በ ተሰ ብ መጣኔ አ ግ ል ገ ሎ ት ና ከ ሱ ጋ ር ተ ያ ይዞ ያ ሉ ነ ገ ሮ ች ን ማጥና ት ን ይ መለ ከ ታ ል፡ ፡

ዕ ር ሶ የ ሚሰ ጡን መረ ጃ ከ ሌ ሎ ች የ መረ ጃ ምን ጮ ች ጋ ር ተ ዳ ምሮ በ ሚሰ ጠን ዉጤት መስ ረ ት ከ ሚመለ ከ ቱ ት የ ጤና ባ ለ ስ ል ጣና ት ፤ ከ ጤና ጥበ ቃ ፤ አ ሮ ሚያ ል ዩ ዞ ን የ ጤና ቢ ሮ ጋ ር በ መወያ የ ት በ አ ካ ባ ቢ ዉ የ ቤተሰ ብ ምጣኔ አ ገ ል ግ ሎ ት የ ሚሸ ሻ ል በ ት ን ሁ ኔ ታ ለ ማመ ቻ ቸ ት ታ ል ሞ የ ተ ዘ ጋ ጀ ጥና ት ነ ዉ፡ ፡

ተ መ ራ ማ ሪ ዉ የ ጥና ቱ ን ዓ ላ ማ በ ሚ ባ ባ አ ስ ረ ድ ተ ዉ ኛ ል፡ ፡ በ ተ ጨ ማ ሪ ም በ ጥና ቱ ያ ለ መሳ ተ ፈ ሰ ና በ ማን ኛ ዉ ም ጊ ዜ ለ ማቋ ረ ጥ ያ ለ ኝ ን መብት ገ ል ጾ ዉ ኛ ል፡ ፡ በ ዚ ህ ም መሠ ረ ት በ ጥና ቱ ለ መሳ ተ ፍ መሉ ፈ ቃ ደ ኛ መሆ ኔ ን አ ረ ጋ ግ ጣ ለ ሁ፡ ፡

ተ ጠ ያ ቂ ዉ ተ ስ ማ ም ቷ ል አ ዎ አ ል ተ ስ ማ ማ ም

የ ጠ ያ ቂ ዉ ፈ ር ማ ---------- ቀ ን

የ ጠ ያ ቂ ዉ ስ ም/ቁ ጥ ር / ----------

1.የ ጤና ድ ር ጅ ት ስ ም ----------

2.ወ ረ ዳ ----------

3.ክ ል ል ----------

4.ቃ ለ መ ጠ የ ቁ የ ተ ደ ረ ገ በ ት ጊ ዜ ----------(ቀ ን /ወ ር /ዓ .ም)

ከ ም ር ጫ ዎ ቹ ት ክ ክ ለ ኛ ዉ ን መ ል ስ ያ ክ ብ ቡ ወ ይ ም ይ ጻ ፉ፡ ፡

12.4 Structured questionnaires Amharic version

ጥ ያ ቄ በ አ ዲ ስ አ በ ባ ዩ ኒ ቨ ስ ስ ቲ የ ጤና ሳ ይ ን ስ ኮ ሌ ጅ ላ ገ ቡ ሴ ቶ ች የ ቤተሰ ብ ምጣኔ አ ጠ ቃ ቀ ም መሰ ረ ት አ ድ ር ጎ የ ተ ዘ ጋ ጇ የ መጠ ይ ቃ ፎ ር ም::

ክ ፍ ል አ ን ድ – የ መ ለ ያ ጥ ና ት

ተ.ቁ	ጥ ያ ቄ	መ ል ስ	ወ ደ ም ቀ ጥ ለ ዉ ጥ ያ ቄ እ ለ ፉ
001	የ ጥ ያ ቄ ኮ ድ		
002	ጥ ያ ቄ የ ተ ጠ ዬ ቀ በ ት ቀ ን		
003	የ ዞ ን ስ ም		
004	የ ወ ረ ዳ ስ ም		
005	የ ቀ በ ሌ ስ ም		
006	የ ጎ ጥ ስ ም		
007	የ ቤ ት ቁ ጥ ር		
008	የ ቤተሰ ብ ብ ዛ ት		

ክ ፍ ል አ ን ድ ማህበራዊና ኢኮኖሚያዊ ሁኔታ መጠይቅ

ተ.ቁ	ጥ ያ ቄ	መ ል ስ	ወ ደ ም ቀ ጥ ለ ዉ ጥ ያ ቄ እ ለ ፉ
101	ዕ ድ መ ሽ ስ ን ት ነ ዉ?	--------- አ መ ት	
102	ሃ ይ ማ ኖ ት ሽ ም ን ድ ነ ዉ?	1.አ ር ቶ ዶ ክ ስ 2.መ ሲ ሊ ም 3.ፕ ሮ ቴ ስ ታ ት 4. ካ ቶ ሊ ክ 5. ሌ ላ	
103	ቤ ህ ረ ሰ ብ ሽ ም ን ዲ ነ ዉ?	1.አ ሮ ሞ 2. አ ማ ራ 3. ጉ ራ ጌ 4.ስ ል ጤ 5. ሌ ላ	
104	የ ስ ራ ሁ ነ ታ ን በ ተ መ ለ ከ ቴ?	1.የ ቤ ት እ መ በ ት 2.የ መ ን ግ ስ ት ሰ ራ ተ ኛ 3.የ ግ ል ን ግ ድ 4. የ ቀ ን ሰ ራ ተ ኛ 5. የ ግ ል ሰ ራ ተ ኛ 6.ለ ላ	
105	የ ት ህ ምር ት ደ ረ ጃ ን በ ተ መ ለ ከ ቴ?	1.አ ል ተ ማ ር ኩ ም 2. 1ኛ ደ ረ ጃ 3. 2ኛ ደ ረ ጃ 5.ኮ ለ ጅ ና ከ ዛ በ ላ ይ	
106	የ ባ ለ ቤ ት የ ስ ራ ሁ ነ ታ ን በ ተ መ ለ ከ ቴ?	1.የ መ ን ግ ስ ት ሰ ራ ተ ኛ 2.የ ግ ል ስ ራ /ን ግ ድ 4. የ ቀ ን ሰ ራ ተ ኛ	

		5. ሹፈር 5. የ ግል ሰ ራ ተ ኛ 6.ለ ላ	

ክ ፍ ል ሁ ለ ት ፡ የ ሰ ነ - ተ ዋ ል ዶ ታ ር ክ

ተ ·ቁ	ጥ ያ ቄ	መ ል ስ	ወ ደ ቀ ጣ ዉ እ ለ ፍ
201	መ ጀ መ ራ ስ ታ ገ ቢ ዕ ድ መ ሸ ስ ን ት ነ በ ረ ?	1. ------- ዓ መ ት	
202	አ ር ግ ሴ ሽ ታ ዉ ቋ ል ሽ ?	1. አ ዎ 2.አ ያ ቅ ም	
203	በ ዚ ዕ ድ መ ሸ ስ ን ት ግ ዜ እ ር ግ ዝ ና ተ ከ ስ ቶ ብ ሽ ያ ቀ ል ?	በ ቁ ጥ ር ----------	
204	ለ ጥ ያ ቄ 202 መ ል ስ አ ዎ ከ ሆ ነ ፤ በ ዛ ን ግ ዜ እ ድ መ ሸ ስ ን ት ነ በ ረ ?	1.---------- ዓ መ ት	
205	ስ ለ ጠ ቅ ላ ላ የ ወ ሊ ድ ሁ ነ ታ ነ ዉ የ ሚ ጠ ይ ቅ ሽ ፤ ወ ል ዴ ሽ ታ ዉ ቋ ል ሽ ?	1.አ ዎ 2. አ ላ ዉ ቅ ም	
206	ለ ጥ ያ ቄ 205 መ ል ስ ሽ አ ዎ ከ ሆ ነ ፤ በ ዛ ን ግ ዜ እ ድ መ ሸ ስ ን ት ነ በ ረ ?	1.---------- ዓ መ ት 2. አ ላ ዉ ቅ ም	
207	በ ዚ ዉ ዕ ድ መ ሸ ስ ን ት ል ጆ ች ወ ል ደ ሻ ል ?	በ ቁ ጥ ር ----------	
208	በ ህ ዎ ት ያ ሉ ት ል ጆ ች ሽ ስ ን ት ና ቸ ዉ?	በ ቁ ጥ ር ----------	
209	ወ ደ ፊ ት ል ጅ መ ዉ ለ ድ ት ፈ ል ጋ ለ ሽ ?	1. አ ዎ 2. አ ል ፈ ሊ ግ ም	

		3.አልወሰንኩም	
210	ለጥያቄ 209 መልስሽ አዎ ከሆነ መቼ መወለድ ትፈሊጋለሽ?	1.በሁለትአመት ዉስጥ 2.ብዛንስ ከሁለት አመት ቦሃላ 3.አላወቅም	
211	አሁንነብሰጠርነሽ?	1.አዎ 2.አይደለሁም	
212	ለጥያቄ 211፣ መልስሽ አዎ ከሆነ ፤ እርግዝናዉ?	1.ተፈላጊነዉ 2.ወደፊትይፈለጋል 3. ጭራሽአልፈሊግም	
213	ለጥያቄ 211፣ መልስሽ አዎ ከሆነ ፤ አሁን ልትወልጂ የተቃረብሽዉዉጪልጅ ማግኘት ትፈሊጋለሽ?	1. አዎ እፈሊጋለዉ 2. አልፈሊግም 3.አልወሰንኩም	
214	ለጥያቄ 216፣ መልስሽ አንደኛ ምርጫ ከሀነ ፤ ልጅሳታገኝ ምናሀል ግዜ ትቆያለሽ?	1. ከሁለት አመት በፊት 2.ከሁለት አመት ቦሃላ 3. አልወሰንኩም	

ክፍልሶስት፡ ወሊድመከላኪያን በተመለከቱ

301	በአሁኑ ወቅት ዘበናዊ የበተሰብ ምጣኔ ትጠቀማለሽ?	1.አዎ 2. አሊጠቀምም	
302	ለጥያቄ 301 መልስ አዎ ከሆነ , የትኛዉን የቤተሰብ ምጣኔ ዘዴ?	1.ኮንዶም 2.ክኒን 3.መርፌ 4.ሉፕ 5.እምፕላንት 6.ቱባልገሽን 7.ቫሶክቶሚ	

		8.ድሃ ፍራም 9. ጀድል	
303	የ ረጂም ግዜ መከላኪያን ፈላጎት አለሽ?	1. አዎ 2. የ ለኝም	
304	ለ ጥያቄ 303 መልስ አዎ ከሆነ ,አሁን እዬተጠቀምሽ ነ ዉ?	1. አዎ 2. አይደለሁም	
305	ለ ጥያቄ 304 መልስ አዎ ከሆነ , የ ቲኛዉ የ በተሰብ ምጣኔ ዘዴ?	1.እምፕላት 2. ሉፕ 3.ጀድል	
306	ለ ምን አግልግሎት ነ ዉ የ ምትጠቀሚዉ?	1.የ ቤተሰብ ብዛት ለ መመጠን 2.አራሪቆ ለ መዉለድ 3. አራሪቆ ለ መዉለድና ለ መመጠን	
307	ለ ጥያቄ 304 መልስሽ ተጠቃሚአይደለሁም ከሆነ ፤ ምክናቱ ምን ድነ ዉ?	1.ጎጂ ጎኑን ፈሪቼ 2. ባለቤቴ ስለሚከለክለኝ 3.ጥሩ እዳልሆነ ከለላ ስለሰማዉ 4.ማርገዝ ስለሚፈልግ 5.በፊት ስላልተመቸኝ 6. አልፎአልፎ ግኙነት ስለሚንናደርግ	
308	በዚ በ 12 ወራት ዉስጥ ዘመናዊ የ ረጅም ግዜ የ ቤተሰብ ምጣኔ ለ መጠቀም ፍላጎት አለሽ?	1.አዎ 2.የ ለኝም	
309	ለ ጥያቄ 308፣ መልስሽ አዎ ከሆነ የ ረጂም ግዜ የ በተሰብ ምጣነ ለ ምን ድነ ዉ	1.አራሪቆ ለ መዉለድ 2.የ በተሰብ ብዛትለ መመጠን	

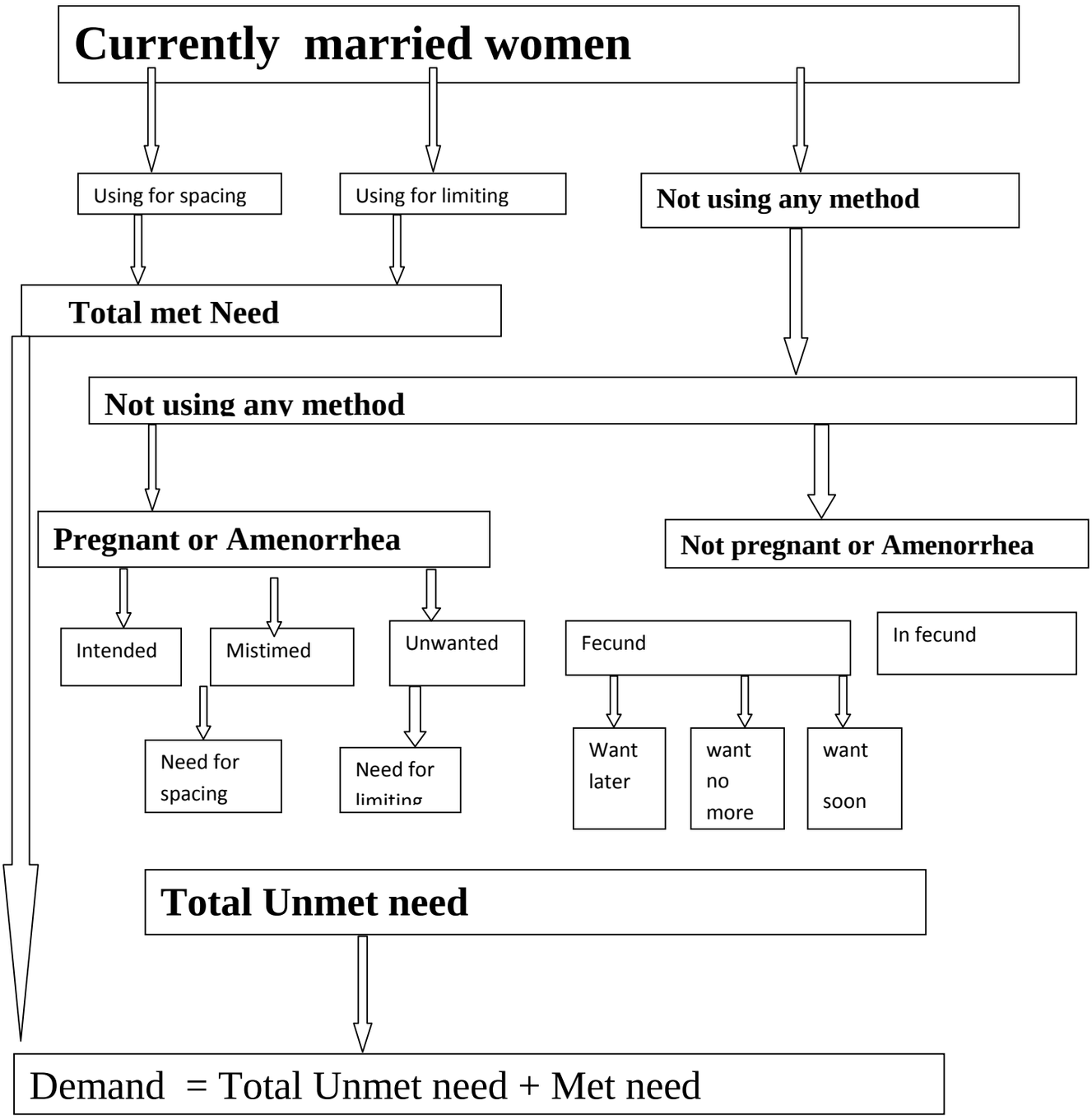
	የ ምት ጠቀ ሚ?	3. አ ራ ሪ ቆ ለ መዉለ ድና ለ መመጠን	
310	ለ ጥ ያ ቄ 308 መልስ ሽ የ ለ ኝ ም ከ ሆነ ፤ ምክ ና ቱ ምድነ ዉ?	1.ጎ ጂ ጎ ኑ ን ፈ ሪ ቼ 2.ነ ብሰ ጡር ስ ለ ሆን ኩኝ 3.ማር ገ ዝ ስ ለ ሚፈ ል ግ 4.ሀ ይ ማኖ ቴ ስ ለ ማይ ፈ ቅ ድ 5.በ ፊ ት ስ ላ ል ተ መቸ ኝ 6.እ ን ደ ሚጎ ዳ ከ ለ ላ ሰ ዉ ስ ለ ሰ ማዉ 7.ከ ለ ን ደ ር ስ ለ ሚጠቀ ም 8.ከ ባ ላ ዊ ተ ጺ ኖ የ ተ ነ ሳ 9. ስ ለ ሚያ ጠባ	
311	የ ቤ ተ ሰ ብ ምጣኔ ን ከ ትነ ዉ የ ምት ወስ ጂ ዉ?	1.ከ መግ ስ ት ሆስ ፕ ታል 2.ከ ግ ል ሆስ ፕ ታል 2.ከ ጤና ጣቢ ያ 3. ከ ጤና ከ ላ 4.ከ ግ ል ክ ሊ ኒ ክ 5. ፋ ር ማሲ	
312	አ ሁን የ ምቲ ጠቀ ሚዉ የ ረ ጂ ም ግ ዜ የ ቤ ተ ሰ ብ ምጣነ ተ ያ ዙ ዞ የ ገ ጠመሽ ችግ ር አ ለ ?(ለ ምት ጠቀ መ)	1.አ ዎ 2. የ ለ ም	
313	አ ን ዳ ድ የ በ ተ ሰ ብ ምጣነ ዎች የ ሚያ መጡ ተ ጽ ኖ ዎች ከ በ ለ መያ ሰ ምተ ሸ ል ?	1.አ ዎ 2. አ ል ሰ ማዉም	
214	ለ ጥ ያ ቄ 313፣ መልስ ሽ አ ዎ ከ ሆነ ምን ማድ ረ ግ እ ን ዳ ለ ብሽ ነ ግ ሮ ሻ ል ?	1.አ ዎ 2.አ ል ነ ገ ረ ኝ ም	
215	ለ ጥ ያ ቄ 224 መልስ አ ዎ ከ ሆነ , ባ ለ መያ ዉ የ ሰ ጠሸ ዉ ምክ ር ተ ረ ክ ተ ሸ ል ?	1.አ ዎ 2.አ ል ረ ካ ዉም	

ክፍል አራት፡ የተጠቃሚዎች (ግኒዛቤ፣ ባህል፣ ስብእናና አመለካከት) በተመለከቱ ጥያቄ

ተ.ቁ	ጥያቄ	መልስ	ወደቀጣዩ እለፍ
401	የረጂምየበተሰብ ምጣነ ውስጥ ብሃንስ አንድ ታቀለሽ?	1. አዎ 2. አላቂም	
402	ለጥያቄ 401 መልስሽ አዎ ከሆነ ከረጂምየበተሰብ ምጣነ ውስጥየቱን ነዉየ ምታቂዉ?	1.እምፕላንት 2.ሉፕ 3.ቱባልገሽን 4. ቫሶክቶሚ 5. ጀድል	
403	የረጅም ግዜ የቤተሰብ ምጣኔ ጥቅም አለዉ ብለሽ ታሚና ለሽ?	1.አዎ 2.አላሚኒ ም 3. መልስ አልተሰጠም	
404	ለጥያቄ 403፣ መልስሽ አዎ ከሆኔ የረጅም ግዜ የቤተሰብ ምጣኔ ጥቅም ምድነ ዉብለሽ ትገ ምታልሽ?	1.አራሪቆ ለመዉለድ 2.ለ መመጠን 4.አራሪቆ ለመዉለድና ለመመጠን	
405	ላለፉት ሶስት ወራት ውስጥ ሰለረጂም ግዜ የበተሰብ ምጣነ ሰምቴሽ ታቋለሽ?	1. አዎ 2. አልሰማዉም	
406	ለጥያቄ 405፣ መልስሽ አዎ ከሆነ ከነዚ የትኛዉ?	1. ሚዲያ 2.ከጤና ኤክስተንሺኖች 4.ከጤና በለ መያዎች 5.ከ ታዋቂ ሰዎች 6.ለላ	
407	የበተሰብ ምጣኔ ለመጠቀም ከባለበትሽ ጋር ትወያያለሽ?	1. አዎ 2.አልወያይም	

408	ለ ጥ ያ ቄ 407፣ መ ል ስ አ ዎ ከ ሆ ነ የ ባ ለ በ ት ሽ ሃ ሳ ብ ም ን ነ በ ረ ?	1.እ ሱ የ ፈ ለ ገ ዉ ን የ በ ተ ሰ ብ ም ጣ ኔ አ ግ ል ገ ሎ ት እ ን ድ ወ ስ ድ ያ ስ ገ ድ ደ ኛ ል 2.በ ጋ ራ እ ን ወ ስ ና ለ ን 3.በ ረ ሴ እ ወ ስ ና ለ ዉ	
409	የ ጤ ና ተ ቋ ማ ት መ ስ ተ ን ግ ዶ ም ን ይ መ ስ ል ሻ ል ?	1. ጥ ሩ 2.ች ግ ር አ ለ በ ት	
410	ም ር መ ራ ክ ፍ ል ለ ነ ጻ ነ ት ም ቹ ነ ዉ?	1.አ ዎ 2.አ ይ ደ ለ ም	
411	ከ ባ ለ መ ያ ጋ ር የ ተ ነ ጋ ገ ር ሽ ዉ እ ን ደ ም ስ ጥ ር ይ ጠ በ ቅ ል ኛ ል ብ ለ ሽ ታ ሚ ና ል ሽ ?	1.አ ዎ 2.አ ላ ሚ ን ም 3.አ ላ ቅ ም	
412	የ ባ ህ ል አ መ ለ ካ ከ ት የ ረ ጅ ም ግ ዜ የ ቤ ተ ሰ ብ ም ጣ ኔ አ ግ ል ግ ሎ ት ፍ ላ ጎ ት ላ ይ ተ ጽ ኖ አ ለ ዉ ብ ሌ ሽ ት ስ ማ ማ ለ ሽ ?	1. አ ዎ 2.አ ል ስ ማ ም	
413	ለ ጥ ያ ቄ ቁ .412፣ መ ል ስ አ ዎ ከ ሆ ነ የ ቲ ኛ ዉ የ ረ ጂ ም ግ ዜ የ በ ተ ሰ ብ ም ጣ ነ ?	ስ ም ጥ ቀ ስ ----------	
414	በ ጥ ያ ቄ ቁ .414፣ መ ል ስ መ ሰ ረ ት ፤ የ በ ተ ሰ ብ ም ጣ ነ ዉ የ ሚ ያ መ ጣ ተ ጽ ኖ ም ን ድ ነ ዉ?	ጥ ቀ ሺ ----------	

12.5 Definition of demand for long acting contraceptive method



CURRICULUM VITAE

Personal information

- **Full name - Galgalo Oljira Gutema**
- **Sex - Male**
- **Age - 32**
- **Nationality - Ethiopia**
- **Place of birth – East Wollega**
- **Marital status – married**
- **Address – 0912417850**

Educational background.

NO	School	School name	Level	Year	Credit Award
1	University	Haramaya	Degree	1999-2001 EC	Health officer
2	Secondary school	Ambo comprensive senior S/school	Grade 9 - 12	1995 – 1998 EC	Certificate
3	Primary school	Komblcha Elementary school	Grade 1 - 8	1987 – 1994 EC	Certificate

- **Qualification – Bachelor of Science in public Health Officer, Diploma basic Computer skill**

Language

	Listening	Writing	Reading	Speaking
	English	Very good	Very good	good
	Amharic	Very good	Very good	Very good
	Afan Oromo	Excellent	Excellent	excellent

Training

- **Ault HIV/AIDS care and support program**
- **Child HIV/AIDS care and support program**
- **PICT provision**
- **Comprehensive PMTCT**
- **TB/HIV co-management and TB infection control**
- **Comprehensive F/P**
- **Implanon TOT training**
- **IUCD training**
- **TOT on maternal, Neonatal, Child and Adolescence health malaria, Hygiene and sanitation, nutrition and communication**

- **Facilitate TOT on maternal, Neonatal, Child and Adolescence health malaria, Hygiene and sanitation, nutrition and communication**
- **ICCM TOT training**
- **IMNCI TOT training**
- **Revised HMIS CHIS TOT training**
- **Supportive supervision training**
- **Continuo quality improvement (CQI)**
- **Be MONC training**
- **Supply Chain Management training**
- **IPLS training**
- **Different campaign refreshment training live CHD measles, polio, meningitis, shistosomialis and many others.**
- **National data collection with TSI**
- **Integrated refreshment training(IRT) for HEWs**
- **Demand creation and community mobilization TOT training**
- **STI training**
- **Health quality auditing at federal ministry of health**
- **Evaluation of health institution at federal ministry of health for GOLF**
- **Training of infection prevention and waste management**
- **Training of safety injection**
- **Personal skill required**
- **Excellent supervisory / managerial skill of the project activities and staff**
- **Fluent spoken and written English, Afan Oromo and Amharic technical and all reports writing skills**
- **Experienced in community based health care activities.**
- **Good communication and interpersonal skills.**
- **Ability to work under pressure, long work hours and high work load**
- **Self motivated, honest, highly responsible and punctual**
- **Ability to work as part of a team as well as to work independently**
- **Ability to constructively address gaps and weakness**
- **Work experience**

  Have 9 years work experience: 5 years at Arsi Zone Chole Woreda H/C ART OPD as head, woreda Health Office as head and woreda mother and child health coordinator, ICCM/CBNC/IMNCI/EPI focal person. Currently, I am working at Addis Ababa kolfe keranio sub- city food, medicine and health facility control office Berau as health institute and health professionals inspection care team coordinator before I joined Addis Ababa University.

Table –Summarizing my current position, work experience, qualification and competencies

1		
2	**Qualification**	**Health officer and 2nd General MPH student**
3	**Current Address**	**0912417850**
4	**Work Experience**	**8 years**
5	**Current position**	**student**
6	**Competencies**	**Knowledge sharing, team sprite, hard working. Ability to work in hard areas and etc**

CURRICULUM VITAE

MESELECH ASSEGID RORO

Phone: +251-911-904390, Email:meselua@yahoo.com, P.O.Box 28287 Code 1000 Addis Ababa, Ethiopia

PERSONAL PARTICULARS

- Sex: Female
- Date of Birth: February 08, 1972.
- Place of Birth: Wellega, Ethiopia
- Religion: Christian
- Marital status: Married
- Nationality : Ethiopian

EDUCATION AND EXPEREINCES

a) Education

- August 2015 to present: PhD candidate at University of Bergen, Norway

- Diploma in Sexual and reproductive Health and Rights, Lund University, Malmo, Sweden. Aug.2009-Apr.2010
- Masters in Public Health (MPH), School of public health, Addis Ababa University. (2004 –2006)
- Bachelor of Science in Nursing (BSc), Department of Nursing, Jimma University. (1998-2001)
- Diploma in Midwifery Nursing, Addis Ababa Midwifery School (1996-1997)
- Diploma in Comprehensive Nursing, Nekemte school of Nursing, (1989-1992)
- Ethiopian school leaving certificate exam (ESLCE), Gidda Ayana senior secondary School, Ethiopia. (1985-1989)

b) Experiences

- August 2015 to present: PhD candidate at University of Bergen, Norway
- June 2013 to present : School of public health, Addis Ababa University, College of Health Sciences , Addis Ababa University

Refrence: Dr. Wakgari Deressa : email: deressaw@gmail.com

- 2010 – May 2013: School of public health, Addis Ababa University, Reproductive Health Training and research (Family Health and Wealth Study: A multiyear Family Planning Research and Translation Initiative) coordinator, teaching and consultancy services.

Refrence: Dr. Assefa Seme : email: assefaseme @gmail

- May 2007- June 2010: Federal Ministry of Health, Ethiopia , team leader of Maternal and child health team and reproductive health focal person

Refrence: Dr. Kebede Worku, email: fmoh.md@ethionet.et

Dr.Neghist Tesfaye, email: netesfaye@yahoo.com

- Aug 2006 – April 2007 Haramaya University, Haramaya, Ethiopia Lecturer: Head Department of Nursing

Reference: Dr. Nega Assefa , email: negaassefa@yahoo.com

- Dec. 2003- Sept.2004 Haramaya University, Haramaya, Ethiopia Assistant Lecturer and Coordinator of The Carter Center EPHTI Reproductive Health Project

Reference: Dr. Nega Assefa , email: negaassefa@yahoo.com

- Sept 1997- Aug 1998 Nekemte school of Nursing, Nekemte, Ethiopia.

Instructor Reference: Mr. Samuel Temesgen Tel: +251-661- 13-98

- June 1992- May 1996 Gidda Ayana Health Center, Gidda,Ethiopia Out patient and MCH department staff

Reference: Mr. Yohannes Hailemichael Tel: +251-917810251

SHORT TERM TRAININGS

- Regional workshop on Monitoring and Evaluation of Family Planning programs for Non M& E professionals, Addis Continental Institute of Public Health and USAID's MEASURE Evaluation, Addis Ababa, Ethiopia, June 2014
- Training of trainers course on reproductive Health Commodity Security, School of Public Health Addis Ababa University, December 2011
- Training of Trainers on IMAI/IMPAC Clinical Course for Integrated PMTCT Services, WHO. Jinja, Uganda, July- Aug. 2009.
- Master Trainer Training on Long term Family Planning Methods: Federal Ministry of Health and Bayer Health Care, Bayer Schering Pharma, Jan 2009
- Strengthening Leadership for the Health of the Nation: USAID, FMoH of Ethiopia, June 2008.
- Training of Trainers Course on Community Based Maternal and Newborn Care: UNICEF and WHO, Addis Ababa, Ethiopia, April-May 2008.
- Data Use and Data Management; Stata software use: Tulane University, Ethiopia November 2007.
- Curriculum and Teaching/Training and Learning Materials (TTLM) Development on Health Sector Occupations: MoE/ECBP and MoH, Aug.-Sept. 2007
- Implanon insertion and removal : by Federal Ministry of Health, March 2007
- Training of Trainers on Adolescent and Youth Reproductive Health Services: Federal MOH, Adama, Ethiopia, December 2007

- Strengthening School Health, Nutrition and HIV Prevention Programmes: Kenya Medical Research Institute, Nairobi, Kenya, July 2007.
- Essential Nutrition actions: The Carter Center (EPHTI) in collaboration with The LINKAGES Project, February. 2004.
- Teaching methodology (Teaching -learning): The Carter Center and USAID, July 2003.
- Treatment of severe malnutrition: UNICEF, June 2003.
- IUCD insertion and removal Norplant insertion and removal: Haramaya University and the Carter Center Reproductive Health Project, January 2002
- Post abortion care and its components: EPHTI Council Carter Center and IPAS Ethiopia, June 2002.
- Refreshment training on TB control: MOH- MSF TB Control Program, May 2002.
- Neonatal resuscitation: Tropical Health Education Trust (THET) in collaboration with Jimma Institute of Health Sciences (JIHS), March 1999.
- Family Planning: Family Guidance Association of Ethiopia (FGAE), April 1997.

RESEARCH EXPERIANCES AND INVITED BOOK CHAPTERS, TEACHING MATERIALS AND MANUALS

RESEARCH

1. Gari T, Loha E, Deressa W, Solomon T, Atsbeha H, Assegid M, et al. Anaemia among children in a drought affected community in south-central Ethiopia. PLoS ONE March 14, 2017;12(3).

2. Neetu A. John, Assefa Seme, Meselech Assegid Roro, Amy O.Tsui. Understanding the meaning of marital relationship quality among couples in peri-urban Ethiopia, Culture, Health and Sexuality, An International Journal for Research, Intervention and Care,16 Aug 2016

3. Meselech A., Neetu A Seme A., Tsui A. The influence of contraceptive use on women's ability to work and generate income in Peri-urban Ethiopia, 2012

4. Meselech Assegid, Emebet Mohamud., Alemayehu Mekonnen., Seifu Hagos , Mesganaw Fantahun. *Why do women not deliver in health facilities: a qualitative study of the community perspectives in south central Ethiopia?BMC Research Notes 2014,7:556*

5. Mesganaw Fantahun Afework , Seifu Hagos, Meselech Assegid, Alemayehu Mekonen and Saifuddin Ahmed **.** *Does a health and demographic surveillance system (HDSS) benefit the local population? The case of maternal Health service utilization in the Butajira Health and Demographic Surveillance System, Ethiopia. Global Health Action 2014, 7:24228*

6. Seifu Hagos, Debebe Shaweno, Meselech Assegid, Alemayehu Mekonen, Mesganaw Fantahun Afework, and Saifuddin Ahmed**.** *Utilization of Institutional Delivery service at Wukro and Butajera districts in the Northern and south central Ethiopia. BMC Pregnancy*

and Childbirth 2014, 14:178

7. Mesganaw Fantahun Afework, Kesteberhan Admassu, Alemayehu Mekonen, Seifu Hagos, Meselech Asegid and Saifuddin Ahmed. *Effect of an innovative community based health program on maternal health service utilization in north and south central Ethiopia: a community based cross sectional study. BMC Reproductive Health* 2014, 11:28.

8. Alemayehu Mekonnen, Emebet Mahmoud, Mesganaw Fantahun, Seifu Hagos, Meselech Assegid.

9. 2013. Maternal morbidity in Butajira and Wukro districts, north and south central Ethiopia. Ethiop Med J, Vol. 51, No. 4

10. Neetu A. Assefa S. Meselech A. Amy T. *Does a Couple's Marital Relationships quality influence their contraceptive use* , Sebeta town , Ethiopia(Submitted)

11. Meselech Assegid. Ruman Abdulrashed. Dereje Abebe *.Awareness creation improves contraceptive use, a qualitative study in Hawassa University 2010.*

12. Situation Analysis of the National PMTCT of HIV/AIDS Programme Response in the Broader RH/MNCH Context in Ethiopia, Federal Ministry of Health, March 2009.

13. National Reproductive Health Commodity Security Situational Analysis in Ethiopia, USAID|DELIVER PROJECT and UNFPA CO Ethiopia, 2009.

14. Assessment of intention and practice of VCT and infant feeding in the context of HIV among lactating mothers in Harar town**.** Oct. 2006

NATIONAL AND INTERNATIONAL PRESENTATIONS

International conference on Family Planning, November 2013. Does a Couple's Marital Relationships quality influence their contraceptive use? , Addis Ababa, Ethiopia

- Ethiopian Public Health Association

annual conference, February 2013.Maternal

Health Study in Ethiopia: Demand, accessibility, and effectiveness of services, Addis Ababa, Ethiopia

- National Family Planning symposium, November 2012, Awareness creation improves contraceptive use, a qualitative study, Bahir Dar, Ethiopia

- Ethiopian Public Health Association 17

the annual conference , October 2006, Assessment

of intention and practice of VCT and infant feeding in the context of HIV among lactating mothers, Harar, Ethiopia

INVITED BOOK CHAPTERS, TEACHING MATERIALS AND MANUALS

- Assefa Seme, Meselech Assegid, Workinesh Kereta, Selamawit Desta.

Adolescent and Youth Reproductive Health. In Mesganaw F. Yemane B. and Amy T. (eds.), Text book of Reproductive and child health with focus on Ethiopia and other developing countries. Addis Ababa, Ethiopia, pp. 333-350, 2104.

- Federal Ministry of Health. Antenatal Care (ANC Part 1 and 2), Blended learning module for the Health Extension Program, 2010, Addis Ababa, Ethiopia
- Federal Ministry of Health. Implanon sub-dermal Implant, A training Course for Health Extension Workers, Training Manual., July 2009
- Meselech Assegid. Obstetrics and Gynecology, Lecture note series for nursing students Haramaya University (2004)

CONSULTANCY SERVICES

- Evaluation of the General Electric (GE) Inc. Ethiopia Health Care Supported Primary and Referral Care Program for Mothers and Babies, since 2016

- Evaluation of DKT Ethiopia's Joint Grant "Focused social marketing *plus* Building on 20 years of experience in Ethiopia, October 2012

- High Burden Countries Initiative National Assessment of MNH (midwifery) workforce in Ethiopia, June- August , 2012, Ethiopian Midwives Association
Referrence: Alemnesh T/Birihan, Hiwot Wubishet
- Evaluation of "Community Management of Acute Malnutrition In Ethiopia" AugestDecember 2011,Break through International Consultance, Plc.,AddisAbeba
- Coordination of BEmOC training for University and college Midwifery lecturers, tutors and preceptors, developing guide line for site and preceptor selection and harmonization of Midwifery curriculum for colleges and universities , March 2010-June 2010 WHO, country office, Ethiopia
Referrence: Dr. Nebreed Fiseha, e-mail: nebreedf@Et.Afro.who.Int
- **A national survey on need assessment for Post Abortion Care (PAC),** Organize and supervise data collection. Reference: Dr Solomon…Ipas, Ethiopia,Tel:+251-911-41-11-87 (2006)
- **A national survey on quality of Reproductive Health services;** Research Assistant**,** Reference: Dr Yilma Melkamu, Addis Ababa University,Tel.+251-911-40-49-71 ,e-mail yilmamelkamu@yahoo.com.(2006)
- **National Health facility survey,** Addis Ababa, February 2006 (Research Assistant)
- **National health facility survey**; Organize and supervise data collection. Reference: Pro.Damen HaileMariam, Addis Ababa University, hcfp.aau@ethionet.et, Tel. +251-91122-89-81(2005)
- **A national survey on youth friendly health service in Ethiopia**; Research Assistant Reference Dr. Michael Dejene, (2005)
- **Coordinating evaluation and monitoring of national polio campaign, Regional coordinator.** Reference Pro.Yemane Berhane **,** +251-911-2197-85 **(** 2005)

LANGUAGE ABILITY

- Excellent in English, (reading, writing and speaking)

- Excellent in Afan Oromo language and Amharic (reading, writing and speaking).

SPECIAL SKILL

- Good interpersonal relationship
- Able to use personal computer
- Able to use statistical (Stata, Epi-info, SPSS) as well as qualitative

data analysis software's(Open code)

MEMBERSHIPS

- Member of the Ethiopian public health association (EPHA)
- Member of the Ethiopian Midwifery Association (EMA)
- Member of Ethiopian Nurse Association (ENA)
- Member of Population Association of America (PAA)

REFERENCES

Dr. Mitike Molla : Dean School of Public Health, College of Health Science, Addis Ababa university Email:deressaw@gmail.com

Dr. Assefa Seme: Director for Reproductive Health Training and research, a collaboration study with Gates Institutes, School of Public Health, Johns Hopkins University (GI/SPH/JHU) USA. School of Public Health, College of Health Sciences, Addis Ababa University e-mail: assefaseme @gmail

Dr. Assefa Seme : Head Department of Reproductive Health and Health Service Management School of Public Health, College of Health Sciences, Addis Ababa University email: assefaseme @gmail

Dr. Kebede Worku ,state Minster of Federal Ministry of Health, Ethiopia email: fmoh.md@ethionet.et

Dr. Nega Assefa , email: negaassefa@yahoo.com

LETTER OF DECLARATION

I, undersigned MPH student hereby declared that this is entirely my original work and I am the sole author of this thesis titled "Demand for long acting reversible contraceptive method among married women in Sebeta town, Southwest, Ethiopia**"** To the best of my knowledge this thesis contains no material previously published by any other person except where due acknowledgment has been made. All other's ideas and words used to support my thesis development have been properly cited according to the good scientific practice. This thesis has been accepted as a partial fulfillment of the requirement for the degree of master in Public Health, which has never been presented and submitted in a whole or in part, in this or any other University for the award of degree, diploma or other qualification certificates.

I have attempted to identify all the risks related to this research that may arise in conducting it, obtained relevant ethical/safety approval, and acknowledged my obligations and the rights of participants. This thesis has been submitted in printed and electronic form. I hereby conform that the content of both printed version and electronic version are the same. I understand that the provision of incorrect information may have legal consequences.

Name:- Galgalo Oljira Gutema (BSc.)

Date of submission: October 2, 2019 **Signature: _____**

Approval of the Primary Advisor

This thesis work has been submitted for examination with the approval of my University primary advisor

Name of the Primary Advisor: - Meselech Assegid(MPH, PhD fellow)

_____ October 25, 2019

Signature **Date**