



**TIMELY INITIATION OF POSTPARTUM CONTRACEPTIVE UTILIZATION AND ASSOCIATED FACTORS AMONG WOMEN OF CHILD BEARING AGE IN ARORESSA DISTRICT, SOUTHERN ETHIOPIA**

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**A THESIS SUBMITTED TO JIMMA UNIVERSITY, INSTITUTE OF HEALTH, POPULATION AND FAMILY HEALTH DEPARTMENT IN PARTIAL FULFILLMENTS OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF PUBLIC HEALTH IN REPRODUCTIVE HEALTH (MPH/RH)**

**JUNE, 2017**

**JIMMA, ETHIOPIA**

# **JIMMA UNIVERSITY**

## **Institute of Health**

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**Timely Initiation of Postpartum Contraceptive Utilization and Associated Factors among Women of Child Bearing Age in Aroressa District, Southern Ethiopia**

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**June, 2017**

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## ABSTRACT

**Background:** Globally, more than 90 percent of women during the first year of postpartum period want to either delay or avoid future pregnancies. Although studies related with utilization of modern contraceptive methods have been conducted in Ethiopia, less attention has been given on time of initiating modern contraceptive utilization after delivery. Therefore, this study tried to fill the gap by considering factor that was not addressed by previous studies like women's participation on forum of the pregnant mothers with other factors associated with timely initiation of postpartum contraceptive utilization in the study area.

**Objective:** - To assess the magnitude and associated factors of timely initiation of postpartum contraceptive utilization among women of child bearing age in Aroressa district, Southern Ethiopia, 2017

**Method:** - The study was conducted in Aroressa district from March 15 to April 15, 2017. A community based cross-sectional study design with interviewer administered structured questionnaires were used. Multistage sampling technique was employed involving a total of 695 women of child bearing age who delivered a child in the past 12 months prior to the study period. Data were cleaned, coded and entered into Epi data version 3.1, then exported to statistical package for social science version 20 for analysis. Descriptive statistics, Bivariate and Multivariate logistic regression analysis was done. P-value <0.05 was used to consider significant variables.

**Result:** The magnitude of timely initiation of postpartum contraceptive utilization was found to be 31.7% [95% CI (28, 36)]. Antenatal care [AOR=1.94, 95% CI (1.23, 3.01)], postnatal care [AOR=1.90, 95%CI (1.23, 2.94)], participation on forum of the pregnant mothers [AOR=1.63, 95% CI (1.09, 2.41)] and resumption of menses after delivery [AOR=2.6, 95% CI (1.47, 3.81)] were predictors positively associated with timely initiation of postpartum contraceptive utilization.

**Conclusion:** The magnitude of timely initiation of postpartum contraceptive utilization was low. Strengthening integration of family planning information with antenatal and postnatal care follow up and giving attention on forum of the pregnant mothers is recommended.

**Key words:** - Timely initiation, postpartum contraceptives, Aroressa district

## **ACKNOWLEDGEMENT**

First of all I would like to thank my Almighty God for giving me strength and power to accomplish this work.

Then I would like to thank Jimma University, department of Population and Family Health for providing me this opportunity to conduct this Thesis.

I would like to give my heartfelt thanks and appreciation to my advisors, Dr. Muluemebet Abera and Mrs. Tsedach Alemu for their unreserved all rounded support and enriching comments throughout the study period.

I would like to thank my families for their support throughout my study period.

I would like to extend my gratitude to Aroressa district Health Office, data collectors, supervisors, study participants as well as all of those who in one and another way contributed for completion of this study.

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## ACRONYMS AND ABBREVIATIONS

|              |   |
|--------------|---|
| <b>ANC</b>   | Antenatal Care                          |
| <b>AOR</b>   | Adjusted Odds Ratio                     |
| <b>CI</b>    | Confidence Interval                     |
| <b>COR</b>   | Crude Odds Ratio                        |
| <b>EDHS</b>  | Ethiopia Demographic Health Survey      |
| <b>EFMOH</b> | Ethiopia Federal Minister of Health     |
| <b>EMDHS</b> | Ethiopia Mini Demographic Health Survey |
| <b>FP</b>    | Family Planning                         |
| <b>IRB</b>   | Institutional Review Board              |
| <b>JU</b>    | Jimma University                        |
| <b>MNH</b>   | Maternal and New born Health            |
| <b>NGOs</b>  | Non Governmental Organizations          |
| <b>OR</b>    | Odds Ratio                              |
| <b>PI</b>    | Principal Investigator                  |
| <b>PNC</b>   | Postnatal Care                          |
| <b>PPFP</b>  | Postpartum Family Planning              |
| <b>SD</b>    | Standard Deviation                      |
| <b>SPSS</b>  | Statistical package for social science  |
| <b>WHO</b>   | World Health Organization               |

# CHAPTER ONE: INTRODUCTION

## 1.1 Background

World Health Organization (WHO) defined timely initiation of postpartum contraceptive utilization as use of modern contraceptive methods before or at six weeks after delivery (1).

Globally, Family Planning (FP) is recognized as a key life-saving intervention for mothers and their children. Postpartum family planning (PPFP) has an important role to play in strategies to support longer birth intervals or reduce unintended pregnancy and its consequences (1).

Family Planning can avert more than 30% of maternal deaths and 10% of child mortality if couples space their pregnancies more than 2 years apart. If all couples waited 24 months to conceive again, under-five mortality would decrease by 13%. If couples waited 36 months, the decrease would be 25% (2).

A recent 10-year study of maternal mortality in 46 countries found that the risk of maternal death increases as the number of children per woman rises to four or more. The study also found that maternal deaths declined by 7–35% as the number of children per woman fell. For women who are not using any modern contraceptive method, pregnancy can occur within 45 days of giving birth. (3).

Unintended pregnancies particularly among women in developing countries and poor individuals are linked to elevated maternal morbidity and mortality. In the world 213 million pregnancies occurred in 2012, 40% of them were unintended in which 50% ended up with abortion, 38% with unplanned birth. These all easily preventable complications that resulted in high number of maternal and neonatal deaths were occurred due to lack of using postpartum contraceptives on time (4). In Ethiopia a national survey in 2013 stated that the prevalence of unintended pregnancy was 24%, while in Southern Ethiopia it was found to be about 43%(5). According to report of the Ethiopian Demographic and Health Survey 2011, 9% and 16% of births were not wanted and mistimed respectively (6).

## **1.2 Statement of the Problem**

The first year after a woman has given birth is crucial for use of modern contraceptives on right time to prevent unwanted pregnancy. Many women, however, do not realize that they are at a risk for pregnancy during this period. Therefore, this can result to unintended pregnancies and unwanted childbearing (7).

Globally, more than 90 percent of women during the first year of postpartum period want to either delay or avoid future pregnancies. However, in most cases, sexual activity in the postpartum is resumed before the first menstruation following delivery without the use of any contraceptive method (3).

About 80 million unintended pregnancies worldwide are accounted for low utilization of contraceptives during the postpartum period. In addition, 30% of all births in sub-Saharan Africa are due to low utilization of family planning (FP) services (7).

The high rate of unintended pregnancy become a big problem especially in sub-Sahara Africa where approximately half of all pregnancies were reported to have come soon or was unwanted. These could have been prevented with increased access to effective utilization of modern postpartum contraceptive methods. An increase in contraceptive use during the postpartum period substantially reduces the rates of maternal and infant mortality (8).

Study has shown that short birth intervals are closely associated with poor maternal and child health. Children born too close to a previous birth, especially if the interval between the births is less than two years, are at increased risk of morbidity and mortality and this therefore can be prevented through using modern contraceptive methods on right time after delivery (9).

An important factor should be addressed in recommendations related to the timing of counseling for postpartum contraception is considering the resumption of ovulation following birth. On the most of women the average time to first postpartum ovulation is 45 days and can occur as early as 25 days following delivery. Additionally, approximately two-thirds of women ovulate prior to their first postpartum menstruation making menstruation a poor indicator for timing the initiation of postpartum contraception (10).

About 225 million women in low- and middle-income countries (LMICs) who do not want to become pregnant and desire to extend next pregnancy for at least two years are not using postpartum contraception on recommended time. It is estimated that 30 million unplanned births and 40 million abortions, half of them illegal and unsafe, occurred annually as a result of not using modern contraceptive methods on timely manner (11).

Analysis of DHS data regarding contraceptive usage during the extended post-partum period from developing countries showed that about 91% of the respondents wished to delay their next pregnancy by at least a year, however, 70% of them were not using a modern contraceptive method (10).

An analysis of data from Demographic and Health Survey (DHS) of 17 developing countries also found that the risk of maternal as well as the newborn and infant death would be decreased with increasing birth interval lengths up to 36 months through using modern contraceptive methods after delivery on timely manner. It also found that an average of 25% of couples in Sub-Saharan Africa who wanted to space or limit their children were not using any form of modern contraceptive method on recommended time after delivery (12).

In sub-Saharan Africa, the proportion of postpartum women who are exposed to the risk of pregnancy by having sex while using no postpartum contraceptive method within 2 years after childbirth is nearly one third (7). Most postpartum women expressed a desire to prevent pregnancy during first two years after delivery but had not obtained contraceptive protection on recommended time (3).

According to EMDHS2014 the great majority of women (82 percent) who gave birth in the preceding five years did not receive a postnatal checkup at all. This shows that the most of women were not utilizing modern contraceptive after giving birth as a result of missing opportunities for early utilization of postnatal care (13).

In Ethiopia, approximately 80% of postpartum women return to sexual activity during the first- to six-month period after giving birth, and menses returns for 20% during this same period (7).

According to 2011 Ethiopian Demographic and Health Survey (EDHS) analysis, it was found that nearly 29% of most current pregnancies were reported as either mistimed or unwanted that would be easily prevented if the women were using modern contraceptive methods on timely manner after delivery (14).

A report from Ethiopian Mini Demographic Health Survey of 2014 also indicated that while awareness of contraceptive methods was high, the most proportion of women was not using a modern method of contraception after delivery. In Ethiopia exclusive breast feeding was about 52%. Therefore, the use of lactational amenorrhea cannot be effectively and reliably used as a method of contraception. By considering this Ethiopia Federal Minister of Health (EFMOH) decided that postpartum contraceptive utilization should be started before or on sixth weeks after delivery by integrating it with child immunization program to reduce mistimed pregnancy and its consequences (14).

Study showed that in Ethiopia about 83.1% of the women wanted to extend their next pregnancy for at least two years; however, they didn't get family planning service on early time after giving birth (15).

Although there is a continuous need of the researches for new information, there was no study previously done in the study area. In addition studies previously done in other areas have focused on general use of postpartum contraceptive methods and a less attention has been given to a time of initiating modern contraceptive methods after delivery. Therefore, this study tried to fill the gap through addressing some factors that was not considered by previous studies like women's participation on forum of the pregnant mothers that can play a role for improvement of postpartum contraceptive utilization on timely manner in the study area.

### **1.3 Significance of the Study**

Late initiation of postpartum contraceptive utilization after giving birth can lead to complications related to unplanned or unwanted pregnancy with short inter-pregnancy interval. Therefore, the findings of this study will help the local authority in developing policies which can improve delivery of maternal health services at community level. Particularly it can give a clue for policy makers to strengthen and encourage utilization of postpartum contraceptive methods on a timely manner.

It also helps policy makers to plan for relevant interventions on identified factors affecting proper utilization of the postpartum modern contraceptive methods and to create awareness among communities in the study area on benefits of its utilization on recommended time.

It also gives inputs for different Non Governmental Organizations (NGOs) interested to work on maternal and child health programs in the area.

Moreover, the finding of this study will serve as a source of information for researchers who are interested to conduct further studies in the area.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Theoretical Overview of Postpartum Family Planning**

The benefits of family planning have become increasingly recognized worldwide, including improved health, economic, and social outcomes for women and families, as well as public health, economic, and environmental benefits at the population-level. The provision of quality family planning services in the postpartum period contributes significantly to reducing maternal and child mortality and morbidity (16).

The timely initiation of contraception postpartum is an important consideration for breastfeeding and non-breastfeeding women. During the postpartum period, effective contraception can prevent unintended pregnancy and ensure adequate birth spacing and short interpregnancy intervals have been linked to increased risk of preterm birth, low birth weight, small for gestational age and increases in maternal morbidity and mortality. There are a number of safe and effective contraceptive methods that women can begin at various points after delivery, including immediately postpartum (17)

### **2.2 Magnitude of Postpartum Contraceptive Utilization on Recommended Time**

Study in Nigeria showed that the magnitude of contraceptive utilization before sixth weeks of delivery was 3.2% (18). Study done in Mumbai, India also showed the prevalence of initiating postpartum contraceptive utilization before six weeks of postpartum was found to be 62% (19). Another study in Malawi also revealed that the prevalence of postpartum contraceptive utilization on sixth weeks after giving birth was found to be 35% (20).

Study conducted in Northern Ethiopia revealed that nearly half (48.4%) of the women were using one form of contraceptives and about 20.6% started it from sixth weeks-three months after giving birth and remaining 20.7%, 25.7% and 33% started it at 4-6 months, 7-9 months and 10-12 months respectively (15). Another cross-sectional study in Ethiopia also revealed that the magnitude timely initiation of postpartum contraceptive utilization was 37% (21).

Study in Ethiopia also showed that only 2.4% of women used family planning in the first 42 days after delivery (22).

## **2.3 Factors Associated With Timely Initiation of Postpartum Contraceptive Utilization**

### **2.3.1 Socio-Demographic and Economic Factors.**

Cross-sectional study done in Kenya revealed that among mothers who gave birth within the past twelve months prior to study, the proportion of women started using a modern family planning method on or before six weeks after delivery were 35.6%. This study revealed that the age of the women (>30) was significantly associated with it (23).

Study in Ghana revealed that there was significant association between occupational status of the women and contraceptive utilization where women with formal employment were three times more likely to using postpartum contraceptives on time than (24). As compared to women with no education, women with a secondary level schooling were three times more likely to have postpartum family planning utilization for limiting when compared with (25).

Similarly, Studies conducted in different Africa countries showed that timely initiation of postpartum contraceptive utilization was significantly higher in women with at least a secondary education (26). Another study conducted in Kenya showed that women with secondary level of education and above were more likely to use a modern family planning method on or before six weeks after postpartum compared to these with primary level of education and below (27).

Cross-sectional study done in Ethiopia also revealed that secondary and above level of the husband's education was found associated with postpartum contraceptive use (28).

### **2.3.2 Knowledge and attitude on benefits of using modern contraceptives**

Although information is presented for all women, the focus should be given for postpartum period to inform women about the importance of utilizing modern contraceptive methods on recommended time after delivery. Knowledge and attitude of family planning is a prerequisite to obtaining access to and using a suitable contraceptive method in a timely and effective manner (6). Study in Ethiopia revealed that women who had knowledge about FP methods



were found to be more likely to start postpartum contraceptive utilization on time than those who do not have knowledge (22).

### **2.3.3 Socio-Cultural Factors**

Study conducted in Ghana revealed that spousal communication on contraceptive utilization was found to be associated with timely utilization of postpartum contraceptives where higher odds of women who communicated with their spouses were using it (24).

Cross-sectional study done in Democratic Republic of Congo indicated that 37% of postpartum women did not initiate using modern contraceptive methods at early time after they gave birth due to lack of knowledge (29). Study done in Mumbai, India showed that women who have discussed use of postpartum family planning with their husbands were more likely to use postpartum contraception on time than their counter parts (19). Another cross-sectional study also revealed that women who communicated with their husband about contraceptives were 1.79 times more likely to uptake family planning services on timely manner after delivery (30).

Cross-sectional study conducted in Ethiopia showed that spousal communication on decision about contraceptive utilization was found as an important factor for contraceptive utilization and those couples communicate on it and made decision together found to use contraceptives 2 times more likely than those who did not (15). Another cross-sectional study conducted in Ethiopia also revealed that lack of knowledge, husband's disapproval, and lack of spousal discussion on reproductive issues were main reasons for not using postpartum contraceptives methods on timely manner (31).

### **2.2.4 Use of maternal health Services**

Study in South East Asia showed that there was a significant relationship between women who received antenatal contraceptive counseling and those who were using postpartum contraception on early time (26). A cross-sectional study done in Uganda showed that use of family planning services prior to last pregnancy was also significantly associated with early uptake of postpartum contraceptives (30). Study done in Nigeria also revealed that those women who had antenatal and postnatal counseling on postpartum contraceptive utilization

were found more likely to start modern postpartum contraceptive utilization on time than their counter parts (18).

Study conducted in Nepal showed that women who received antenatal care were more likely to initiate using contraceptives on time (32). Another cross-sectional study found that women who received more information on postpartum contraception either during the antenatal or immediate postpartum period were more likely to report an intention to use contraception in the postpartum period immediately after delivery or sixth weeks postpartum (33).

The quality of timely utilization of postpartum contraceptive methods can be influenced by health service utilization during pregnancy. Study conducted in northern Ethiopia revealed that delivery at health institution and PNC follow up were the factors significantly associated with postpartum contraceptive utilization on time (34).

Cross-sectional study in Ethiopia showed that women who had ANC follow up were 4 times more likely to initiate postpartum contraceptive methods on time than their counterparts. It also revealed that women who had postnatal care were three times more likely to initiate postpartum contraceptive utilization on time than those who haven't attended (22).

Another study conducted in Southern Ethiopia revealed that women who attended ANC were more likely to initiate postpartum family planning on time than those who didn't, which indicates that women are particularly receptive to information about contraception and birth spacing during pregnancy (35).

### **2.3.5 Obstetric Factors**

Community based cross-sectional study done in Rwanda showed that number of living children was directly associated with postpartum contraceptives utilization (36).

Cross-sectional study conducted in southern Ethiopia showed that women who returned to see menses after birth and wanted to space two and more years were more likely to use modern contraceptive after delivery (21). Study in Ethiopia also showed that women whose menses was returned after delivery were found to be more likely to initiate postpartum contraceptive utilization on time (22).

Since last few years Ethiopian Federal Minister of Health (EFMOH) formulated the strategy of Health Development Army at community level that has components like pregnant mothers' days (forum) that mainly focused on maternal and child health through encouraging the women to discuss about reproductive issues and maternal health service utilization to each other as well as with health professionals (37). Although different studies related with use of postpartum contraceptive methods have been conducted in Ethiopia, no study considered women's participation on these activities mentioned above.

### **2.3 Conceptual framework of the study**

The conceptual framework used for this study was adapted from different related literatures and contains independent variables that were classified in to socio-demographic and economic factors, socio-cultural factors, behavioral factors (use of maternal health services) and obstetric factors as well as knowledge and attitudes towards benefits of using modern contraceptive methods. The dependent variable was timely initiation of postpartum contraceptive utilization (initiating postpartum contraceptive utilization before or at sixth weeks after delivery).

Diagrammatically it is shown below (figure 1):

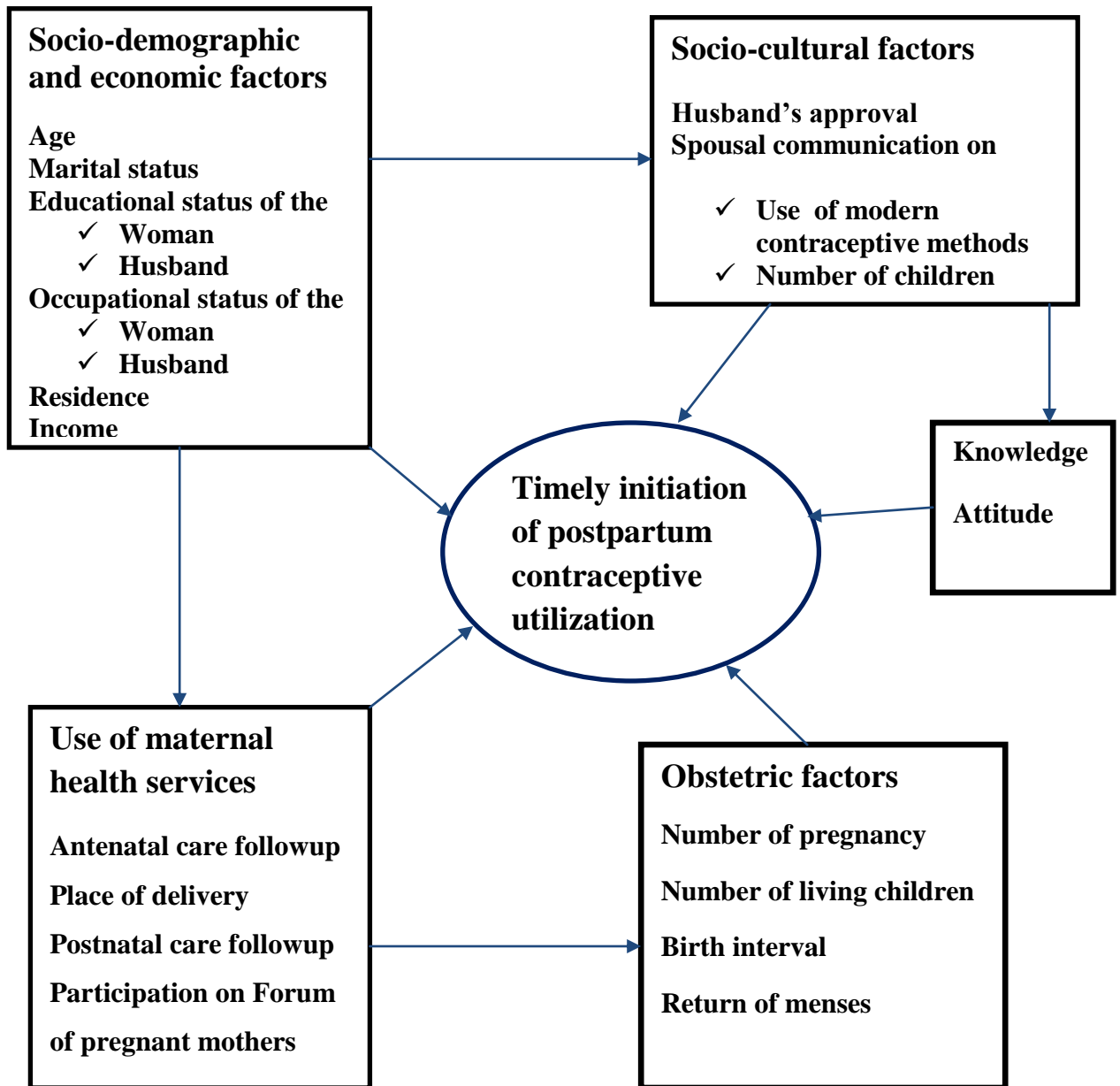


Figure1:- Conceptual Frame Work of the study, Adapted From Related Literatures.

## **CHAPTER THREE: OBJECTIVE**

### **3.1 General Objective**

- To assess the magnitude of timely initiation of postpartum contraceptive utilization and associated factors among women of child bearing age in Aroressa district, Southern Ethiopia, 2017

### **3.2 Specific Objectives**

- To assess the magnitude of timely initiation of postpartum contraceptive utilization among women of child bearing age in Aroressa district, Southern Ethiopia, 2017
- To identify factors associated with timely initiation of postpartum contraceptive utilization among women of child bearing age in Aroressa district, Southern Ethiopia, 2017

## CHAPTER FOUR: METHODS AND MATERIALS

### 4.1 Study Area and Period

Aroressa district is one of 23 districts in Sidama zone, Southern nation, nationalities and peoples region of Ethiopia which found at 181 km and 454 km apart from Hawassa and Addis Ababa respectively. It has 30 rural and 3 urban Kebeles with total population of 215,399 and from this 49.8% were females. The women of reproductive age group account 50, 188(23.3%) of the total population. According to district health office report the total number of estimated delivery in 2016/17 was 7453 and the utilization of first ANC, institutional delivery, PNC services and contraceptive prevalence was 75%, 27%, 67% and 48.4% respectively. The district is bounded with Bensa district at north, Chire district at East, Oromia region at West and South. The district has 8 health centers, 33 health posts, 3 primary private clinics and 4 private drug stores (38).

The study was conducted from March 15-April 15, 2017.

### 4.2 Study Design

A community based cross-sectional study design was used.

### 4.3 Populations

**4.3.1 Source Population:** - All women of child bearing age who gave birth in the last twelve months prior to the study period in the Aroressa district, Southern Ethiopia.

**4.3.2 Study Population:** - Randomly selected women of child bearing age who gave birth in the last twelve months prior to the study period and fulfilled inclusion criteria.

**4.3.3 Inclusion Criteria:** - women of child bearing age who gave birth in the last twelve months prior to the study period, were above 42 days of postpartum and lived at least for six months in the selected Kebeles.

**4.3.4 Exclusion Criteria:** - Those women who were sick and unable to respond.

### 4.4 Sample Size Determination

The sample size for the first objective was determined by using single population proportion formula with consideration of the following parameters:-

The proportion of women who initiated postpartum contraceptive utilization on time = 0.37 (21), the level of confidence 95%, ( $Z_{\alpha/2}=1.96$ ), the margin of error assumed to be 5%, design effect of 2 and estimated non-response rate of 10%. Accordingly, the sample size calculated as follows:

$$n = \frac{\left(Z_{\left(\frac{\alpha}{2}\right)}\right)^2 P(1-P)}{d^2} \times \text{design effect}$$

$$\frac{(1.96)^2 0.37(1-0.37)}{(0.05)^2} = 358, \text{ since source population was less than 10,000, the correction}$$

formula was applied

$$n_f = \frac{ni}{1 + \left(\frac{ni}{N}\right)} = 316. \text{ After multiplying it by design effect of 2 and adding 10\% non-response}$$

rate, the total sample size was 695.

**For the second objective: -**

By using Epi info7 software and taking assumptions of 95% CI, 80% power, Ratio of 1:1 and considering significant variables from the previous (22), the total sample size for the each factor was calculated as shown below.

**Table 1: sample size calculation for the factors associated with timely initiation of postpartum contraceptive utilization.**

| Factors | P     | AOR  | Sample size<br>( $n_i$ ) | Multiplying<br>by design<br>effect of 2 | 10% non<br>response<br>rate | Final sample<br>size ( $n_f$ ) |
|---------|-------|------|--------------------------|---|-----------------------------|--------------------------------|
| ANC use | 80.9% | 3.56 | 238                      | 476                                     | 48                          | 524                            |
| PNC use | 77.8% | 2.84 | 272                      | 544                                     | 54                          | 598                            |

All sample sizes calculated for the second objective were below that of the first objective. Therefore, the largest sample size [sample size of the first objective ( $n=695$ )] was taken.

#### **4.5 Sampling Technique**

A multistage sampling technique was used to identify study subjects. First Kebeles (smallest administrative units of Ethiopia) were stratified into urban and rural Kebeles. Then ten rural and one urban Kebeles were randomly selected from total Kebeles in the district. Rapid censuses was done to get all lists of the women of child bearing age who gave birth in the last twelve months prior to the study period. Then identification number was given for each household with eligible women. Sampling frame was developed for each selected kebele separately based on the results of censuses. Then calculated sample size was proportionally allocated to each selected Kebele based on its total number of eligible women and finally study subjects were selected by using simple random sampling technique. Incase when there were two or more eligible women in the same household lottery method was applied to select one of them.



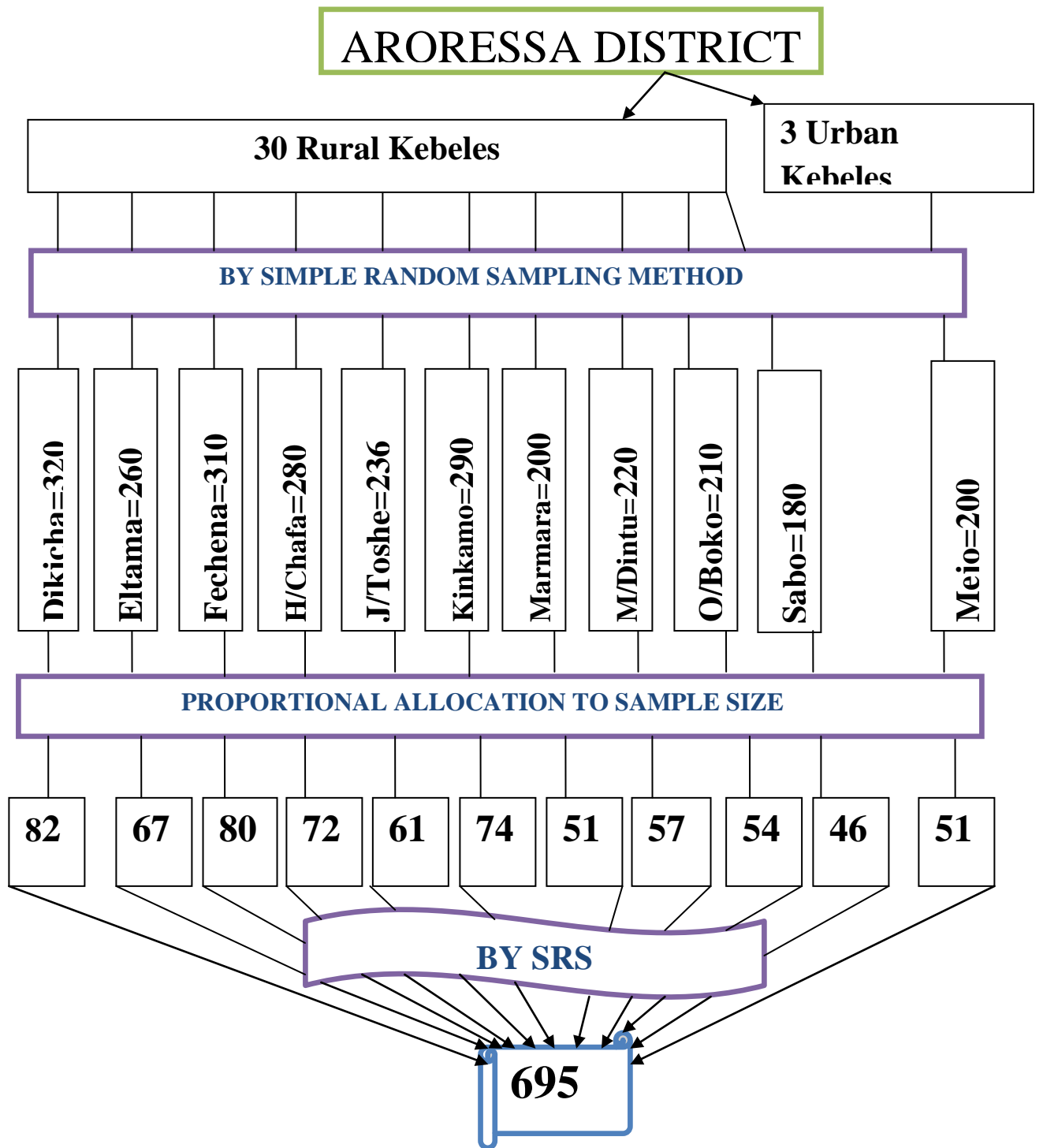


Figure 2:- Schematic Presentation of Sampling Procedure

## **4.6 Study Variables**

### **Dependent variable**

- Timely initiation of postpartum contraceptive utilization (Yes, No)

### **Independent variables**

- Socio-demographic and economic factors
  - ✓ Age, marital status, educational and occupational status of the women and the husband, residence and income of the household
- Socio-cultural factors
  - ✓ Spousal communication on modern contraceptive methods and number of the children they desired to have and husband's approval
- Knowledge and attitude on benefits of using modern contraceptive methods
- Use of maternal health service
  - ✓ Antenatal care follow up, place of delivery, postnatal care and participation on forum of the pregnant mothers
- Obstetric factors
  - ✓ Number of pregnancy, number of living children, birth interval, history of abortion and resumption of menses after delivery

## **4.7 Data Collection Tools and Procedures**

Structured questionnaires adapted from related literatures were used after some modification to make it consistent with the objective of the study and conceptual frame work. Data were collected by using interviewer administered structured questionnaires that contain socio-demographic and economic factors, socio-cultural factors, items related to knowledge and attitudes on benefits of using modern contraceptive methods as well as maternal health services utilization characteristics of the study subjects. Questionnaires that prepared in English were translated to local language (Sidamic language) by language experts. Data were collected by ten data collectors who have completed grade ten and some of them had previous

experience of data collection. Two health professionals (BSc) were recruited as supervisors with the responsibility to lead the whole situation of data collection process.

#### **4.8 Operational Definitions**

**Postpartum contraceptive utilization:** - Is use of modern contraceptive methods after giving birth.

**Timely initiated postpartum contraceptive utilization:** - If a woman initiated modern contraceptive utilization before or on sixth weeks after delivery.

**Not initiated postpartum contraceptive utilization on time:** - If a woman initiated modern contraceptive utilization after sixth weeks of delivery or a woman who was above six weeks of postpartum, but not initiated modern contraceptive utilization during data collection period.

**Forum of pregnant mothers:** - Is a day of pregnant mothers held every month at each kebele among mothers and health professionals to discuss on issues of the maternal health including health service utilization.

**Knowledgeable:** - If the respondent answered more than or equal to the mean score of total knowledge related questions on benefits of modern contraceptive methods.

**Not Knowledgeable:** - If the respondent answered below the mean score of total knowledge related questions on benefits of modern contraceptive methods.

**Spousal communication:** - Is discussion between spouses about modern contraceptive utilization and the number of the children they desire to have in the future.

**Have positive attitude:** - Those who scored mean and above for attitude related items.

**Have negative attitude:** - those who scored below mean score for attitude related items.

#### **4.9 Data Analysis Procedures**

After completing data collection, the data were cleaned, coded and enter into Epi data version 3.1. Then exported to statistical package for social science (SPSS) version 20 and checked for missing values before analysis. Descriptive analysis was done for each predictor variables. Cross tabulation was also performed to see the distribution of different variables in relation to outcome variable. Principal component analysis was done for the items used to measure attitudes of the respondents and all the assumptions of Principal component analysis were checked to conduct data reduction. Multi-collinearity among the independent variables was checked. The goodness-of-fit of the model was also checked by Hosmer-Lemshow goodness of model fit. Bivariate analysis was done for each independent variable with outcome variable to see the independent effect. Variables that were associated with outcome variable at p-value 0.25 or below were considered as candidates for multivariate logistic regression and finally entered into multivariate logistic regression model for controlling possible confounders to get final model. Backward stepwise logistic regression was used to identify variables which had the largest contribution to the model. Adjusted odds ratio (AOR) with 95% confidence interval (CI) was calculated to determine the presence and strength of association among predictors and outcome variables. P-value <0.05 was used to consider significant variables. Results were described by texts, tables and figures.

#### **4.10 Data Quality Assurance**

To assure the quality the data, properly designed data collection tool was developed in English after revising related literatures and it was contextualized to the study objective and local situations. The English versions of the questionnaires were translated in to local language (Sidamic Language) and back to English by language experts to check consistency. Ten data collectors and two supervisors who can read and speak Sidamic language fluently were trained for two days by principal investigator before starting actual data collection. Training was given on general objective of the study, contents of the tool, how to approach study participants, collect information from them and keep their confidentiality. Before starting actual data collection, the questionnaires were pre-tested on 5% (**35 women**) of the sample in Kechawo kebele which was out of the selected Kebeles for the study and necessary

modification was made specifically on understandability of some items. Collected data were checked for completeness and consistency by supervisors and principal investigator at the end of each day. Discussion was made with data collectors and supervisors in each day before and after collecting data and corrective actions was taken timely to minimize errors. To reduce non-response rate appropriate time was adjusted for repeated visits when respondents were unavailable. Collected data were edited and cleaned on daily basis. Double data entry was applied to minimize data entry error.

#### **4.11 Ethical Consideration**

Ethical clearance was obtained from Jimma University (JU), Institute of Health, and Institutional Review Board (IRB). Official letter was written from Woreda Health Office to individual Kebele administration to enhance cooperation. Verbal consent was taken from each selected participant to confirm their willingness and those who were not willing to participate in the study was given the rights to do so. To ensure confidentiality interview was held on a private basis and ensured throughout the process.

#### **4.12 Dissemination Plan**

Results of this study will be disseminated to Jimma University, Institute of Health, department of Population and Family Health.

It will also be disseminated to Sidama Zone Health Department, Aroressa District health office and local NGOs working on study area.

The finding of this study will be presented to different workshops, seminars and further efforts will be made to publish on national or international peer reviewed journals.

## **CHAPTER FIVE: RESULTS**

### **5.1 Socio-demographic and economic factors**

From six hundred ninety five study participants planned for interview, about 684 respondents were interviewed making a response rate of 98.4%. The mean age of the respondents was 25.4 (SD  $\pm$ 5.1) with the minimum and the maximum age of 17 and 41 years respectively. Majorities (89.5%) of the respondents were married and about 78.9% were followers of protestant followed by orthodox (9.4%). Regarding educational status of the respondents, 48.4% had no formal education and only 15.1% have attended secondary and above. Concerning occupational status of the respondents 36.4% were housewives followed by merchants (22.8%). Majority (92.3%) of the respondents were from Sidama ethnicity group (Table2).

**Table 2: Socio-demographic and economic characteristics of the respondents in Aroressa District, Southern Ethiopia, 2017**

| <b>Variables and categories<br/>(n= 684)</b>  | <b>Frequency</b> | <b>Percent<br/>(%)</b> |
|---|------------------|------------------------|
| <b>Age of the respondents</b>                 |                  |                        |
| 15-19   | 76               | 11.1                   |
| 20-24   | 264              | 38.6                   |
| 25-29   | 187              | 27.3                   |
| >=30  | 157              | 23.0                   |
| <b>Marital status of the respondents</b>      |                  |                        |
| Single  | 22               | 3.2                    |
| Married                                       | 612              | 89.5                   |
| Widowed                                       | 24               | 3.5                    |
| Separated                                     | 26               | 3.8                    |
| <b>Religion of the respondents</b>            |                  |                        |
| Protestant                                    | 540              | 78.9                   |
| Orthodox                                      | 64               | 9.4                    |
| Muslim  | 45               | 6.6                    |
| Catholic                                      | 35               | 5.1                    |
| <b>Educational status of the respondents</b>  |                  |                        |
| No formal education                           | 331              | 48.4                   |
| Primary                                       | 250              | 36.5                   |
| Secondary and above                           | 103              | 15.1                   |
| <b>Occupational status of the respondents</b> |                  |                        |
| Housewife                                     | 249              | 36.4                   |
| Merchant                                      | 156              | 22.8                   |
| Student                                       | 103              | 15.0                   |
| Farmer  | 101              | 14.8                   |
| Government employee                           | 75               | 11.0                   |
| <b>Residence of the respondents</b>           |                  |                        |
| Rural   | 508              | 74.3                   |
| Urban   | 176              | 25.7                   |
| <b>Ethnicity of the respondents</b>           |                  |                        |
| Sidama  | 631              | 92.3                   |
| Amhara  | 30               | 4.4                    |
| Others**                                      | 23               | 3.3                    |

**Table 3:- Continued...**

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|   |     |      |
|---|-----|------|
| <b>Educational status of the husband (n=612)</b>  |     |      |
| No formal education                               | 346 | 56.5 |
| Primary   | 139 | 22.7 |
| Secondary and above                               | 127 | 20.8 |
| <b>Occupational status of the husband (n=612)</b> |     |      |
| Farmer  | 361 | 58.9 |
| Merchant  | 134 | 21.8 |
| Government employee                               | 82  | 13.9 |
| Others*   | 35  | 5.4  |
| <b>Monthly income of the household</b>            |     |      |
| <500 Birr   | 345 | 50.4 |
| >=500Birr   | 339 | 49.6 |
| <b>Have Exposure to the Media</b>                 |     |      |
| No  | 320 | 46.8 |
| Yes   | 364 | 53.2 |

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<sup>1</sup> Others\*\*= Oromo, Wolaita, Gurage  
Other\*= Student, daily laborer



## **5.2. Socio-cultural characteristics of the respondents**

Regarding Socio-cultural characteristics of the respondents three hundred ten (45.3%) of them have discussed with their husband on number of the children they desired to have and more than half (54.7%) have never discussed with their husband. From those who have discussed with their husband, majority (70.1%) of them decided together on number of the children they desired to have in the future.

Concerning spousal communication on utilization of the modern contraceptive methods, about three hundred ninety six (58%) of the respondents have discussed with their husband on modern contraceptive utilization and from these two hundred twenty three (56.3%) have decided together on utilization of these services.

In terms of husband's approval on modern contraceptive utilization, four hundred fifty six (66.7%) of the respondents reported that their husbands support them to utilize modern contraceptive methods (Table3).

**Table 4: socio-cultural characteristics of the respondents in Aroressa District, Southern Ethiopia, 2017**

| <b>Variables and categories</b>   | <b>Frequency</b> | <b>Percent (%)</b> |
|---|------------------|--------------------|
| <b>Discuss with husband on number of children (n=684)</b>                   |                  |                    |
| No  | 374              | 54.7               |
| Yes   | 310              | 45.3               |
| <b>Give decision on number of children (n=310)</b>                          |                  |                    |
| Myself  | 42               | 13.5               |
| Husband   | 51               | 16.5               |
| Together  | 217              | 70.0               |
| <b>Discuss with husband on utilization of modern contraceptives (n=684)</b> |                  |                    |
| No  | 288              | 42.1               |
| Yes   | 396              | 57.9               |
| <b>Give decision on utilization of modern contraceptives (n=396)</b>        |                  |                    |
| Myself  | 123              | 31.1               |
| Husband   | 50               | 12.6               |
| Together  | 223              | 56.3               |
| <b>Husband's approval (n=684)</b>   |                  |                    |
| No  | 228              | 33.3               |
| Yes   | 456              | 66.7               |

Regarding to information on modern contraceptive methods, almost all (99.7%) of the respondents heard about modern contraceptives methods and the main sources of information were health institutions (69.2%), followed by mass media (14.7%) and school (9.2%). Majority (63.3%) of the respondents reported that they know at least two types of modern contraceptive methods.

Concerning general knowledge of the respondents on benefits of modern contraceptive utilization, about three hundred eighty two (56.1%) were knowledgeable (Table4).

**Table5: knowledge of the respondents on benefits of modern contraceptives in Aroressa District, Southern Ethiopia, 2017**

| <b>Variables and categories</b>   | <b>Frequency</b>  | <b>Percent</b> |      |
|---|-------------------|----------------|------|
| <b>Heard about modern contraceptives (n=684)</b>                                |                   |                |      |
| No  | 2                 | 0.3            |      |
| Yes   | 682               | 99.7           |      |
| <b>Source of information about modern contraceptives (n=682)</b>                |                   |                |      |
| Health institution  | 472               | 69.2           |      |
| Mass media  | 100               | 14.7           |      |
| School  | 63                | 9.2            |      |
| Spouse  | 47                | 6.9            |      |
| <b>Know that woman can use modern contraceptives immediately after delivery</b> |                   |                |      |
| No  | 460               | 67.4           |      |
| Yes   | 222               | 32.6           |      |
| <b>Know that woman can be pregnant while breast feeding</b>                     |                   |                |      |
| No  | 259               | 38             |      |
| Yes   | 423               | 62             |      |
| <b>Know that contraceptives prevent unwanted pregnancy</b>                      |                   |                |      |
| No  | 39                | 5.7            |      |
| Yes   | 643               | 94.3           |      |
| <b>Know that woman can use modern contraceptives before Return of menses</b>    |                   |                |      |
| No  | 306               | 44.7           |      |
| Yes   | 376               | 55.3           |      |
| <b>Know that woman can be pregnant before return of menses after delivery</b>   |                   |                |      |
| No  | 544               | 79.6           |      |
| Yes   | 138               | 20.4           |      |
| <b>Know that modern contraceptives can prevent disease</b>                      |                   |                |      |
| No  | 420               | 61.5           |      |
| Yes   | 262               | 38.5           |      |
| <b>Knowledge on benefits of contraceptive utilization</b>                       | Knowledgeable     | 382            | 56.1 |
|   | Not knowledgeable | 300            | 43.9 |

In relation to the attitudes of the respondents towards the benefits of modern contraceptive utilization more than half (52.6%) of them had negative attitudes and remaining 47.4% had positive attitudes (Table5).

**Table6: Attitudes of the respondents towards the benefits of using modern contraceptives in Aroressa District, Southern Ethiopia, 2017**

| <b>Variable</b>  | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
|--|--------------------------|-----------------|----------------|--------------|-----------------------|
| <b>Contraceptive utilization is beneficial for your health</b>           | 161(23.5)                | 182(26.6)       | 149(22)        | 167(24.3)    | 25(3.6)               |
| <b>Contraceptive utilization can make you strong during pregnancy</b>    | 196(28.7)                | 161(23.5)       | 155(23)        | 153(22.4)    | 19(2.4)               |
| <b>Contraceptive utilization can help you during time of delivery</b>    | 173(25.3)                | 168(24.6)       | 271(40)        | 61(8.9)      | 11(1.2)               |
| <b>Use of modern contraceptives can help you to live a good life</b>     | 92(13.5)                 | 99(14.5)        | 465(68)        | 16(2.2)      | 12(1.8)               |
| <b>Use of modern contraceptives can improve the health of your child</b> | 54(7.9)                  | 192(28)         | 84(12.2)       | 329(48.2)    | 25(3.7)               |
| <b>Use of modern contraceptives is good for growth of your baby</b>      | 411(60.1)                | 155(22.7)       | 105(15.3)      | 11(1.6)      | 2(0.3)                |
| <b>Attitude of the respondents</b>                                       | Negative attitude        |                 |                | 360          | 52.6%                 |
|  | Positive attitude        |                 |                | 324          | 47.4%                 |

### **5.3 Characteristics of the respondents related to maternal health service utilization**

Regarding to the characteristics of the respondents related to maternal health service utilization about four hundred nineteen (61.3%) of them had previous history of using modern contraceptive methods before last pregnancy. Nearly half (47.5%) of the respondents have attended antenatal care (ANC) during their last pregnancy. From those who had antenatal care follow up, about 31.2% had four and more visits. Majority (65.7%) got advice and counseling on postnatal care utilization from health professionals during ANC visit. Four hundred seventy (68.7%) gave their last birth at home. Concerning postnatal care service utilization only 66.2% of the respondents attended postnatal clinic after their last delivery. About 71.8% of the respondents have participated on forum of the pregnant mothers during their last pregnancy (Table6).

**Table7: Characteristics of the respondents related to maternal health service utilization in Aroressa District, Southern Ethiopia, 2017**

| <b>Variables and categories</b>   | <b>Frequency</b> | <b>Percent</b> |
|---|------------------|----------------|
| <b>Used modern contraceptives before last pregnancy (n=684)</b>                               |                  |                |
| No  | 265              | 38.7           |
| Yes   | 419              | 61.3           |
| <b>Attended antenatal clinic during last pregnancy (n=684)</b>                                |                  |                |
| No  | 325              | 47.5           |
| Yes   | 359              | 52.5           |
| <b>Number of antenatal care visit during last pregnancy (n=359)</b>                           |                  |                |
| 1   | 141              | 39.3           |
| 2-3   | 106              | 29.5           |
| >=4   | 112              | 31.2           |
| <b>Got advice from health professionals about postnatal care during ANC follow up (n=359)</b> |                  |                |
| No  | 123              | 34.3           |
| Yes   | 236              | 65.7           |
| <b>place of delivery (n=684)</b>  |                  |                |
| Home  | 470              | 68.7           |
| Health institution  | 214              | 31.3           |
| <b>Have visited health facility after delivery for postnatal care (n=684)</b>                 |                  |                |
| No  | 231              | 33.8           |
| Yes   | 453              | 66.2           |
| <b>Know forum of the pregnant mothers (n=684)</b>   |                  |                |
| No  | 330              | 48.2           |
| Yes   | 354              | 51.8           |
| <b>Participated on forum of the pregnant mothers (n=354)</b>                                  |                  |                |
| No  | 100              | 28.2           |
| Yes   | 254              | 71.8           |

#### **5.4 Reproductive characteristics of the respondents**

About 41.7% of the respondents had history of two to three pregnancies followed by four and above (29.8). In terms of the interval between previous and recent delivery, from those who had experience of two and above pregnancies, about 51.6% delivered their last child within two to three years after previous birth.

Nearly half (48.7%) of the respondents had two to three living children. Majority (71.4%) of the respondents have seen menses after their last delivery (Table7).



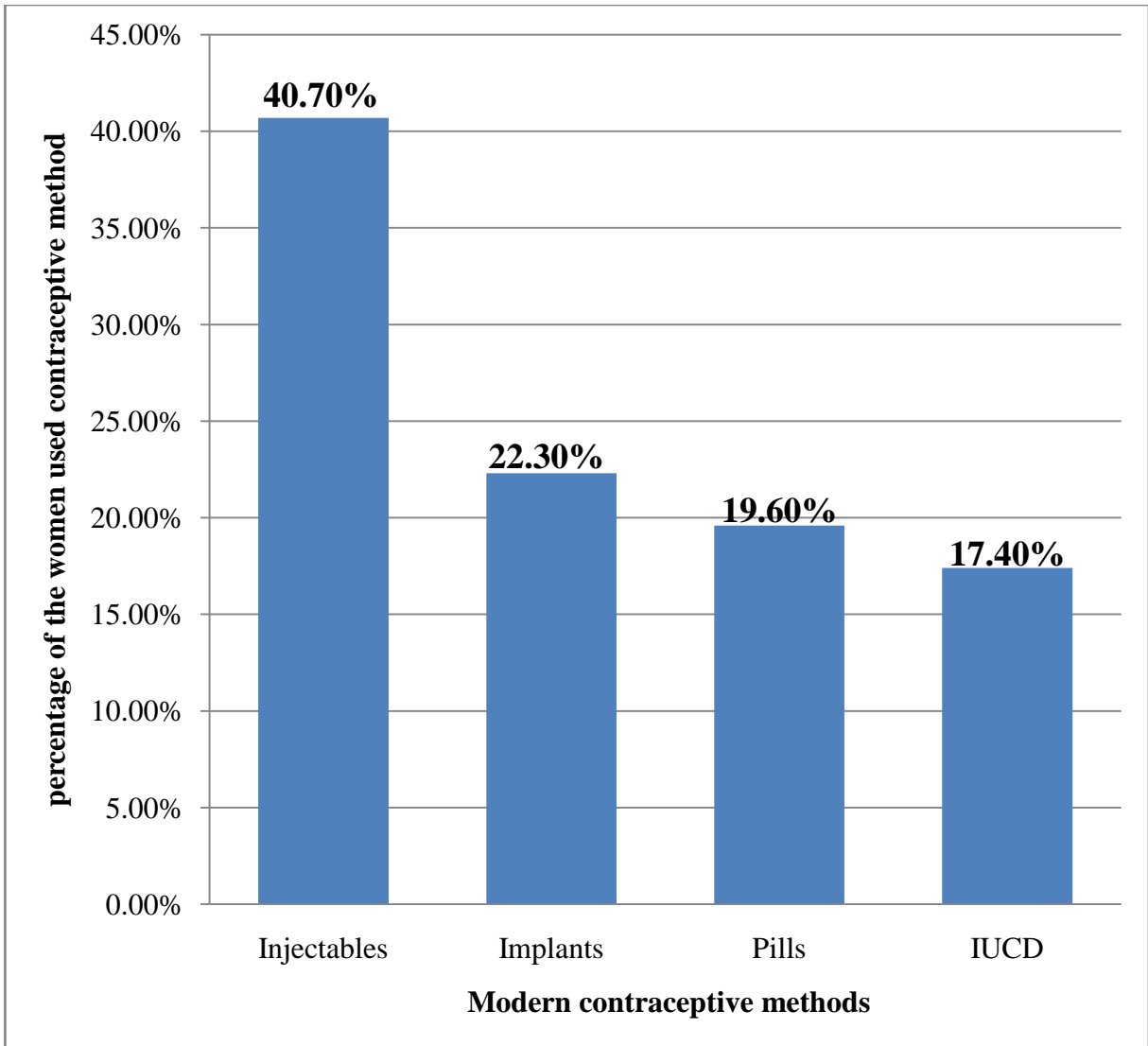
**Table8: Reproductive characteristics of the respondents in Aroressa District, Southern Ethiopia, 2017**

| <b>Variables and categories</b>                                | <b>Frequency</b> | <b>Percent</b> |
|--|------------------|----------------|
| <b>Number pregnancy (n=684)</b>                                |                  |                |
| 1  | 195              | 28.5           |
| 2-3  | 285              | 41.7           |
| >=4  | 204              | 29.8           |
| <b>Interval between previous and recent birth (n=489)</b>      |                  |                |
| <24months  | 47               | 9.6            |
| 24-36months  | 252              | 51.6           |
| >36months  | 190              | 38.8           |
| <b>Number of a live children (n=684)</b>                       |                  |                |
| 1  | 203              | 29.7           |
| 2-3  | 333              | 48.7           |
| >=4  | 148              | 21.6           |
| <b>Postpartum period</b>                                       |                  |                |
| <3 months  | 97               | 14.2%          |
| 3-6 months   | 175              | 25.6%          |
| >6 months  | 412              | 60.2%          |
| <b>last pregnancy was planned (n=684)</b>                      |                  |                |
| No   | 184              | 26.9           |
| Yes  | 500              | 73.1           |
| <b>Seen menses after last delivery (n=684)</b>                 |                  |                |
| No   | 195              | 28.6           |
| Yes  | 488              | 71.4           |
| <b>Time of seeing menses after delivery (n=488)</b>            |                  |                |
| <1months   | 16               | 3.2            |
| 1-3months  | 172              | 35.3           |
| >3months   | 300              | 61.5           |
| <b>Have had sexual intercourse after last delivery (n=684)</b> |                  |                |
| No   | 387              | 56.6           |
| Yes  | 297              | 43.4           |

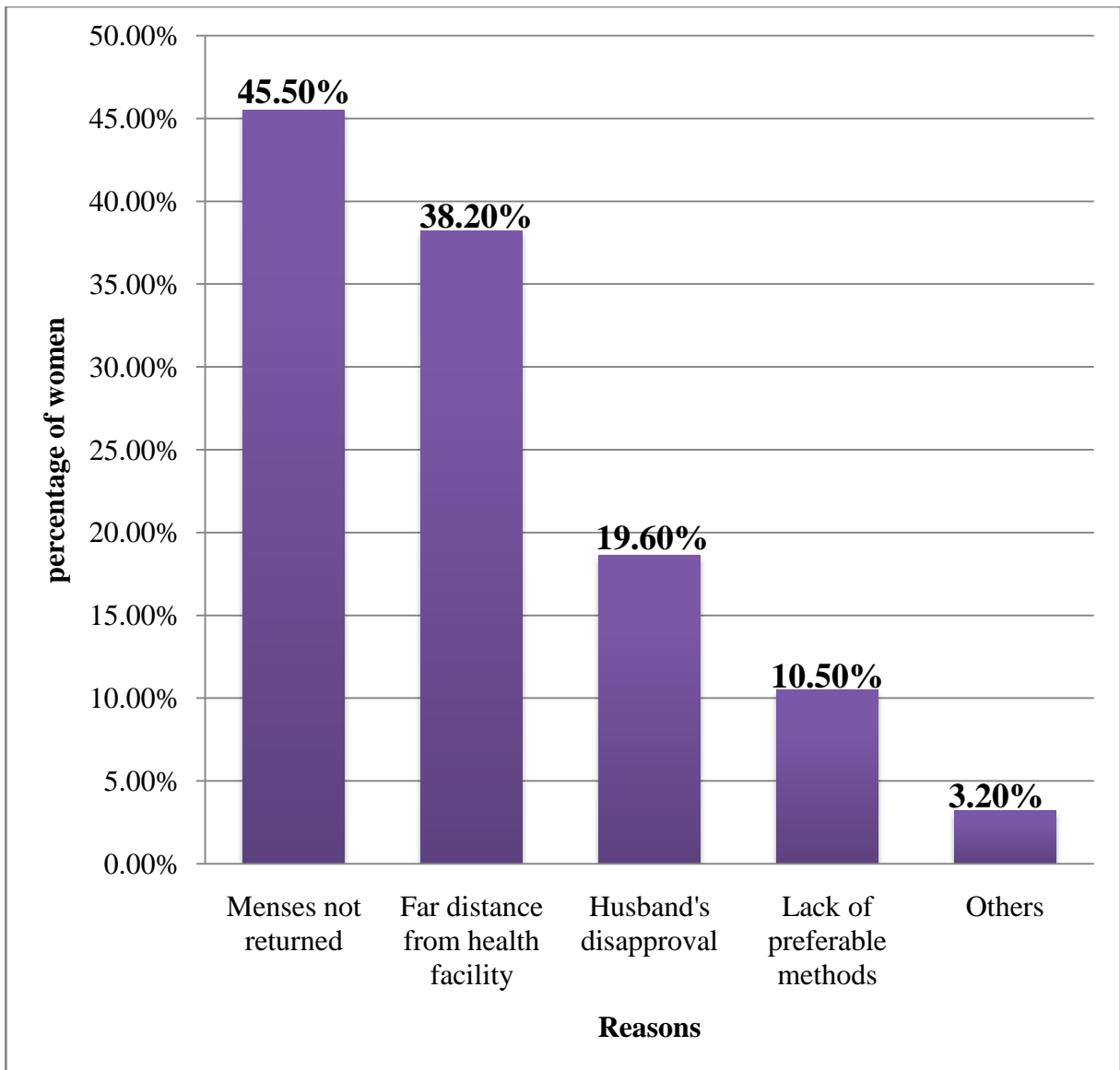
### **5.5 Magnitude of timely initiation of postpartum contraceptive utilization**

Regarding characteristics of the respondents related to timely initiation of postpartum contraceptive utilization, about two hundred seventeen (31.7%) of the total study participants have initiated postpartum contraceptive utilization on recommended time

In relation to the choice of contraceptive methods, majority of the contraceptive users were using Injectables (40.7%) followed by Implants (22.3%) (Figure3).



**Figure 3: prevalence of modern contraceptive methods used by respondents in Aroressa District, Southern Ethiopia, 2017**



**Figure 4: Reasons for not initiating postpartum contraceptive utilization on time in Aroressa District, Southern Ethiopia, 2017**

**Others** = religious forbidden, fear of side effect<sup>2</sup>

<sup>2</sup> Percentages can't be added in to hundred because of multiple responses for options.

## **5.6 Factors associated with timely initiation of postpartum contraceptive utilization**

In bivariate analysis educational status of the mother, residence, discussion with husband on number of children, discussion with husband on contraceptive methods, attitude towards contraceptive methods, knowledge on benefits of modern contraceptives, antenatal care follow up, place of delivery, postnatal care, participation on forum of the pregnant mothers and resumption of menses were associated with timely initiation of postpartum contraceptive utilization (Table8).

In multivariate logistic regression analysis antenatal care follow up, postnatal care, participation on forum of the pregnant mothers and resumption of menses were predictors of timely initiation of postpartum contraceptive utilization (Table8).

Concerning previous utilization of maternal health services, women who have attended antenatal care during their last pregnancy were 1.94 times [AOR = 1.94, 95% CI: (1.21, 3.03)] more likely to initiate postpartum contraceptive utilization on time than those who have never attended antenatal care follow up during their last pregnancy.

Women who have attended postnatal care after their last delivery were 1.91 times [AOR = 1.91, 95% CI: (1.23, 2.94)] more likely to initiate postpartum contraceptive utilization on time than those who have never attended postnatal care after their last delivery.

Women who have participated on forum of the pregnant mothers during their last pregnancy were 1.63 times [AOR = 1.63, 95% CI: (1.09, 2.41)] more likely to initiate postpartum contraceptive utilization on time than those who have never participated during their last pregnancy.

In relation to reproductive characteristics of the respondents women whose menses was returned after last delivery were 2.6 times [AOR = 2.6, 95% CI: (1.47, 3.81)] more likely to initiate postpartum contraceptive utilization on time than those who haven't seen menses after their last delivery.

**Table9: Crude and adjusted odds ratio (OR) and 95% confidence interval (CI) of factors associated with timely initiation of postpartum contraceptive utilization in Aroressa district, Southern Ethiopia, 2017**

| Variables and categories                                  | Initiated postpartum contraceptive utilization on time |     | COR (95%CI)              | AOR (95% CI)    |
|---|--|-----|--------------------------|-----------------|
|   | Yes  | No  |                          |                 |
| <b>Educational status of the mother</b>                   |  |     |                          |                 |
| No formal education                                       | 121  | 212 | 1                        |                 |
| Primary   | 82   | 167 | 0.9(0.7, 1.4)            | 1.2(0.8, 1.8)   |
| Secondary and above                                       | 14   | 88  | <b>0.28(0.15, 0.51)*</b> | 0.6(0.29, 1.27) |
| <b>Residence of the mother</b>                            |  |     |                          |                 |
| Rural   | 173  | 334 | 1                        |                 |
| Urban   | 44   | 133 | <b>0.68(0.45,0.7)*</b>   | 1.2(0.72, 1.98) |
| <b>Discuss with husband on number of children</b>         |  |     |                          |                 |
| No  | 144  | 230 | 1                        |                 |
| Yes   | 73   | 237 | <b>0.54(0.37,0.77)*</b>  | 0.8(0.31, 2.04) |
| <b>Discuss with husband on contraceptive methods</b>      |  |     |                          |                 |
| No  | 65   | 223 | 1                        |                 |
| Yes   | 152  | 244 | <b>1.98(1.4, 2.9)*</b>   | 0.8(0.45, 1.45) |
| <b>Knowledge on benefits of contraceptive utilization</b> |  |     |                          |                 |
| Poor knowledge  | 119  | 183 | 1                        |                 |
| Good knowledge  | 98   | 284 | <b>0.53(0.38, 0.73)*</b> | 0.8(0.6, 1.3)   |
| <b>Attitudes towards contraceptive utilization</b>        |  |     |                          |                 |
| Negative  | 112  | 248 | 1                        |                 |
| Positive  | 105  | 219 | <b>0.31(0.13, 0.51)*</b> | 0.9(0.55, 1.41) |

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|  |     |     |                         |                         |
|--|-----|-----|-------------------------|-------------------------|
| <b>Had ANC during last pregnancy</b>                 |     |     |                         |                         |
| No   | 40  | 188 | 1                       |                         |
| Yes  | 177 | 279 | <b>2.8(1.87, 4.29)*</b> | <b>1.94(1.2, 3.0)**</b> |
| <b>Place of delivery</b>                             |     |     |                         |                         |
| Home   | 165 | 305 | 1                       |                         |
| Health institution                                   | 52  | 162 | <b>0.7(0.45, 0.99)*</b> | 1.2(0.8, 1.91)          |
| <b>Attended postnatal care</b>                       |     |     |                         |                         |
| No   | 42  | 142 | 1                       |                         |
| Yes  | 175 | 325 | <b>1.97(1.3, 2.97)*</b> | <b>1.9(1.23, 2.9)*</b>  |
| <b>Participated on forum of the pregnant mothers</b> |     |     |                         |                         |
| No   | 72  | 258 | 1                       |                         |
| Yes  | 145 | 209 | <b>2.4(1.7, 3.5)*</b>   | <b>1.63(1.09, 2.4)*</b> |
| <b>Menses returned after last delivery</b>           |     |     |                         |                         |
| No   | 31  | 169 | 1                       |                         |
| Yes  | 186 | 298 | <b>3.4(2.2, 5.2)**</b>  | <b>2.6(1.47, 3.8)**</b> |

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<sup>3</sup> \*= Statistically significant at P<0.05, \*\*= statistically significant at P<0.001, AOR = Adjusted Odds Ratio, COR = Crude Odds Ratio, CI=Confidence Interval, ANC=Antenatal care

## CHAPTER SIX: DISCUSSION

Postpartum family planning (PPFP) has an important role to play in strategies to support longer birth intervals or reduce unintended pregnancy and its consequences. It can avert more than 30% of maternal deaths and 10% of child mortality if women started utilization of it as early as possible after delivery (1).

This study has attempted to identify the magnitude of timely initiation of postpartum contraceptive utilization and associated factors among women of child bearing age in Aroressa district, Southern Ethiopia. Accordingly the magnitude of timely initiation of postpartum contraceptive utilization was found to be 31.7% [95% CI (28, 36)]. This finding is consistent with similar studies done in Kenya and Malawi (23, 20). However, this finding was higher than the findings of similar studies previously done in Ethiopia (15, 22). It was also higher than study done in Nigeria (18). This difference might be due to improvement in health service delivery, difference in study period as well as socio-economic status of the study participants. However, this finding was found to be lower when compared with study done in India and Northern Ethiopia (19, 21). The possible explanation for this variation might be difference in socio-economic and socio-cultural status as well as availability and accessibility of the health services.

The present study revealed that women who have attended antenatal care during their last pregnancy were 1.94 times [AOR = 1.94, 95% CI: (1.23, 3.01)] more likely to initiate postpartum contraceptive utilization on time than those who have never attended antenatal care follow up during their last pregnancy. This finding is in line with other similar studies done in Nigeria, south East Asia, Nepal and Ethiopia (18, 26, 32, 34-35). The possible explanation might be women who attended antenatal care clinic during pregnancy may have more information on benefits of initiating postpartum contraceptive utilization on timely manner and this can increase their intention to use it on time after delivery.

Postpartum women who have attended postnatal care after their last delivery were 1.91 times [AOR = 1.91, 95% CI: (1.23, 2.94)] more likely to initiate postpartum contraceptive utilization on time than those who have never attended postnatal care after their last delivery. This



finding is consistent with other similar studies done in Nigeria and Ethiopia (18, 15, 31-32). This might be due to that postnatal care visit give the opportunity of getting more information and counseling from health professionals and can help postpartum women to use contraceptive methods on effective and timely manner.

Postpartum women who have participated on forum of the pregnant mothers during their last pregnancy were 1.63 times [AOR = 1.63, 95% CI: (1.09, 2.41)] more likely to initiate postpartum contraceptive utilization on time than those who have never participated during their last pregnancy. The possible explanation for this might be that women can get more information about utilization of maternal health services through discussing with health professionals and other women on forum of pregnant mothers and this might increase their intention to use contraceptive methods in efficient and timely manner after delivery. This is also supported by reports of Ethiopian Federal Minister of Health (37).

Women whose menses was returned after last delivery were 2.6 times [AOR = 2.6, 95% CI: (1.47, 3.81)] more likely to initiate postpartum contraceptive utilization on time than those who haven't seen menses after their last delivery. This finding is also supported by other studies done in Ethiopia (21, 22, 31). This might be explained by the fact that postpartum women whose menses is returned after delivery may assume that they are at risk of getting pregnancy, so this can initiate them to start postpartum contraceptive utilization on timely manner.

## **STRENGTH AND LIMITATIONS OF THE STUDY**

### **STRENGTH**

- Use of a community based study design.
- It was the first study conducted in the study area that assessed the magnitude of initiating postpartum contraceptive utilization on timely manner and factors affecting it in the area.

### **LIMITATIONS**

- Since it was cross-sectional study design, can't draw causal relation between predictors and outcome variable.
- During interview there might be recall bias; however, it was minimized by training data collectors and supervisors before starting data collection.

## **CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION**

### **7.1 CONCLUSION**

The magnitude of timely initiation of postpartum contraceptive utilization was found to be low in the study area.

Having antenatal care, having postnatal care, participating on forum of the pregnant mothers during last pregnancy and resumption of menses after last delivery were factors positively associated with timely initiation of postpartum contraceptive utilization.

### **7.2 RECOMMENDATION**

Based on the findings of this study the following recommendations are forwarded:

Federal Minster of Health and Regional Health bureau should continue the strengthening of integration of family planning information with antenatal and postnatal care services at all level.

Sidama Zone Health Department and Aroressa district Health Office should strength integration of family planning with other maternal health services at health centers and health posts and women's participation on forum of the pregnant mothers.

Health care providers should promote counseling on early initiation of postpartum contraceptive utilization during antenatal and postnatal visit.

According to this study the prevalence of home delivery was found to be high in the study area. Therefore, Aroressa District Health office should give more attention on maternal health services distribution at community level to improve utilization of institutional delivery.

It is also recommended to the researchers to conduct further qualitative studies to explore factors related with cultural aspects like believes, values and perceptions and misconceptions of the communities towards modern contraceptive methods.

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## ANNEX

### ANNEXI: English version Questionnaire

#### **Jimma University, Institute of Health, population and Family Health Department**

My name is \_\_\_\_\_. I am working as a data collector for the study being conducted in this community by Aregahegn Dona who is studying for his Masters degree at Jimma University, Institute of Health, Department of Population and Family Health. He is conducting a study on **timely initiation of postpartum contraceptive utilization and associated factors among women of child bearing age in Aroressa district**. I am interviewing randomly selected mothers for this purpose and certain questions which are thought to be important will be asked and you are kindly requested to respond to these questions. I want to assure you that your answers will be strictly kept secret and your name or address will not be recorded. Participation in this study is voluntary and you have the right to refuse participation at any time or not to respond to questions that you are not willing to answer. However, your honest answers to these questions have a great role for success of this study and to improve contraceptive service utilization in the future. We would appreciate your help in responding to these questions.

Can I continue? 1. Yes 2. No

If no thanks and stop. If yes, continue

General information about date, study area and data collector

001. Questionnaire Number\_\_\_\_\_

002. Woreda\_\_\_\_\_, Kebele \_\_\_\_\_

003. House Code\_\_\_\_\_ Visit Number 1\_\_\_\_2 \_\_\_\_3 \_\_\_\_\_

Name of interviewer \_\_\_\_\_, signature\_\_\_\_\_

Date of interview DD\_\_\_\_\_ MM\_\_\_\_\_ YY\_\_\_\_\_

## I. Socio-Demographic and Economic profile

| s. No | Questions  | Answers  | Remark |
|-------|--|--|--------|
| 100   | What is your age?                                | _____ in years   |        |
| 101   | What is age of your child?                       | _____ in weeks or months   |        |
| 102   | What is your marital status?                     | 1. Single<br>2. married<br>3. Widowed<br>4. Separated  |        |
| 103   | What is your religion?                           | 1. Protestant<br>2. Orthodox<br>3. Muslim<br>4. Catholic<br>5. other _____   |        |
| 104   | What is your educational status?                 | _____  |        |
| 105   | What is your occupational status?                | 1. House wife<br>2. Government employee<br>3. Merchant<br>4. Student<br>5. farmer<br>6. Other (specify)                    |        |
| 106   | Where is your permanent residence?               | 0. Rural<br>1. Urban   |        |
| 107   | What is educational status of your husband?      | _____  |        |
| 108   | What is occupational status of your husband?     | 1. Farmer<br>2. Government employee<br>3. Merchant<br>4. Student<br>5. Non-government employee<br>6. Other (specify) _____ |        |
| 109   | What is your monthly household income (in birr)? | _____ ( in birr)   |        |
| 110   | What is your ethnicity?                          | 1. Sidama 2. Oromo<br>3. Amhara<br>4. Other _____  |        |



|   |  |  |  |
|---|--|--|--|
| 111   | Do you have a television?  | 0. No<br>1. Yes  |  |
| 112   | Do you have a radio?   | 0. No<br>1. Yes  |  |
| <b>II. socio-cultural factors related questions</b>                                 |  |  |  |
| 200   | Do you discuss with your husband about reproductive issue including the number of children you desire to have? | 0. No<br>1. Yes  | → 202                                  |
| 201   | If yes for question 200, who decide on number of children?   | 1. myself<br>2. Husband<br>3. Together   |  |
| 202   | Do you discuss with your husband about utilization of modern contraceptive methods?                            | 0. No<br>1. Yes  | → 204                                  |
| 203   | If yes for question 202, who decide on utilization of contraceptive methods?                                   | 1. myself<br>2. House band<br>3. Together  |  |
| 204   | Does your house band approve contraceptive utilization?  | 0. No<br>1. Yes  |  |
| <b>III. Questions related to Knowledge on benefits of contraceptive utilization</b> |  |  |  |
| 300   | Have you ever heard about modern contraceptive methods?  | 0. No<br>1. Yes  |  |
| 301   | If Yes to Que. 300, what was the source of information about modern contraceptive method?                      | 1. Public health sector<br>2. Private health sector<br>3. Mass media<br>4. School<br>5. Spouse<br>6. other _____ | Tick all mentioned, but don't read it. |

|  |   |  |  |
|--|---|--|--|
| 302  | What type of methods do you know?   | 1. Pills<br>2. IUDs<br>3. Injectables<br>4. Implants/Norplant<br>5. Other_____   | (Tick all mentioned, Please don't read out the lists). |
| 303  | Do you know the benefits of using modern contraceptives?                        | 0. No<br>1. Yes  |  |
| 304  | If Yes to Ques. 303, What is the benefit of using modern contraceptive methods? | 1. Birth spacing<br>2. Limiting birth<br>3. improve the health of the mother<br>4. Prevent disease<br>5. other, specify_____ | Tick all mentioned                                     |
| 305  | Can a woman use postpartum contraceptives immediately after delivery?           | 0. No 1. Yes 2. Don't know   |  |
| 306  | Can you become pregnant while breast feeding?                                   | 0. No 1. Yes 2. Don't know   |  |
| 307  | Contraceptive utilization can prevent unwanted pregnancy.                       | 0. No 1. Yes 2. Don't know   |  |
| 308  | Can you use modern contraceptives before menses returned after delivery?        | 0. No 1. Yes 2. Don't know   |  |
| 309  | Can you become pregnant before menses returned?                                 | 0. No 1. Yes 2. Don't know   |  |
| 310  | Contraceptive utilization can prevent a disease.                                | 0. No 1. Yes 2. Don't know   |  |
| <b>IV. Items related with attitudes of the women towards contraceptive utilization</b> |   |  |  |
| 400  | Contraceptive utilization can improve living standard of the family.            | 1. Strongly Disagree<br>2. Disagree<br>3. Neutral<br>4. Agree<br>5. Strongly Agree   |  |
| 401  | Contraceptive utilization beneficial for your health.                           | 1. Strongly Disagree<br>2. Disagree<br>3. Neutral<br>4. Agree<br>5. Strongly Agree   |  |

|     |  |   |  |
|-----|--|---|--|
| 402 | Contraceptive utilization can make you strong during pregnancy.              | 1. Strongly Disagree 2.Disagree<br>3. Neutral4.Agree<br>5. Strongly Agree         |  |
| 403 | Contraceptive utilization can help you during time of delivery.              | 1. Strongly Disagree 2.Disagree<br>3. Neutral 4.Agree<br>5. Strongly Agree        |  |
| 404 | Contraceptive utilization can improve the health of the mother.              | 1. Strongly Disagree<br>2. Disagree<br>3. Neutral<br>4.Agree<br>5. Strongly Agree |  |
| 405 | Contraceptive utilization can help you to improve yourself.                  | 1. Strongly Disagree<br>2. Disagree<br>3. Neutral<br>4.Agree<br>5. Strongly Agree |  |
| 406 | Use of modern contraceptives helps you to give birth according to your plan. | 1. Strongly Disagree<br>2. Disagree<br>3. Neutral<br>4.Agree<br>5. Strongly Agree |  |
| 407 | Use of modern contraceptives can improve economic status of the family.      | 1. Strongly Disagree<br>2. Disagree<br>3. Neutral<br>4.Agree<br>5. Strongly Agree |  |

|   |   |  |       |
|---|---|--|-------|
| 408   | Use of modern contraceptives is beneficial to improve the health of your child.             | 1. Strongly Disagree<br>2. Disagree<br>3. Neutral<br>4. Agree<br>5. Strongly Agree |       |
| 409   | Use of modern contraceptives is good for growth of your baby                                | 1. Strongly Disagree<br>2. Disagree<br>3. Neutral<br>4. Agree<br>5. Strongly Agree |       |
| <b>V. maternal health service utilization profile</b> |   |  |       |
| 500   | Have you ever used modern contraceptive method before your last pregnancy?                  | 0. No<br>1. Yes  |       |
| 501   | Did you attend antenatal clinic during your last pregnancy?                                 | 0. No<br>1. Yes  | → 505 |
| 502   | If yes for question 501, how many times did you attend?                                     | _____ (put it in number)   |       |
| 503   | Did you get any advice from health professionals about postnatal care during ANC follow up? | 0. No<br>1. Yes  |       |
| 504   | Where did you deliver your last baby?   | 1. At home<br>2. At health institution   |       |
| 505   | Have you visited health facility after delivery for postnatal care?                         | 0. No<br>1. Yes  | → 509 |
| 506   | Currently are you using any modern contraceptives after your last delivery?                 | 0. No<br>1. Yes  | → 514 |
| 507   | If yes for question 506, when did you start it after delivery?                              | _____ in weeks or months   |       |

|  |   |   |       |
|--|---|---|-------|
| 508  | Which modern contraceptives are you using now?  | 1. Injectables    2. Pills<br>3. IUCD            4. implant<br>5. Others_____   |       |
| 509  | If no for question 506, what is the reason?   | 1. Menses is not returned<br>2. Lack of preferable methods<br>3. Husband's disapproval<br>4. Far distance from health facility<br>5. my husband is using condom/done vasectomy<br>7. other_____ |       |
| 510  | Do you know days or forum of the pregnant mothers?  | 0. No<br>1. Yes   |       |
| 511  | If yes for question 510, did you participate on forum of pregnant mothers during your last pregnancy? | 0. No<br>1. Yes   |       |
| <b>VI. Items related with reproductive/obstetric factors</b> |   |   |       |
| 600  | How many pregnancies have you ever had, including abortion or still birth?                            | _____   |       |
| 601  | How many live children do you have?   | _____   |       |
| 602  | What was the interval between your previous and recent birth? (only for Para $\geq 2$ )               | _____ (in year)   |       |
| 603  | Was your last pregnancy planned?  | 0. No<br>1. Yes   |       |
| 604  | Have you seen your menses after last delivery?  | 0. No _____<br>1. Yes   | → 609 |
| 605  | If yes for question 604, what was the age of your child when you start menstruating?                  | _____ (in month)  |       |
| 606  | Have you had sexual intercourse since your last delivery?   | 0. No<br>1. Yes   |       |

**THANK YOU!!**

**ANNEXII: Sidamic Version Questionnaires**  
**Jimmu Universite, Fayyimmate Institute, Dagoomunna Maatete Fayyimma Rosu Kifile**

Su'mi'ya \_\_\_\_\_ yaamamanno. Xa loosanni noommohu kalaa Areggahenyi Donihu, Jimmu Universite, Fayyimmate Institute, Dagoomunna Maatete Fayyimma Rosu Kifile layinki digire (Mastersete) rosaancho ikkinohu Aroressu woradi giddo gumulshu xiinxallo loosanni noo daafira tenne xiinxallora ikkitanno hedo gamba assanni afameemmo. Xiinxallote birxichino; **Aroressu woradi giddo amuwu ilihu gedensooni ila gargadhinanni doogo rahotenni horoonsira hanafanna amadisiisantino mitiimmuwa** yitannote.

Anino amuwu mereerinni xa'mote kaayyora dooramino amuwa xa'manni noommo daafira atino tenne kaayyo beeqqaancho ikkoottahura hasiissanno dawaro qolattae gede shaqqillunni xa'mireemmohe. Ledeno kummi assate baxeemmori ati qolatta dawaro ikkinnina ate mayimma woyi su'makki horontanni diborreessinanni. Ati qolotta dawaro wolu ayino la'aranna maciishshara didandaanno. Tenne xiinxallorano beeqqaancho ikkattahu baxxe ikkinnina giwate qoossokki अगरantinote. Ati kolatta dawaro tenne xiinxallo gumulo iillishate hattono woradinke giddo afamanno amuwinna qaaqqullinsa keeraanchimma woyyeessate lowo kaa'lo assitanno daafira beeqqaancho ikkittaro addinta tashshi yaannonke.

Hanafa dandeeemmo?

1. **Dee'ni** \_\_\_\_\_ → Galatte uurrisi.
2. **Ee** \_\_\_\_\_ → Hanafi

Qarqarunna hedo gamba assanno manchita xaphoomu xawishsha

001. Xa'mote kiiro \_\_\_\_\_

002. Worada \_\_\_\_\_, ollaa \_\_\_\_\_

003. Minu kiiro \_\_\_\_\_ towanyote kiiro 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_

Hedo gamba assitannohu/te su'ma \_\_\_\_\_, malaate \_\_\_\_\_

Xa'minooni barra \_\_\_\_\_

## I. Ayimmanna EO La'anno Xa'muwa

| A.K  | Xa'mo  | Dawaro  | Lao       |
|--|--|---|-----------|
| 100  | Dirikki me'eha?  | _____ (dirunni xawisi)  |           |
| 101  | Qaaqqikki diri me'eha?   | _____ (aganunni/lamalate xawisi)  |           |
| 102  | Mine assirootta?   | 1. Diassiroomma<br>2. Assiroomma<br>3. Assire tiroomma<br>4. Gashshaanni reyino   |           |
| 103  | Amma'nokki maati?  | 1. Protestaante<br>2. Orthodoxise<br>3. Kaatoolike<br>4. Islaama<br>5. Wole_____  |           |
| 104  | Rosu deerriikki hiitooti?                                      | _____   |           |
| 105  | Loosikki maati?  | 1. Minaama<br>2. Mangistete loosaancho<br>3. Daddalaancho<br>4. Baatto loosire galinoha<br>5. Rosaancho<br>6. Wole_____ |           |
| 106  | Teessokki mamaati?   | 0. Gaxare<br>1. Katama  |           |
| 107  | Gashshaannikkihu rosu deerri hiitooti?                         | _____   |           |
| 108  | Gashshaannikki loosi maati?                                    | 1. Baatt loosire galinoha<br>2. Mangistete loosaancho<br>3. Daddalaancho<br>4. Rosaancho<br>5. Wole_____                |           |
| 109  | Aganunni afidhinanni eo mageeshshite?                          | _____ (Birrunni)  |           |
| 110  | Qansichimmakki maati?  | 1. Sidaama<br>2. Amaara<br>3. Oromo<br>4. Wole_____   |           |
| 111  | Mine televiyiine noo'ne?                                       | 0. Dino 1. Ee no  |           |
| 112  | Mine raadoone noo'ne?  | 0. Dino 1. Ee no  |           |
| <b>II. Dagoomanna bude la'anno xa'muwa</b> |  |   |           |
| 200  | Gashshaannikki ledo me'e oso ila hasidhinanniro hasaabbinnani? | 0. Dihasaambeemmo<br>1. Ee hasaambeemmo   | → 202 sai |

|  |   |  |                                  |
|--|---|--|----------------------------------|
| 201  | 200kki xa'mora dawarokki ee ikkituro, kageeshshi ooso illo yee gumulo aannohu ayeeti?                   | 0. Ane umo'yaati<br>1. Gashshaanna'yaati<br>2. Mitteenni sumuu yineeti                                   |                                  |
| 202  | Gashshaannikki ledo haaro yannata ila gargadhinanni doogo horoonsira lainohunni hasaawa assitinanni?    | 0. Dee'ni<br>1. Ee   | 204 sai                          |
| 203  | 202kki xa'mora dawarokki ee ikkituro, ila gargadhinanni doogo horoonsiratta gede gumulo aannohu ayeeti? | 0. Ane umo'yaati<br>1. Gashshaanna'yaati<br>2. Mitteenni sumuu yineeti                                   |                                  |
| 204  | Haaro yannata ila gargadhinanni doogo horoonsiratta gede gashshaannikki jawaachishannohe?               | 0. Dee'ni<br>1. Ee   |                                  |
| <b>III. amuwunnita haaro ila gargadhinanni doogo horo aana noonsa egenno la'anno xa'muwa</b> |   |  |                                  |
| 300  | Haaro yannata ila gargadhinanni doogo macciishshite egennootta?   | 0. Dee'ni<br>1. Ee   |                                  |
| 301  | 300kki xa'mora dawarokki ee ikkituro, mashalaqqe mamiichchinn afiritta?                                 | 0.Fayyimmate mininni<br>1.Televiyiine/raadoone<br>2.Rosu mininni<br>3.Gashshaanni'yawiinn<br>4.Wole_____ | kultuha<br>calla<br>malaatisi    |
| 302  | Haaro yannata ila gargadhinanni doogo giddonni hiikkuri afootta?  | 0.Kiniine<br>1.Otoottote worrannita<br>2.Marfetenni uyinayita<br>3.Dasaho worrannita<br>4.Wole_____      | kultuha<br>calla<br>malaatisi    |
| 303  | Haaro ila gargartanno doogga uyitanno horo afootta?   | 0. Diafoomma<br>1. Ee afoomma  |                                  |
| 304  | 303kki xa'mora dawarokki ee ikkituro, uyitanno horo maati?  | 0.Fafise ilate<br>1.Ila uurrisate<br>2. fayyimma woyyeessate<br>3.Xibba gargarate<br>4.Wole_____         | Kultinoha<br>calla<br>malaatisi. |
| 305  | Mitte ama iltanni heedhe haaro yannata ila gargadhinanni doogo horoonsira dandiitanno?                  | 0. Didandiitanno<br>1. Ee dandiitanno<br>2. Diafoomma  |                                  |
| 306  | Qaaqqo qansitanni noo amara godowu gatara dandaanno?  | 0. Dee'ni<br>1. Ee   |                                  |
| 307  | Ama iltuhu gedensoonni xure la'ukkinni ila gargartanno doogo horoonsira dandiitanno?                    | 0.Didandiitanno<br>1.Dandiitanno<br>2.Diafoomma  |                                  |



|   |  |   |  |
|---|--|---|--|
| 308   | Haaro yannati ila gargadhinanni doogga hasi'noonnikki godowanni gatisanno?   | 0. Dee'ni 1. Ee<br>2. Diafoomma   |  |
| 309   | Ilittahu gedensoonni aganu munde leeltukkinni godowu gatara dandaanno?       | 0. Dee'ni 1. Ee<br>2. Diafoomma   |  |
| 310   | Ila gargadhinanni doogo horoonsira xibba gargartara dandiitanno?             | 0. Dee'ni 1. Ee<br>2. Diafoomma   |  |
| <b>IV. Amuwunnita ila gargadhinanni doogo aana noonsa laooshshe</b> |  |   |  |
| 400   | Ila gargadhinanni doogo horoonsira maatete heeshsho woyyeessitanno.          | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma<br>3. Diafoomma<br>4. sumuu yeemma<br>5. Addinta sumuu yeemma |  |
| 401   | Ila gargadhinanni doogo horoonsira qaaqu ilamanni reyannoki gede assitanno.  | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma<br>3. Diafoomma<br>4. sumuu yeemma<br>5. Addinta sumuu yeemma |  |
| 402   | Ila gargadhinanni doogo horoonsira gatino godowi ba''annokki gede assitanno. | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma<br>3. Diafoomma<br>4. sumuu yeemma<br>5. Addinta sumuu yeemma |  |
| 403   | Ila gargadhinanni doogo horoonsira ilate yannara qarra dikalaqqanno.         | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma<br>3. Diafoomma<br>4. sumuu yeemma<br>5. Addinta sumuu yeemma |  |
| 404   | Ila gargadhinanni doogo horoonsira amate fayyimma woyyeessitanno.            | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma<br>3. Diafoomma<br>4. sumuu yeemma<br>5. Addinta sumuu yeemma |  |
| 405   | Ila gargadhinanni doogo horoonsira hasi'noonnikki godowanni gargartanno      | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma   |  |

|   |   |  |       |
|---|---|--|-------|
|   |   | 3. Diafoomma<br>4.sumuu yeemma<br>5. Addinta sumuu yeemma  |       |
| 406   | Ila gargadhinanni doogo horoonsira ilaweelo diassitanno.  | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma<br>3. Diafoomma<br>4.sumuu yeemma<br>5. Addinta sumuu yeemma |       |
| 407   | Ila gargadhinanni doogo horoonsira maatennita miinju eo woyyeessitanno.   | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma<br>3. Diafoomma<br>4.sumuu yeemma<br>5. Addinta sumuu yeemma |       |
| 408   | Ila gargadhinanni doogo horoonsira qaaqu fayyimma woyyeessitanno.   | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma<br>3. Diafoomma<br>4.sumuu yeemma<br>5. Addinta sumuu yeemma |       |
| 409   | Ila gargadhinanni doogo horoonsira unuunu ado diajishshanno.  | 1 .Addintanni sumuu diyeemma<br>2. Sumuu diyeemma<br>3. Diafoomma<br>4.sumuu yeemma<br>5. Addinta sumuu yeemma |       |
| <b>V. A muwu fayyimma owaante horoonsira la'anno xa' muwa</b> |   |  |       |
| 500   | Xaa qaaqo godowakkira albaanni haaro yannata ila gargadhinanni doogo horoonsidhe egennootta?                              | 0. Dee'ni<br>1. Ee   |       |
| 501   | Konne qaaqo godobbe heedhe ilate albiidi qorqorsha assirootta?  | 0. Dee'ni<br>1. Ee   | → 504 |
| 502   | 501kki xa'mora dawarokki ee ikkituro, me'e higge assirootta?  | _____ (kirotenni xawisi)   |       |
| 503   | Qorqorsha assiritta yannara fayyimmate ogeeyye ledo illihu gedonoonna fayyimmate owaante afira hasiissannota hasaawootta? | 0. Dee'ni<br>1. Ee   |       |
| 504   | Xaa qaaqo hiikko ilootta?   | 0.Mine   |       |

|   |   |   |           |
|---|---|---|-----------|
|   |   | 1.Fayyimmat uurrinshara   |           |
| 505   | Ilate gedensiidi qorqorshira fayyimmate minira harootta?  | 0. Dee'ni<br>1. Ee  | → 508     |
| 506   | Konne qaaqqo ilitta kawa haaro yannata ila gargadhinanni doogo horoonsira hanafootta?   | 0. Dee'ni<br>1. Ee  | → 513 sai |
| 507   | 510kki xa'mora dawarokki ee ikkituro, ilittahunni meekki barra hanafitta?   | _____ (lamalate/aga nunni xawisi?)  |           |
| 508   | Horoonsira hanafoottaha ikkiro hiittenne haaro yannata ila gargadhinanni doogo horoonsidhanni nootta?                         | 0. Kiniine<br>1. Marfetenni uyinannita<br>2. Otoottote worrannita<br>3. Dasaho worrannita<br>4. Wole _____  |           |
| 509   | 506kki xa'mora dawarokki dee'ni ikkituro, horoonsira hoogakkira korcaatu maati?   | 0. Iummahu kawa aganu mundee dila''oomma<br>1.qaaqqo qansanni noomma<br>2. gashshaanni'ya difajjannoe<br>3. fayyimmate mini noohu fafowaati<br>3. gashshaanni'ya kondome horoonsiranno<br>4. wole _____ |           |
| 510   | Godowinni noo amuwi gambooshshe (fooreme) afootta?  | 0. Dee'ni<br>1. Ee  |           |
| 511   | 519kki xa'mora dawarokki ee ikkituro, konne qaaqqo godobbe heedhe godowinni noo amuwi gambooshshe (fooreme) hadhe egennootta? | 0. Dee'ni<br>1. Ee  |           |
| <b>VI. Sirote (godowanna ila) la'anno xa'muwa</b> |   |   |           |
| 600   | Xaphoomunni me''e higge godowootta (umo ka''oottahanna ilamanni reyinoha mitteenni)?  | _____ (kiirotenni)  |           |
| 601   | Lubbotenni noori me''e ooso noohe?  | _____ (kiirotenni)  |           |
| 602   | Albiidi qaaqqo ilittahunni meekki aganiraati (diriraati) konne qaaqqo iloottahu?  | _____ (aganunni woyi dirunni xawisi).   |           |
| 603   | Konne qaaqqo godowoottahu godowate hasidheeti?  | 0. Dee'ni<br>1. Ee  |           |
| 604   | Konne qaaqqo ilitta kawa xure la''ootta?  | 0.Dila''oomma<br>1. Ee la''oomma  | → 609 sai |
| 605   | 604kki xa'mora dawarokki ee ikkituro, ilittahunni meekki barraati la''a hanafoottahu?   | _____   |           |
| 606   | Konne qaaqqo ilittahu kawa siimu xaado assite egennootta?   | 0. Diegennoomma<br>1. Ee egennoomma   |           |

**GALATEEMMOHE!!**