

Assessment of Institutional Delivery Services Utilization among Women Who Gave Birth in the Last 2years in Seka Chokersa District, Jimma Zone ,Southwest Ethiopia.



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Abstract:

Background: In the developed world where less than 1% of maternal deaths occur, it is estimated that 99% deliver in health institution. In developing countries 53% deliver in health institutions. In Ethiopia Ten percent of births are delivered at a health facility. Institutional delivery service utilization is essential to improve maternal and child health. However, little is known about institutional delivery service utilization in Seka Chokersa district, Jimma, Ethiopia.

Objective: assessment of factors associated institutional delivery utilization and its prevalence.

Methods: A community based cross sectional study was done on 152 mothers who gave birth in the last 2 years in seka chokersa district. Eleven kebeles were selected. The study population was selected from 11 kebeles using systematic random method and the study participant was interviewed by trained data collector. Analysis was done by using SPSS version 16.0 after exported from EPI Info data. Variable which has significant in Bivariate logistic regression analysis with p-value <0.05 entered in to multivariate analysis of logistic regression and P-values <0.05 were considered as statically significant.

Results: Majority mothers 134(75.0%) age were in the range of 20–34 years and utilize delivery service 4.7 times more likely than age range of 15-19. Ninety (59.2%) are illiterate. About 93(61.2%) has monthly income less than 300 ETB. Thirty(19.4 %) of mother delivered at health facility. Planned at health post and health center 72 (47.4%), 70 (46.1%) to give birth during their last pregnancy respectively. About 22.2% of mother said that cost, 52.0 % transportation were factor to not utilize delivery service. About 101(66.4) % and 79(52%) said that labour is smooth and short and labouring mother carried by stretcher. About 42.8 % of mothers have no access of health facility within 2 hour walking distance. Bivariate logistic regression analysis of attitude towards institutional delivery showed significant association with institutional delivery service utilization [COR= 0.88, 95% CI (0.78, 0.99), P-value (0.029).

Conclusions: Institutional delivery was lower when compared to mothers planned to deliver in health facility and health facility were far. Lack of adequate transportation. Mothers who gave birth only one child has no utilization of institutional delivery. Cost and income were also another factor to not utilize institutional delivery service.

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List of Acronyms

ANC	Ante Natal Care
W H O	World Health Organization
HIV	Human Immune Virus
UNICEF	United Nations of International Child Emergency Fund
FMOH	Federal Ministry of Health
EDHS	Ethiopia Demographic and Health survey
MMR	Maternal Mortality Ratio
APH	Ante Partum Hemorrhage
PPH	Post Partum Hemorrhage
MDG	Millennium Development Goal
TBA	Traditional Birth Attendant
JSI/L10K	Jon Snow Research Institution/Last Ten Kilometer
SSA	Sub Saran Africa
PDHS	Pakistan Demographic and Health Survey
UK	United Kingdom
WDA	Women Development Arm

Chapter One

Introduction

1.1Background: According to the latest estimates, globally 81 per cent of women receive antenatal care (ANC) from a skilled health provider at least once during pregnancy. Regional averages range from around 70 per cent in South Asia to over 90 per cent in East Asia and Pacific and Latin America and the Caribbean. Globally, the majority of pregnant women at least 8 in 10 receive antenatal care from a skilled health professional [1, 2, and 3].

In the developed world where less than 1% of maternal deaths occur, it is estimated that 97%, 99% and 90% of women receive antenatal care, deliver in health institution and receive postpartum care respectively [4]. In developing countries, 65% receive antenatal care services, 53% deliver in health institutions and 30% receive some form of postpartum care [4]. This discrepancy in maternity care coverage between developed and developing countries offer some explanation to the maternal mortality situation around the world. In Ethiopia Ten percent of births are delivered at a health facility 9 percent in a public facility and 1 percent in a private facility. Nine women in every ten deliver at home [5].

Every year over 500,000 women die of pregnancy and childbirth related complications globally. Of these, 99% occur in developing countries and mostly in sub-Saharan Africa [6]. Thus maternal mortality is the indicator with the widest disparity between developed and developing countries. In realization of this unacceptable level of maternal mortality around the globe, in 2000 world leaders committed themselves and set goals commonly known as Millennium Development Goals (MDGs) [7]. “Improving Maternal Health” is MDG 5 with set target of maternal mortality ratio reduction by three-quarters of the 1990 levels by the year 2015 [7]. Critical in the attainment of the above goal is to ensure availability, utilization and quality of maternity care services – antenatal, delivery and postpartum care. Intrapartum and per partum death accounted for over 70% of the global maternal death. Thus, making skilled attendance during pregnancy is critical and an essential intervention in reducing maternal mortality and morbidity [7].

Antenatal care is a branch of preventive medicine dealing with pre-symptomatic diagnosis of general medical disorders, nutrition, immunology, health education and social medicine in addition to prevention and early detection of pregnancy disorders [4].

The World Health Organization recommends that a woman without complications should have at least four ANC visits starting from the first trimester to get sufficient prenatal care to minimize pregnancy-related complications. Antenatal care is the care given to pregnant women so that they have safe pregnancy and healthy baby. Recently the WHO Technical Working Group has recommended a minimum level of care to be four visits throughout the pregnancy. The first visit which is expected to screen and treat anemia, syphilis, screen for risk factors and medical conditions that can be best dealt with in early pregnancy and initiate prophylaxis if required (e.g. for anemia and malaria) is recommended to be held by the end of fourth month. The second, third and fourth visits are scheduled at 24–28, 32 and 36 weeks, respectively [8].

Attendance for antenatal care represents a unique opportunity to improve the health of women and their infants. It is imperative that we optimize this opportunity by offering a full range of health promoting services that may include voluntary counseling and testing for Human immunodeficiency viruses (VCT), screening and treatment for syphilis, prevention and presumptive treatment of malaria in pregnancy (IPTp) and health education. At delivery, the importance of skilled attendance has long been recognized. However, distance to health facilities, inadequate transportation and the need for immediate and specialized services have hampered women's ability to access these services [9, 10].

The developed country has high ANC coverage when compared with that developing country and there is also great disparity in institutional delivery service utilization. These service utilization interns determine the level of maternal mortality it means those country which have high utilization of maternal health service has low maternal mortality rate. To decrease maternal mortality WHO recommendation of at least four antenatal care visit have to be made common practice among the pregnant women and the health care provider have a great role to do this and increasing institutional delivery service.

1.2 Statement of the problem

Maternal mortality remains a major challenge to health systems worldwide. According to assessment of trends in maternal mortality for 181 countries from 1980–2008, it was estimated to be 342,900 maternal deaths worldwide in 2008 decreasing from 526,300 in 1980. More than 50% of all maternal deaths were only from six countries in 2008 (India, Nigeria, Pakistan, Afghanistan, Ethiopia, and the Democratic Republic of Congo) [11]. Maternal deaths have both direct and indirect causes. About 80% of maternal deaths are due to causes directly related to pregnancy and childbirth [12]. Worldwide, the major causes of maternal mortality are hemorrhage (24%), infection (15%), unsafe abortion (13%), prolonged labor (12%) and eclampsia (12%) whereas primary causes of maternal mortality in Africa are hemorrhage (34%), other direct causes (17%), infection (10%), hypertensive disorders (9%) and obstructed labor (4%), abortion (4%) and anemia (4%) [11].

Major causes of maternal deaths in Ethiopia are similar to most developing countries such as infection, hemorrhage, obstructed labor, abortion and hypertension in pregnancy [12].

At the health facility level post partum hemorrhage (PPH) is responsible for 11% of all maternal deaths due to direct obstetric complications. The major direct obstetric complications include ante partum hemorrhaged (APH & PPH), prolonged/obstructed labor and ruptured uterus, severe pre-eclampsia and eclampsia, sepsis, complications of abortion and ectopic pregnancy which account for 69% of the deaths. The proportion of deaths due to PPH that occurred in facilities is most likely due to the fact that over 90% of births take place at home, and women with PPH may not be arriving at a health facility in time [13].

One of the objectives of the United Nations Millennium Development Goals (MDGs) was to reduce MMR by an average of 5.5% every year over the period 1990–2015. At the global level, MMR decreased by less than 1% per year between 1990 and 2005 far below 5.5% to reach the target of MGD [14].

In Ethiopia maternal mortality is still an issue because the figure is still significant. In EDHS reports it was stated that 676/100,000 live birth. And antenatal care utilization is 34% and skill attendant is 10%. It also the study made in Amhara Regional State shows that Delivery service is significantly lower. But In almost all countries where health professionals attend more than 80% of deliveries, MMR is below 200 per 100,000 live births [15].

In Ethiopia, the proportions of births attended by skilled personnel are very much lower than sub-saran Africa. Even for women who have access to the services, the proportion of births occurring in health facilities is very low. Only 6% of births were delivered in health facilities and, there is no significant difference in proportions of delivery service utilization between Ethiopian demographic health survey DHS 2000 and 2005; however this figure moderately increased to 10% in EDHS 2011. Twenty eight percent of mothers delivered by traditional birth attendance; while the majority of births were attended by a relative or some other person (61%) and 5% of all births were delivered without any type of assistance at all [16, 17].

As the Woreda health office said that the institutional delivery service coverage is below 15 % and the aim of this study is to identify the possible factors like mothers attitude, any programmatic factors, their knowledge towards delivery at hand of skilled or TBAs and socio demographic factors if have any influence on it in study area.

Chapter Two

2. Literature review

Maternal mortality remains a major challenge to health systems worldwide. According to assessment of trends in maternal mortality for 181 countries from 1980–2008, it was estimated to be 342,900 maternal deaths worldwide in 2008 decreasing from 526,300 in 1980. More than 50% of all maternal deaths were only from six countries in 2008 (India, Nigeria, Pakistan, Afghanistan, Ethiopia, and the Democratic Republic of Congo) [18].

Data from the World Health Organization (WHO) indicate that in many low- and middle-income countries (LMICs), especially in sub-Saharan Africa, the rate decline in MMR is less than 1% per year, and in some countries (e.g., South Africa, Nigeria, Mozambique, and Swaziland) rates even appear to be increasing. [19, 20]. As with the MMR figures, the rate of progress is slowest in sub-Saharan Africa [21].

As Ethiopian EDHS 2011 has shown, the MMR was 676 per 100,000 live births for the seven year period preceding the survey which is not significantly different from EDHS 2005 report (673 per 100,000 live births [22, 23]. However, birth with skilled attendance was low in Southern Asia (40%) and SSA (47%), the two regions with the greatest number of maternal deaths [24].

In Nicaragua, the second poorest country in Latin America and the Caribbean, the maternal mortality ratio has reached as high as 230 maternal deaths per 100 000 live births in recent years [25]. The United Nations estimates that 529 000 women die each year from complications during pregnancy and childbirth [26] and approximately 22 000 maternal deaths occur annually in the Latin America and Caribbean region [26].

Antenatal coverage rates have improved slightly during the last two decades, but the number of women visiting four or more times has remained static at about 44% [27]. Despite of the Ethiopian government working to changes attitudes and increase intuitional delivery, In our country maternal mortality is still significant as EDHS 2011 report shows 676/100,000Live birth [28].

A community based cross-sectional study was conducted among pregnant women from January 26 to February 06, 2006 in Jimma Town, Jimma zonal administration south west Ethiopia, a total

of 360 pregnant women were enrolled in the study. The study revealed that about 76.7% of the women have attended antenatal care and 23.3% have not attended at all [29]. Ethiopian women (57 percent) did not receive any antenatal care for their last birth in the five years preceding the survey. While this percentage is still substantial, it represents a marked decrease from 2005, when 72 percent did not receive any antenatal care [28].

A study conducted in southern Ethiopia in 2003 showed that the proportion of women who received antenatal care for their most recent birth in the six years preceding the survey was 26.1%. Women living in rural areas were less likely to receive antenatal care than those women in urban areas [30, 31].

Utilization of routine antenatal care at government health facilities in Pakistan generally is low. According to World Health Statistics and the Pakistan Demographic Health Survey of 2007 (PDHS) only 61% of women had at least one visit and the proportion further drops to 26% for 4 visits. [32]. The antenatal care service coverage for at least one visit during pregnancy has increased from 50% in 2006 to 71% in 2010. This service coverage has been increasing by an average of 5.16% per year. The highest annual increment was in 2008 which was 8.3%. In contrast, the annual number of pregnant mothers who have not received any ANC service has declined from 1.4 million in 2006 to 845,298 in 2010.

The women seek antenatal care only when they are symptomatic and not as a preventive or screening purpose. The women feel it uneasy to attend the hospital. Proportion of women who delivered with the assistance of a skilled birth attendant is one of the indicators in meeting the fifth MDG. In almost all countries where health professionals attend more than 80% of deliveries, MMR is below 200 per 100,000 live births [33].

In Ethiopia, the proportions of births attended by skilled personnel are very much lower than SSA. Even for women who have access to the services, the proportion of births occurring in health facilities is very low. Only 6% of births were delivered in health facilities and, there is no significant difference in proportions of delivery service utilization between EDHS 2000 and 2005; however this figure moderately increased to 10% in EDHS 2011. Twenty eight percent of mothers delivered by TBAs; while the majority of births were attended by a relative or some other person (61%) and 5% of all births were delivered without any type of assistance at all [34, 35].

Study conducted aimed to assess factors affecting institutional delivery service utilization among mothers who gave birth in the last 12 months during August 2010 in Sekela District, Amhara Region, Ethiopia show that 1% of the mothers delivered in health facilities. Of 87.9% mothers who gave birth at home, 80.0% of them were assisted by family members and relatives. The common reasons for home delivery were closer attention from family members and relatives (60.9%), home delivery is usual practice (57.7%), unexpected labor (33.4%), not being sick or no problem at the time of delivery (21.6%) and family influence (14.4%) [37].

Thirty-four percent of pregnant mothers who gave birth in the five years preceding the survey received antenatal care from a skilled provider and 10% were receiving skilled delivery assistance that is, from a doctor, nurse, or midwife [38].

A cross-sectional study was made in Saharti-Samre district Tigray region, Ethiopia, shows that, the proportion of women who perceived the health facility as a better place to give birth than at home was 63%, and around 40% of women said they wanted to give birth at a health facility next time. On the discussion part stated that though moderate coverage of ANC (54%) but there is very low institutional delivery utilization (4.1%) [39].

In the district of the study area as the Woreda health office told us antenatal care coverage is 70% but delivery service is below 15% that means from 70% on ANC at least half of them are not getting skilled delivery.

The availability and accessibility of modern health services in developing and low income countries have increased over the past decades. While the effectiveness in curing diseases may lead to greater utilization of modern health services compared to traditional practices, their utilization is likely to be higher among urban dwellers and those with higher socioeconomic status than by rural residents and groups with a lower socioeconomic status in developing countries. It is also possible that antenatal care may play an indirect role in reducing maternal mortality by encouraging women to deliver with assistance of skilled birth attendant or in a health facility [40].

The predictors of the utilization of ANC services in most developing countries include socio-demographic factors, availability and access to the health facilities, the educational level of the women and their husbands, perceptions of women regarding ANC and their knowledge of the

importance of ANC services Mothers with primary educational level were more likely to attend ANC than women who are unable to read and write. This is in line with other studies conducted in Southern Ethiopia (2003) and EDHS 2005 [41].

Demographic factors such as the number of previous pregnancies, the number of children, maternal age, and marital duration also are reported to have an influence on the utilization of antenatal care .“Attitude” is a state of readiness or tendency to respond in a certain manner when confronted with certain stimuli, is mostly dormant and is expressed in speech or behavior only when the object or situation is encountered [42].

Studies have reported negative attitudes as a major barrier to ANC utilization [43] Previous studies in rural areas of the developing world have shown an association of specific attitudes with utilization of and access to health services. In addition, provision and utilization of routine antenatal care. Study was made in Jhal Magsi District of Balochistan Qualitative data also supported quantitative results as most of the male and female respondents revealed low knowledge and negative attitudes towards the ANC services provided at the government health facilities [44].

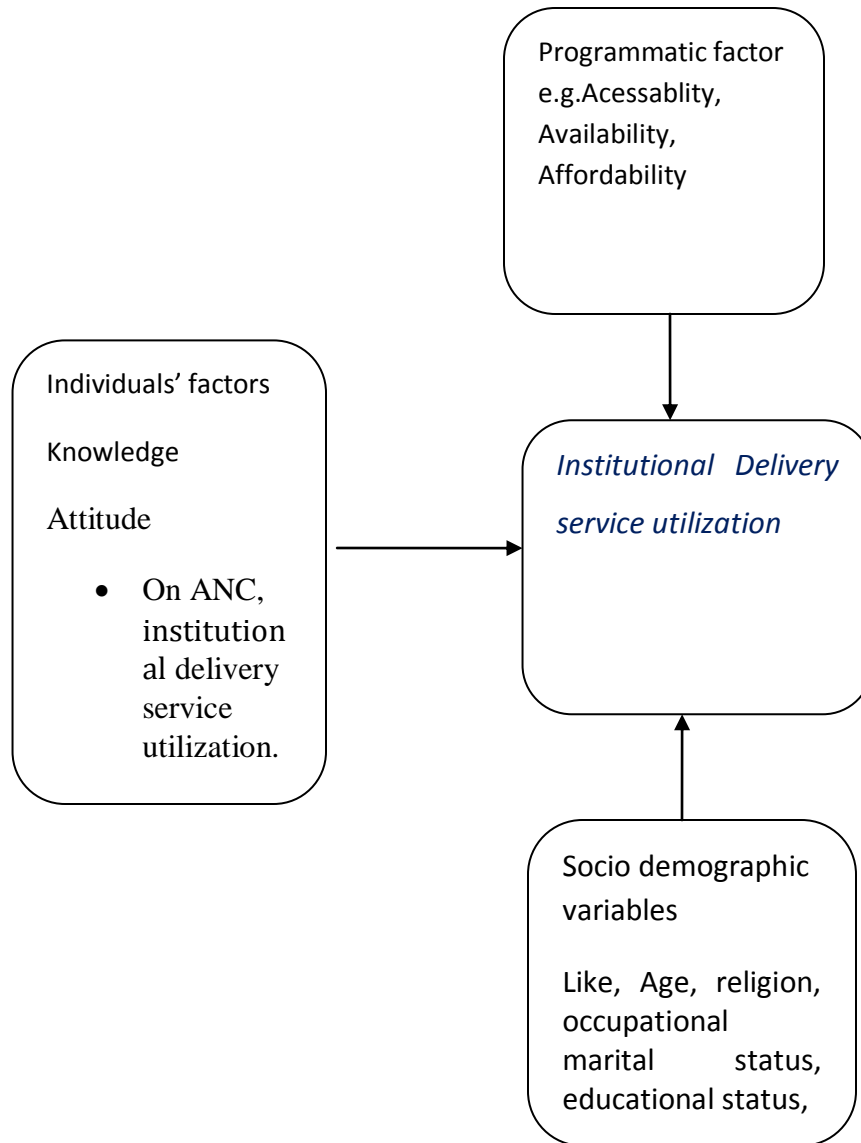
Studies have examined women's individual perceptions influencing their utilization of prenatal care and delivery services in a wide range of socioeconomic and cultural contexts around the world [45].But the study made in other area also show that Positive husband attitude towards ANC was significantly related to antenatal care service utilization. This result agrees with the finding in Addis Ababa (1990)[46].

The District Health Information System in Baluchistan Province reported only 15% of pregnant women registered for ANC in 2010-11[47].

Although there is a significant increasing trend in the number of pregnant mothers attending ANC in Ethiopia, by the end of 2010, 29% were not yet receiving any ANC service. There is no national generalizable study to show the reasons behind this data. However, according to the last Ethiopia Demographic and Health Survey (EDHS 2005), these numbers are attributed to the culture of societies, the poor quality of health services, and the perception and attitude of the health care workers [49, 49].

Since long ago, however, it is well known that maternal mortality can be significantly reduced in low-income settings by increasing access to skilled attendants which has close link to ANC, emergency obstetric care and family planning services [50, 41]

2.1 Fig1. Conceptual frame work



2.2 Significance of the study

In Ethiopia maternal mortality is still high as stated in Ethiopian demographic health survey. Skilled delivery of study area was low even though different service delivery strategy and motivational activity was set by government to decrease maternal mortality by increasing ANC utilization as input to increase skilled attendant.

The aim of this study is to assess the reason behind of 85 % of home delivery take place and to forward possible intervention and the findings from this study will give a highlight into the factors that determine delivery service utilization of pregnant women and this will be helpful for the relevant stakeholders in the planning and implementation of intervention activities to improve the delivery service utilization of pregnant women in seka chokersa district. Determine if programmatic factor has influence on institutional delivery service utilization and to forward possible solution. Also provide knowledge on programmatic factor that has influence on institutional delivery service utilization for planning purpose at district MCH expert and managerial level.

Chapter Three

Objective

3.1. General Objective

To asses institutional delivery devices utilization among women who gave birth in the last 2years in seka chokersa district, Jimma Zone Southwest Ethiopia, 2013 G.C.

3.2. Specific objectives

- To asses prevalence of institutional delivery service utilization
- To asses factors that influence institutional delivery service utilization

Chapter Four

Methodology

4.1 Study Area and Period

The study was conducted in seka chokersa Woreda, which is one of the most populous Woreda of Jimma zone. Seka Woreda is located in south west of Jimma zone and 18km from Jimma town. Has total population of 243,166 and of this male account 49.5% and female 50.5%. This Woreda has 36 kebeles and has 9 government health centers with 36 health posts. All health centers have function and providing maternal and other health service. The health post also providing clean and safe delivery and different health service. Antenatal care coverage was 70 percent in 2012 as the head of Woreda health office said. Also has 4 privet clinic and 3 drug vender. The privet clinic does not provide maternal and delivery service. There is no any NGO clinic that provides maternal health service in this Woreda rather that NGO that provide technical support on the maternal service.

4.2 Study design

Community based cross-sectional survey was conducted from 2/9/2013 to 30/10/ 2013 G.C

4.3 Source population

Source populations were all women who gave birth before two years in Seka Chokersa Woreda.

4.4 Study population

The study populations were all sampled women who gave birth before two years in Seka Chokersa Woreda

4.5. Exclusion criteria

All women who are severely ill, permanently away after censes was made and absent with repeated contact during the data collection.

4.6.1 Sample size determination

The sample size was determined by using a single population proportion formula considering the following assumptions and the proportion of institutional delivery is 10% (EDHS2011).

Proportion of institutional delivery is 10% ($p=0.1$)

Level of significance to be 5% ($\alpha = 0.05$), $Z_{\alpha/2} = 1.96$ and

Margin of error to be 5% ($d = 0.05$).

The formula for calculating the sample size is,

$$n = \frac{(Z_{\alpha/2})^2 \cdot P(1-P)}{d^2} = \frac{(1.96^2) \cdot (0.1) \cdot (0.09)}{(0.05)^2}$$

$$n = 138$$

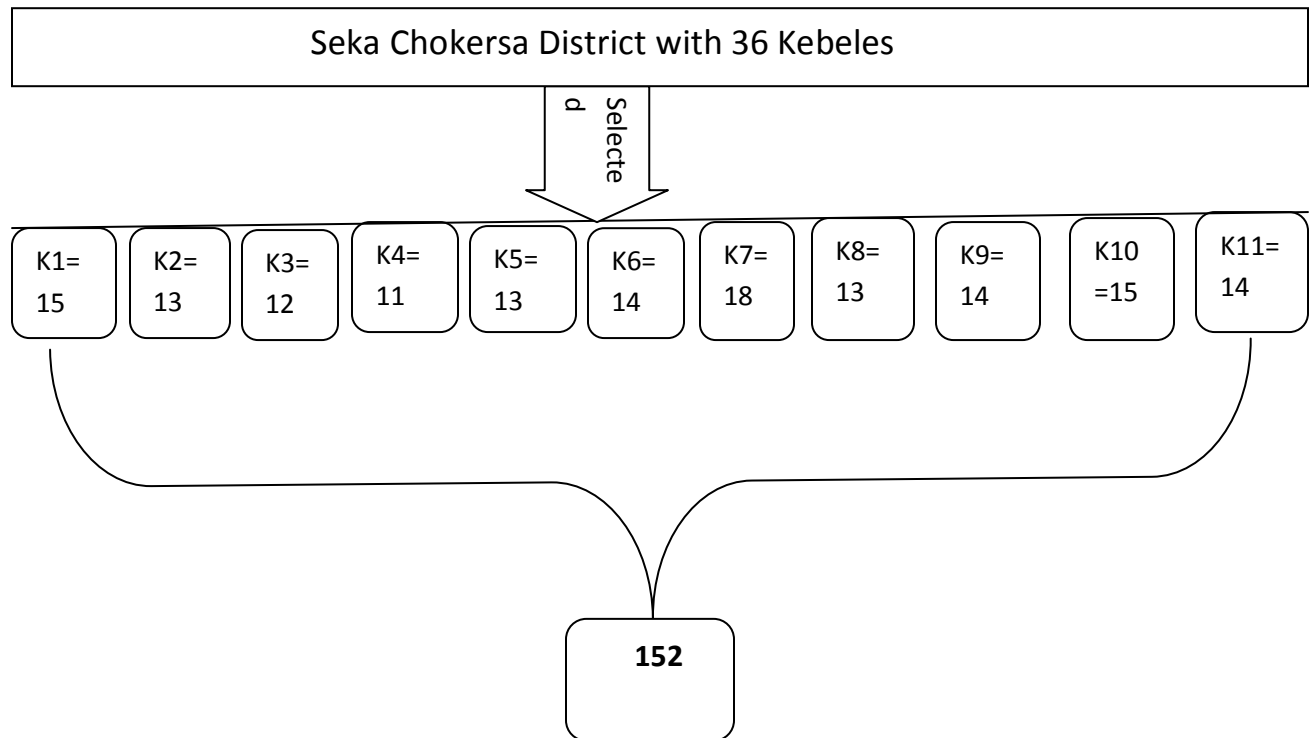
Non-response rate 10%.

The final sample size were been 138 and non response rate 14=152.

4.6.2 Sampling techniques

The study Woreda has 36 kebeles and 11 (bekegudo, shashamane, G/ula uke, lilu, mettiushane, gepa sadden, siba kake, kusaro, dabo yaya, ushane buyo, wakito) kebeles were selected by lottery method from 36 kebeles with consideration of world health organization minimum study sit selection method (30 %) for the reason of logistic and cost. The other consideration was homogeneity of the population since kebeles are all at the same stage. Then census was done by health extension worker to identify women that has gave birth before two year in those selected 11 Kebeles and found that 398 women. Next to that Study participant was proportionally allocated for each kebeles. Study participants were selected by systematic random method. Finally from each kebeles the study participant were interviewed and from one household only one woman that has gave birth before two year interviewed and if the house hold has two women who gave birth before two year the women that the second for that house will be taken for the interview.

Fig2.Schematic presentation of sampling techniques



4.6 variables of the study

4.6.1 Dependent variable

- Institutional Delivery service utilization

4.6.2 Independent variables

- Socio demographic variables: Age, religion, occupational status, marital status, educational status, parity and gravidity
- Knowledge on ANC service and institutional Delivery service like frequency of ANC, when to begin ANC, danger sign during pregnancy, delivery and after etc
- Programmatic factors; .accessibility like distance of health facility, availability like supply drug glove, affordability cost for the service
- Attitude on ANC and institutional delivery service like male support in ANC and PMTCT, Focused ANC benefit ,male conduct delivery, home delivery is safest etc

4.7 Operational definitions

Mother's knowledge were assessed using ten knowledge related question like: benefit of attending ANC, preferable time to begin ANC, knowledge on danger sign during pregnancy etc were coded for correct answer=1 and for incorrect answer=0 and the utilization of institutional delivery were measured by summed score and as score increase the knowledge of utilization of institutional delivery also increases as it decrease also.

Accessibility: health facility that providing delivery service within 2 hours distances on foot and, that has transportation access during labour and accesses of road for transportation is considered as having access to institutional delivery.

Availability: the presence of midwifery (skill attendant) at health facility, discussion of women development army on ANC and institutional delivery... etc considered as availability of the institutional delivery service.

Affordability: fund for ANC and delivery if prepared during birth preparedness, free cost service and like drug, glove if all these are found it is affordable for institutional delivery utilization.

Attitude; Factors related to intuitional delivery like, approach of health worker, male involvement in PMTCT and ANC, decision making in delivery etc measured by summed score of related attitude items on 5 -point Likert's and as summed score increases it considered as the influences of attitude on institutional delivery increased and as the scores decreases the influences of attitude on institutional delivery service utilization also decreased. Delivery service utilization: mothers who gave birth in the health center or hospital are considered as utilized skilled delivery or institutional delivery.

4.8 Data collection tools and procedures

Data was collected by face to face interview using a structured questionnaire prepared in English, and adopted from previous similar researches [52, 53, and 54]. It was translated to local language (Afan Oromo). Two supervisor and five data collectors were participated in the data collection process. After recruiting data collectors and supervisors, one day training was given to them before data collection was begun. Procedures' including ways of collecting the data going through the questionnaires and clarification was given. During data collection two supervisors were followed the data collection process and corrected for any difficulty faced by the data collectors. When the difficulty is beyond their capacity, they were been contact the researcher.

4.9 Data processing and analysis

Questionnaires were entered to EPI Info data enter program to prevent duplication and were checked for completeness, consistency. Data was cleaned and exported to SPSS windows version 16.0 for analysis. Bivariate logistic regression analysis was used primarily to check which variables have association with the dependent variable then variables found to have p-value of less than 0.05 taken for multivariable analysis to control the possible effect of confounders. Frequencies, proportion and summary statistics were used to describe the study population in relation to relevant variables and presented by using tables. Finally the variables which have significant association ($P\text{-value} < 0.05$) were identified on the basis of AOR with 95% CI.

4.10 Data Quality control

The quality of data was insured by providing training for the data collectors and supervisors before the data collection pre-testing of the questionnaires in deto kersu kebeles on 5% of the selected participant. Appropriate modifications were made after reviewing the pre-test result and overall supervision was made by the principal investigator. Every day after data collection, questionnaires was reviewed and checked for completeness, accuracy and clarity by the supervisors and principal investigator and the necessary feedback was offered to data collectors in the next morning. Finally double entry was made during data entry to prevent duplication of data.

4.11 Ethical considerations

Ethical clearance was obtained from Public Health and Medical Science Research and Publication Committee of Jimma University. Then formal letter was written to Jimma zone seka Woreda health office. Woreda health office were written formal letter to the kebeles. All respondents were asked for their willingness of participation in the study. Verbal and written consent was obtained after convincing respondents' issues of confidentiality. Questionnaire was labeled with questionnaire ID, not to the respondents' name.

4.12. Dissemination of the result

The result of the study will be publicly defended as per schedule of Jimma university school of public health education promotion and the copies provided to CBEO office. Copies of the result will be provided to seka chokersa woreda health office and other concerned bodies that need to

utilize it and do the intervention. Attempt will be on going to get the findings published in a peer reviewed journal.

Chapter Five

Result

Socio-demographic characteristics of respondent

The study was conducted in a total of 152 mothers who gave birth in the last two year back and the response rate was hundred percent. Of these study participant 134(75.0%) of mothers age were in the range of 20–34 years with mean age of 29.29 ± 5.26 SD. Ninety (59.2%) are illiterate or unable to read and write while 47(30.9%) are educated less than grade six, and only 15(10.2%) are greater or equal to grade seven. Of the total respondent of the study 147(96.7%) were married and five (3.3%) were separated. Most of the respondent occupation were house wife 137 (90.1%) and the majority of the study participant 142 (93.4%) are Muslim and only 8 (5.3%) are Orthodox religion follower.

Most of the study participant 93(61.2%) has monthly income less than 300 ETB, 31(20.4%) said that has monthly income of 301 to 600ETB and about 18(11.8%) said that has an income of between 601 to 1000ETB. Oromo ethnic group is the dominant which is 147(96.7%) and Amhara and Gurage accounts for two (1.3%) each (Table 1).

Table1. Distribution of Socio-Demographic Character of Seka Chokersa District, Jimma, 2014

Item	Options	N (%)
Monthly income	≤300	94(60.6)
	301-600	34(21.9)
	601-1000	18(11.6)
	≥1001	6(3.9)
Age	15-19	5(3.3)
	20-34	114(75.0)
	35-49	33(21.7)
Educational	Illiterate	90(59.2)
	<Grade 6	47(30.9)
	≥ Grade 7	15(10.2)
Marital Status	Married	147(96.7)
	Separated	5(3.3)
Occupational Status	House wife	137(90.1)

	Merchant	5(3.3)
	Farmer	4(2.6)
	Govt employ	3(2.0)
Religion		
	Muslim	142(93.4)
	Orthodox	8 (5.3)
	Protestant	1(.7)
	Catholic	1(.7)
Ethnicity		
	Oromo	147(96.7)
	Amhara	2(1.3)
	Gurage	2(1.3)
	Tigeray	1(.7)
Gravidity		
	1	17(11.2)
	2-4	87(57.2)
	>5	48(31.6)
Parity		
	1	17(11.2)
	2-4	91(59.9)
	>5	44(28.9)

Programmatic factors; .accessibility, availability, affordability

Around 87(57. 2%) of the study participant accesses health facility that have delivery service with in 2 hour walking distance and 143(94.1%) with enough and competent delivery care provider in the facility but about 65(42.8%) of mother said that no health facility within 2 hour walking distance. Those who said that, the health facility has no enough and competent delivery attendant at health facility were about 8(5.3 %.) And during labor their means of transportation were 79(52.0%) stretcher, 55(36.2%) ambulance and those who said that we have no means of transportation were about 15(9.9%).

Most of mother 99(65%) says that transportation, 34 (22.4 %,) cost that spent for drug, glove when not available at that health facility, 16(10.5 %.) inconveniency of the place of delivery in health facility were barriers to deliver at health facility. Most of mother 131 (86.2%) said that their husband, family 13(8.6%), prepared early in the birth preparedness only 7(4.6 %.) were fund raiser for delivery care.

About 94(61.8%) they said that drug and supply were available in the health facility but 58(38.2%) said that there were no drug, glove and other supply available in the facility

Regarding to the means of information about ANC and delivery majority 110 (72.4%) were health worker are the source of information and 25(16.4%) were from media and 23(8.6%) are from women development army but four (2.8%) said that they had no means of information about ANC and delivery.

Regarding to women development army 31 (20.4%) said that there was no discussion during their regular meeting on place of delivery but about 121 (79.6%) said that there was discussion in place of delivery among women development army during their meeting besides that most of them on their discussion recommend to delivery at health center 117 (77.0 %), health post were about (15.1%) and at home were 8 (5.3 %) (Table2).

Table2. Distribution of Programmatic Factor of Seka chokersa District, Jimma, 2014

Item	N (%)
Presence of health facility in 2 hr distance	
Yes	87(57.2)
No	65(42.8)
Presence of enough and competent skilled attendant in the facility	
Yes	143(94.1)
No	8(5.3)
what is your means of transportation during labor	
Ambulance	55(36.2)
Animal	3(2.0)
Stretcher	79(52.0)
No means of transport	15(9.9)
Can you please tell me the barriers (if any) to deliver in a health facility	
Approach of health worker	3(2.0)
inconveniency of the place	16(10.5)
Transportation	99(65.1)
Cost	34(22.4)
Who provides the fund to seek delivery care	
Husband	131(86.2)
for me (wife itself)	1(0.7)
Family	13(8.6)

It already prepared by birth preparedness	7(4.6)
Does all service like drug, glove and other found in the facility	
Yes	94(61.8)
No	58(38.2)
What is your source of information on delivery and ANC?	
Health worker	110(72.4)
Media	25(16.4)
Women army development	13(8.6)
no any source	4(2.6)
Is there discussion about place of delivery among women development army	
Yes	121(79.6)
No	31(20.4)
Where is the majority recommendation place of delivery in the discussion?	
Home	8(5.3)
health post	23(15.1)
H/c	117(77.0)
Other	4(2.6)
What means do you recommend to increase institutional maternal health service	
Increasing of 1 to 5 network or strengthen women development army	48(31.6)
Working on community mobilization	45(29.6)
Education the community	44(28.9)
Training of got or zone leader	14(9.2)
Working with religion leaders	1(0.7)

Institutional Delivery service utilization

Almost 151 (99.3%) mothers planned to attend by skill attendant on their last pregnancy and only insignificant number one (0.7%) does not planned to deliver by skilled birth attendant Majority of mother 121(79.6%) were delivered at home. Those who delivered one child at health facility was 26 (17.1%), those who delivered two children and more at health facility were about 3(2.0%).

Most mothers said that the reason for not delivering at health facility is 101(66.4) % labour is smooth and short, 32(21.1%) are due to previous home delivery was safe, 11(7.2%) unwell

coming approach of health workers and poor handling of health personnel and those said that health facility is too far and Preference of TBAs each account four (2.6%). Majority of the mother 91(59.9%) said that place of delivery is determined by previous birth history if no problem faced at home, 36(23.7%) said transportation, 15 (9.9%) cost and poor quality at health facility is 8(5.3%) are the determinant factor for place of delivery. Majority of mother 135 (88.8%) has received information on place of delivery during on their last ANC follow up but 17(11.2%) of mother said that they did not get any information on place of delivery on their last pregnancy.

Majority of mother of the study participant prior of their delivery planed to give birth at health post and health center are 72(47.4%) and 70(46.1%) respectively. But planned home delivery was nine (5.9%) and hospital was only one (0.7%). Of mother 152 who gave birth within last 2 years prior to data collection majority of them were not attended by skill attendant and only 30 (19.4 %) are health facility delivery see (Table3).

Table3 Distribution of Institutional delivery Service Utilization of Seka Chokersa District, Jimma, 2014

Item	N (%)
Did you give birth at health facility in your last pregnancy?	
Yes	30(19.4)
No	122(78.7)
Did you planned ahead to attended by skilled delivery	
Yes	151(99.4)
No	1(0.6)
How many children you delivered at health facility?	
None	121(78.1)
1	26(16.8)
2-4	3(1.9)
>5	2(1.3)
Why not delivered at health facility	
Health facility is too far	4(2.6)
Poor approach of health workers and poor handling of health personnel	11(7.1)
Preference of TBAs	4(2.6)
Labour is smooth and short	101(65.2)
previous home was safe	32(20.6)
What factors determine your preferred place of delivery?	

Cost	15(9.7)
Transportation	36(23.2)
husband opinion	1(0.6)
previous birth history if no problem faced at home	91(58.7)
poor quality at health facility	8(5.2)
unwell coming approach of health workers	1(0.6)
During your last pregnancy where did you plan to give birth?	
Home	9(5.8)
health post	72(46.5)
H/c	70(45.2)
Hospital	1(0.6)
Who is the decision maker on the place of delivery	
Husband	2(1.3)
You	30(19.4)
Family	34(21.9)
you and your husband	86(55.5)
Receiving information on place of delivery during last ANC?	
Yes	135(87.1)
No	17(11.0)

Bivariate Logistic Regression Analysis of socio-demographic character

Binary logistic regression analysis was conducted and in the final Bivariate analysis, age, income, marital status, education, gravidity and parity were found to be significant factors that associated with institutional delivery utilization.

In the finding mother age range from 20-34 utilize delivery service 4.7 times more likely [CI, 2.90, 7.61] when compared to mothers age range 15-19. Mother with an income 301 to 600 utilize delivery service 4.6 [CI, 1.93, 11.27] times more likely when compared with an income less than 300 ETB. But a mother with monthly income range 601-1000 has no significant association with institutional delivery utilization or its p-value is greater than 0.05. Those mothers who were educated grade six and less 5.7 times more likely utilize delivery service [CI 2.56, 12.75] when compared to mothers who were non-educated or illiterate.

Mother with two to four parity utilizes delivery service 2.4 times more likely utilize delivery service when compared with mother who were five and more parity. And mother with 2-4 gravidity were 4.1 times more likely utilize delivery service when compared with mothers who gravidity five and more as shown below in table 2.

Knowledge on delivery service

Bivariate logistic regression analysis of mothers knowledge of institutional delivery service showed that has no significant association [OR= 1.12, CI= (0.80, 1.58) p-value =0.516] with institutional delivery service utilization.

Attitude towards institutional delivery service

Bivariate logistic regression analysis of attitude towards institutional delivery showed significant association with institutional delivery service utilization [COR= 0.88, 95% CI (0.78, 0.99), P-value (0.029).

For a unit increased in the total score of mothers Attitude toward institutional delivery, the odds of institutional delivery service utilization decreased by 0.88 (COR= 0.88, 95% CI= [0.78, 0.99]

Table4. Bivariate analysis of socio-demographic variable associated with institutional delivery attendant of Seka Chokersa District, Jimma, 2014

Item	Institutional Delivery		COR (95.0% C.I)	P-value
	Yes N (%)	No N (%)		
Age				
15-19	20(17.5)	94(82.5)	1	0.001
20-34	10(30.3)	23(69.7)	4.7(2.90,7.61)	0.001*
Income				
<300	16(17)	78(83)	1	0.001
301-600	6(17.6)	28(82.4)	4.6(1.93,11.27)	0.001*
601-1000	7(38.9)	11(61.1)	1.5(0.61,4.05)	0.350
>100	1(16.7)	5(83.3)	4.8(2.84, 8.34)	0.001*
Marital status				
Separated	2(40)	3(60)	1	0.001
Married	28(19)	119(81)	4.2(2.86,6.41)	0.001*
Educational status				
Illiterate	23(25.6)	67(74.4)	1	0.001
<Grade6	7(14.9)	40(85.1)	5.7(2.56,12.75)	0.001*
Gravidity				
5+	11(25)	33(85)	1	0.002
2-4	19(20.9)	72(77.1)	4.1(2.42,6.99)	0.001*
Parity				
5+	13(27.1)	35(72.9)	1	0.002
2-4	17 (19.5)	70(80.5)	3.7(2.28,6.28)	0.001*
Knowledge			1.12(0.80,1.58)	0.516
Attitude			0.88(0.78,0.99)	0.029*

(*=Significant variable or P-value <0.05)

Multivariate logistic regression analysis of factors associated with skilled delivery service utilization

Multivariate analysis was made and variables that show significant association with institutional delivery utilization after adjusting for the effect of confounders were; marital status, parity, income, cost and transportation, availability of health facility nearby and health care provider have significant association with institutional delivery service utilization.

Mother who had monthly income of 301 to 600 ETB 1.04 times more likely utilize delivery service (AOR=1.04, 95% CI=[1.02,1.06] than mothers who had monthly income of less than three hundred ETB.. Mothers who had gave birth 2-4 children 0.09 times more likely utilize institutional delivery service (AOR= 0.09 ,95% CI=[0.06,0.73] when compared to mothers who had deliver 5 and greater children

Mothers who had said that cost and transportation is the determinant factor to utilize delivery service were 7.1 times more likely utilize delivery service (AOR=7.1,95% CI=[1.33,.37.8] when compared mothers who had said poor quality of health facility and approach of health worker were determining factor. Mothers who had no health facility within two hour walking distance utilize delivery service 0.04 times less likely (AOR=0.04,95% CI=[0.02,.0.45] when compared to mothers who had less than two hour walking distance utilizes delivery service. Attitude of mother has no significance association in multivariate analysis with institutional delivery service utilization p (0.783) as shown on table

Table5. Multivariate Logistic Regression Analysis of Factor associate with Institutional Delivery Utilization of Seka Chokersa District, Jimma, 2014

Item	Institutional Delivery		COR (95%CI)	AOR(95%CI)	P-Value
	Yes, N (%)	No, N (%)			
Parity					
5+	11(25)	33(75)	1	1	0.030
2-4	19(20.9)	72(79.1)	4.1(2.42,6.99)	0.09(0.06,0.73)	0.036 *
Monthly income					
<300	16(17)	78(83)	1	1	0.098
301-600	6(17.6)	28(82.4)	4.6(1.92, 11.27)	1.04(.02,1.06)	0.047 *
601-1000	7(39.9)	11(61.1)	1.5(0.60, 4.05)		
>100	1(16.7)	5(83.3)	4.8(2.84, 8.34)	5.95(.468,7.58)	0.225
Marital status,					
Married	28(19)	119(81)	4.2(2.81,6.41)	1.09(1.02,5.21)	0.026 *
Separated	2(40)	3(60)		1	
Time of ANC in last pregnancy?					
0-4 month	16(19)	68(81)	1	1	0.043
4-7 month	11(20.8)	42(79.2)	4.6 (2.21,9.37)	1.2(0.09, 2.54)	0.012 *
7 and above month	1(14.3)	6(85.7)	2.5 (0.48,12.89)	0.09(.05,.8.41)	0.009 *
No follow up	2(25)	6(75)	3.9 (2.27,6.61)	1.1(0.04,0.842)	0.114
Factors determine preferred place of delivery?					
Poor approach of health workers and facility.	11(11.1)	88(88.9)	1	1	0.071
Cost and Transportation	19(36.5)	33(63.5)	1.73(0.99, 3.05)	7.1(1.33, 37.8)	0.021 *
Presence of health facility within 2 hour distance					
Yes	11(12.6)	76(87.4)	1	1	0.091
No	19(29.2)	46(70.8)	0.4 (0.15, 0.80)	0.4(0.02, 0.45)	0.023 *
Presence delivery care provider in the facility					
No	2(25)	6(75)	1		0.088
Yes	28(19.6)	115(80.4)	4.10(2.77, 6.28)	1.2 (1.01,1.62)	0.028 *
Attitude	NA		0.9(0.77, 0.98),	0.9(0.81,1.17)	0.783

* (is significant at p-value <0.05), N=number

Discussion

The study showed that institutional delivery service utilization is 19.4 %. This is higher than the study conducted in EDHS 2011 and Saharti-Samre district Tigray region which is 4.1 % (38, 39). This might be due to the fact that women development army was established and the health extensions were working through this system to raise their awareness. This study also showed that almost all of mother were discussing on facility based delivery with majority deciding to attend by skilled attendant. But about 47.4 % and 46 % of mother of this study participant planned to give birth in their last pregnancy at health post and health center respectively. In addition 88.8 % of mother has received information on place of delivery during their last pregnancy ANC follow up and when compared with mothers who were planned to deliver at health institution and informed on place of delivery, the institutional delivery utilization was very low. Similar study was made in Saharti-Samre district Tigray region, Ethiopia support that mother who were better place to give birth than at home were 63%, and around 40% of women said they wanted to give birth at a health facility next time. Though moderate coverage of ANC (54%) but there is very low institutional delivery utilization (4.1%) [39]. The reason it could be there is lack of adequate infrastructure, transportation access and most mothers perceived that labour were easy and short as seen in this study.

About 59.9 % of the mother said that place of delivery were determined by previous birth history if no problem faced at home and 23.7 percent said depend on the availability of transportation and in multivariate logistic regression analysis cost and transportation showed that significantly associated(AOR=7.1,CI=[1.33, 37.8]) with institutional delivery utilization.

Mother who had gave birth 2 to 4 child 0.09 times more likely utilize institutional delivery (AOR= 0.09 ,CI=[0.06,0.73]) when compared to mother who had gave birth 5 and above. Similar study done in Indian and Turkey reported that women with high parity utilize institutional delivery less likely [59, 60]. The possible explanation for this is as parity increases women's confidence and experience increase. In other study reported that parity as a factor responsible for the utilization of institutional delivery and the probability of giving birth at health facilities decreases for women with five or more births in other national studies [61, 62, and 63]. Those mothers were said that ANC has to begin within sixteen week from the time begin pregnancy were 55.3 % and those mother who were said that we have to begin ANC in the

second trimester was about 34.9 % where as 19.7 % didn't know the four focused recommended visit of ANC that WHO recommend. The study conducted in 2005 from large data set also suggests that those mothers attend within first trimester it about 21.8 % which is much lower than with the current study and in the second trimester were about 49.6 % which is higher than the study area (57). Most mothers seek antenatal care only when they are symptomatic and not as a preventive or screening purpose and they feel it uneasy to attend the health facility. Proportion of women who delivered with the assistance of a skilled birth attendant is one of the indicators in meeting the fifth MDG. In almost all countries where health professionals attend more than 80% of deliveries, MMR is below 200 per 100,000 live births [33]. It is also possible that antenatal care may play an indirect role in reducing maternal mortality by encouraging women to deliver with assistance of skilled birth attendant or in a health facility [40].

In this study mothers attitude towards utilization of institutional delivery has not significant association with institutional delivery service utilization. But previous studies in rural areas of the developing world have shown an association of specific attitudes with utilization and access to health services and this finding was also inconsistent to the study done in Tanzania that showed attitude of mothers on pregnancy risk factors had significant association with use of skilled care at delivery after controlling for confounding factors (58, 43).

About 42.8 % of mothers live beyond two hour walking distance from health facility and also about 52 % use stretcher to carry labouring mother to the health facility and around 9 % has no any means of transportation. In the binary logistic regression analysis mother with less than grade six utilize delivery service 5.7 times more likely than illiterate mothers or unable to read and write.

These availability and access to the health facilities, educational level of the women were factors that predicting of institutional health service utilization. This is in line with other studies conducted in Southern Ethiopia and EDHS11 [41].

Conclusion

Very Low institutional deliveries when compared with mothers who were planned to deliver at health institution.

A large proportion of mothers gave birth at home without a skilled attendant.

Lack of transportation accesses and competent skilled delivery provide.

The health facilities were not in accessible place, it is far.

Lack of awareness on institutional delivery because the main reasons given by mothers not attending delivery by health care provider were labour was unexpected/short, absence of problem in the last home delivery.

Lack of supplies that used for delivery purpose in the health facility in low utilization of mother who has no ANC follow up and lower monthly income.

Recommendations

- The district administrator should designed infra structure and have to accessible means of transportation
- The district health office should designed means of health education, awareness raising and empowering mothers to utilize skilled delivery.
- In addition strengthen of WDA and HEW since they are one of the major means of information among women child bearing age for the utilization of institutional delivery
- The district health office should be assigned skilled midwife at each health centers and accessed of health facility.

Annexes

I. References

- 1 UNICEF, *The State of the World's Children 2013*, UNICEF, New York, 2013 (forthcoming).

2 UNICEF, Progress for Children: A report card on maternal mortality, Report No.7, UNICEF, New York, 2008.

3 WHO, The Partnership for Maternal, Newborn and Child Health, *Strategy and Work plan 2009 to 2011*, Geneva, 2009.

4 Donald I. (ed).The scope of antenatal care. In: Practical obstetrical problem.5th edition. Lloyd-Luke Co.1969, P-2.

5 Central Statistical Agencies: *ICF International: Ethiopian Demographic and Health Survey*. , Addis Ababa, Ethiopia, Calverton, Maryland, USA; 2012.

6 Kwast BE, Liff JM. Factors associated with maternal mortality in Addis Ababa, Ethiopia. *International Journal of Epidemiology*. 1988; 17(1):115–121. [[PubMed](#)]

7 Rockers Peter C, Wilson Mark L, Mbaruku E Godfrey, and Kruk Margaret E. Source of Antenatal Care Influences Facility Delivery in Rural Tanzania: A Population-Based Study. *Matern Child Health J*. 2009; 1opinion3:879–885. [[PubMed](#)]

8 The Cairo Consensus at Ten: Population, Reproductive Health and the Global Effort to End Poverty. 2004. UNFPA state of world population.

9 Brundtland GH: Perinatal health – a global perspective. *J Matern Fetal Neonatal Med* 2002, 12(4):217-8. [[PubMed Abstract](#) | [Publisher Full Text](#)]. Attention to clean and hygienic delivery practices

10 World Health Organization: *Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice*. Geneva: WHO press; 2003

11 Hogan MC, Kyle J, Mohsen N, Stephanie Y, Mengru W, Susanna M, Alan D, Rafael L, Christopher JL: Maternal Mortality for 181 countries, 1980–2008: A systematic analysis of progress towards MDG5. *Lancet* 2010, 375(9726):16091623. [[PubMed Abstract](#) | [Publisher Full Text](#)]

- 12 USAID: *Population Reference Bureau: Making pregnancy and child birth safer*. Policy brief, USA; <http://www.measurecommunication.org> [webcite](#)
- 13 A. Ahmed: Maternal Mortality Trend in Ethiopia. *Ethiop J Health Dev* 2010, 24(1):117-120.
- 14 FMOH, UNICEF, UNFPA, WHO and AMDD: *National Baseline Assessment for Emergency Obstetric & Newborn Care in Ethiopia*. 2008, 18. [PubMed Abstract](#) | [Publisher Full Text](#)
- 15 United Nations: *Millennium Development Goals Report*. New York; 2008:24-25. 6 UNFPA: *Material Mortality updates*. 2004. Delivering in to good hands. <http://www.unfpa.org/webdav/site/global/eng.pdf> [webcite](#)
- 16 Central Statistical Agencies: *ICF International: Ethiopian Demographic and Health Survey*. , Addis Ababa, Ethiopia, Calverton, Maryland, USA; 2012.
- 17 Central Statistical Agency [Ethiopia] and ORC Macro: *Ethiopia Demographic and Health Survey 2005*. , Addis Ababa, Ethiopia and Calverton, Maryland, USA; 2006.
- 18 Hogan MC, Kyle J, Mohsen N, Stephanie Y, Mengru W, Susanna M, Alan D, Rafael L, Christopher JL: Maternal Mortality for 181 countries, 1980–2008: A systematic Analysis of progress towards MDG5.
- 19 Hogan MC, Foreman KJ, Naghavi M, Ahn SY, Wang M, et al. (2010) Maternal mortality for 181 countries, 1980—2008: a systematic analysis of progress towards Millennium Development Goal 5. *Lancet* 375: 1609–1623. Doi:[10.1097/01.aoa.0000397097.96320.28](https://doi.org/10.1097/01.aoa.0000397097.96320.28).
- 20 World Health Organization, United Nations Children's Fund, United Nations Population Fund, The World Bank (2010) Trends in maternal mortality: 1990–2008.
- 21 World Health Organization. United Nations (2011) The Millennium Development Goals report 2011. New York: United Nations.
- 22 Central Statistical Agencies: *ICF International: Ethiopian Demographic and Health Survey*. , Addis Ababa, Ethiopia, Calverton, Maryland, USA; 2012.
- 23 Antenatal care services utilization and factors associated in Jimma Town (south west Ethiopia, [Fekede B](#), [G/Mariam A.](#), Department of Health Education & Behavioral sciences, 2006
- 24 Central Statistical Agencies: *ICF International: Ethiopian Demographic and Health Survey*. , Addis Ababa, Ethiopia, Calverton, Maryland, USA; 2012.
- 25 Zahr Abou, C. Global burden of maternal death and disability. *Br Med Bull*. 2003; 67(1): 1–11. [[Links](#)]

- 26 AbouZahr C, Wardlaw T. Maternal mortality in 2000: estimates developed by WHO, UNICEF and UNFPA. Geneva: World Health Organization; 2004. [[Links](#)]
- 27 World Health Organizations. United Nations (2011) The Millennium Development Goals report 2011. New York: United Nations.
- 28 Central Statistical Agency [Ethiopia] and ORC Macro: *Ethiopia Demographic and Health Survey 2005*. Addis Ababa, Ethiopia and Calverton, Maryland, USA; 2012
- 30 CSA, ORC Macro, author. Ethiopia Demographic and Health Survey, Addis Ababa, Ethiopia and Calverton, Maryland, USA. Sep, 2006.
- 31 Mekonnen Y. Patterns of maternity care service utilization in Southern Ethiopia: Evidence from a community and family survey. *Ethiop J Health Dev*. 2003; 17(1):27–33.
- 32 DHIS P: HMIS/DHIS Annual Analysis Report 2010. In. Quetta: Health Directorate 2010.
- 33 CSA, ORC Macro, author. Ethiopia Demographic and Health Survey, Addis Ababa, Ethiopia and Calverton, Maryland, USA. 2006. Sep, [3](#), Mekonnen Y. Patterns of maternity care service utilization in Southern Ethiopia: Evidence from a community and family survey. *Ethiop J Health Dev*. 2003; 17(1):27–33.
- 34 WHO: *Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF and UNFPA*. WHO, Geneva; 2003. <http://www.who.int/reproductive-health/pdf/webcite>,,,
- 35 Central Statistical Agency [Ethiopia] and ORC Macro: *Ethiopia Demographic and Health Survey 2005*. Addis Ababa, Ethiopia and Calverton, Maryland, USA; 2012).
- 37 Alemayehu S. Teferra [1](#)* Fekadu M Alemu [2](#) and Solomon M Woldeyohannes [3](#), 2010 Institutional delivery service utilization and associated factors among mothers who gave birth in the last 12 months in Sekela District, North West of Ethiopia: A *community - based cross sectional study*, or (<http://creativecommons.org/licenses/by/2.0>)
- 38 Csa addis abeba Ethiopia ICF international Calverton Maryland USA march 2012:120
- 39 Determinants of antenatal and delivery care utilization in Tigray region, Ethiopia: a cross-sectional study Yalem Tsegay [1](#)[†], Tesfay Gebrehiwot [2](#)^{*†}, Isabel Goicolea [3](#), Kerstin, Hailemariam Lemma [2](#) and Miguel's Sebastian [3](#) (<http://creativecommons.org/licenses/by/2.0>), 2012

- 40 Rockers Peter C, Wilson Mark L, Mbaruku E Godfrey, and Kruk Margaret E. Source of Antenatal Care Influences Facility Delivery in Rural Tanzania: A Population-Based Study. *Matern Child Health J.* 2009; 13:879–885. [[PubMed](#)]
42. A.N. Oppenheim, *Questionnaire Design, Interviewing and attitude Measurement*, Printer Publisher Limited, New York, 1992
- 43 T.Mathole, G.Lindmark, F.A.Majoko, A qualitative study of women’s perspectives of antenatal care in a rural area of Zimbabwe *Midwifery*, 20(2), (2004), 122-132
- 44 *Journal of Applied Medical Sciences*, vol. 1, no.1, 2012, 93-116 ISSN: 2241-2328 (print version), 2241-2336 (online) Scienpress Ltd, 2012, Provision and Utilization of Routine Antenatal Care in Rural Balochistan Province, Pakistan: a Survey of Knowledge, Attitudes, and Practices of Pregnant Women Abdul Ghaffar, Sathirakorn Pongpanich, Robert S. Chapman, Alessio Panza, Sheh Mureed1.
- 45 Csa Addis Ababa Ethiopia icf international Calverton Maryland USA march 2012:120
- 46 Mesganaw F, Olwit G, Shamebo D. Determinants of ANC attendance and preference of site or delivery in Addis Ababa. *Ethiopia Journal of Health Development.* 1990; 6(2):17–21.
- 47 *EMRO: Health Systems Profile- Pakistan*. In. *Eastern Mediterranean Region: World Health Organization*, (2007), 80-109
- 48 Central Statistic Authorities: *Ethiopia Demographic Health Survey*. Addis Ababa; 2005.
- 49 Federal Ministry of Health: *Report on Situational Analysis of the National PMTCT of HIV/AIDS Program Response in the Broader RH/MCH Context in Ethiopia*. Addis Ababa; 2009. These are serious challenges that need time and well thought-out strategic approaches to make a real and sustainable difference in the health seeking behavior of pregnant women.
- 50 Determinants of antenatal and delivery care utilization in Tigray region, Ethiopia: a cross-sectional study Yalem Tsegay^{1†}, Tesfay Gebrehiwot^{2*†}, Isabel Goicolea³, Kerstin Edin⁴, Hailemariam Lemma² and Miguel’s Sebastian³ (<http://creativecommons.org/licenses/by/2.0>), 2012

51. Abdul Ghaffar, Sathirakorn Pongpanich, Robert S. Chapman, Alessio Panza, Sheh Mureed. Provision and Utilization of Routine Antenatal Care in Rural Balochistan Province, Pakistan: a Survey of Knowledge, Attitudes, and Practices of Pregnant Women .Journal of Applied Medical Sciences, vol. 1, no.1, 2012, 93-116 ISSN: 2241-2328 (print version), 2241-2336 (online) Scienpress Ltd, 2012.
- 52 A. Mulumebet, G. Abebe, and B.Tefera .*Predictors of Safe Delivery Service Utilization in Arsi Zone, South-East Ethiopia, Ethiop J Health Sci.* 2011 August; 21(Suppl 1): 95–106.PMCID: PMC3275878.
- 53.Family care International (FCI) and the Safe Motherhood inter Agency Group (IAG), a Comprehensive package of service for Safe Motherhood, New York, 1998.Accessed on August 20, 2006 at: www.safemotherhood.org
- 54 Tura Gurmesa, G/Mariam Abebe. *Safe delivery service utilization in metekel zone northwest Ethiopia, Ethiopia J Health Sci.* Vol.17, No, 4, March 2008,
- 55 Worku A. Jemal M. Abeje G. *Institutional Delivery Service Utilization in Woldia, Ethiopia, Science Journal of Public Health.* Vol. 1, No. 1, 2013, pp. 18-23. Doi: 10.11648/j.sjph.20130101.13
56. N. Mesfin, H. Damen, M. Getnet: Assessment of Safe Delivery Service Utilization among women of child bearing age in North Gondar Zone EJHD 2004, 18(3):146–150.
57. Tewodros A. Jemal H. and Habte D. Utilization of antenatal care services among teenagers in Ethiopia: A cross sectional study, 2005
58. Rose NMM, Japhet ZK, Melkzedek TL, Siriel NM, Albrecht J, Declare M, Hassan M: Use pattern of maternal health services and determinants of skilled care during delivery in Southern Tanzania: implications for achievement of MDG-5 targets. [http://:www.biomedcentral.com](http://www.biomedcentral.com)
59. N. Mesfin , H Damen , M Getnet. *Assessment of Safe Delivery Service Utilization Among women of child bearing age in North Gondar Zone.* EJHD 2004, 18(3):146–150.
60. Wagle R, Sabroe S, Nielsen BB: Socioeconomic and physical distance to the maternity Hospital as predictors for place of delivery: An observational study from Nepal. BMC

61 DHIS P: HMIS/DHIS Annual Analysis Report 2010. In. Quetta: Health Directorate 2010.

62 EMRO: Health Systems Profile- Pakistan. In. Eastern Mediterranean Region: World Health Organization, (2007), 80-109.

63 D.A. Gleib, N. Goldman, G. Rodriguez, Utilization of care during pregnancy in Rural Guatemala: does obstetrical need matter?, *Social Science and Medicine*, 57(12), (2003), 2447-2463.

64. A. McCaw-Binns, J. La Grenade, and D. Ashley, Under-users of antenatal care: A comparison of non-attenders and late attenders for antenatal care, with early attenders, *Social Science and Medicine*, 40(7), (1995), 1003-1012.

65. Magadi M, I. Diamond and R. Rodriguez, Choice of Delivery Care in Kenya, University of Southampton. Available at <http://www.socstats.soton.ac.uk>. Accessed on December 2, 2005.

66. Annual report of Arsi Zone Health office for the year 2004/2005

II. Questionnaire

<p>CONSENT FORM: I have been informed about the purpose of this particular research project and I have also been informed that I am going to respond only to questions I know and I can refuse to Any question which I don't want to respond. I have been informed that the information I give will be used only to the purpose of the study. In addition I am also informed that my identity as well as the information I will be providing will be kept confidentially .Furthermore I am aware that I can stop responding to the questions at any time in the process. Based on the above information I agree to participate in the research voluntarily. Signature_____Date_____</p>			
<p>Place of data collected: Zone.....woreda.....kebeles.....gote (zone) Name of data collector..... Signature.....Date..... Name of supervisor.....Signature.....Date.....</p>			
<p>During data collection the answer that respondents provided will be circled except questioner number one which will be number filled on the space provided.</p>			
I		Demographic part	
200	How old are you?	-----year	
201	What is your monthly income	1,<300 2,301-600 3,601-1000 4,>1000	
202	Marital Status	(1) Married (2) Separated (3) Single (4) -----Others	
203	What is the highest level of school did you attended?	1, Never attended school 2, below grad 6 3, Grade 7 to12 4, diploma level 5, University	
204	What is your current occupation?	1, Government employed 2, Housewife 3, Merchant 4, Private employed 5, Farmer 6, Other	
205	What religion do you belong to?	1, Orthodox 2, Catholic 3, Protestant 4. Muslim 5, Other religion (Specify)	
206	What ethnic groups do you belongs to?	1, Oromo 2, Dawero 3 Amharic 4, Gurage 5 Tigre 6yem 7Others (specify)	
207	How many times were been you pregnant?	1, First time 2, Second 3, Third time	

		4, 4 5,5 6, 6 and greater than 6	
208	How many child you were been gave birth?	1, 1 2, 2 3,3 4, 4 5,5 6, 6 and above	
II Knowledge on ANC and delivery			
300	What is appropriate time to begin for ANC?	1,0 to 16 wk 2,16 to 28wk 3,28 to 32wk 4, after 32wk 5,I don't know	
301	Do you know the recommended visit of ANC?	Yes (1) No (2) if yes, how often.....	
302	Why you attend ANC	1,for health of baby 2,for my health 3, for healthy of us(mother and baby) 4.because of advice of heath worker (HEW)	
303	In your last pregnancy in which month you attended ANC?	1,0-4 moth 2,4-7 moth 3,7-8 moth 4,after 8 moth 5, No follow up	
304	If labour begins When is the appropriate time to go health facility?	1,If Prolonged labor at home (> 12 hrs) 2,IF Retained placenta after delivery at home 3,Only when sever v bleeding 4,As early as labour 6,when there is no relatives assistance at home	
305	Which one delivery complications can be dangerous for the health of the woman?	1.Labour that stay >12hrs 2,During labour if profuse vaginal bleeding 3,retaind placenta 4,I don't know	
306	Why delivery at health facility?	1, for health of baby. 2,for health of mother 3,for healthy of both 4.because of advice of heath worker during ANC	
307	What signs/symptoms do you know as dangerous after delivery?	Swollen/puffy face (1) Swollen legs (2) Raised B/P (3) Dizziness (4) Bleeding before delivery (5) Bleeding after delivery (6) Anemia (7)	
308	What signs/symptoms do you know as dangerous during pregnancy?	Swollen/puffy face (1) Swollen legs (2) Raised B/P (3) Dizziness (4) seeing water before delivery (5) Bleeding before delivery (6) Labour > 12 hours (7) Anemia (8)	
309	What signs/symptoms do you know as dangerous during Labor/delivery?	Swollen/puffy face (1) Swollen legs (2) Raised B/P (3) Dizziness (4) seeing water before delivery (5) Bleeding before delivery (6) Bleeding after delivery (7) Lab our > 12 hours (8) Anemia (9)	

III		Attitude on ANC and delivery service utilization					
		S/agree	Agree	Neutral	Disagree	Strongly disagree	
400	Being attended by male health professional during delivery is very shameful and unethical.	1	2	3	4	5	
401	Male should engage in maternal health service like ANC and PMTCT activity.	1	2	3	4	5	
402	Antenatal care has 4 focused visits. Which all visit are importance?	1	2	3	4	5	
403	In TTBA's in conducting delivery? Or it is as a safest?	1	2	3	4	5	
404	A home delivery is not safer place of delivery.	1	2	3	4	5	
405	Do you think that giving birth at health facility is the safest for baby and mother?	1	2	3	4	5	
406	Do you think that health care providers especially those who conduct delivery are competent?	1	2	3	4	5	
407	Does health worker have good well coming when labour mother go there?	1	2	3	4	5	
408	Do you think that starting of ANC within first try minster is important?	1	2	3	4	5	
409	Do you agree that women army development has role in increasing institutional delivery?	1	2	3	4	5	
IV		Programmatic factors; .accessibility, availability, affordability					
500	Is there health facility which gives delivery service near you within 2 hour on foot?	1, yes 2, no					
501	Do there enough and competent health care provider in the facility?	1. Yes 2. No					
502	what is your means of transportation during labor	1. ambulance 2.animal 3,estreachter 4, no means of transport					
503	Can you please tell me the barriers (if any) to deliver in a health facility (Health centre/Clinic/Hospital)	1,Approach of health worker 2, inconveniency of the place 3,Transportation (4) cost					
504	Who provides the fund to seek delivery care?	1.Husband 2.it is me (wife itself) 3 family 4.it already prepared by birth preparedness					
505	Does all service like drug, glove and other found in the facility?	1. Yes 2. No					

506	What is your source of information about ANC?	1, health worker 2, media 3, women army development 4, no any source	
507	Is there discussion about place of delivery among women development army?	1. Yes 2. No	
508	Where is the majority recommendation place of delivery in the discussion?	Home (1), health post (2) H/c (3), Hospital (4) -----Other (5)	
509	What means do you recommend to increase institutional maternal health service	1,increasing of 1 to 5 network or strengthen WAD 2,working on community mobilization 3,educating the community 4,traing on got or zone leader 5,working with religion leaders	
510	What factors determine your preferred place of delivery?	1 cost 2, Transportation 3, husband opinion 4, previous birth history if no problem faced at home 5, poor quality at health facility 6. unwell coming approach of health workers 7.Other	
511	During your last ANC, did you receive any information on place of delivery?	Yes (1) No (2)	
512	How many children you delivered at health facility?	1, none 2, 1 3,2 4,3 5,4 6,5 7, 6 and above	
513	Why not delivered at health facility?	1. Health facility is too far, 2.Need be with relatives, 3.unwell coming approach of health workers and poor handling of health personnel 4. Preference of TBAs, 5.Labour is smooth and short, 6.perevios home was safe 6.opinion of husband 7,other	
514	Who is the decision maker on the place of delivery?	1. Husband 2.you 3 family 4,you and your husband 5,other	
515	Did you planned ahead of time of labour where you will give birth in your last pregnancy?	Yes (1) No (2)	
516	During your last pregnancy where did you planed to give birth?	Home (1), health post (2) H/c (3), Hospital (4) ...Other (5)	
V	Institutional Delivery service utilization		
600	Did you gave birth in health facility in your last pregnancy?	1,Yes 2,No	

III. Translated part of questioner (To Afan Oromo)

Waa'ee barbaachisummaa qorannoo pirojektii kanaa hubannoo nan qaba akkasumas nama biraatiif dabarsuu nan danda'a .garuu gaaffiin gaafatame qofaafan deebii kennuu danda'a .gaaffii kamiif akkan deebii kennuu fi kamiif akkan hin kennines addaan baasee nan keeka. Odeeffannoon ani kennu barbaachisummaa qorannoo qofaaf ta'uu akka qabu nan amana.dabalataanis odeeffannoon ani dabarsu maalummaa kiyyaa fi ofitti amanamummaa kiyya eeggachuun qaba .Harka caalaatti yeroo kamiyyuu waa'e yaa'insa odeeffannoon kanaa hubannoo gahaa waanan qabuuf bakkan argetti odeeffannoo kennu nan dhaaba . bu'uura odeeffannootiin qo'annoo fi qorannoo irratti fedhiidhaan hirmaachuuf itii walii nan gala . <u>Mallattoo</u> <u>Guyyaa</u>			
Bakka ragaan itti sassaabamu Zoonii-----Aanaa -----ganda -----gooxii (zoonii) Maqaa nama ragaa sassaabu-----mallattoo -----Guyyaa----- Maqaa suppevaayzerii -----Mallattoo -----Guyyaa-----			
During data collection the answer that respondents provided will be circled except questioner number one which will be number filled on the space provided.			
Laak.	I	Demographic part	Debii
200	umuriin kee meeqa ?	Wagga.....	
201	Galiin ji'aa kee meeqa argeta?	1,<300 2.301-600 3,601-1000 4,>1000	
202	Gaaila ilalchisee?	(1) heerumera (2) addaan baanerra (3) naraa dueeraa (4).kopa(hin herumne) (5) kanbiraa....	
203	Barumsa kutaa meeqa geeseeta ?	1, ummaa hiberanne 2,kutaa 6 gadii 3,kutaa 7-12 4,saadarkaa diploma 5,.saadarkaa yuniiversity	
204	Yeroo amma hojiin kee maali?	1, hojataa mootuuma 2, housewife 3,merchant 4. Hojii dhunfaa 5.qotte bultuu 6.kanbiraa	
205	Ammanta kamii hordoffita?	1.oortodoksii 2.kaatoliiki 3.prosestantii 4. musliima 5. Kanbiraa...	
206	What ethnic groups do you belongs to?	1.orommo 2.dawroo 3.ammara 4.guragee 5.tiigree 6.yemmi 7. kanbiraa	
207	Yeroo meeqa hulfaa ulfooftetta?	1.yeroo jalqabafii 2.yeroo lamfaafi 3.yeroo sadaftif 4, yeroo 4, 5. Yeroo5 6, 6 olli	
209	Yeroo meeqa deeseeta ?	1.1 2. 2 3.3 4.4 5.5 5.6 fi isaa olli	
II Knowledge on ANC and delivery			
300	Tajajjili daumsaa duraa yoom jalqabamu qaba?	1.jia0-4 2.jia4-7 3.7-8 4jia 8 booda 5.hordoofi higonee	
301	Yeroo hulfumma tooko keessati Tajajjili daumsaa duraa yeroo meeqa akka keenamu nibekitta?	Eeye 1 mitti 2.yoo eeye tee yeroo meeqa.....	
302	Fayidaan ati Tajajjili daumsaa duraa hordoofu maalif ?	1.fayya daimma dhalatudhaaf 2.fayya dhunfa keettif 3.fayya lachan kessaanif 4.waan oogeessii fayya nuugorsanufi	
303	Ulfaa kee isaa dhuma irrati jiaa meeaffati tajajjila daumsaa dura jalqabdee?	1.jia0-4 2.jia4-7 3.7-8 4jia 8 booda 5.hordoofi higonee	
304	Yeroo cininfuun sijalqabu osoo yeroo kamitti garaa dhabille fayyaati demmte gariidha jatta?	1.ciinifun jalqabee saaa 12 bodaa 2.manaati deesse yoo hoofolu dadhabdee 3.yoo dhignii bayysee dhangalee qofaa 4.akkuma cininfun caalqabeen 6.yoo manaati namnii gargaru dhabamee qofaa	

305	Dhimoota balaa yeroo dahumsa kana keessaa fayya hadha irrati kamtu cimmadha jatee yadaa?	1.yoo cininfun saa 12 irra derbee 2.yeroo cininfu yoo dhignii bayyinan dhangalee 3.yoo hofooltiin diddee 4. Hinbeeku.
306	Faydaa daumsii bakaa dhabilee fayyati keenamuuf nati nihimita?	1.fayya daimma dhalatudhaaf 2.fayya dhunfa keettif 3.fayya lachan keenyaanif 4.waan gorsii oogeyii fayya irra nuff keenamuf
307	Yeroo da'umsa boodaa mallattoo kamtu cimaadha jettee yaadda?	1.dhiita'uu fuulaa 2.dhiita'uu miilaa 3. ol kau'uu dhiigaa 4.maraanmartoo mataa 5.dhangala'uu dhiigaa yeroo da'umsa duraa 7.dhangala'uu dhiigaa yeroo da'umsa boodaa 8.hir'ina dhiigaa 9.maraanmartoo mataa
308	Yeroo ulfaa mallattoo kamtu cimaadha jettee yaadda?	1.dhiita'uu fuulaa 2.dhiita'uu miilaa 3. ol kau'uu dhiigaa 4.maraanmartoo mataa 5.dhangala'uu ootaa (bishaan mataa) osoo yeron higahin 6.dhangala'uu dhiigaa yeroo da'umsa duraa 7.ciniinfuu sa'atii 12caalu 9.hir'ina dhiigaa 10.maraanmartoo mataa
309	Yeroo ciniinfuu mallattoo kamtu cimaadha jettee yaadda?	1.dhiita'uu fuulaa 2.dhiita'uu miilaa 3. ol kau'uu dhiigaa 4.maraanmartoo mataa 5. dhangala'uu ootaa (bishaan mataa) osoo yeron higahin 6.dhangala'uu dhiigaa yeroo da'umsa duraa 7.dhangala'uu dhiigaa yeroo da'umsa boodaa 8.ciniinfuu sa'atii 12caalu 9.hir'ina dhiigaa 10.maraanmartoo mataa

III Attitude on ANC and delivery service utilization /Ilaalcha da'umsa duraa fi hubannoo kenniinsa tajaajila

		S/disagree	Agree	Neutral	Disagree	Strongly disagree	
400	yeroo da'umsaa ogeessa dhiiraatiin deessisuun qaanii fi safuu qaba .	1	2	3	4	5	
401	Dhiirii(dhirsii) tajaajila da'umsa duraa fi qorannoo dhiigaa yeroo ulfaa gaggeessuu irratti hirmaachuu qaba .	1	2	3	4	5	
402	Tajaajila da'umsa duraa yeroo 4 kennamu keessaa inni jalqabaa baay'isee barbaachisaadha .	1	2	3	4	5	
403	Deessistuu aadaatiin deessisuun balaa qaqqabu danda'u irraa bilisa .	1	2	3	4	5	
404	Manatti dahuun balaa qaqqabu danda'u irraa bilisa mitii. .	1	2	3	4	5	
405	Dhaabbilee fayyaatti dahuun haadholee fi daa'immaniif gaaridha jettee yaaddaa?	1	2	3	4	5	
406	Ogeessi dahumsa gaggeessu(deessistuu) bufataa faya dandeettii gahaa qabu	1	2	3	4	5	
407	Ogeessi fayyaa yeroo haadholeen ciniinfuudhaan gara buufata fayyaatti dhaqan simannaa gaarii qabuu.	1	2	3	4	5	
408	Hordoffii da'umsa dura ji'oota sadan isa duraa irratti jalqabuun gaaridha jettee yaaddaa?	1	2	3	4	5	
409	Ijaamni raayyaa dubartootaa da'umsa dhaabbilee fayyaatti tasifamuuf bu'aa ni	1	2	3	4	5	

	qaba jettee yaaddaa?						
IV Programmatic factors; .accessibility, availability, affordability/Sagantoota irratti dhiibbaa kan godhan ,tajaajila dhiyoo,tajaajila argachuu,dandeettii kaffaltii							
500	Dhaabbilleen fayyaa sa'aatii 2 gadi miilaan kan deemu naannoo kee jiraa ?	1-eeyye 2,-Lakkii					
501	Ogeessi gahaa fi gahumsaa qabu jira jata?	1.Eeyyee 2.Lakkii					
502	Yeroo ciniinfuu maalin gara buufata fayyaatti dhaqxa?	1.Ambulaansii 2 Horii 3 .Istireecharii 4,wanti ittiin deemamu hin jiru					
503	Hudhaaleen (dhiibbaa)dhaabbilee fayyaatti akka hin deenye kan si godhu maali?	1, naamusa ogeessa fayyaa 2, Bakii dahumsa buffta faya mijaa mitti 3, geejjiba 4.baasii					
504	Tajaajila dahumsaaf Eenyutu deeggarsa ykn kaffaltii siif godha?	1 -dhirsa 2. ana 3 -maatii 4. durumaan yeroo qophi dahumsa duraatiin qophaa'ee jira					
505	Tajaajilli kennamu kan akka qorichaa,gu'aantii,fi yaaliin hundi baasii malee dhaabbata keessa jiraachuu hubannoo qabdaa ?	1. eeyyee 2.Lakkii					
506	Waa'ee dahumsa duraa Maddii odeeffannoo keetii eenyu?	1,-Ogeessa fayyaa 2,raadiyoo 3, Ijaarama raayyaa dubartootaa 4, -Maddi odeeffannoo hin jiru					
507	Yeroo marii Raayyaa ijaarama dubartootaa bakka haadholee ulfi itti dahanu ni murteeffatuu ?	1.Eeyyee 2.Lakkii					
508	Harki caalaan yeroo mari'atanu iddoo kamitti dahuuf itti walii galan?	1.Mana 2.Keellaa fayyaa3. Buufata Fayyaa 4.Hospitaala 5. -----kan biroo					
509	Haadholeen ulfi Dhaabbilee Fayyaatti akka dahanu ergaa maalii dabarsita?	1, Ijaarama tokko shanee cimsuu 2.hawaasa keessatti hubannoo uumuu 3.hawaasa barsiisuu 4.gaggeessaa garee fi zoonii leenjisu 5.Abbootii amantaa irratti hojjechuu					
V Institutional Delivery service utilization /Dahumsa Dhaabbilee fayyaa							
600	Ulfa kee isa dhuma dhabilee fayyaatii desse?	1.Eeyyee 2.Lakkii					
601	Daa'imma meeqa dhaabbilee fayyaatti deesse?	1,Hin jiru 2, 1 2, 2 3, 3 4, 4 5, 5 6.hunda					
602	Mmanati deess, maalif manatti deesse?	1.dhaabbileen fayyaa baay'ee waan fagaatuuf 2. firaa wajjin biratti dahuun waan gammachiisuuf 3. Ogeessi fayyaa simannaa gaarii waan namaf hi gonef 4,deessistun addaa waan nagargatuf 5.cinii nfuun salphachuu fi gabaabbachuu 6.issa darbee nagadhan waan manati daheef 6.aban mana koo waan manatii dahii nangedhef 7,kanbira					
603	Yeroo daumsa mana Eeenyutu si gargara ykn si deessisa?	1. namni na deessisu hin jiru 2.ogeessa HEF 3. leenjitu deessftuu aadaa 4 firaa 5,offumani dahee					

604	Iddoo dahumsaa murteeffachuuf wantti dhiibbaa isin irraan gahu maali? Ykn kan isin rakisu.	1 maallaqa 2, Geejjiba 3, fedhii dhirsa 4,seenaahamsa kanaan duraa fi rakkoon ture dhabamuu 6, hanqina qulqullina dhaabbilee fayyaa 5.ogeessi fayyaa simannaa gaarii godhuu dhabuu 6.kan biroo	
605	Tajaajilii idilee dahumsa duraa odeeffannoo ykn gorsa iddoo dahumsaa ni keenu?	Eeyyee (1) Lakkii (2)	
606	Ama ulfa yotatee ykn fula durati yoo ufofte, Eessatti dahuudhaaf karoofata?	mana (1), keellaa fayyaa (2) Buufata fayyaa (3), hospitaala (4) -----kan biro (5)	
607	Eeenyutti iddoo dahumsaa murteessaa?	1.dhirsa 2.suma 3 maatii 4,siif dhirsa kee 5,other-kan biro	
608	Ofii keetiif bakka itti deessu murteeffattee bekkta?	1,Yes -Eeyyee 2,No-lakkii	