Institutional Delivery Service Utilization and Associated Factors in Zala District, Gamo Goffa Zone, Southern Ethiopia, 2015.

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ABSTRACT

Background: Reducing maternal mortality is a global priority which is particularly relevant to developing countries like Ethiopia. The key to reducing maternal mortality ratio and improving maternal health is increasing attendance by skilled health personnel throughout pregnancy and delivery. This study aimed to determine the magnitude of institutional delivery service utilization and associated factors in Zala district.

Methods: A community-based cross-sectional study was conducted from March 18-30, 2015 in Zala District, South Ethiopia. Multistage sampling technique was used to select the study participants and total of 373 mothers who have delivered within one year prior to the study period were interviewed. Data was collected through face to face interviews using structured questionnaire. Analysis was carried out by using SPSS version 16. Bivariate and multivariate logistic regression analyses were carried out to examine the existence of association between the outcome variable and selected determinant factors. Variables having P-value less than 0.25 on binary logistic regression were the candidate for multiple logistic regressions. Statistical significance was considered at $p < 0.05$ and the strength of statistical association was assessed by odds ratios (OR) with 95% confidence intervals.

Results: The study indicated that only 19.8% of the respondents delivered in health institution. Among women who delivered at health institution, 13.9% deliveries were in health centers, 3.2% were in hospital and 2.7% at health posts. Factors that statistically significant association with institutional delivery service utilization in this study were; women who live in urban were approximately 4 times more likely to deliver in health institutions than rural dwellers (AOR = 3.64, 95% CI = [1.14,11.51]), women's education (AOR = 8.01, 95% CI = [2.07, 31.08]), ANC4+ visits during last pregnancy were 5 times more likely to deliver in health facilities (AOR = 5.29, 95% CI = [2.63, 12.96]) and mothers who were delivering their first babies were 13 times more likely to deliver in health facilities than those who had five and more deliveries (AOR = 12.98, 95%CI= [3.50, 28.13]).

Conclusion and recommendations: Institutional delivery service utilization was found to be low in the study area. Secondary and above level of mother`s education and ANC4+ visits were amongst the main factors that had an influence on health institution delivery. Increasing the awareness of mothers about the benefits of institutional delivery services is recommended.

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Abbreviations

ANC: Antenatal Care.

EDHS: Ethiopian Demographic and Health survey.

EMDHS: Ethiopian Mine- Demographic and Health Survey.

FMOH: Federal Minister of Health.

HEW: Health Extension Worker

MDG: Millennium Development Goal.

MMR: Maternal Mortality Rate.

SBD: Skilled Birth Attendant.

SNNPR: Southern Nations Nationalities and people's Region.

SSA: Sub-Saharan Africa.

TBA: Traditional Birth Attendants.

Chapter One: Introduction

1.1 Background

Globally, approximately 287,000 women died from causes related to pregnancy and childbirth in 2010.Of these, 162,000 were in Sub-Saharan Africa and 83,000 were in South Asia. The maternal mortality ratio ranges from 16 in the developed countries to 220 in South Asia and 500 in Sub-Saharan Africa (1). And in 2013, the maternal deaths in sub-Saharan Africa and Southern Asia are 62 per cent and 24 percent respectively (2). According to the 2011 Ethiopian Health and Demographic Survey (EDHS), maternal mortality in Ethiopia is 676 per 100,000 live births (3).

Antenatal care, delivery by skilled health professionals, and postnatal care would ensure timely management and treatment of complications to reduce maternal deaths. Despite the importance of institutional delivery in preventing maternal death, about 42 percent of the births in developing countries were delivered outside a health facility (4).

Skilled birth attendance during labor, delivery and the early post-partum period could reduce an estimated 13% to 33% of maternal deaths (5). Due to the central role of professional care at birth, skilled birth attendance was an indicator for monitoring progress towards the Millennium Development Goal 5(MDG5) of reducing maternal mortality ratio by 75% between 1990 and 2015 (6).

The proportion of births that occur at home remains high in Ethiopia, and skilled health professionals attend very few births. The proportion of births attended by a skilled health professional and delivered in a health facility is 10 percent (3). This rate is in the lowest bound by sub-Saharan Africa standard. The Federal Ministry of Health of Ethiopia (FMOH) identified institutional delivery rate as one priority area in the national Reproductive Health strategy and targeted to increase it to 60% by 2015 (7).

1.2 Statement of Problem

The maternal mortality ratio in developing regions was 230 maternal deaths per 100,000 live births in 2013. It is fourteen times higher than that of developed regions, which recorded only 16 maternal deaths per 100,000 live births in 2013 (2). In Ethiopia, maternal mortality in year 2013 was estimated to be 420 per 100,000 live births which were significantly different from year 2011 (3, 8).

Health facility delivery of mothers is one of the interventional options proven to reduce the risk of complications and infection that can cause maternal and neonatal morbidity and mortality and also it is one of the millennium development goal indicators to track national efforts towards safe motherhood (9). In the strategy of safe motherhood initiative strongly emphasizes ensuring the availability and accessibility of skilled care during pregnancy and childbirth, of which institutional delivery is one element. Hence, an important component in the effort to reduce the health risks of mothers and children is to increase the proportion of babies delivered in a safe and clean environment and under the supervision of health professionals (10).

In Ethiopia, Births attended by skilled personnel are very much lower than Sub-Saharan Africa (SSA). According to the report of EMDHS 2014, the proportion of births occurring in health facilities is only 15%. Mothers delivered by Traditional Birth Attendants (TBAs) 27% and the majority of births were attended by a relative or some other person (51%) and 5% of all births were delivered without any type of assistance at all (11). However, the proportion of births attended by skilled personnel in health institution is increased slowly from 2011 to 2014. The majority of Ethiopian women give birth at home without skilled attendants (3, 11).

Even though, the uniformity in programme designs throughout the country, there is considerable regional variation in the utilization of health institutions for delivery and other maternal health services. Though many studies have been carried out to identify and understand why maternal health care services are underutilized in Ethiopia, there is still no remarkable change. In 2014 Ethiopian Mini-Health and Demographic survey, nationally skill delivery is 15% and it is 12% in Southern Nations Nationalities and people's region (SNNPR) (11). In other words, Utilization of institutional delivery service by in large is very low which holds back movement towards Millennium Development Goals (MDGs).

The Ethiopian government is committed to achieving Millennium Development Goal 5 (MDG5), that is, to improve maternal health, with a target of reducing the maternal mortality rate by 75% from 1990 to 2015 (12,13). Accordingly, the Federal Ministry of Health (FMOH) has used a multitasking approach to reducing maternal morbidity and mortality; which includes improving access to and strengthening facility-based maternal and newborn services, which is also a strategic objective of the health sector development plan IV (13).

In the study area, according to District health office 2013/14 annual report there is 56% of ANC coverage but only 9% of births attended by skilled birth attendants in the health centers (14). So the present study is intended to contribute to bridging the information gap and the coverage of institutional deliveries in the area.

1.3 Significance of the Study

Understanding contextual factors that hinders delivery in health facilities are particularly important in order to narrow the existing gaps among regions and improve quality of health service delivered to pregnant mothers to reduce maternal morbidity, mortality and disabilities that are related to pregnancy and childbirth. Therefore, the need to find out factors that have to be considered significant to improve delivery in health facilities in Zala district.

The study was conducted to examine the current status of institutional delivery rate and associated factors in the district. The information obtained is useful for the community and decision makers at the district and regional level in planning, implementing and evaluating various interventions related to research findings to reduce maternal mortality rate and achieve millennium development goals.

CHAPTER TWO: LITERATURE REVIEW

Maternal mortality remains a major global public health concern more than twenty years after the international Safe Motherhood Initiative was launched. Globally, the number of estimated maternal mortality decreased between 1990 and 2013, from 380 to 210 deaths per 100,000 live births. However, this still falls far short of the MDG target to reduce the maternal mortality ratio by 2015 (8)

Delivery by skilled birth attendance serves as an indicator of progress towards reducing maternal mortality (15). Place of delivery is a crucial factor which affects the health and wellbeing of the mother and the newborn. If problems may arise during labour and delivery not treated properly and effectively can lead to ill health and even death of one or both of them (16).

There were a number of studies have sought to identify factors that are associated with institutional delivery service utilization. Studies in India and Pakistan reported that institutional delivery significantly associated with maternal education, household wealth, maternal age, autonomy of the mother and physical access to health institution (17, 18). In those studies educational status of the mother was regarded as the most important factor to determine institutional delivery (17, 18).

Distance from the health facility is also a barrier to access health facility delivery in rural areas cause higher number of women to deliver in their homes. Study in Nepal reported that 48% of mothers delivered their babies with the assistance of skilled birth attendants (SBA). It revealed that distance to a health facility and antenatal care visits were determining factors for the utilization of SBAs (19).

Mother's literacy level is also important determinant of place of delivery as those with non-formal education tend to deliver at home, and those educated tend to give birth's in health facilities. Study conducted in Kenya also revealed that mothers who attended higher education level were two times more likely to delivery in health facility than those had no education. And antenatal care visits and parity were also significant determinants of health facility delivery (20).

Cross-sectional survey conducted in three districts of Tanzania, reported that 74.5% of the 915 women delivered at health facilities. It reported that better quality of antenatal care (ANC) increases institutional delivery (21).

Community based study conducted in Sekela District, North West of Ethiopia, revealed that 12.1% of the mothers delivered in health facilities. Majority, 87.9% mothers who gave birth at home. It reported that mothers' place of residence was strongly associated with institutional delivery service utilization. It was further found in the same study that ANC visit during last pregnancy, maternal education level had significant association with institutional delivery service utilization (22).

Another study conducted in Munisa Woreda, South East Ethiopia, reported that 12.3% of childbirths took place at health facilities. That shows majority of Ethiopian women give birth at home without skilled attendants. It also revealed that residence, age of mother, parity, mothers' and husbands' education level and antenatal care (ANC) visit during last pregnancy had significant association with institutional delivery service utilization (23).

Also other community based study conducted in Dodota Woreda (district), Oromia regional state, reported that 18.2% of mothers delivered in health institution. Urban residence, educational level of mothers and pregnancy related health problems were significantly associated with institutional delivery service utilization. But it reported that ANC attendance during the index pregnancy had no association (24).

Another community based study conducted in Bahir Dar City administration, Amhara region, found that 78.8% of women gave birth to their current child at health facilities. Age at first marriage, educational status of the women and gestational age at first ANC visit were factors affecting institutional delivery service utilization (25).

Trends documenting the change in the proportion of births attended by skilled professionals over the last 15–20 years offer no indication that adequate change is happen. To reduce maternal mortality rapidly in regions where births in the home without skilled birth attendants are common, governments and community-based organizations could implement cost-effective strategies (26).

Conceptual Framework of the Study

This study tried to identify different factors that may affect women's delivery service utilization provided at health institution. The socio demographic characteristics such as the variables place of residence, age of mother at delivery, marital status, educational status of mothers and husbands, occupational status of mothers and husbands, family size and monthly household income. The obstetric and maternal variables such as antenatal care service utilization, total number of pregnancy, birth order, pregnancy related problems and duration of labor. And the health service factors include distance from health facility and availability of skilled delivery services (Figure 1).

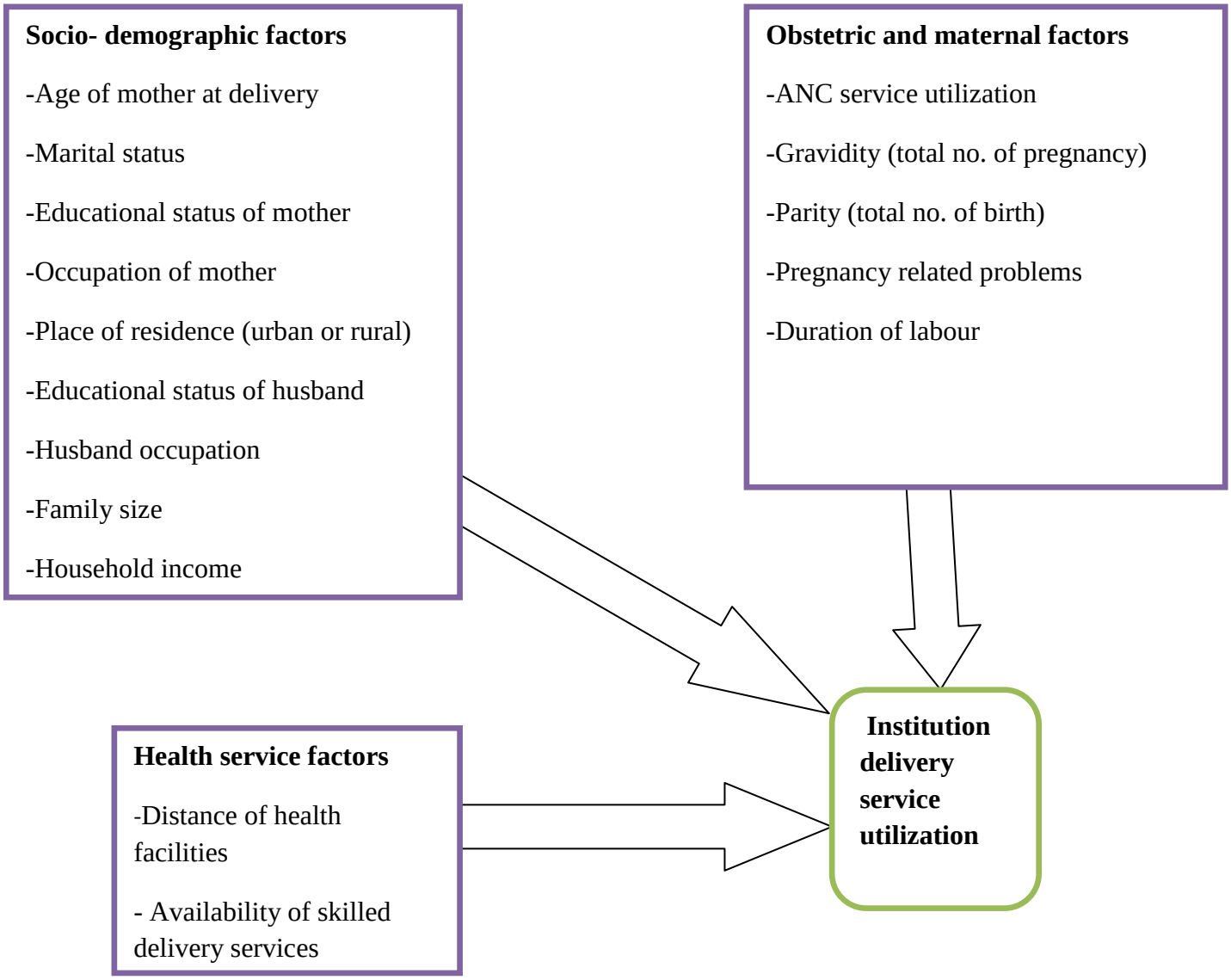

Figure 1 Conceptual framework of factors associated with institutional delivery service utilization adapted from review of different literatures in Zala district, 2015.

CHAPTER THREE: Objectives

3.1 General Objective

To assess the institutional delivery service utilization and associated factors among childbearing women who have delivered within one year prior to the study in Zala district, Southern Ethiopia.

3.2 Specific Objectives

1. To determine the magnitude of institutional delivery service utilization within one year prior to the study in Zala district, 2015.
2. To identify factors associated with institutional delivery service utilization in Zala district.

CHAPTER FOUR: METHODS AND MATERIALS

4.1 Study area and Period

The study was conducted from March 18–30, 2015 in Zala district, Gamo Goffa Zone SNNPR. Zala district is one of the fifteen rural districts of Gamo Goffa Zone of South Nation Nationalities and Peoples state. The district is bordering Kamba district in the East, Uba Debiretsahay district in the south, Daramalo district in the North and Demba Goffa district in the West. Galma town is serving as a capital for Zala district which is 186 Kms from capital town of Gamo Goffa Zone (Aribaminch) and 485 Kms away from Addis Ababa city.

The district consists of 1 urban and 34 rural kebeles with an estimated population of 93,199, of whom 45,668 are men and 47,531 women. The number of child bearing women (15–49 years) is 21,809 and expected delivery/ regional annual crude birth rate is 3.46%. The vast majority of the population lives in rural villages. The livelihood of the population is mixed farming which is dependent on rain fed agriculture (16).

The health infrastructure in the district comprises of 5 health centers, 34 health posts, and 7 private clinics in the district. With regard to human power there are 3 health officers, 34 clinical nurses, 9 midwives, 4 lab technician, 3 sanitarian, 4 pharmacy technician, 68 health extension workers and 26 supportive staffs in the district.

All these health centers have skilled delivery facilities. There is no district hospital but the general hospital (Sawla Hospital) which is about 52 km away serves as the first referral point for emergency obstetric care.

4.2 Study Design

Community-based cross-sectional study was conducted in Zala district, Gamo Goffa Zone, southern Ethiopia.

4.3 POPULATION

4.3.1 SOURCE POPULATION

All childbearing age women (15-49 years of age) were included in Zala district, Gamo Goffa Zone, southern Ethiopia.

4.3.2 STUDY POPULATION

Sampled Childbearing age women who delivered within one year prior to the study in the selected households in Zala districts, Gamo Goffa Zone, southern Ethiopia.

4.4 INCLUSION EXCLUSION CRITERIA

4.4.1 Inclusion Criteria

All childbearing age women who delivered within one year**,** resident in the area and available during data collection period were included.

4.4.2 Exclusion Criteria

Women who unable to respond because of severe illness were excluded from the study.

4.5 SAMPLE SIZE and SAMPLING TECHNIQUE/PROCEDURE

4.5.1 Sample Size Determination

Sample size was determined by using the single population proportion formula. The following assumptions were used while calculating the sample size. Level of significance to be 5% ($\alpha = 0.05$), $Z\ \alpha/2 = 1.96$, margin of error to be 5% ($d = 0.05$) and proportion of mothers who gave birth at the health institutions in SNNPR assumed to be 12% taken from EMDHS 2014 (12). Considering a design effect of 2 owing to the use of multistage sampling the required sample size was:

$$n = \frac{(Z\ \alpha/2)^2 P\ (1-P)}{d^2} = \frac{(1.96)^2\ 0.12\ (1-\ 0.12)}{(0.05)^2} = 162$$

Since multistage sampling technique was used, the sample size was multiplied by the design effect of two. The required sample size became 324. After 15% of non response was added, the final sample size was determined to be 373. Then, the total sample was allocated proportionally to each of the 11 selected kebeles by using population proportion to size (PPS) formula.

4.5.2 Sampling Technique/Procedure

A multi-stage sampling technique was used to select the study population. Probability sampling in a form of simple random and two-stage sampling methods was used for selecting the required size from the study area**.** In the district there were one urban and 34 rural kebeles during the study time. The first stage of the sampling was started by selecting one urban kebele and 10 rural kebeles randomly by lottery method.

In the second stage, all households with women who had delivered within one year prior to the study in selected kebeles were listed from family folder in the health posts. The sample size was allocated to each selected kebele by population proportion to size formula. And households from each kebele were selected again by simple random sampling by using computer generated randomized number.

Table 1 show that 11 Kebeles were selected randomly by lottery method and the sample size was distributed to Kebeles by population proportion to size (PPS) formula.

Table 1 Randomly selected kebeles with population in Zala district, 2015.

s. No.	Randomly selected Kebeles	Total pop.	Household (HH)	Delivered mothers in 1year	% proportion for sample n/1084	Study subjects
1	**Galma**	3008	614	104	10%	38
2	**Ambigayle**	1945	397	67	6%	22
3	**Gayla**	3821	780	132	12%	46
4	**Borize chencha**	4012	819	139	13%	48
5	**Shambara**	3285	670	114	10%	37
6	**Bola**	2129	434	74	7%	26
7	**Gissa**	3155	644	109	10%	37
8	**Debochi**	1889	386	65	6%	22
9	**Genda**	2149	439	74	7%	26
10	**Kaysha**	2362	482	82	8%	31
11	**Tsanga**	3578	730	124	11%	40
	Total	27055	5522	1084	100	373

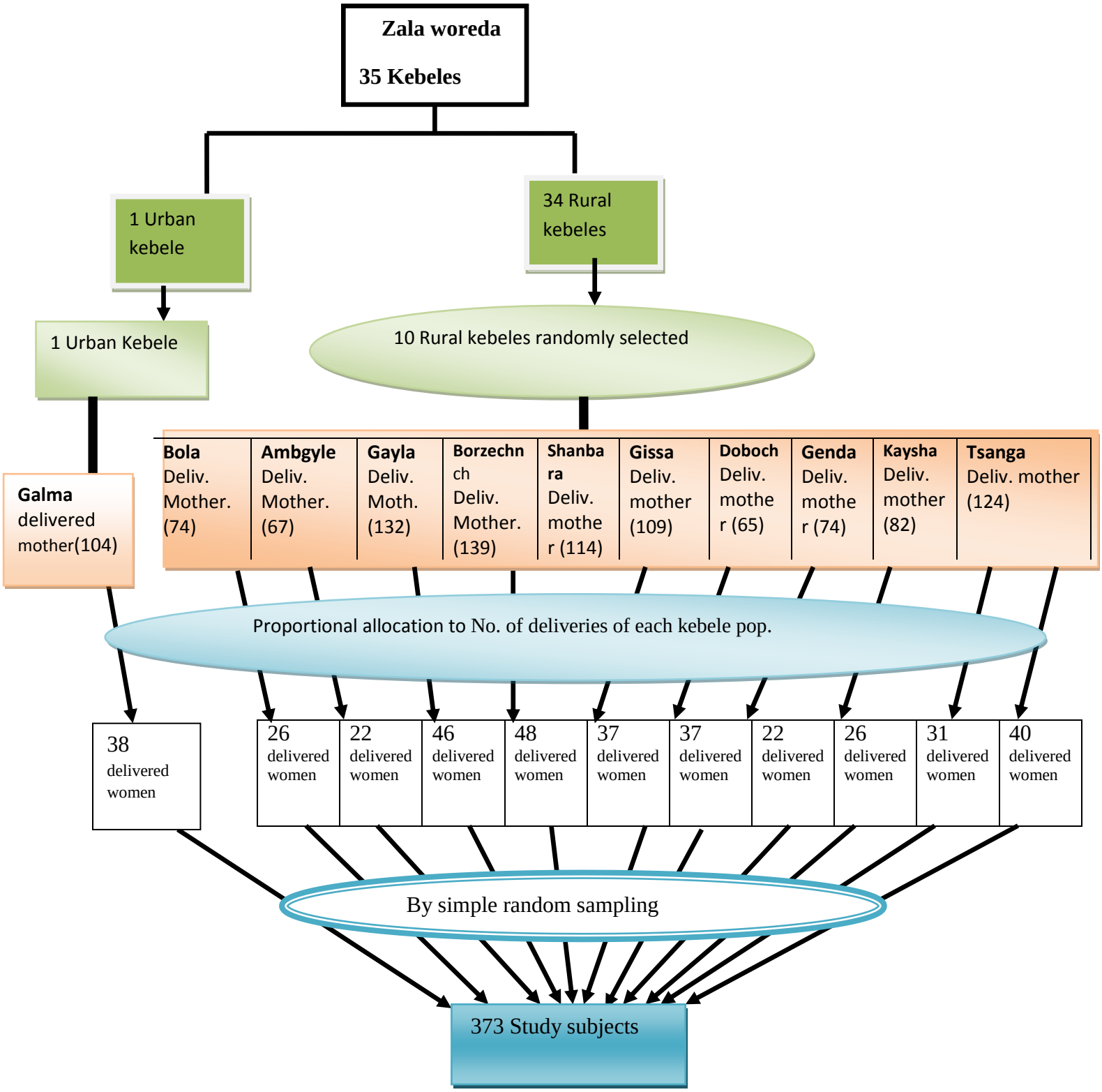

Figure 2 Schematic presentation of sampling procedure for the study of institutional delivery service utilization and associated factors in Zala district, 2015.

4.6 Study Variables

4.6.1 Dependant Variable

Utilization of institutional delivery service.

4.6.2 Independent Variables

Socio-demographic factors (age of the mother, family size, occupational status, educational status, residential place, monthly family income), **Obstetric and maternal factors** (number of ANC visits, number of pregnancy, birth order, pregnancy related problems and duration of labour) , **health service factors** (distance from health facility and availability of skilled delivery services)

4.7 Data Collection Procedures (Instruments, Personnel, Data Quality Control)

4.7.1 Data Collection Methods

Data were collected through face to face interviews using pre-tested structured questionnaire.

4.7.2 Data Collection Instruments

First English structured questionnaire was developed and adapted from EDHS and other published literatures (3, 24). The English version questionnaire was translated later into the local language of the study area; Goffegna by an individual who had very good knowledge of English and local language (Goffegna) for better understandability of the tool by enumerators and respondents. Another independent translator who has had knowledge of the two languages again translated back into English version. Comparisons were made on the consistency of the two versions.

4.7.3 Data Collection Procedures

Data were collected by nine diploma nurses through house to house survey and face to face interview to get eligible mothers. Three degree health professionals were assigned to supervise the data collection process after they trained, together with the data collectors. Training was given to the data collectors for two days and for supervisors one day before the actual data collection regarding the aim of the study and data collection tool going through the questionnaires.

4.8 Data Quality Assurance

The instrument was pre-tested on 5% of the total sample size at Zelande kebele, three days prior to the actual data collection, data collectors were trained and supervised, and consistency of the data was checked every day, incomplete question was filled by callbacks.

4.9 Operational Definition

Institutional delivery: Deliveries/births occurred in hospitals, health centers and health posts.

Skilled birth attendant: Health professional such as a doctor , midwife, health officer or nurse- who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth, and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns (26).

4.10 Data Analysis Procedure

Data was entered into EPI data version 3.1 and exported to SPSS version 16.0 software package for analysis. The results were presented in the form of tables, figures and texts using frequencies and summary statistics such as mean, standard deviation, and percentage to describe the study population in relation to relevant variables. Associations between dependent and independent variables were assessed using logistic regression. First bivariate analysis between independent and dependent variables was done, then all independent variables that with p-value <0.25 in the bivariate analysis was included in the multivariate model.

Multivariate logistic regression was done using back-ward stepwise logistic regression to assess individual effect of variables on utilization of institutional delivery services. Crude and adjusted odds ratio with 95% confidence interval were calculated using binary and multiple logistic regression, respectively. Those variables with p-value <0.05, in the multivariate analysis, were considered as significant factors associated with institutional delivery.

4.11 Ethical Clearance

Before conducting the study, the proposal was approved by Institutional Review Board (IRB) of College of Health Sciences of Jimma University. Then the permission letter to conduct the study was also obtained from Gammo Goffa Zone health department and from Zala District administrative and health offices. Informed consent was obtained from the study participants after they were informed about objectives and procedures of the study and their right to refuse participation any time they want was assured. Participation in the study was after their verbal consent was obtained. Participants were also informed that all data obtained from them was kept confidential by using codes instead of any personal identifiers.

4.12 Dissemination of Findings

The findings of the study first and foremost rendered to Jimma University scientific community in a defense whilst duplication was placed at Jimma University library, and also to department of health economics, health management and policy, college of public health and medical sciences. It will be shared to Zala District Health Office and Gammo Goffa Zone Health Department to act on the recommendations of the study. National and international publication centers are also deemed to deliver the thesis for peer review and publications.

CHAPTER 5: RESULTS

5.1 Socio-Demographic Characteristics of the Respondents

A total of 373 mothers who gave birth in the last one year prior to the data collection time were interviewed; with 100% participation rate. Of these, 335(89.8%) were rural and 38 (10.2%) were

urban residents. The mean age of the respondents was 27.1 years with a standard deviation (SD) of 4.88 years. Among the respondents 72.4% were protestant Christians and 27.1% were orthodox Christians. Majority 356 (95.4%) of the respondents were married. Regarding Ethnic groups, 359 (96.2%) and 12 (3.2%) of respondents were Goffa and Gammo respectively. Educational level of participants, one hundred twenty six (33.8%) reported primary school and 145(38.9%) reported that they were educated up to secondary school and above. About one hundred two (27.3%) of respondents had no educational level. Also 152 (42.7%) of husbands were educated up to primary school, 173(48.6%) were Secondary and above.

Majority, three hundred forty six (92.8%) of respondents were house wives and 13(3.5%) of them were government or private employee. Two hundred seventy six (77.5%) of husband's occupational status were farmers and 75(21.1%) of them were government or private employee. The family size, living in a house during the study period were 203(54.4%) up to five and 170(45.6%) above five. Monthly household income of the respondents, fourteen (3.8%) of them had less than 500ETB and 342(91.7%) of respondents had between 500ETB to 1500ETB.

One hundred one (27%) of the respondents had radio and 12 (3.3%) had TV in their home during interview period. Concerning the time they travelled on foot to reach the nearby health center, 266 (71.3%) of them said less than one hour, 76 (20.4%) said between one to two hours and 31 (8.3%) said more than two hours (Table 2).

Table 2 Socio-demographic characteristics of mothers (n= 373) in Zala district, Southern Ethiopia, March, 2015.

Variables	Frequency	%
Place of residence		
Urban	38	10.2
Rural	335	89.8

Age of the mothers at interview(Mean, SD, 27.1 ± 4.88)		
15-19	10	2.7
20-24	106	28.4
25-29	161	43.2
30-34	64	17.2
≥35	32	8.6
Marital status		
Married	356	95.4
Widowed	8	2.1
Divorced/separate	6	1.6
single	3	.8
Religion		
Orthodox	101	27.1
Protestant	270	72.4
Islam	2	.5
Ethnicity		
Goffa	359	96.2
Gammo	12	3.2
Amhara	2	.5
Occupation of mother		
Housewife	346	92.8
Government/private employed	13	3.5
Other*	14	3.7
Educational status of mother		
No education	102	27.3
Primary(G1-8)	126	33.8
Secondary and above	145	38.9
Occupation of husbands (n=356)		
Farmer	276	77.5
Government/ Private employed	75	21.1
Other**	5	1.4
Educational level of husband (n=356)		
No education	31	8.7
primary(G1-8)	152	42.7
Secondary and above	173	48.6
Family size in house		
≤5	203	54.4

>5	170	45.6
Monthly household income		
<500	14	3.8
500-1500	342	91.7
>1500	17	4.6
Have radio or television in the home		
Yes	113	30.3
No	260	69.7
Travel time to nearby health institution		
Less than one hour	266	71.3
One to two hour	76	20.4
Above two hour	31	8.3

*Merchant, daily labor, student ** carpenter, merchant.

5.2 Obstetric characteristics of the respondents

Majority, 220 (59%) of the respondents had been pregnant for two to four and110 (29.5%) more than five in their life. Two hundred thirty one (61.9%) of the respondents were between para two and four while 25.2% were parity five and above. Three Hundred twenty nine (88.2%) of the respondents had ANC visit during their last pregnancy. Among the mothers who attended ANC, 191 (58.1%) of them visited health facility for two to three times and 86(26.1% of them, made four and above visits during their recent pregnancy. Three Hundred twenty (97.3%) of the ANC attended mothers obtained information about delivery place during antenatal visits. Out of the total respondents, only 74 (19.8%) mothers gave birth at health institution and 49 (66%) of them were attended by nurse/ midwife. Of these, 52 (13.9%) gave birth at health center and 12 (3.2%) at hospital.

Majority of the respondents 299 (80.2%) were delivered in home without skilled professionals. Among those who gave birth at home, 214 (71.6%) of delivered mothers were assisted by their families or relatives, 31 (10.3%) by health extension workers and 54 (18.1%) by traditional birth attendants (TBAs). Regarding the duration of labor, Three Hundred fifty one (94.1%) of them responded that their labor took less than half a day and 22 (5.9%) more than half a day. The

problems during labor and birth for the index pregnancy; Three Hundred fifty four (94.9%) of respondents report no problems faced during time of labor and birth (Table 3).

Table 3 Obstetric characteristics of mothers in Zala district, Southern Ethiopia, March 2015.

Variables	Frequency	%
Ever pregnancy (n=373)		
1	43	11.5
2-4	220	59.0
≥5	110	29.5
Birth order (n=373)		
1	48	12.9
2-4	231	61.9
≥5	94	25.2
ANC visit during last pregnancy (n=373)		
Yes	329	88.2
No	44	11.8
Number of ANC visits (n=329)		
Only one	52	15.8
Two to three	191	58.1
Four and above	86	26.1
Obtaining information about health institution delivery during ANC visit (n=329)		
Yes	320	97.3
No	9	2.7
Assistance during health institution delivery (n=74)		
Nurse/ Midwife	49	66.2
Health officer	5	6.8
Doctor	10	13.5
HEW	10	13.5
Assistance during home delivery (n=299)		
TBA	54	18.1
Families or relatives	214	71.6
Health extension worker	31	10.3
Duration of last Labor (n=373)		
Less than half a day	351	94.1
More than half a day	22	5.9
Problems faced during labor and birth (n=373)		

Yes	19	5.1
No	354	94.9

5.3 Institutional Delivery Service Utilization

From the total respondents, only 74 (19.8%) of them gave birth at health institutions and majority of them two hundred ninety nine (80.2%) delivered at home. Out of those mothers who delivered at home, 214 (71.6%) were assisted by families or relatives. Regarding health institution delivery, fifty two (13.9%) delivered in health centers, 12(3.2%) in government hospital and 10(2.7%) in health posts (Figure 3).

Figure 3 presents the percentage distribution of place of birth. 52(13.9%) of mothers were delivered in health centers, 12(3.2%) in hospital, 299 (80.2%) of respondents were delivered in home and 10(2.7%) were delivered in health posts.

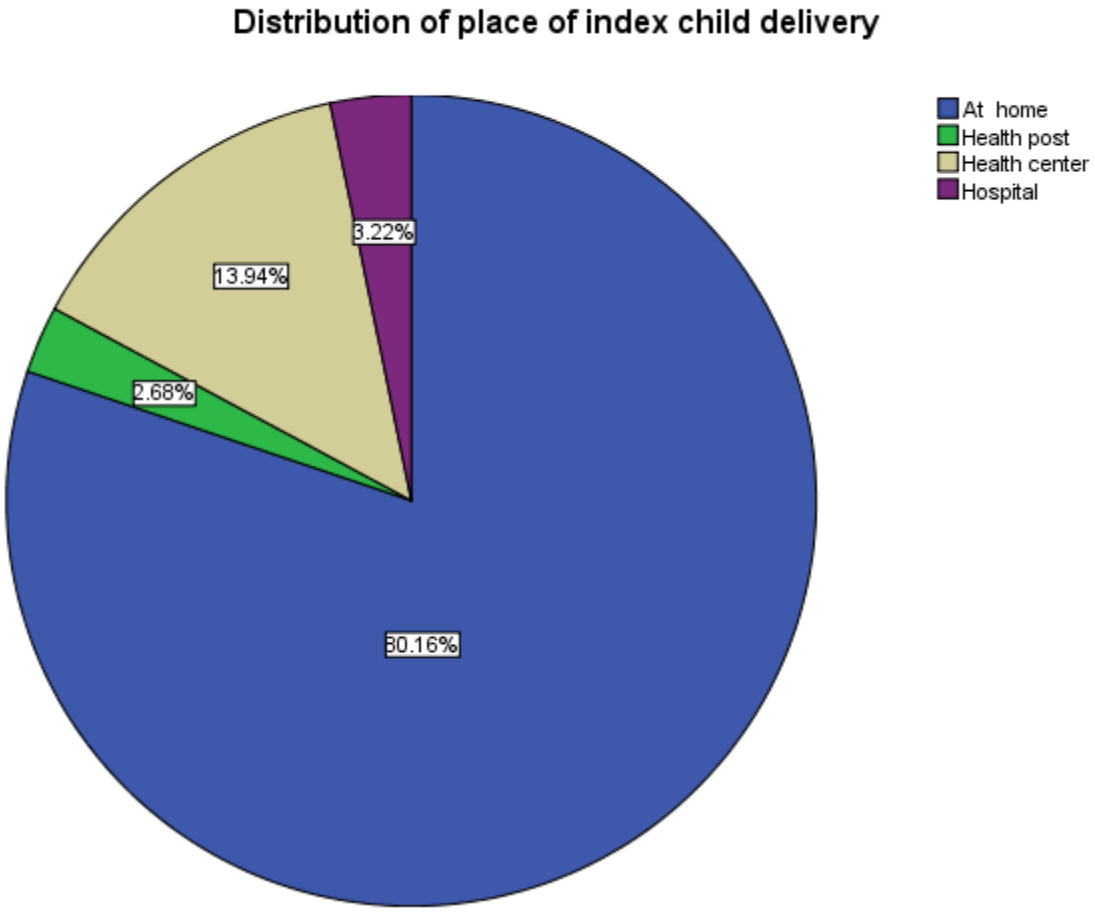

Figure 3 Percentage distributions of Places of delivery among women who gave birth in the previous one year in Zala district, March 2015.

5.4 Factors associated with institutional delivery service utilization

On bivariate analysis, place of residence, age of mother at interview, occupational status of the mother, educational status of the mother, number of ANC visits at last pregnancy, number of pregnancies (gravidity) and number of birth order (parity) were the factors that associated with institutional delivery service utilization. Similarly, monthly household income, distance of nearby health facility, educational status and occupation of husbands showed association with institutional delivery service utilization (Table 4).

Table 4 Bivariate analysis of factors associated with institutional delivery service utilization among mothers in Zala district, South Ethiopia, March 2015.

Variables	Institutional delivery service utilization				Crude OR (95% CI)	p-value
	Yes	%	No	%		
Place of residence						
Urban	14	36.8	24	63.2	2.67(1.31, 5.47)	.007
Rural	60	17.9	275	82.1	1.00	
Age of the mother at interview						
15-24	42	36.2	74	63.8	17.60(2.32, 65.43)	.000
25-34	31	13.8	194	86.2	4.95(0.65, 37.61)	
≥35	1	3.1	31	96.9	1.00	
Occupation of mother						
Housewife	59	17.1	287	82.9	1.00	.000
Government/ private employed	11	84.6	2	15.4	.51(0.16, 1.69)	
Other*	4	28.6	10	71.4	13.75(2.05, 92.04)	
Educational status of mother						
No education	3	2.9	99	97.1	1.00	.004
Primary(G1-8)	20	15.9	106	84.1	6.23(1.79, 21.60)	
Secondary and above	51	35.2	94	64.8	17.90(5.40, 59.33)	
Occupation of husband						
Farmer	36	13	240	87	1.00	.000
Government/ Private employed	35	46.7	40	53.3	5.83(3.29, 10.35)	
Other**	1		4		1.67(0.18, 15.33)	
Educational level of husband						
No education	4	12.9	27	87.1	1.00	.05
primary(G1-8)	24	15.8	128	84.2	1.27(0.41, 3.95)	
Secondary and above	44	25.4	129	74.6	2.31(0.76, 6.95)	

Monthly household income						
<500	1	7.1	13	92.9	1.00	.01
500-1500	63	18.4	279	81.6	2.94(0.37, 22.85)	
>1500	10	58.8	7	41.2	18.57(1.95, 97.49)	
Travel time to nearby health institution on foot						
Less than one hour	58	21.8	208	78.2	1.5(0.87, 2.91)	.13
Greater than/ equal to one hour	16	14.9	91	85.1	1.00	
Gravidity						
1	23	53.5	20	46.5	16.92(6.41, 44.74)	.002
2-4	44	20	176	80	3.67(1.59, 8.46)	
≥5	7	6.3	103	93.7	1.00	
Parity/Birth order						
1	23	47.9	25	52.1	11.43(4.39, 29.73)	.000
2-4	44	19	187	81	2.92(1.26, 6.75)	
≥5	7	7.4	87	92.6	1.00	
ANC4 + visits						
Yes	54	62.8	32	37.2	18.21(9.99,35.43)	.000
No	20	8.2	223	91.8	1.00	

*Merchant, daily labor, student ** carpenter, merchant.

In the multivariate logistic regression analysis only place of residence, educational status of the mother, number of ANC visits at last pregnancy and number of birth order (parity) were found to be significantly associated with the institutional delivery service utilization.

Mothers who were urban residents were approximately 4 times more likely to deliver in health institutions than rural mothers (AOR = 3.64, 95% CI = [1.14, 11.51]). Mothers with educational level of secondary school and above were about 8 times more likely to give birth in health facilities than those non-educated. (AOR = 8.01, 95% CI = [2.07, 31.08]). Similarly women who had primary education had more than 5 times (AOR= 5.33, 95% CI= [1.30, 21.86]) higher chance of delivering in health facilities compared to the non-educated.

ANC visit during last pregnancy was also found to be a strong predictor of institutional delivery service utilization. Mothers who had ANC4+ visit during last pregnancy were 5 times more likely to deliver in health facilities than those who less ANC4+ visit during last pregnancy (AOR = 5.24, 95% CI = [2.63, 12.96]). Parity was also another important factor which was associated with the place of delivery. Mothers who had first delivers were 13 times (AOR =

12.98, 95%CI= [3.50, 28.13]) more likely to utilize health institution delivery as compared to those who had five and more deliveries (Table 5).

Table 5 Multivariate analysis of factors associated with institutional delivery service utilization among mothers in Zala district, South Ethiopia, March 2015.

Variables	Institutional delivery service utilization				Crude OR (95% CI)	Adjusted OR (95% CI)
	Yes	%	No	%		
Place of residence						
Urban	14	36.8	24	63.2	2.67(1.31, 5.47)	3.64(1.14, 11.51)*
Rural	60	17.9	275	82.1	1.00	1.00
Educational status of mother						
No education	3	2.9	99	97.1	1.00	1.00
Primary(G1-8)	20	15.9	106	84.1	6.23(1.79, 21.60)	5.33(1.30, 21.86)*
Secondary and above	51	35.2	94	64.8	17.90(5.40, 59.33)	8.01(2.07, 31.08)*
Parity/Birth order						
1	23	47.9	25	52.1	16.92(6.41, 44.74)	12.98(3.50, 28.13)*
2-4	44	19	187	81	3.67(1.59, 8.46)	3.07(1.08, 8.77)*
≥5	7	7.4	87	92.6	1.00	1.00
ANC4 + visits						
Yes	54	62.8	32	37.2	18.21(9.99,35.43)	5.29(2.63, 12.96)*
No	20	8.2	223	91.8	1.00	1.00

*Statically significant at $p < 0.05$

CHAPTER 6: DISCUSSION

The study attempted to identify the magnitude of institutional delivery service utilization and associated factors among mothers who gave birth in one year prior to the study in Zala District. The results of the study revealed that the proportion of women who delivered at health facilities was 19.8% in the District and that the vast majority of mothers (80.2%) gave birth at home. This result was slightly higher when compared with the EMDHS reports of 2014 which showed that the percentage of national and the SNNPR deliveries attended by skilled health personnel were 15% and 12.2% respectively [11]. The reasons may need to be explored further but can be due to the Health Extension Workers (HEWs) residing in the villages facilitate health facility delivery by calling ambulance for laboring mothers.

The result was in line with that of a study done in Dodota Woreda (district), Oromia regional state in 2012, which was 18.2% [24]. This slight difference between this study and the previous ones (18.2 Vs 19.8%) may be due to the difference in study settings and there might have been improvements in accessibility and utilization of health institution delivery service. However, it was lower than those of studies conducted in Western Kenya and Tanzania where the proportion of women who gave birth at health facilities was 48% and 74.5% respectively [20, 21]. The difference could be explained by the fact that mothers in these countries had better educational status and better ANC service utilization.

In this study, the factors that significantly influenced delivery at a health institution were; place of residence, educational status of woman, ANC four times or more visit during last pregnancy and number of birth order (parity).

Residence of the respondents was significantly associated with institutional delivery service utilization. Mothers who lived in urban kebeles were about 4 times more likely to deliver in health institutions as compared to those who lived in rural kebeles. This finding was in line with studies done in Sekela District, North West of Ethiopia and Munisa Woreda, South East Ethiopia, which showed that mothers living in urban areas were 2 and 5 times more likely to deliver in health institutions than rural dwellers, respectively [22, 23]. The possible explanation for this finding could be due to the presence of higher proportion of educated mothers in urban settings as compared to rural settings. In addition to this, mothers in urban area could get

maternal and other health services nearby and had better access to information than rural mothers.

The results of this study showed that maternal education was significantly associated with institutional delivery service utilization. Women with higher level of education (secondary and above) were about 8 times more likely to deliver at health facilities than those who were unable to read and write. And the mothers who attended primary education were 5 times more likely to delivery at health facility than mothers who had no education. This finding is similar with those of studies conducted in different parts of Ethiopia [22-25], India and Pakistan [17, 18]. These might be due to the fact that educated women had better awareness about the benefits of preventive health care and health services. They might also have higher receptivity to new health related information. Familiarity with modern medical culture, better communication with husbands, more decision-making power, increased self-worth and self-confidence were also the characteristics of urban women which might have contributions to better utilization of health facility delivery than rural women.

Our study also revealed that parity was strongly associated with institutional delivery service utilization. Those women who had one child were 13 times as likely to deliver in a health institution compared with women having above four children. This is consistent with the study done in Munisa Woreda South East Ethiopia [23], where delivery in a health facility was observed to be more frequent amongst mothers for their first birth. The possible explanations might be women who have large number of children would spend time caring for the children. In addition, previous uneventful pregnancies and deliveries may lead to undermine risks for poor outcomes. It is also likely that as the family size increases, fewer resources are available, preventing them from seeking attention at a health facility.

This study showed that mothers who had ANC four times or more visits during the last pregnancy were about 5 times more likely to deliver at health institution compared to those who visit less than ANC four times or more visits during their last pregnancy. The result was consistent with other studies done in Nepal, Kenya, which showed that mothers who attended ANC four more visits were 3 and 2 times more likely to deliver in health institutions than those who did not, respectively [19,20]. The studies in Munisa Woreda, South East Ethiopia and Sekela District, North West of Ethiopia, which revealed that mothers who attended ANC follow

up were 4 times more likely to deliver at health facilities than those who did not attend [22,23]. These might be due to the fact that ANC services can provide opportunities for health workers to promote a specific place of delivery or give women information on the status of their pregnancy which in turn alerts them to decide where to deliver.

6.1 Limitation

The findings of this study should be interpreted with the following limitations. As a cross-sectional study requires respondents to remember information retrospectively, recall and interviewer bias are the potential limitations of this study. Recall bias cannot be ruled out about events that took place further from the period of data collection.

Chapter 7: Conclusion and Recommendations

7.1 CONCLUSION

This study revealed that the proportion of women who gave birth in health institution in the district was low. Still large proportion of women gave birth at home without attended by skilled birth attendant. In general, the study has revealed that place of residence, women educational status, birth order and attending antenatal care four times or more were significant predictors of institutional delivery service utilization in the study area.

7.2 RECOMMENDATIONS

However, the reasons could be multifactorial. In the light of these findings, a focus on increasing demand for existing services through improving quality of services seems the most rational approach.

Therefore, Zala district health office and health centers should make efforts to increase community based health education, awareness creation and improve better access to information for women's regarding health institutional delivery service utilization will be imperative. And improving women's educational opportunities is very important, which in turn will enhance the use of delivery care services.

In health centers, more efforts are required to educate women on antenatal care follow up that provides opportunity to inform that pregnancy and giving birth is risk at any time and age.

Also at community level, health extension workers should promote completion of ANC four and more visits as those attending antenatal care acquire enough information about institutional delivery and majority of those attending four and more visits ending up deliver in health facility.

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Annex 1

Jimma University – college of public health and medical science

English Version of Structured Questionnaire for interview of women to assess the utilization of institutional delivery service and associated factors in Zala district southern Ethiopia.

Verbal consent

Greeting

Hello! My name is _____ and I am from Zala district health office. We are conducting a study on institutional delivery service utilization and associated factors in Zala district. You are kindly requested to be included in the study, which will have importance in improving maternal health services. The interview will take about 30 minutes. Your participation is voluntary and you have the right not to participate fully or partially. Your decision about not to participate is respected. You may stop the interview at any time.

The study has approval from Jimma University.

Now, do you agree to participate in the survey?

.

If yes, continue interviewing. If No, thank and stop interviewing.

Name of the interviewer _____ Sign. _____ Date of interview_____

Name of the supervisor_ _____Sign. _____ Date_____

Identification Information

001. Code No. _____

002. Kebele _____House no. _____

Section 1: Socio-demographic Information

Q.#	Question	Codes	Go to Q
101	How old are you now? (in completed years)	_____	
102	What is your marital status now?	Married…….. ……....1 Widowed ……...2 Divorced/separate……...3 Single……4	
103	What is your religion?	Orthodox…….. ……1 Protestant ……..…….2 Islam ……..……...3 Others (Specify) _____	
104	What is your ethnicity?	Goffa ……..…....…1 Gammo ……2 Amhara …..……. 3 Others (Specify_____	
105	What is your occupation?	Housewife ……..……..…… 1 Government/ Private employed.... 2 Other (Specify)_____	

106	What is your educational status?	No education..…….. 1 Primary(G1-8)……...……. 2 Secondary & above …….…….. 3	
107	How much is your monthly household income in Eth. Birr	_____	
108	How many is your number of family that lives with you?	_____	
109	Do you have radio in your home?	Yes…….01 No ……..02	
110	Do you have television in your home?	Yes…….01 No ……..02	

Question no.111 – 112 will be asked if the answer for question no.102 is married

111	Husband's occupation	Farmer ……...……1 Government/ Private employed.... 2 Other (Specify) _____	
112	Husband's educational status	No education..…….. 1 Primary(G1-8)……...……. 2 Secondary & above...…….. 3	

Section 2: Obstetric and maternal characteristics

Q.#	Question		Go to Q.
201	How many times in total you become pregnant?	_____	
202	How many times in total you gave birth (still birth and live birth)?	_____	
203	Have you had attended antenatal care during the current pregnancy or during your last pregnancy (for which you gave birth in the last 12 months)?	Yes……...……01 No……..... 02	If no → 206
204	How many times in total did you receive antenatal care?	Only one…… 01 Two to three…….. 02 Four and above…….. 03	
205	Did a health worker advise you about any of the following at least once during the ANC? (Read each.)	Yes No 1.Danger signs during pregnancy, Child birth, or soon after? …… ☐ ☐ 2.Where to go if you had danger signs of serious health problems?.... ☐ ☐ 3. Identify where you should give birth to your baby …… ☐ ☐ 4. Arrangements for transportation? … ☐ ☐ 5. Arrangements for funds/finances? .. ☐ ☐ 6.Identifying for a healthcare	Put tick mark (√) for all that apply

		Professional to deliver your baby? ☐ ☐ Other (specify)----------	
206	If no to Q203, Why did you not see anyone for antenatal care? Probe: What else?	Yes No 1. I didn`t thought it is necessary. ☐ ☐ 2. Health facility too far..... ☐ ☐ 3. Service too expensive..... ☐ ☐ 4. I didn`t get time …… ☐ ☐ 5. No good service..... ☐ ☐ Other _____	Put tick mark (√) for all that apply
207	Travel time to the nearby health center	Less than one hour …… 01 One to two hour …… 02 Above two hour ……03	
208	During this or past pregnancy, did you experience any serious health problems related to pregnancy?	Yes……01 No ……..... 02	If no →301
209	Did you seek assistance from health workers (Doctors, HO, Midwives or nurses) for this problem?	Yes ……..… 01 No …….……..... 02	If no →212

210	If yes to Q 210, Who made the final decision to seek assistance for this problem?	I my self …….....01 Husband…… 02 Friend/Neighbor …….. 03 HEW ……. ….. 04 TBA …….. …05 Other (specify)_____	
211	If no to Q210, Why did you not seek assistance for this problem?	Yes No 1. I didn't thought necessary…… ☐ ☐ 2.My husband/my family didn't thought necessary..... ☐ ☐ 3. Facility too far..... ☐ ☐ 4. No transport..... ☐ ☐ 5. Lack of money..... ☐ ☐ 6. Services are not good..... ☐ ☐ 7. Went to traditional/spiritual healer….. ☐ ☐ Other (Specify_____	Put tick mark (√) for all that apply

Section 3: Personal experiences related to last Birth (women who gave birth in the past 12 months)

Q.#	Question	Codes	Go to Q./Sect.
301	Prior to this birth, did you or your family make any arrangements?	Yes …….. 01 No ……..... 02	
302	Where did you give birth for the last pregnancy?	At home…… ……01 Health post……...……02 Health center ……..….03 Hospital ……...04 Other (Specify) _____	
303	Who would you have preferred to assist with the birth?	1. Doctor..... 01 2. Nurse/Midwife ..... 02 3. Health officer….. ..... 03 4. TBA..... 04 5. Health extension workers…..... 05 6. Relatives/Friends..... 06 Other(specify) _____	
304	Who made the final decision about where you would give birth?	1.I myself ……... 01 2. Me & my husband 02 3, Husband…… 03 4. HEW ……. ….. 04 5. TBA …….. …05	

		Other (specify)_____	
305	How long is the duration of your last birth labor?	Less than half a day…….01 More than half a day…….02	
306	During labor & birth, did you experience any serious health problems related to birth?	Yes …… 01 No ……..... 02	If no Stop.
307	If yes to Q306, What problems did you experience? (Probe: ask for the problems which are not mentioned spontaneously).	Yes No 1. Severe vaginal bleeding…….. ☐ ☐ 2.Convulsions..... ☐ ☐ 3. Labor lasting >12 hours…….....… ☐ ☐ 4. Placenta not delivered 30 minutes after baby……..... ☐ ☐ Other (Specify) _____	Put tick mark (√) for all that apply.

Annex 2 Goffigna version structured questionnaire

Misxirre naggo gudda

Sarro

Aymalle ta sunthaye_____tanni zalla wrada fayatetha xiffate kethape yasse.nunne yelliya ayotanne entarra misatiya ye7oo bollane filigethi zalla woradane othosse. Ha hiddottappe dendide nene ha feligethasse koshiya murruta giddo gisho koshiya murutata emmanda koytadassa.hayssika murutaye maccatta phayatetha loytannassine qerri naytta hayquwa ziqisanassa.ha oyishoye hassetamu daqiqa ekkessi. Ha qoffa nee emmeye mulle ne hiddotanene qassika ne qoffa mullera woyko dabbayadda emike gannawu dandayasa.

Ha feligethaye jimma uneverstiappe kumetha fekkadeyara keyyisse.

Hai nee ha feligethane mulle emitarra qaxannawu koyayi?

E77e oysho dometha. Atto oyshuwa essone galata shish ago.

Oyshowashishiyab sunthaye……firmmaye…….oyichiya qammayi…….

Kaliyabitannita
sunthaye……..firmmaye……qammayi……..

Shakiya sissata

001. shaho quxxurre……

002.Qaballe sunthaye…….ketha quxxurryi……..

Yaffarra 1: Oyshoye shikya bitaneya kumetha deretethanne ne herra uttetha sissate.

Paydo #	Oyshota	Shaho	Yusho oyshoko
101	Nesse laythaye appunne? ha wurishen de777aya laythane.	_____	
102	S077o oyqaddi ?	Gellas……1 Azzinaye hayqqisse……..…2 Azzina billase/dumma dosi…..…...3 Gelabeyke……4	
103	Ne kalliya haymaoteyi aybe?	Orthodokise……..1 Protestante……2 Isilame……..……3 Harri dekko_____	
104	Newu dendo kusha dereyi awe?	Goffa……..1 Gammo……..…2 Amara……3 Hare dekko_____	
105	Ossoye newu aybe?	Golle ayyo……1 Kawwo/ Gilleni ossancha…….2 Harre de77ik_____	
106	Timirte dethayi aymale?	Tamarabike……1 Koyro detha(K1-8) ttamarase…..…2 Namantho dethane bolla……..….3	
107	Aggenane ne demmiya shalloye appune?	_____	

108	Nerra de77iya soo assayi phayidne appune?	_____	
109	Eradonneyi ne suwani de77i?	E7e……1 A7a…….2	
110	Telivishineye ne suwane de77i	E7e……1 A7a…….2	
Oysho qodda 111-112 zarressida oyshanchate zarro 102 ne gellide woyko Machida gecko hayssape kallide de77iya oyshota zarrossona.			
111	Ketha awwa ossoyi aybe?	Goshancha……..1 Kawwo/ Gelleni osancha…….2 Hare diko_____	
112	Golle awaa timirte dethaye aymale?	Tamarabike……1 Koyro detha(K1-8) ttamarase…….2 Namantho dethane bolla……..….3	

Yaffara 2: Ayetta yellora gakidabane ayetta marra

Paydo #	Oyishatta	Shaho	Yusho oyshoko
201	Appun taara sharadi nee?	_____	
202	Appun tarra yelladdi?	_____	
203	Matta wodethatetha kallo kalladi?	E7e……1 A7a…….2	A7a giko → 207
204	Appun toho wodetha kall kalladi?	Petto xallala……..…….01 Nam77ape hezza gakkanas..02 Oyddane bolla……..……03	
205	Fayatetha eranchote newu kalli de77iya wdetha kallo	E7e A7a 1.Etta metota wodethatethara ☐ ☐	Zarotas ha

	qoffatta odede?	gahhetidi……... 2.Mettoye dekko awwu banneko…….. ☐ ☐ 3.Awwane nee yelaneko…….. ☐ ☐ 4.Yello ogge bannawu gigso de77i……. ☐ ☐ 5.Yello shalloye gigide…… ☐ ☐ 6.Yello eranechati nerra donna……. ☐ ☐ Harre dekko_____	malata (√) wotsoo
206	Oysho 203 a7a gediko, ayssi neni kallabike?	E7e A7a 1.Koshesi gadda qoppeke……..… ☐ ☐ 2.Fayatetha kethayi hakkessi……. ☐ ☐ 3.Fayatetha marreccoyi al7o……. ☐ ☐ 4.Wodde demabike…….. ☐ ☐ 5.Lo7o maddo emokona……. ☐ ☐ Harre dekko_____	Zarotas ha malata (√) wotsoo
207	Newu matta fayatetha kethayi appune satte oychi?	Petto sattepe gutha……..…01 Esse sattepe nam7u satte gathesi……..02 Nam7u sa7atepe bolla…….03	

208	Matta wodethane woyko kasseyissane ne bollane gakkida mettoye wodethatethara misatiyayi de7ii?	E7e……..01 A7a…….……02	A7a giko → 301
209	He mettuwase fayaetha eranchatape maddo demmade? (dokiterepe,harra fayyatetha eranchape)	E7e……..01 A7a…….…02	A7a giko → 212
210	Oysho 210 e7a gediko ,haa mettuwase onne newu maccarasha qoffa qachidaye	Ta tawu……..01 Gole awa……02 Shorota……..……03 Fayatetha ekstenishineta……04 Qarra yelo woga eranchata….05 Harre diko_____	
211	Oysho 210 a7a geddiko,ayssi ne metuwas maddiya assi koyabike?	E7e A7a Koshesi gadda qoppike…… ☐ ☐ Ta golle aayine ta so assayi koshesi gide qopokonna..... ☐ ☐ Fayyatetha kethayi hakkessi…… ☐ ☐ Herape hera qaxxiya transporteyi bawa……... ☐ ☐ Mishai bawa……... ☐ ☐ Maddoyi loythi laffesi…….. ☐ ☐ Wogane pathiyasane wossane pathiya gisho……..... ☐ ☐ Harre diko_____	

Yaffara 3: Ayota bagga wurisetsa yellora gakidiy deiya payatetsa maddo emmo(ayoti adhida 12 aginna gidon yelidaysati)

Paydo #	Oyishatta	Shaho	Yusho oyshoko
301	Hayssape kasse yelluwan ne soo assayi ha yelluwas gigssidabayi de77i?	E7e……..…..1 A7a……....2	
302	Awwan neni hammata wode shara yeladi?	Sonne…….01 Fayatetha kellani……02 Faatetha xabbiyani……..03 Hosipitalen……..04 Harri deko_____	
303	Onne nena yelishen maddanada doradi?	1 Docteriya…….01 2 Yelo nurisiya……..02 3 Fayatetha marriya…….03 4 Yelo qarra woga erancha…04 5 Faytetha ekistenshineta……05 6 Shorota……06 Harre dikko_____	
304	Onne newu wurisetha yello herra wursetha qahso othidayi?	Ta tawu……....01 Gole awa…….02 Shorota…….03 Fayatetha ekstenishineta…….04 Qarra yelo woga eranchata……05 Harre diko_____	
305	Macharasha neyelowas mitsoy aymela gamede?	Baga galasafe simmo……01 Baga galasafe adhisi……02	

306	Nee yelishine yello metoyi adhida mixxone yelone gakidi handabayi de7i?	E7e…….01 A7a…….o2	Zaroy a7a gidiko oysho esso
307	Oyysha paydo 306 nee zarryi e7e giddiko,awse metoye gakide nena?	E7e A7a 1.Yashiya sutha gogisi…….☐ ☐ 2.Bicco……..…☐ ☐ 3.Mixxoye 12 sattepe darro gamisse.☐ ☐ 4.Yiccoye hastamu daqiqape adhi gam77ise…….☐ ☐ Harri diko_____	

DECLARATION

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in this or any other university and that all sources of materials used for the thesis have been fully acknowledged.

Name: _____

Signature: _____

Name of the institution: _____

Date of submission: _____

Approval of the advisors

Name and Signature of the first advisor

_____

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Name and Signature of the second advisor

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