DETERMINANTS OF INSTITUTIONAL DELIVERY AMONG MOTHERS FOLLOWING ANTENATAL CARE AT HEALTH INSTITUTIONS IN GINDABERET AND ABUNA GINDABERET DISTRICTS

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May, 2010

Jimma, Ethiopia

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Abstract

Background: Every year some 536 000 women die of complications during pregnancy or childbirth, 99% of them are from developing countries. Though maternal health service utilization is very important, WHO reports the proportion of births attended by skilled health personnel is very low in developing countries because of variety of reasons.

Objective: To assess determinants of institutional delivery among mothers following antenatal care at health institution in Gindaberet and Abuna Gindaberet districts, March, 2010.

Methodology: Facility based cross sectional study design was applied among mothers attended antenatal care (ANC) at government health institution in Gindaberet and Abuna Gindaberet Woreda, March, 2010. A total of 322 pregnant women were participated in the study. The data were collected quantitatively by face to face exit interview using structured questionnaire and focus group discussion was used for qualitative. Quantitative data were analyzed using SPSS version 16.0 and thematic coding analysis was applied for qualitative.

Result: Majority 229 (71.1%) and more than half 192 (59.6%) of the respondents had high perceived susceptibility and severity to pregnancy complications respectively. Two hundred five (63.7%) and 117 (37%) of the respondents had high perceived benefits and barriers to institutional delivery respectively. Residence, time mothers spent to get to health institution, history of under-one child death, perceived susceptibility and severity to pregnancy complications of the respondents were the determinants of place of delivery. Those mothers who had low perceived susceptibility and severity to pregnancy complication were more likely to deliver at their home than those who have high perceived susceptibility and severity to pregnancy complication OR = 3.45, 95% CI = 1.24 – 9.65 & OR = 3.36, 95% CI = 1.23 – 9.18 respectively.

Conclusion: Factors like mothers' educational status, husbands' educational status, residence, history of antenatal care visit, number of antenatal care received, obstetric outcomes and pregnancy danger signs and symptoms have significant contribution on place of delivery and where mothers intends to deliver. Perceived susceptibility and perceived severity to pregnancy complications and perceived barriers of institutional delivery utilization have positive effects on place of recent child delivery and place where mothers intends to deliver their current pregnancy.

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Acronyms

ANC - Antenatal Care

EDHS - Ethiopia Demographic and Health Survey

EFY - Ethiopia Fiscal Year

EOC- Emergency Obstetric Care

FGD - Focus Group Discussion

HBM - Health Belief Model

HCIC - Health Centre-based Intra-partum Care

H/C - Health Center

ID - Institutional Delivery

JU - Jimma University

MDG-5 - Fifth Millennium Development Goal

MMR - Maternal Mortality Rate

SBAs - Skilled Birth Attendants

TBAs - Traditional Birth Attendants

TTBAs - Trained Traditional Birth Attendants

WHO -World Health Organization

WoHO - Woreda Health Office

Chapter-1: Introduction

1.1. Background

Every year some 536,000 women die of complications during pregnancy or childbirth, 99% of them are in developing countries. The global maternal mortality ratio of 400 maternal deaths per 100,000 live births in 2005 has barely changed since 1990. Most maternal deaths occur in the African Region, where the maternal mortality ratio is 900 per 100,000 live births, with no measureable improvement between 1990 and 2005 (1).

Progress in reducing maternal mortality and morbidity depends on better access to and use of good maternal and reproductive health services. The proportion of pregnant women in the developing world who had at least one antenatal care visit increased from slightly more than half at the beginning of the 1990s to almost three quarters a decade later. Over the period 2000–2008, sixty five percent of births globally were attended by skilled health personnel, 4% more than in 1990–1999 (1, 2).

In many parts of the developing world, barriers to health care prevent women to benefit from life-saving interventions. Studies of maternal mortality in low income countries have shown that making pregnancy and childbirth safer first of all means to ensure that women have access to a continuum of care, including appropriate management of pregnancy, delivery and the post-partum period together with access to life-saving emergency obstetric care (EOC) when complications arise. Access to such care is the crucial component of safe motherhood (3).

Maternal health outcomes are the results of a number of factors. Socioeconomic and cultural characteristics of the woman and her household were significant in predicting delivery care. Increasing maternal educational status was associated with a consistent and significant decrease in the chance of home delivery: compared to those with secondary education and above, the chance of home delivery were around six times greater for those with no education. There is also highest odds of institutional delivery utilization documented among women with at least secondary education (seven times higher), followed by women with primary education (two times higher), compared with women with no education. A similar effect was seen in relation to household assets. Distance was an important factor influencing delivery care: residence more than two hours from a facility was associated with double the chance of home birth compared to residence within one

hour of a facility (4 - 8). The influence of the community has also a great position for the place of delivery (7).

Proper care during pregnancy and delivery are important for both maternal and newborn health. Although most women do not experience major problems during childbirth, complications that do occur can be sudden and unpredictable, requiring immediate attention. Maternal and prenatal outcomes in such instances are greatly improved when such complications occur in the presence of a trained attendant and in a facility well equipped to handle such emergencies (6, 7).

Antenatal care from a trained provider is important in order to monitor the pregnancy and reduce the risks for the mother and child during pregnancy and at delivery. In Ethiopia, 28% of women have received antenatal care from a health professional at least once. Nearly nine in ten women in Addis Ababa and one in two women living in Dire Dawa received antenatal care at least once during their pregnancy. In contrast, less than one in ten women in the Somali Region and 15% of women in the Affar Region received antenatal care from a health professional. Antenatal care from a health professional ranged from 25% to 41% in the other regions of Ethiopia like in Oromiya which is 24.8% (5, 8).

Utilization of professional assistance at delivery in urban Ethiopia is estimated to have increased over the last five years by 20% per year between 1996 and 2000, assuming a linear trend. Only two variables were identified as independent predictors of utilization of delivery care services utilization in rural Ethiopia. Consistent with findings for the urban areas, women's education is a significant and independent predictor of utilization of delivery care services in rural Ethiopia. As expected, women with no education are less likely to use professionally assisted delivery services. Another important and independent predictor of utilization of delivery care services in rural Ethiopia is parity. As the parity increases, the probability of utilizing institutional delivery decreases (5).

More over study will aim to assess more determinants factors of institutional delivery utilization among mothers currently taking antenatal care by assessing their last delivery history.

1.2. Problem Statement

Health institutions are generally accepted as having an important role to play in the delivering of maternal health services in rural areas in the developing world. Under utilization of institutional delivery is a common problem internationally, nationally and provincially (9).

The most common direct medical causes of maternal death around the world are hemorrhage, obstructed labor, infection (sepsis) and hypertensive disorders related to pregnancy, such as eclampsia. South-East Asia and sub-Saharan Africa contribute to ninety percent of the maternal mortality in the world and less than 5% of all people in these regions have access to emergency services such as the caesarean section. There are also geographical disparities in accessing skilled care within countries (4, 10).

Information about women's awareness of danger signs of pregnancy complications and the need for treatment is important because it indicates the existence of knowledge which can be transferred into action. Unfortunately, majority of women in Indonesia do not have adequate knowledge about pregnancy complications and their treatment, even though such knowledge is important (6).

Many developing countries have low utilization of modern health care services. Health care during pregnancy or antenatal care (ANC) is an important area of health intervention following evidence that maternal deaths due to puerperal sepsis, haemorrhage and obstructed labour tend to decrease and those due to eclampsia do not increase if health care intervention is available during early pregnancy (6 - 8).

Despite the fact that almost all (more than 90 percent) of Kenyan women receive some form of antenatal care, less than half of deliveries take place within a health facility. The institutional delivery rate in Kenya compares favorably with other regional countries, but maternal mortality remains high at 590/ 100,000 (7).

The fifth Millennium Development Goal (MDG-5) is to reduce maternal mortality by three-quarters between 1990 and 2015 by adopting a core strategy of health centre-based intra-partum care (HCIC). Yet, sub-Saharan Africa seems to have stalled in its efforts to improve maternal survival. Only two out of five births benefit from skilled attendants at delivery and that share has remained unchanged between 1990 and 2003. South Asia has seen improvements: from 27% to 38% coverage with skilled attendants. But coverage rates still remain far too low (11). Research has shown that adequate use of antenatal and delivery services can reduce maternal deaths from 10 to 45%, especially in the developing countries where maternal mortality is highest (12).

In Bangladesh most of the deliveries which account for 88% have been attended at home. As a result 80% of maternal deaths occur during attempted deliveries at home. The maternal mortality ratio (MMR) in Bangladesh is 290–300/100, 000 live births and 88% of babies are delivered at home. Nationally, only 18% of birth is attended by skilled birth attendants (SBAs) (4).

One of the targets of the millennium development goal is a two-third reduction in infant and child mortality by 2015, to be achieved through upgrading the proportion of births attended by skilled health personnel and other related strategies, but nationally only 6% and in Oromiya 4.8% of birth has been attended by health professionals despite of national ANC coverage is 27.6% and 24.8% in Oromiya. As a result still we are among the leading countries of high maternal and infant mortality. For the five years preceding the survey (approximately calendar years 2001-2005), the infant and maternal mortality rate is 77 per 1,000 and 673 per 100,000 live births respectively. In Oromiya neonatal death 40 per 10,000 live births. Most of the time neonatal death is because of unsafe delivery which causes neonatal tetanus (8).

It is obvious that skill birth attendants can reduce perinatal mortality. However EDHS-2005 showed that out of the 11,280 reported pregnancies of at least seven months' gestation reported during the five years preceding the survey, 117 were stillbirths and 303 were early neonatal deaths, yielding an overall perinatal mortality rate of 37 per 1,000 stillbirths and live births (8).

Considering all the above, the result of this study will explain factors that determine institutional delivery utilization among women following antenatal care and have history of delivery elsewhere. This will benefit the country to alleviate maternal and child health problems come as a result of pregnancy through tackling the underlined causes.

Chapter - 2: Literature review

2.1. Literature review

A. The Extent of Institutional Delivery Utilization

To alleviate maternal and child problem, service during pregnancy and safe delivery service is crucial. Though maternal health service utilization is very important, WHO reports the proportion of births attended by skilled health personnel by region as, 44% in Africa region, 92% in region of Americas, 48% in South-East region, 96% in European region, 63% in Eastern Mediterranean, and 92% in Western pacific (4).

Study conducted in Nigeria revealed that among the total 496 respondents 38.9% of them attended at least four antenatal clinics in their previous pregnancy but another significant proportion 27% has not attended at all. Regarding the place of delivery, most of the respondents 70.2% had their delivery at home and only 27.6% delivered in the hospital (13). In Rwanda, of the total birth occur in the country, 59 percent of them were at home without assistance (14).

Study conducted in Tanzania showed that almost all (99.8%) of pregnant women attended antenatal clinic at least once during their last pregnancy. 44.5% women in Tanzania and 33% in Kenya delivered in a health facility in their most recent delivery (12, 15). Among delivery conducted in Tanzania health institution, 35% delivered in a hospital level and 65% delivered in health centers. Skilled attendance at delivery was reported by 433 (44.5%) of the respondents and of these 16 (3.6%) were home deliveries (15).

Home delivery poses great risks for both the mother and baby, as there is a high level of unskilled handling of the delivery process (12). Among women who delivered at home, 50.1%, 44% were assisted by relatives, friends or the mother herself-without any assistance while 46.3%, 16% were assisted by Traditional Birth Attendants (TBA's) in Tanzania, and Kenya respectively and 3.6% were assisted by skilled midwives in Tanzania (12, 15).

In Ethiopia survey conducted by the year 2005 shows that only 28% of mothers received antenatal care from a health professional for their most recent birth, and only 6% of babies are delivered by a health professional from which 5% of them attended at a health facility (8). 2007 Health Indicator shows as, nationally deliveries attended by skilled health personnel is 16.4%, in Oromiya 12.1%, in Amhara 7.9, in Addis Ababa 33.1%, and 70 % in Harari (16).

Study conducted in North Gondar showed that, of the total 168 (13.5%) women gave birth at health institutions, only 14 (1.7%) of the rural respondents gave birth to their last babies at health facilities. About three-quarter (76.4%) of the home deliveries were attended by untrained traditional birth attendants (TBAs), relatives and by the mothers themselves. About 7% of women who attempted to give birth at home encountered prolonged labor (17).

In Oromiya antenatal care given from a health professional is 24.8% and among the only 4.8% of deliveries attended by a health professional 4.2% of it occurred in a health facility and the remaining 0.6% at home (8).

B. Factors Which Modify Perceptions of Women With Regard to the Threat of the Child Birth Process [socio-demographic, cultural and structural variables]

Socio-demographic variables could have positive or negative influences on the pregnant woman with regard to utilization of institutional delivery. Study conducted in South Africa showed there was difference in institutional delivery utilization among different religion. Seventy five percent of women delivered in hospital were Zionist followed by Pentecostal (9).

Previous bad obstetric experience can have an influence on the mother's selection of the place of delivery. Those women who ever experience miscarriage, still birth or neonatal death would have preferred a clinic or hospital delivery to home delivery (9).

Comparing the mother's educational level and the choice of place of delivery in Nigeria and Uganda, those with formal education tend to deliver at the hospital 3.32 times than those with no formal education who tend to deliver at home. However, ladies whose husbands with formal education tend to deliver at home compared to those with no formal education and the relationship was statistically significant. In addition, the study showed that the occupational status of the husbands was an important determinant of the place of delivery as wives of employed husbands delivered at the hospital. In Uganda, age at first pregnancy was another determinant of place of delivery. Fifty eight percent of the respondents who had their first pregnancy before 18 years had their deliveries at home (13).

Years spent in school also showed a significant association with seeking of skilled care during delivery. Study conducted in Tanzania revealed that women who have more schooling years having a higher proportion of deliveries (50.4%) attended by skilled personnel compared to those with fewer schooling years or those who did not go to formal schooling (15).

The proportion of women of Tanzania who were attended delivery by a skilled attendant was seen to decrease significantly with increasing age of women from 57.5% among women below 20 years of age to only 48.8% among women aged 35 or more years (12, 15).

Study conducted in Uganda showed births to younger women and low-order births are more likely to be took place in a health facility than births to older women and higher-order births. Delivery in a health facility is more common in urban than in rural areas (79% compared to 32%). Mothers with secondary education are more than three times more likely to deliver at a health facility than women with no education (72% 21%, respectively) (18). Access to essential skilled birth attendants remains difficult especially for less educated, poorer women, commonly mediated by financial and transport difficulties and several simple post delivery practices were commonly neglected (19).

Similar to other developing country a greater proportion of births in urban areas of Uganda occur in a health facility. The numbers from the 1992 survey revealed that 68% of urban births took place in a health facility compared to 24% of births in rural areas. Comparison with data from 2005 survey reveals that there was a decline in the proportion of urban births in a health facility to 56% but there was only a 2 percentage point increase in the proportion of rural births in a health facility (14).

Most births to mothers with primary or no education were the most likely to be delivered at home in Nyanza zone of Kenya, while mothers with secondary_education had greater chances of delivering their babies in a health institution. The relationship between partners' education and place of delivery was similar to that of the mothers. Mothers who earned cash had greater likelihood of delivering at a health institution, whereas those who did not earn cash were more likely to deliver at home. The most plausible explanation for this is that the former were better able to pay for delivery in a health institution (12).

In Kenya, the chance of a home delivery was four times greater for births of order 8 and above compared to first order births. With regard to total children ever born, the higher the parity, the greater the chances of a mother delivering at home. 71% of births to mothers of parity seven and above were born at home, compared to 54% for parity 1–3. Conversely, health facility deliveries were greatest among births to lower parity women. The household economic status also, is significantly related to place of delivery. A greater proportion of those who delivered at home were from the lower economic status households. On the other hand, over 75% of births in medium and

upper status households took place in health institutions. Rural residence is associated with higher likelihood of home deliveries, where 63% of births occur at home. Those residing in urban areas had a higher chance of a health institution delivery, with 78% births delivered in a health facility. The youngest age group, of mothers aged from 15 to 24, had the most chances of delivering at a health institution (12).

Timing and number of antenatal checks during pregnancy appears to be significantly associated (12, 7). The chance of a home delivery was 9.2 times for those who received no antenatal care compared to those who had at least seven or more antenatal consultations (7). Mothers who had their first antenatal check in the third trimester were most likely to deliver their babies at home. On the other hand, mothers who went for their first check in the first trimester had greater chances of delivering in a health institution. It is also clear that mothers who had four or less antenatal visits had greater chances of delivering at home. Conversely, mothers who had over five antenatal checks showed greater likelihood of delivering at a health institution (12).

From EDHS-2005 results, the multivariate analysis for the overall sample showed that place of residence, women's education, parity, and number of children under five is independent predictors of utilization of delivery care services in Ethiopia (8, 5, 17). 2% of women with no education were attended during delivery by a health professional compared to 58% of women with some secondary or higher_education (8). Those women with primary and at least secondary education receive professionally assisted delivery care 3.4 and 8.2 respectively than women with no education. Women with two or more children under five were 40% less likely to receive professionally assisted delivery services than women with only` one child under age five (5).

A baby's likelihood of professional delivery care decreases as the age of the mother and the birth order increases. Two in five urban births have had a health professional in attendance during delivery compared with about 3% of rural births (8). Women residing in Addis Ababa are about 40 times more likely to receive assistance during delivery than rural women, while women from other urban areas are about nine times more likely to receive assistance during delivery than rural women (5). In Addis Ababa, more than three in four babies are delivered at health facility. In contrast, with the exception of women living in Harari, Dire Dawa and Gambela only about 5 percent of babies in the other regions are delivered in a health facility (8).

Mothers of North Gondar Zone of Amhara region, whose educational status was secondary high school and above were about 11 times more likely to give birth at health institutions than women

with other levels of education. Women resided in rural areas were less likely by 0.03 to deliver at health facilities than women residing in urban areas. Women with lower incomes (<100 Birr) were less likely by 0.04 to deliver at health facilities than women having incomes of 500 Birr and above. As birth order increases utilization of safe delivery services decreases. Obviously, prenatal visit was found to be strong predictor of safe delivery services utilization. Women who did not have any registered antenatal visit were 0.09 times less likely to give birth at health facilities. Moreover, mothers who have had past history of intra-partum complication were 1.63 more likely to seek safe delivery care than those with no such history (17).

As study conducted in Jimma Town showed us, among the socio demographic_variables, families monthly income, women's as well as their husbands' educational status and maternal age were significantly associated with their place of delivery. But by applying Multiple Logistic regression, when they were adjusted for other socio demographic variables only maternal age and their educational status were significantly associated with their place of delivery. And women between 35-39 years are 0.06 times less likely to deliver in health facilities when compared to those between 15-19 years and women who have formal education were 2.82 times more likely to deliver in health facilities when compared to those who have no formal education (20).

C. Perceptions of Women Regarding the Threats to pregnancy complications

Only a few cases of respondents of study conducted in South Africa showed their choice of place of delivery influenced by perceptions that their most recent labour and delivery could have endangered their own or their baby's health. The majority of respondents [90%] who were included in study conducted in revealed that their current pregnancy couldn't have endangered them and their baby's health (9).

In Indonesia, 40.7% of the women, who had their most recent birth in the five years preceding the survey, knew about the signs of pregnancy complications in the county (6).

Proportion of women of Tanzania with skilled care at delivery increased with knowledge of danger signs from 39% among women who did not mention any to 68% among those who mentioned 4 or more danger signs (15).

Of note in Kenya, 64% of those who delivered outside a health facility were aware of the potential risks, and could identify one or more complications that could occur (21).

Intra and postpartum obstetric complications were reported by 67 (16.3%) of urban and 169 (20.3%) of the rural women. The reported symptoms were excessive vaginal bleeding in 41.1%, prolonged labor in 24.2 % and retained placenta in 18.6% of the cases. Only about a third (31.8%) of those who developed the complications sought modern health care in North Gondar (17).

In regard to their perceptions about pregnancy and child birth complications as well as importance of getting skilled help at child birth, 87% of the women of Jimma Town felt that they may be susceptible to develop delivery complications, 93% of them perceived that delivery complications can be hazardous to their health and 95.2 % of them agreed that if they get a skilled attendant during delivery (20).

D. Perceptions of Women of Barriers to Clinic Delivery

In Tanzania the proportion of women with skilled attendants at delivery was also seen to decrease with increasing distance to the health facility which provide delivery care from 50.1% among women residing within 5 km of a health facility to only 20.2% among those residing more than 5 km from a health facility (15).

Study conducted in Uganda showed, a high proportion of women delivered their infant at a hospital or public clinic but one in 10 women still delivered their infant at home with no trained assistance. Of these 44 women who delivered at home: 34% (15) stated that this was due to financial limitations, 23% (10) due to transport limitations, and 27% (12) due to 'other reasons' which were most commonly stated as to be due to the delivery occurring too quickly or too late at night to attend the facility of choice .

Most Kenyan women (83%) delivered outside of a health facility. The most frequent reason for not attending a health facility for delivery was lack of means of transport, in particular at night (49%), fast progression of labor (47%), and expense (28%) for services. Fourteen percent of women did not think facility attendance was necessary; reasons given for this included previous uneventful home delivery, preferred home deliveries, or had made arrangements with TBAs or another person to attend the delivery. A small subset (3%) reported anticipation of unpleasant treatment at a health facility as a reason not to attend. Among women who did not visit an antenatal clinic, only 1 woman (1.6%) delivered in a health facility. In multivariate analysis, factors associated with delivery outside a health facility included: age $\geq$ 30 years, parity $\geq$ 5, low/medium SES, $<$ 8 years of education, and $>$ 1 hour walking distance from the hospital (21).

In North Gondar regarding reasons for preferring home delivery, 44.7% of the respondents reported that labor was short and smooth. The rest 55.3% of the mothers reported preference to give birth the in presence of relatives, trust in TBAs, cultural reason and lack of money as reasons for non-use of health facilities (17).

E. Perceptions of Women Regarding the Benefits of institutional Delivery

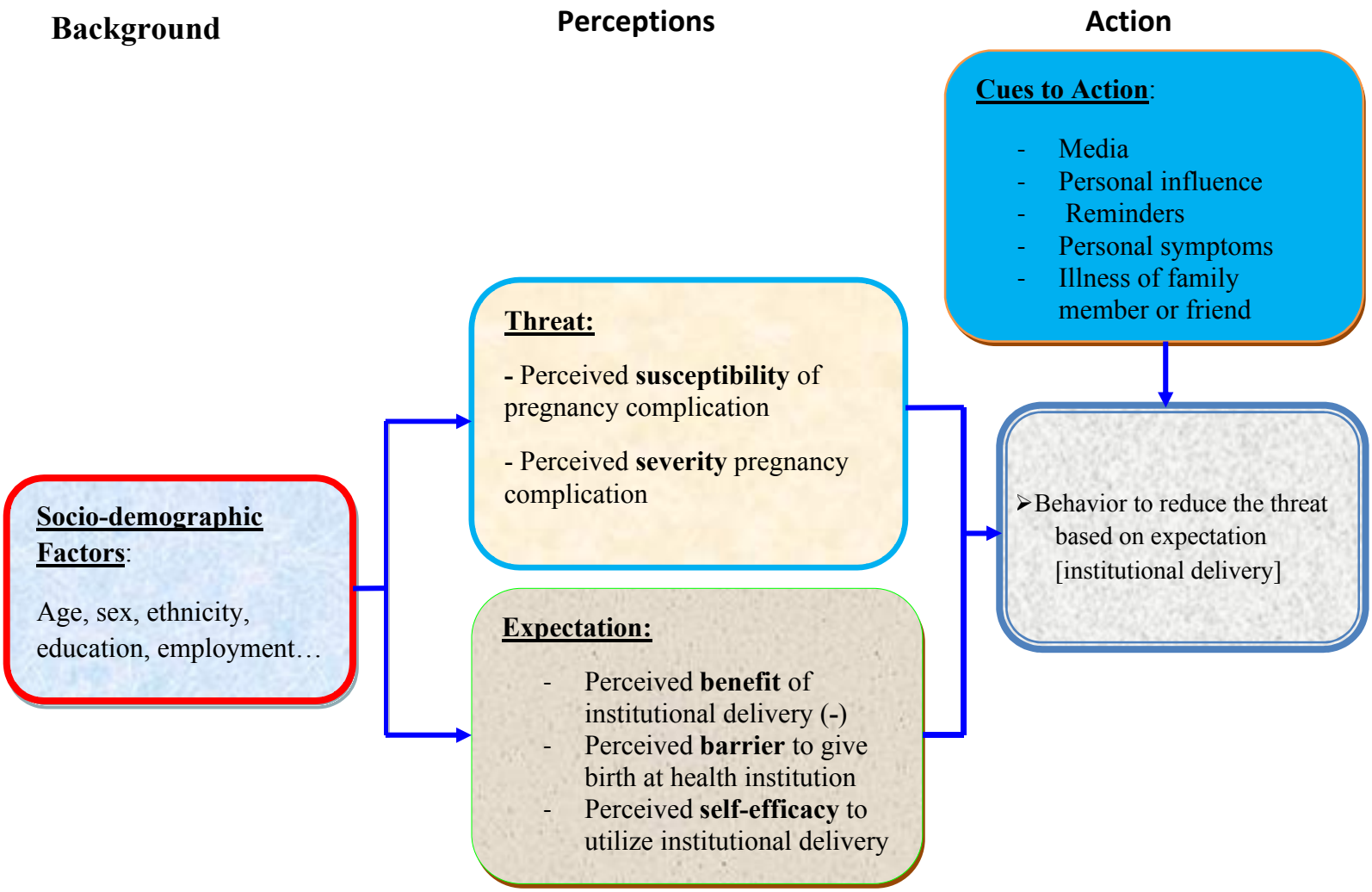
In Jimma from 93% of respondents who perceived that delivery complications can be hazardous to their health, 95.2 % of them agreed that if they get a skilled attendant during delivery, it will be beneficial to their health and the health of their newborns. Regarding their knowledge about the advantages of pregnancy and delivery related services, 78 % of the women of Jimma town know at least one advantage of the services (20).

F. Cues to Action

In Tanzania those women ever discussed with their husbands or partners on where to go for delivery were 2.37 times to deliver at health facility and those who were advised during ANC by health workers were 1.82 times higher to deliver in a health facility those who were not (15). Study conducted in the same country at different time showed ANC attendance in the previous pregnancy preceding delivery did not influence hospital delivery as most of the respondent who had at least four ANC attendance (46%) delivered at home (13).

Women of North Gondar without access to radio were less likely by 0.41times to deliver at a health institution than women with access to radio (17).

Study conducted in Jimma town of Oromiya region showed that, among the ANC attendants identified during the survey, during their follow up, only 87(55%) of the women were informed about where they should deliver, out of whom almost all 86 of them were informed to deliver in health facilities (19). Regarding women's decision making power in relation to getting ID services, 62.3% can make this decision by themselves, while the rest should get the decisions either from their husbands or their relatives (20).



(**Source**: Adapted from Rosenstock, Strecher, & Becker, 1988)

Figure 1**:** Schematic presentation of Health Belief Model (HBM) for institutional delivery

2.2. Significance of the study

Many studies revealed that, maternal morbidity and mortality are the most common problems in Ethiopia. Many studies have been done to assess the cause of these problems. Among the known and common causes of maternal mortality, pregnancy and pregnancy related problems are the first. So, to alleviate these problems the only and the most effective solution is maternal health service utilization. Of these services, institutional delivery is crucial to reduce maternal mortality. Despite the service available to the nearby, many pregnant women especially those who are following ANC do not utilize the service for a few known and many unknown reason.

In a few years of my stay in health facility, I saw that many mothers had attended antenatal care. But the delivery coverage by skilled birth attendants of that area was small and below the zone and Oromiya region coverage. The question, why those mothers accessible to health facility or attended antenatal care at health institution didn't give birth at health institution, came to my mind. This problem is not the problem of one local area or not the problem of one region of the country. It is problem of country. Despite of this, our country has planned to achieve 4^{th} and 5^{th} millennium development goal. If the question came to my mind get the solution, it becomes easy to increase delivery coverage by skilled professional through tackling hindrances of institutional delivery. This will have some contribution to decrease both maternal and infant mortality that help us to achieve fourth and fifth millennium development goals.

Even, if at least half of those mothers following antenatal care service give birth at health facility and/or delivery is attended elsewhere by skilled birth attendants, our country delivery coverage by skilled birth attendants will increase at least by folds. To do so the reason why those who are accessible to the service do not give birth should be known.

Therefore, this study is aimed to identify determinant factors of the utilization of institutional delivery among mothers following antenatal care service from hospital and health centers, which helps to design appropriate plan of an intervention.

Chapter - 3: Objectives

3.1. General Objective

- To assess determinants of institutional delivery among mothers following antenatal care at health institution in Gindaberet and Abuna Gindaberet districts, March, 2010.

3.2. Specific Objectives

- To determine perceived susceptibility of pregnancy complication among women following ANC
- To determine perceived severity of pregnancy complication among women following ANC
- To determine perceived benefits of institutional delivery among women following ANC
- To determine perceived barrier of institutional delivery among women following ANC
- To determine practice of institutional delivery among pregnant women following ANC
- To identify predictors of institutional delivery among women taking antenatal care

Chapter - 4: Methods and Materials

4.1. Study Area and study period: Study was conducted in Gindaberet and Abuna Gindaberet Woredas health institution which include Hospital and health centers from March, 2010. These Woredas are among the Woredas of West Shewa Zone of Oromiya region which have 75 Kebeles (43 in Abuna Gindaberet and 32 are from Gindaberet) with a total population of 225,272 (Gindaberet=110,629 and Abuna Gindaberet=114,543) as projected from Central Statistic Agency Population Census 2007. There is a total of 8,628 pregnant women in the two Woreda (Gindaberet=4,237 and Abuna Gindaberet=4,387). This was calculated using the regional proportion of pregnant women among the total population which is 3.83% (22).

Gindaberet and Abuna Gindaberet Woredas located at 193km and 176km to the West of Addis Ababa respectively and 123km and 113 to the North Zonal Town, Ambo. They are bordered by Amhara region and North Shewa from the North, Horo Guduru Wollega from the West, North Shewa and Meta Robi from the East, Ambo, Meda Kagni and Jaldu Woreda from the South. Six years back both woreda were called together with the name Gindaberet. Despite of the division, the district hospital found in Gindaberet services both Woredas equally. Both woredas are delineated from other neighbor Woredas by rivers- Abay and Mogar from the North, Urgaha and Mogar from the East, Gudar from the West and Teranter from the South.

There are one district hospital and five health centers in the Woredas. One District Hospital (Gindaberet Hospital) and three health centers are found in Gindaberet and the remaining two Health centers are found in Abuna Gindaberet Woreda. On top of this there are six private clinics, and forty four health posts (twenty two in each) in the Woreda. Although the antenatal coverage of the Woredas is 54% on average, which is more than that of the national, delivery conducted by health professional is lower than other districts of West Shewa zone e.g. Noonnoo (29%), Elfeta (13%), Ambo (23%), Holeta town (24%) and 10% as a zone.

4.2. Study design*:* Facility based cross sectional study design was employed using quantitative and qualitative method

4.3. Population:

4.3.1. Source Population: All mothers attended antenatal care at Gindaberet and Abuna Gindaberet woredas government health institution

***4.3.2 Study population*:** Mothers who visited government health institution in Gindaberet and Abuna Gindaberet districts for antenatal care during the study period

4.4. Inclusion and Exclusion:

Inclusion criteria: Pregnant women who gave at least one birth and attended antenatal care in the Hospital and health centers, who were mentally and physically capable to be interviewed and lived in the study area at least for the last six months preceding the study.

Exclusion criteria: Critically ill women and those who have no history of child birth.

4.5. Sample size determination and sampling technique

4.5.1. Sample Size determination

Quantitative: Abuna Gindaberet and Gindaberet Woreda were purposively selected for the study because of their low skilled birth attendants (6%) that is lower than that of zone (10%) and other districts in the same zone - Noonnoo (29%), Jibat (14), Elfeta (13%), Ilu Galan (11%), Chaliya (10%), Ambo (23%), Holeta town (24%), & other districts of the same zone despite of high coverage of ANC (57%) relative to national figure. Hospital and all health centers found in both Woredas were included in the study. The number of pregnant women taking ANC service from the corresponding health facility would be calculated by reviewing one month data back from ANC registration book of 2002 EFY and the total pregnant women who have been served under the health institution would be estimated. Finally, pregnant women included in the study were allocated to each health facility proportionally based on number of pregnant women served under the corresponding health facility.

To determine number of pregnant women to be included in the study unit, the single population formula were used, based on the assumption that:

a) The level of confidence of the study 95%,
b) Margin of error was 5%

c) The proportion (P) was the proportion of mothers gave birth at government health institution from those women had history of antenatal care from health institution that was 26% and taken from study conducted in North Gondar, Amhara region, Ethiopia (17).

Accordingly, by using the following single population formula the sample size:

$$N_o = \frac{(Z_{\alpha/2})^2 * P * (1-P)}{d^2}$$

$N = (1.96)^2 \times 0.26(1-0.74) / (0.05)^2 =$ **296**

Considering 10% non-response rate, the final sample size became **326**.

4.5.2. Sampling technique

Quantitative: Number of mothers included in the study was allocated to each health facility proportionally based on number of pregnant women served under the corresponding health facility by reviewing one month ANC registration book of the institution. Then all eligible mothers come to the health institution for antenatal care service was interviewed consecutively until the required sample size fulfilled for twenty work days.

Qualitative: Three FGDs comprising eight members in two FGD and seven in one were under taken among mothers taking antenatal care from health institution that were selected purposively.

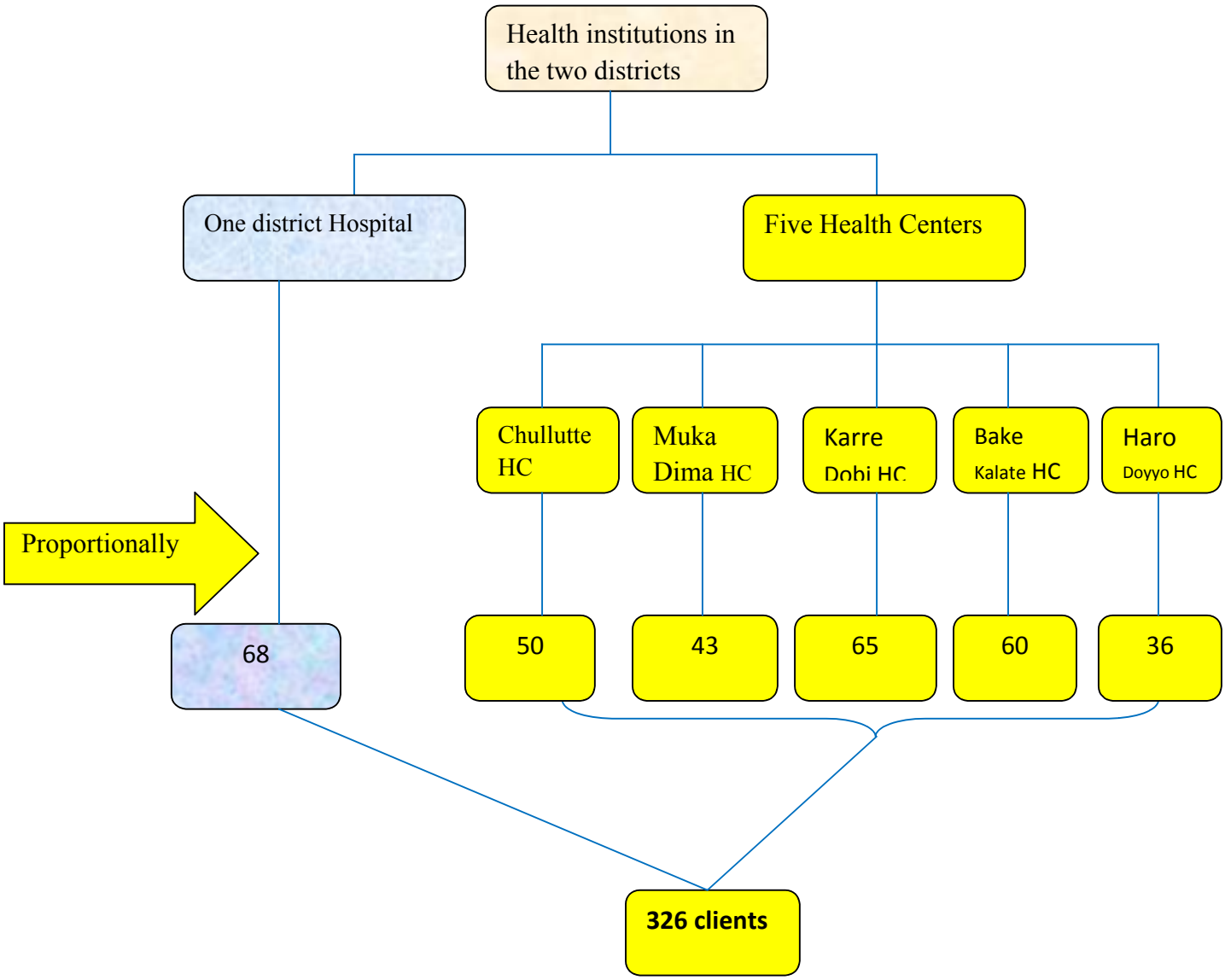


Figure 2*:* Schematic presentation of sampling technique for the selection of mothers attended ANC at health institution in Abuna Gindaberet and Gindaberet Woredas, West Shewa, Oromiya regional state, Ethiopia, 2010.

4.6. Instruments and Data collection methods

4.6.1. Instruments

Quantitative: Structured questionnaire consisting HBM constructs was developed from reviewing different literatures that were pertinent to the topic (7- 9, 13, 17, 20, 23). The questionnaire consists of different variables such as socio-demography, past obstetric and related history, perceived severity (six items), perceived susceptibility (four items), Perceived barriers (ten items), perceived benefits (five items), perceived self-efficacy with six items like confidence to give birth at health institution, to overcome somebody idea which oppose institutional delivery and the like were included. All response option for perception questions would be on a five point likert-scale ranging from strongly agree to strongly disagree.

Cues to action – was assessed using five items which included variables like: whether the respondents discuss place of child birth with relatives, have seen neighbor suffering or die from pregnancy complication, and received instructions from health professionals where to deliver.

Qualitative: FDG guide containing open-ended questions to assess determinants of institutional delivery like perceived severity, perceived benefits and other was developed.

4.6.2. Data collection method

Quantitative: Face to face exit interview was conducted using structured questionnaire. The data was collected by six ten-grade completed female students that was assigned to each health institution and supervised by two B. Sc. Nurses and two Health Officers.

Qualitative: Focus group discussion method was applied using FGD guide. With Diploma holder nurse modulator, data was collected by principal investigator through note taking and tape-recorder.

4.7. Study Variables:

4.7.1 Dependent Variable: Institutional delivery

4.7.2 Independent Variables:

- Socio-demographic Factors (age, educational status, income, residence, etc.)
- Obstetric and related history
- Perceived barrier
- Perceived benefits of women to institutional delivery
- Perceived threat (severity, susceptibility) of being delivery is not attended by skilled birth attendants
- Cues to action and Self-efficacy

4.8. Data Processing and analysis

Quantitative- The data was entered into SPSS version 16.0. Then, the entire data was cleaned for any errors. Frequency, proportions, percentages and mean was calculated. Chi-square test was used to assess the association between dependent variable and independent variables. Bivariate and multivariate logistic regressions was used to assess the degree of association between the dependent and independents variables; a corresponding p-value of <0.05 was considered to be statistically significant.

Qualitative: Qualitative data that was collected through note taking and tape recorder was translated to English by the principal investigator by revising the note and replaying the tape recorder. Then the group reflections analyzed and summarized by thematic coding analysis. Finally the quantitative and qualitative findings were triangulated.

4.9. Data Quality Control

Quantitative: The questionnaire was translated to Afan Oromo and retranslated to English language to check its consistency. Thing(s) needed to be corrected after the process was corrected accordingly before actual data collection started. Pre-testing was done on 5% of sample size.

Six grade-ten completed female data collectors and two B. Sc. Nurse and two Health Officers supervisors were trained by the principal investigator on the entire contents of the questionnaire for two days by principal investigator. The data collectors checked for entire questionnaires for its completeness before the respondents departed from the institution. On top of this, supervisors

supervised data collectors to clarify or advice data collectors to take care explaining any difficulty (if any) forwarded from data collectors and the principal investigator checked for the collected data.

Qualitative: In order not to miss some idea of the discussion, it was recorded using tape–recorder after getting permission from the discussants. In addition to this, short note that was taken was transcribed soon the discussion windup before some idea was forgotten.

4.10. Operational Definitions:

- ***Antenatal care*** **-** health care received by mothers at the time of their pregnancy from health professional.
- ***Institutional delivery*** **-** child birth at hospital and health center or delivery attended by skilled birth attendants.
- ***Health Belief Model*** - A paradigm used to predict and explain health behavior based on people's perception.
- ***Health Institution*** – an institution that give prevention and curative service
- ***Non***-primi – mothers who gave at least one birth
- ***Perceived Barrier*** - Women's perception that may hinder from institutional delivery utilization (having skilled birth attendants).
- ***Perceived Benefits*** - women's perception about the benefits of having a skilled delivery attendant in preventing delivery complications.
- ***Perceived Severity*** - woman's feelings concerning the seriousness of contracting possible delivery complications and their outcomes.
- ***Perceived Susceptibility***- Women's perception of the risk of contracting possible delivery complications and their outcomes.
- ***Perception*** - Perceived severity, perceived susceptibility, perceived benefits and barriers will be assessed using Likert Scale Method (1. strongly agree 2. agree 3. neutral 4. disagree 5. strongly disagree) and mean scores for each construct was computed and dichotomized into high and low. Respondent scores below the mean were labeled as having low perception of severity, susceptibility, benefits and barriers.

- ***Self-Efficacy*** - The degree to which the pregnant women perceive that they are able to utilize institutional delivery to avert the threat that could occur because of delivery conducted without skilled professional.
- ***Skilled Birth Attendants*** - people with midwifery skills (doctors, health officers, midwifes, and nurses) who have been trained in the skills necessary to manage normal delivery, diagnose and refer and/or manage obstetric complications.
- ***Traditional Birth Attendants***- A birth attendant who initially acquired the ability by delivering babies herself or through apprenticeship to other TBAs.
- ***Trained Traditional Birth Attendants***- those TBAs who have undergone subsequent training and are integrated in the formal healthcare system

4.11. Ethical considerations

Ethical issue was approved by Ethical Review Board of Jimma University. Explaining the purpose of the study, supportive letter was obtained from Zonal Health bureau to woreda health office and from WoHO to the health institutions. Finally verbal consent was obtained from clients who participated in the study. The respondents had the right to participate or withdraw at the middle of interview. All the information given by the respondent was used for research purposes only and confidentiality maintained by omitting respondents' name.

4.12. Dissemination plan of the result

The results of this study could be disseminated or communicated to Jimma University, Gindaberet and Abuna Gindaberet Woreda health offices, West Shewa Zonal Health Office as well as Regional Health Bureau, local institutions and other concerned bodies through reports and publication on an appropriate journal.

Chapter - 5: Result

Socio-Demographic Characteristics of the Respondents

A total of 322 pregnant women attended antenatal care at health institutions in two districts were participated in the study producing response rate of 98.8%. Of the 322 mothers, 236 (73.3%) were between the age of 20 and 34 and the mean age of the participants were 27.7 ± 6.0. Two hundred seventy nine (86.6% of the respondents were rural and 43 (13.4%) were urban in residence. The majority, 254 (78.9%) of the respondents had no formal education, 207 (64.3%) unable to read and write and 47 (14.6%) read and write only), 56 (17.4%) attended primary school and 12 (3.7%) of the respondents attended secondary schools and above. Almost all, 319 (99.1%) of the respondents are Oromo and the remaining 3 (0.9%) of the respondents were Amhara. The majority of the respondents 211 (65.5%) were Protestant Christian, 96 (29.8%) were Orthodox Christian and 15 (4.7%) respondents were Wakefata. Regarding the respondents' occupation, more than half of the respondents 186 (57.8%) were farmer (Table -1).

Of the total 316 husbands, 249 (78.8%) of them were farmers and followed by merchants 32 (10.1%) and employees 14 (4.4%). One hundred sixty nine (53.5%) of the husbands couldn't read and write and 14 of the respondents were completed grade 12 and above. Regular employment/job that bring income monthly/annually were the source of income for 289 (89.8%) of the respondents and 23 (7.1%) and 9 (2.8%) got income from irregular employment and contributions from relatives/others respectively (Table – 2).

Table 1: Socio-demographic characteristics of mothers attended antenatal care at health institutions in Gindaberet & Abuna Gindaberet districts, March, 2010

Variables		number (n=322)	Percent (%)
Age	15-19 years	27	8.4
	20-34 years	236	73.3
	35-49 years	59	18.3
	Mean ± SD	(27.7±6.0)	
Educational status	Unable to read & write	207	64.3
	Only read and write	47	14.6
	Primary school	56	17.4
	Secondary and above	12	3.7
Ethnicity	Oromo	319	99.1
	Amhara	3	0.9
Occupation	Farmer	186	57.8
	housewife	84	26.1
	Merchant	23	7.1
	daily laborer	20	6.2
	others*	9	2.8
Religion	Protestant Christian	211	65.5
	Orthodox Christian	96	29.8
	Wakefata	15	4.7
Marital Status	Married	307	95.3
	Partner live at different places	7	2.2
	Single	6	1.9
	Divorced	2	0.6

* Employee & student

Table 2: Socio-demographic characteristics of husbands of mothers attended antenatal care at health institution in Gindaberet and Abuna Gindaberet, March, 2010

	Variables	Number (n=322)	Percent (%)
Age	15-19	3	0.9
	20-24	45	14.2
	25-29	40	12.7
	30-34	95	30.1
	35-39	57	18.0
	40-44	46	14.6
	45-49	18	5.7
	50-54	5	1.6
	55-59	6	1.9
	60-64	1	0.3
	Mean ± S.D		33.2 ± 8.07
Occupation	Employee	14	4.4
	Student	7	2.2
	Daily laborer	12	3.8
	Merchant	32	10.1
	Farmer	251	79.4
Educational status	Unable to read and write	169	53.5
	Read and write only	32	10.1
	Grade 1-8	77	24.4
	High school and above	38	12.0

Obstetric characteristics of the respondents

With the mean age of 18.7 ± 1.8, 198 (61.5%) and 124 (38.5%) of mothers became pregnant before the age of 20 years and above 20 years respectively. From the total 322 respondents, 176 (54.7%) mothers had 2-4 history of pregnancy and 146 (45.3%) of them had five and above

history of pregnancy. The majority, 226 (70.2%) of the respondents gave 2-4 birth where as 96 (29.8%) of mothers gave five and above child. For 276 (85.7%) of the respondents, their current pregnancy was planned and for 46 (14.3%) of mothers the conception was unplanned (Table - 3).

Table - 3: Obstetric characteristics of mothers visited antenatal care at health institution in Gindaberet & Abuna Gindaberet woreda, West Shewa zone, March, 2010

Variables		Number (n=322)	Percent (%)
Gravida	2-4	176	54.7
	>=5	146	45.3
parity	2-4	226	70.2
	>=5	96	29.8
Number of live births	1	81	25.2
	2-4	161	50
	>=5	80	24.8
Number of abortion ever faced	0	257	79.8
	1	58	18.0
	2	6	1.9
	3	1	0.3
Number of still birth ever faced	0	293	91
	1	26	8.1
	2	3	0.9
Number of <1 yr death ever faced	0	277	86
	1	38	11.8
	2	7	2.2
Was the current pregnancy planned	yes	276	85.7
	no	46	14.3

Maternal health service utilization

Of the 322 mothers, 184 (57.1%) reported that the service they visited for during antenatal care was advantageous both for mother and child and 86 (26.7%) of them reported as the service was advantageous to only herself. The remaining 32 (9.9%) claimed ANC was advantageous for the child only whereas 20 (6.2%) of mothers didn't know the advantage of antenatal care. Sixty eight (21.1%) mothers attended antenatal care for their last child. Among those mothers who attended

ANC for their recent child 11 (16.2%) of them took >=4 times and 5 (7.4%) of them took only once. 32 (47.1%) of mothers began ANC follow up in their first three month of gestational age and two (2.9%) mothers started at their third trimester. Almost all mothers 316 (98.1%) believed that every mothers should take antenatal care service. Most of the mothers 267 (82.9%) delivered their last child at their home. 21 (6.5%) at health centers, 18 (5.6%) at health post and 16 (5.0%) gave birth at hospital (Table - 4).

Table 4: Maternal health service utilization among mothers attended antenatal care at health institution in Gindaberet and Abuna Gindaberet districts, March, 2010

Variables		Number	Percent (%)
History of antenatal care for recent child	Yes	68	21.1
	No	254	78.9
Number of antenatal care visit among those mothers who attended antenatal care for their recent child pregnancy	1	5	7.4
	2	19	27.9
	3	33	48.5
	>=4	11	16.2
Gestational age at which mothers started antenatal care for their recent child pregnancy	1-3 months	32	47.1
	4-6 months	34	50
	7-9 months	2	2.9
Place of last child delivery	Health institution	55	17.1
	Home	267	82.9
Place of last child delivery among mothers who had History of ANC follow up	Health institution	42	61.8
	Home	26	38.2

Being pregnancy complications managed at health institution is the main reason 53 (96.4%) why mothers born their recent child at health institution. Fast labor condition was the major reason why mothers born their recent child at home (Table – 5)

Table 5: Responses of mothers attended ANC in Gindaberet and Abuna Gindaberet for why they give birth at health institution or home, March, 2010

A. Why Mothers born child at health institution

Variables		N^{o} (n=55)	%
Health institution is close to where I live	Yes	4	7.3
	no	51	92.7
Health institution can manage pregnancy related complication	Yes	53	96.4
	no	2	3.6
Good approaches of health workers	Yes	24	43.6
	no	31	56.4
Little expense to deliver in this particular institution	Yes	12	21.8
	no	43	78.2

B. Why mothers gave birth at their home

Variables		N^{o} (n=267)	%
Expenses for delivery service was unaffordable	yes	11	4.1
	no	256	95.9
Bad approaches of health workers	Yes	11	4.1
	No	256	95.9
Whishes to deliver where relatives are nearby	Yes	63	23.6
	No	204	76.4
Trust traditional birth attendants more	Yes	29	10.9
	No	238	89.1
Fast labor condition	Yes	70	26.2
	No	197	73.8

During their delivery most of the mothers were assisted by their neighbor (**Figure-1**).

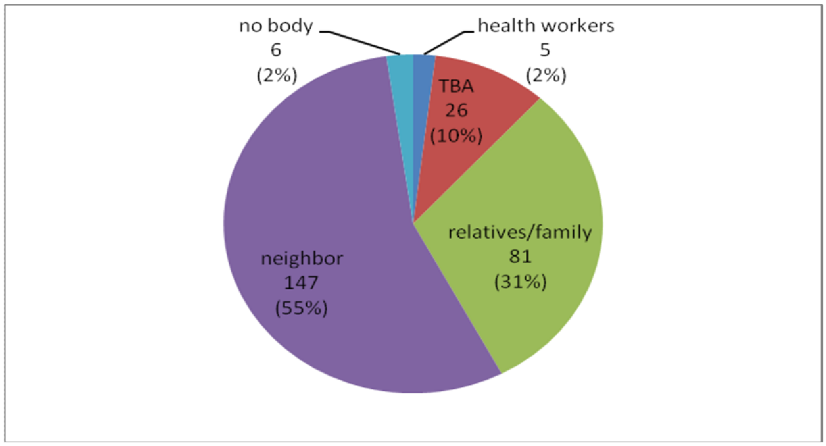


Figure 3: With whom mothers attended ANC at health institution in Gindaberet and Abuna Gindaberet woredas were assisted when they delivered their recent child at home March, 2010

Out of the total 322 pregnant women participated in study, more than half of mothers claimed that abnormal fetal position 192 (59.6%) and prolonged labor 179 (55.6%) were pregnancy danger signs and symptoms (Fig.4).

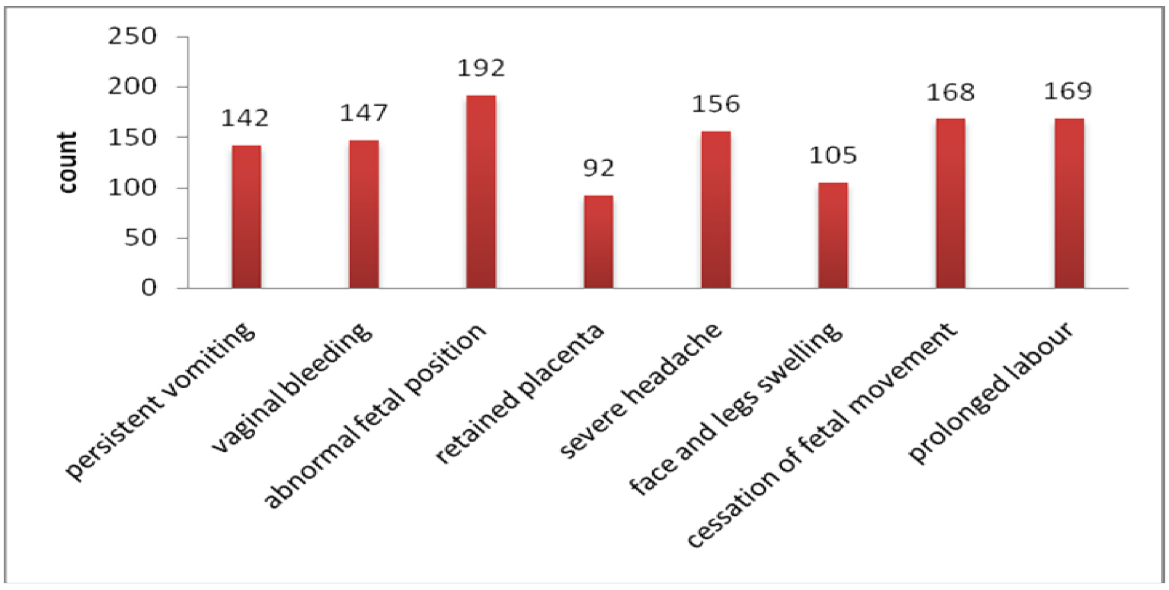


Figure 4: Number of mothers who knew some of pregnancy danger signs and symptoms from those mothers attended antenatal care at health institution in Gindaberet and Abuna Gindaberet Districts, March, 2010

Of 200 mothers have ever faced the pregnancy problem(s), 59 (29.5%) of the mothers faced at least one of the problems during their current pregnancy, 55 (27.5%) of them faced while they were pregnant of their last child and 86 (43%) faced in both current and last pregnancy. In order to overcome the problems 145 (72.5%) of the mothers visited health institution, 25 (12.5% visited TBAs, 19 (9.5%) visited both health facility and 10 (5%) mothers didn't take any measures.

Socio-demographic factors affecting of place of child birth

Using binary logistic regression an association between place of last child delivery and socio-demographic factor was done. Among the variables residence, mothers' educational status, mothers' occupation, marital status and husbands' occupation, husbands' educational status and husbands' age were significantly associated with place of last child delivery ($p<0.05$). But by applying multivariate logistic regressions, when they are adjusted for those variables showed significant association through binary regression, residence, the mothers' educational status, husbands' occupation and husbands' educational status were significantly associated with place of their last child delivery ($p<0.05$). Women whose residence was urban were less likely to give birth at their home than those mothers live in rural residence (OR = 0.24, 95.0% CI = 0.09 – 0.63) table – 7.

From qualitative finding, majority of the respondents claimed that the reasons why most mothers gave birth at their home were that they didn't encounter any problem for their last child delivery. It is the usual practice in their area. Far distance from the health facility, lack of transportation and lack of money at hand at the moment of labor were also some of the reasons why mothers didn't deliver their children at health institution.

Table 6: Association of socio-demographic factors of mothers attended antenatal care at health institution with place of recent child delivery in Gindaberet and Abuna Gindaberet districts, March, 2010

Factors		Place of delivery		Crude ORs (95% CI)	Adjusted ORs (95% CI)**
		Home	Health institution		
Residence	Urban	20	23	0.12 (0.06 – 0.24)	0.24 (0.09 – 0.63)*
	Rural	245	34	1.00	
Mothers educational status	Unable to read & write	186	21	12.4 (3.6 - 42.5)	0.34 (0.42 – 2.77)
	Read & write only	38	9	5.9 (1.5 - 23)	0.09 (0.01 – 0.86)*
	Grade 1- 8	36	20	2.5 (0.7 – 9)	0.2 (0.02 – 1.64)
	Secondary & above	5	7	1.00	1.00
Husband's occupation	Employee	4	10	0.05 (0.01- 0.16)	0.08 (0.01 - 0.6)*
	Students	4	3	0.15 (0.03 – 0.73)	0.76 (0.1 – 5.9)
	Daily laborer	5	7	0.08 (0.02 – 0.28)	0.13 (0.03 – 0.6)*
	Merchant	22	10	0.25 (0.1 – 0.6)	0.62 (0.22 – 1.7)
	farmer	225	26	1.00	1.00
Husbands' educational status	Unable to read & write	157	12	11.8 (5 – 30)	5.4 (1.4 – 21.1)*
	Read & write only	29	3	8.7 (2.26 – 33.5)	4.9 (0.9 – 27.7)
	Grade 1- 8	54	23	2.1 9 (0.95 – 4.7)	0.99 (0.3 – 3.5)
	Secondary & above	20	18	1.00	1.00

* P < 0.05, ** Adjusted for socio demographic factors of the respondents and respondents' husband

Obstetric factors and related factors affecting place of delivery

Crude analysis was done by applying bivariate logistic regression to assess the association between place of recent child birth and obstetric factors. Accordingly, history of ANC visit, number of antenatal care visit, whether or not mothers have encountered pregnancy related problems, and history of still birth had an association with place of their recent child delivery ($p<0.05$). Those mothers who attended antenatal care for their last child were less likely to deliver at home than those mother didn't attend (OR = 0.04, 95% CI = 0.02 – 0.08). Those mothers encountered pregnancy danger signs and symptoms for their last child pregnancy were less likely to deliver at their home than those mothers didn't encounter the problems (OR = 0.5, 95% CI = 0.28 – 0.89) and mothers who had never faced still birth were more likely to born their child at their home than those mothers ever faced still birth (OR = 2.76, 95% CI = 1.21 – 6.3). When adjusted for these obstetric factors through multivariate logistic regression, history of still birth, parity and number of antenatal care visit showed an association with place of last child delivery ($p<0.05$). Those mothers encounter no still birth are more likely to deliver at their home than those mothers encounter still birth (OR = 1.37, 95% 1.14 – 16.5). Para one mothers are less likely to deliver at their home than para 5 and above mothers (OR = 95% CI = 0.01 – 0.89) (Table -7).

Qualitatively, pregnancy complications were the major reasons why mother seek for health institutional delivery. In addition to this, condition of the labor itself, want to deliver where their relatives and family exists were the reasons why mothers deliver at their home. One of the respondent said that, "*I have never faced any problem when I deliver my children at home, so that I will also born this current pregnancy at my home" (26 years mothers, from Ulaa Abbaa Dhaadhii kebele, at Karre Dobi Health Center)*

Table 7: Association of obstetric factors of mothers attended antenatal care at health institution with place of recent child delivery in Gindaberet and Abuna Gindaberet districts, March, 2010

Factors		Place of delivery		Crude ORs (95% CI)	Adjusted ORs (95% CI)**
		Home	Health institution		
Attended ANC for last child	Yes	26	42	0.04 (0.02 – 0.08)	
	No	239	15	1.00	
Number of ANC visits	1	5	0	0.00	0.00
	2	7	12	0.33 (0.07 – 1.56)	0.27 (0.4 – 1.60)
	3	7	26	0.15 (0.04 – 0.68)	0.07 (0.01 – 0.43)*
	>=4	7	4	1.00	1.00
Parity	1	64	12	0.69 (0.29 – 1.66)	0.09 (0.01 – 0.89)*
	2-4	116	34	0.44 (0.21 – 0.92)	0.24 (0.05 – 1.16)
	>=5	85	11	1.00	1.00
Encounter pregnancy danger signs and symptoms for recent child pregnancy	Yes	108	33	0.50 (0.28 – 0.89)	0.76 (0.22 – 2.67)
	No	157	24	1.00	1.00
Encounter still birth	No	10	19	2.75 (1.21 – 6.30)	1.37 (1.14 – 16.5)*
	Yes	47	246	1.00	1.00

* P< 0.05, ** adjusted for obstetric and related factors

Perceptions of mothers to pregnancy complications and institutional delivery

The majority of the respondents 229 (71.1%) perceived as at high risk to encounter problems due to pregnancy and 93 (28.9%) of the mothers perceived as at low risk to encounter pregnancy related complications. More than half 192 (59.6%) of the respondents perceived as complications related to pregnancy were high and 130 (40.4%) of the respondents had low perception to complications come because of pregnancy. Two hundred five (63.7%) of the respondents perceived that the benefits of institutional delivery was high while the rest 117 (36.3%) of the respondents claimed the benefits of institutional delivery was low. More than half 203 (63%) of

the mothers have low perceived barriers to institutional delivery while 117 (37%) of the respondents have high perceived barriers to utilize institutional delivery.

From qualitative finding, the majority of the discussants claimed that they were susceptible to pregnancy complication like any other mothers. One of the respondents responded that, *"Even I fear for this pregnancy because, I faced prolonged labor for my recent child labor." (23 years old mothers, from Kachisi kebele, at Gindaberet Hospital)* Majority of the discussants complained that pregnancy complication is very danger. One of the participants said that, "*I remember that the problem that one of my neighbors faced, I feel sorry and I regret for being become pregnant and I don't want talking about it." (24 years old mother, from Badhaadha Walii kebele, at Bakke Kalate Health Center)*

From the total 322 mothers included in the study almost equal proportion [(160 (49.7%): 162 (50.3%)] of mothers have high and low self-efficacy of institutional delivery respectively.

Table 8: Responses of mothers to perception questions among those mothers attended antenatal care at health institution in Gindaberet and Abuna Gindaberet, March, 2010

	Items	Response					Median	Range	Mean score ± SD
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree			
Perceived susceptibility to pregnancy complication	*-Any pregnant woman is susceptible to face delivery complications*	199	68	6	31	18	5	4	16.0 ± 3.86
	-Like any pregnant women, I am susceptible to encounter delivery complications	120	156	10	19	17	4	4	
	- mothers have history of danger sign during their current pregnancy are at risk of delivery complication	117	132	10	61	2	4	4	
	-Those mothers have history of danger sign during their last delivery are at risk of developing similar complication during her delivery	99	128	22	50	23	4	4	
⇨ Cronbach's alpha = **0.85**									
Perceived severity to pregnancy complication	*-Delivery complications can be severe and may be hazardous to my well being.*	192	105	20	4	1	5	4	22.8 ± 2.49
	-Delivery complication(s) can be severe and may be hazardous to the newborn	201	104	10	6	1	5	4	
	-Home delivery complication(s) can be severe to mother	198	110	11	2	1	5	4	
	-Home delivery complications can be dangerous to baby	202	118	0	1	1	5	4	

... Table – 8 cont'd

	-Delivery complication may lead to death to both mothers and/or new born	197	113	6	5	1	5	4	
⇨ Cronbach's alpha = **0.84**									
Perceived benefits to institutional delivery	*-Being attended by a skilled delivery attendant may be beneficial to my well being*	236	69	16	0	1	5	4	23.0 ± 1.75
	-Being attended by a skilled delivery attendant may be beneficial to the newborns well being	234	80	8	0	0	5	2	
	-In case, if I may encounter pregnancy complication, there is a solution from health institution for my baby and me	216	102	1	1	2	5	4	
	There is better outcomes from institutional delivery than home delivery for my baby and me	156	164	1	1	0	4	4	
	-Birth attended by skilled birth attendant is safe/clean	155	162	3	2	0	4	4	
⇨ Cronbach's alpha = **0.73**									
Perceived barriers of institutional delivery	*Unavailability of Health facilities*	74	73	89	84	2	3	4	28.5 ± 4.81
	Unavailability of expected skilled attendant in Health Facility	43	75	115	84	5	3	4	
	I can't pay for services	53	28	127	106	8	3	4	
	I can't get transportation services	40	138	86	55	3	4	4	
	Very distant Health facilities	49	109	97	58	9	3	4	
	I fear delivery procedure	43	55	104	110	10	3	4	
	Health staffs have good approach for the servants	168	106	33	15	0	5	3	
	Service given for me during my labor/delivery is very nice	206	102	12	2	0	5	3	
⇨ Cronbach's alpha = **0.76**									
Cues to action of institutional delivery	*-If somebody opposes or is against me from delivering at health institution, I can find a way to get it.*	128	162	20	10	2	4	4	26.0 ± 2.72
	It is easy for me to stick to my plans and accomplish my goals	142	157	19	4	0	4	3	
	-I am sure that I will go to health center or hospital soon I face pushing down pain	131	156	23	12	0	4	3	
	-I can get help from skilled birth attendants if I go health facility for my labor	145	160	12	2	3	4	4	
	-When I am having a problem during my labor, I can usually find health institution that can give further solution	151	161	8	2	0	4	3	
	-I strengthen my child birth intension or plan at health facility as my gestational age increases	145	157	15	4	1	4	3	
⇨ Cronbach's alpha = **0.75**									

Do perception affects place of child delivery?

Using binary logistic regression crude analysis was done to an association between place of last child delivery and perceptions were done. From perception of constructs of health belief model perceived susceptibility, perceived severity, perceived benefits and perceived self-efficacy were significantly associated to place of last child delivery (P<0.05). But when other perceptions are adjusted for the others through multiple logistic regressions perceived susceptibility, perceived severity and perceived benefits are strongly significant with place of last child delivery (p<0.05). Those mothers have low perceived susceptibility to pregnancy complications are more likely to give birth at their home than those mothers have high perception to pregnancy complications (OR=3.95, CI (95.0%) = 1.79 – 8.74). Similarly those mothers have low perceived severity and benefits to pregnancy complications and institutional delivery were more likely to give birth at their home than those mothers have high perception to the complications & benefits (OR = 3.23, 95% CI = 1.60 – 6.51 and OR = 2.04, 95% CI = 1.01 – 4.09) (Table - 9).

Table 9: Association of perceptions of mothers attended antenatal care at health institution with place of recent child delivery in Gindaberet and Abuna Gindaberet districts, March, 2010

		Place of delivery		Crude ORs (95% CI)	Adjusted ORs (95% CI)**
		Home	Health institution		
Perceived susceptibility of pregnancy complication	Low	84	9	2.48 (1.16 – 5.28)	3.95 (1.79 – 8.74)*
	High	181	48	1.00	1.00
Perceived severity of pregnancy complication	Low	117	13	2.68 (1.38 – 5.20)	3.23 (1.60 – 6.51)*
	High	148	44	1.00	1.00
Perceived benefits of institutional delivery	Low	117	13	2.19 (1.12 – 4.26)	2.04 (1.01 – 4.09)*
	High	148	44	1.00	1.00
Perceived self-efficacy of institutional delivery	Low	104	13	2.58 (1.40 – 4.74)	1.55 (0.75 – 3.17)
	High	161	44	1.00	1.00

* P < 0.05, ** adjusted for perception to pregnancy complications and institutional delivery

Do cues to action determine place of last child delivery?

The majority 195 (60.6%) of the mothers reported that they discussed their place of last child delivery with their husbands, 75 (23.3%) mothers didn't discuss where to deliver their last child, 35 (10.9%) discussed with their relatives and the rest discussed with their friends, neighbors and others. Of the total mothers discussed where to deliver their recent child only 55 (28.2%) of them delivered at health institution. 254 (79%) of the mothers heard or saw those mothers suffer/die from/of pregnancy related complication. Concerning the information of place of delivery 211 (65.5%) of mothers heard where to give birth from different media like radio, TV and written materials and 267 (83%) of the mothers were informed where to deliver their last child by health professionals.

Using binary logistic regression crude analysis was done to see the association between cues to action variables with place of last child delivery. Accordingly, mother discussed where to deliver, mother who saw mother suffered and/or die from/of pregnancy complication, mother who heard and/or read where to deliver from any media or health professional showed statistically significant association with place of last child delivery ($p < 0.05$). But mother who discussed with husband/relatives where to deliver and heard where to deliver from health professionals showed significant association with place of last child delivery when adjusted for other cues to action variables through multivariate logistic regression ($p < 0.05$). Those mothers discussed where to deliver were 0.07 less likely to deliver at their home than those mothers didn't discuss (OR = 0.07, 95% CI = 0.01 – 0.38 (Table – 10).

Table 10: Association of cues to action of institutional delivery of mothers attended ANC at health institution with place of recent child delivery in Gindaberet and Abuna Gindaberet districts, March, 2010

Factors		Place of delivery		Crude ORs (95% CI)	Adjusted ORs (95% CI)**
		Ho me	Health institution		
Discussed where to deliver their recent child,	Yes	192	55	0.096 (0.02 – 0.40)	0.07 (0.01 – 0.38)*
	No	73	2	1.00	1.00

...Table – 10 cont'd

Ever seen mothers suffer from pregnancy complication	Yes	206	54	0.19 (0.06 – 0.64)	0.41 (0.08 – 1.96)
	No	59	3	1.00	1.00
Ever seen mothers die of pregnancy complication	Yes	201	53	0.24 (0.08 – 0.68)	1.0 (0.24 – 4.11)
	No	64	4	1.00	1.00
Ever heard and/or read where to deliver from any media	Yes	167	44	0.50 (0.26 – 0.98)	0.55 (0.23 – 1.30)
	No	98	13	1.00	1.00
Informed by health professionals where to deliver their last child	Ye	16	39	0.03 (0.01 – 0.06)	0.03 (0.01 (0.06)*
	No	249	16	1.00	1.00

* P < 0.05, ** adjusted for cues to action of institutional delivery

When those significant variables under perceptions and cues to action of place of delivery were adjusted for one another through multivariate logistic regressions, perceived susceptibility to pregnancy complication, perceived severity to pregnancy complication, mothers informed where to deliver their last child health professional, discussed where to deliver, heard where to deliver from media like radio, TV or written material, history of under one child death, residence, time mothers spend to get to health institution became statistically significant association with place of last child delivery ($p < 0.05$). Mothers whose residence were urban were less likely to deliver at their home than those who were rural in residence (OR = 0.21, 95% CI = 0.05 – 0.95). Mothers who faced under one child death were less likely to deliver at their home than those mothers never encountered under one child death (OR = 0.12, 95% CI = 0.03 – 0.60). Those mothers who had low perceived susceptibility and severity to pregnancy complication were more likely to deliver at their home than those who have high perceived susceptibility and severity to pregnancy complication OR = 3.45, 95% CI = 1.24 – 9.65 and OR = 3.36, 95% CI = 1.23 – 9.18 respectively (table – 11).

Table 11: Association of significant variables of socio-demographic, obstetric and related factors, perception to pregnancy complications and institutional delivery of mothers attended antenatal care at health institution with place of recent child delivery in Gindaberet and Abuna Gindaberet districts, March, 2010

Factors		Place of delivery		Crude ORs (95% CI)	Adjusted ORs (95% CI)**
		Home	Health institution		
Residence	Urban	20	23	0.12 (0.06 – 0.24)	0.21 (0.05 – 0.95)*
	Rural	245	34	1.00	1.00
Time spend to get to the health institution	<1hour	88	30	0.26 (0.11 – 0.63)	0.90 (0.21 – 3.88)
	1-2 hrs	98	20	0.43 (0.18 – 1.08)	0.25 (0.08 – 0.84)*
	>2 hrs	79	7	1.00	1.00
History of under one child death	Yes	6	39	0.68 (0.27 – 1.70)	0.12 (0.03 – 0.60)*
	No	51	226	1.00	1.00
Perceived susceptibility of pregnancy complication	Low	84	9	2.48 (1.16 – 5.28)	3.45 (1.24 – 9.65)*
	High	181	48	1.00	1.00
Perceived severity of pregnancy complication	Low	117	13	2.68 (1.38 – 5.20)	3.36 (1.23 – 9.18)*
	High	148	44	1.00	1.000
Discussed where to deliver their recent child,	Yes	192	55	0.096 (0.02 – 0.40)	0.05 (0.01 – 0.34)*
	No	73	2	1.00	1.00
Ever heard and/or read where to deliver from any media	Yes	167	44	0.50 (0.26 – 0.98)	0.48 (0.18 – 1.30)
	No	98	13	1.00	1.00
Informed by health professionals where to deliver their last child	Ye	16	39	0.03 (0.01 – 0.06)	0.02 (0.01 – 0.05)*
	No	249	16	1.00	1.00

* P < 0.05, ** adjusted for perceptions, cues to action of institutional delivery, obstetric and related factors and socio-demographic variables

Predictors of place of delivery among mothers attended ANC for their recent child

Using bivariate logistic regression crude analysis was done to assess the relationship between place of last child delivery and predictor variables among mothers visited ANC for their recent child. Accordingly, residence, mothers occupations, time mothers spent to get to the health facility, money mother pay for transportation to get to health facility, mothers' educational status, husbands' educational status, number of ANC visits, history of under one year child death, informed by health professional to give birth at health institution, heard or read where to deliver from media like radio, TV and written materials, perceived susceptibility to pregnancy complications and perceived self efficacy have significant associations with place delivery. But when adjusted for one another through multivariate logistic regression, whether or not informed institutional delivery by health professional, heard /read where to deliver from media like radio, TV and written materials, perceived susceptibility of pregnancy complications and history of under one child were statistically significant with place of delivery ($p < 0.05$). Those mothers were told by health professionals to deliver at health institution were less likely to deliver at home than those mothers weren't told (OR = 0.19, 95% CI 0.04 – 0.90). Mothers that encountered under one year child death were less likely to deliver at home than those mothers didn't encounter under one year death (OR = 0.09, 95% CI 0.02 – 0.50) (Table – 12).

Table 12: Association of place of last child delivery versus perception to pregnancy complications and institutional delivery, obstetric and socio-demographic factors of mothers attended ANC for their recent child in Gindaberet and Abuna Gindaberet, March, 2010

Factors		Place of delivery		Crude ORs (95% CI)	Adjusted ORs (95% CI)**
		Home	Health institution		
Residence	Urban	4	21	0.18 (0.05 – 0.62)	0.23 (0.05 – 1.20)
	Rural	22	21	1.00	1.00
Informed by health personnel to deliver at health institution	Yes	13	36	0.17 (0.05 – 0.53)	0.19 (.040 – 0.90)*
	No	13	6	1.00	1.00

... Table – 12 cont'd

Heard/read from different media about place of delivery	Yes	14	35	0.23 (0.08 – 0.72)	0.13 (0.02 – 0.76)*
	No	12	7	1.00	1.00
Perceived Susceptibility to pregnancy complication	Low	10	4	5.94 (1.62 – 21.75)	2.41 (3.36 – 17.36)*
	High	16	38	1.00	1.00
Under year one child death	Yes	5	11	0.18 (0.06 – 0.62)	0.09 (0.02 – 0.5)
	No	37	15	1.00	1.00
Time spent to get to health facility	<1 hour	13	26	0.10 (0.02 – 0.53)	1.46 (1.33 – 15.96)*
	1-2 hour	3	14	0.04 (0.01 – 0.31)	0.23 (0.02 – 2.36)
	>2 hour	10	2	1.00	1.00

* P < 0.05, ** adjusted for perceived susceptibility, cues to action to institutional delivery, selected socio-demographic and obstetric factors

Where mothers intend to deliver their current pregnancy?

From the total 322 mothers participated in the study, 215 (66.8%) of them were intended to give birth their current pregnancy at health institution (health center and hospital), 107 (33.2%) at their home & (2.2%) of them didn't decide where to deliver. From those intended to deliver at their home, 78 (78%), 11 (11%), 5 (0.05%) and 5 (0.05%) mothers prefer relatives/family members, health professionals, TBA & TTBA to attend the delivery respectively. Some of the reasons why those mothers intended to give birth at their home were, feel more comfortable just being at home 60 (60%), need close attention from relatives and family members 36 (36%), poor outcome from health facility delivery 9 (0.09%), being never faced any problem in their last home delivery 8 (0.08%), poor approach of health professional and her usual practice 5 (0.05%) were some of the reasons why those mothers intended to deliver at their home. Presence of better service 166 (77.2%) and better outcomes at health facility 149 (69.3%), poor outcome from home delivery to mothers 43 (21.5%) and new born 21(9.8%) were reasons why mothers intended to deliver at health institution.

Factors affecting place where mother intends to deliver

Using binary logistic regression crude analysis was done to assess the association between socio-demographic, obstetric and related factors, perception to pregnancy complication and institutional delivery and cues to action of institutional delivery and place where mothers intend to deliver their current pregnancy.

For socio-demographic factors, marital status, husband educational status and mothers' educational status were statistically significant with where mother intended to deliver their current pregnancy.

From obstetric factors, responses of mother to benefits of ANC, ANC follow up history for last child, number of ANC visits for last child, history of danger sign and symptoms for current pregnancy, place of last child delivery, wishes labor and delivery service for other mothers, gravida, parity and history of abortion were statistically significant with where mothers intended to deliver.

Among the perceptions, perceived susceptibility of pregnancy complication, perceived severity of pregnancy complication and perceived benefits of institutional delivery significant with where mothers intended to deliver.

To the final when cues to action of place of delivery assessed for association, discussed where to deliver their last child, whether health professional inform them where to deliver their last child, heard or read where to deliver from any media, heard or saw mother die of pregnancy complication, saw mothers suffered from pregnancy complications were showed significance association to place where mothers intended to deliver their current pregnancy ($p<0.05$).

Through multivariate logistic regression when socio-demographic factors were adjusted for it, marital status, husbands' and mothers' educational status showed significant association with where mothers intended to deliver. Those women whose husbands attended primary school were more likely to deliver health institution than those mothers whose husband attended secondary and above educational status (OR = 3.33, 95% CI = 1.14 – 9.75).

Using multivariate logistic regression of obstetric and related factors, history of pregnancy danger signs and symptoms during their current pregnancy, places of last child delivery, and parity were statistically associated with where mothers intended to deliver. Those mothers faced pregnancy danger signs and symptoms during their current pregnancy were more likely to deliver health institution than those mothers didn't encounter the problems (OR = 8.77, 95% CI

= 4.60 – 16.78). Mothers who born only one child were less likely to deliver at health institution than those mothers born five and above child (OR = 0.38, 95% CI 0.18 – 0.80).

As usual when perception adjusted for adjusted through multivariate logistic regression, perceived susceptibility and severity to pregnancy complication and perceived benefits of institutional delivery were significantly associated with where mothers intended to deliver. Similarly when cues to action were adjusted for cues to action of institutional delivery, saw or heard mothers suffered/die from/of pregnancy complications(s), informed where to deliver their last child by health professional and discussion of place of delivery of their last child showed statistically significant association with where mothers intended to deliver. Those mothers discussed where to deliver their last child intended more to deliver at health institution than those mothers didn't discuss (OR = 2.10, 95% CI = 1.14 – 3.77).

Finally all significantly associated variables were adjusted for one another. Accordingly, history of pregnancy danger sign and symptoms for current pregnancy, perceived susceptibility and severity to pregnancy complication, discussion of place of last child delivery, saw or heard mothers suffered from pregnancy complications were statistically significant association with where mothers intended to deliver. Mothers that encountered pregnancy dangers signs and symptoms for current pregnancy were more likely to deliver at health institution than those mothers didn't encounter the problem (OR = 11.1(5.07 – 24.33). Those mothers have low perceived susceptibility to pregnancy complications were more likely to deliver their current child at health institution than those mothers had high perceived susceptibility to pregnancy complication (OR = 9.23, 95% CI = 3.63 – 23.46). But those mothers had low perceived severity to pregnancy complication were less likely to born their current pregnancy at health institution than those mothers had high perceived severity to pregnancy complication (OR = 0.48, 95% CI = 0.24 – 0.96). Mothers who saw or heard mothers die of pregnancy complications were more likely to deliver at health institution than those mothers didn't see or hear mothers suffered from pregnancy complications (OR = 3.04, 95% CI = 1.39 – 6.66) (Table – 13).

From qualitative finding also, pregnancy complications during labor like prolonged labor are the most factors which enhance mother to go to health facility. One of the respondents said that, "… *I will not go to health institution unless and other wise I faced prolonged labor.*" (*29 years old mothers, from Badhaadha Walii kebele, a Bakke Kalate Health Center)*

Table 13: Association of where mothers intends to deliver their current pregnancy with perception to pregnancy complications and institutional delivery, obstetric and socio-demographic factors of mothers attended ANC at health institution in Gindaberet and Abuna Gindaberet, March, 2010

Factors		Where mothers intended to deliver		Crude ORs (95% CI)	Adjusted ORs (95% CI)**
		Health institution	Home		
Husband educational status	Unable to read & write	104	65	0.50 (0.22 – 1.11)*	3.24 (0.94 – 11.1)
	Only read and write	13	19	0.21 (0.08 – 0.59)*	1.82 (0.41 – 8.08)
	Primary school	66	11	1.86 (0.70 - 4.98)	1.66 (0.43 – 6.40)*
	Secondary and above	29	9	1.00	1.00
Parity	1	38	38	0.41 (0.22 – 0.77)	0.45 (0.18 – 1.11)
	2-4	109	41	1.10 (0.62 – 1.93)	0.68 (0.30 – 1.55)
	>=5	68	28	1.00	1.00
Encountered pregnancy dangers signs and symptoms for current pregnancy	Yes	131	14	10.4(5.55 – 19.36)	11.1 (5.07 – 24.33)*
	No	84	93	1.00	1.00
Perceived susceptibility of pregnancy complication	Low	85	8	8.09 (3.74 – 17.49)	9.23 (3.63 – 23.46)*
	High	130	99	1.00	1.00
Perceived severity of pregnancy complication	Low	61	69	0.22 (0.133 – 0.36)	0.48 (0.24 – 0.96)*
	High	154	38	1.00	1.00
Perceived benefits of institutional delivery	Low	62	55	0.38 (0.24 – 0.62)	0.53 (0.27 – 1.04)
	High	153	52	1.00	1.00
Heard or saw mothers die of pregnancy complications	Yes	196	58	8.72 (4.76 – 15.97)	3.04 (1.39 – 6.66)*
	No	19	49	1.00	1.00

* P < 0.05, ** adjusted for socio-demographic variables, obstetric and related factors, perception to pregnancy complications and institutional delivery, cues to action of institutional delivery

Chapter - 6: Discussion

This study tried to assess factors affecting place of child delivery and intension of mothers where to deliver their current pregnancy. On top of this the perceptions of mothers toward pregnancy complications and institutional delivery was assessed.

In this study from the total 322 mothers participated in the study only 68 (21.1%) of the respondents reported that they took antenatal care for their last child. This finding is lower than that of national health and health related indicators 2006/7 reports which stated national antenatal care coverage was fifty two percent. In Oromiya 39.7% of mothers utilize antenatal care from health professionals and 83% of Nigeria mothers took at least one antenatal care while they were pregnant (13, 16). This discrepancy might be the study design used for this study – cross sectional and consecutive reports for national health and health related indicators.

Concerning place of recent child delivery, the majority of the respondents 265 (82.3%) delivered their recent child at their home while only 17.7% of the respondents gave birth at the health institution. Similarly of the total birth occur in Nigeria and Rwanda 70.2% and 59% of delivery was conducted at home respectively (13, 14). 44.5% women in Tanzania and 33% in Kenya delivered in a health facility in their most recent delivery (12, 15). In Ethiopia, study conducted in North Gondar showed that 13.5% women gave birth at health institutions (17). In case of Oromiya, national health and health related indicators reported that 12.1% of delivery is conducted by skilled health professionals but EDHS-2005 stated only 4.2% of deliveries were conducted in health facility (8, 16). Reporting delivery conducted at health post by health extension workers might bring this figure discrepancies that it doesn't considered as delivery conducted by skilled health personnel.

Socio-demographic variables could have positive or negative influences on the pregnant woman with regard to utilization of institutional delivery (9). In this study socio-demographic factors like residence, educational status of the husbands, mothers' occupations and educational status have effects on the utilization of institutional delivery. Study conducted in Nigeria, Uganda, Tanzania and Kenya also show similar variables had an influence on place of child birth (12 -15 & 19). This study finding showed that ladies whose husbands have attended formal education (primary school, secondary and above) were more likely to give birth at health institution than those ladies husbands haven't formal education. Contrary to this finding, study conducted in

Nigeria showed that, ladies whose husbands attended formal education tends to deliver at home compared to mother whose husbands with no formal education (13).

Mothers whose residences were urban are more likely to deliver at health facility than those mothers live in rural area. In Uganda also, delivery in a health facility was more common in urban than in rural areas (19). Access difference to health institutions and health information could be the probable reasons for the difference.

In this study history of still birth, abortion and < 1 child mortality have significant effects on place of child delivery. Similarly, study conducted in Maputaland, Northern KwaZulu-Natal showed that previous bad obstetric experience can have an influence on the mother's selection of the place of delivery. Those women who ever experience miscarriage, still birth or neonatal death would have preferred a clinic or hospital delivery to home delivery (9). Mothers who had never faced still birth were 2.76 times more likely to born their child at their home than those mothers ever faced still birth. Fear of poor obstetric outcome mother faced before could be the reason for preferring institutional delivery.

The chance of home delivery was 0.04 times less for those mothers visited antenatal care than those mothers didn't visit antenatal care for their recent child. Timing and number of antenatal checks during pregnancy appears to be significantly associated (7, 12). In Kenya also, the chance of home delivery was 9.2 times for those who received no antenatal care compared to those who had at least one or more antenatal consultations (**7**). Among Indian mothers, those mothers who received antenatal check-ups are two to five times more likely to give birth in a medical institution than mothers who did not receive any ante-natal check-up (26).

Perceived susceptibility and severity of pregnancy complications and perceived benefits of institutional delivery have an influence on choice of place of delivery. Those mothers have low perceived susceptibility and severity to pregnancy complication was 3.95 and 3.23 times more likely to deliver at their home than those have high perceptions to the same constructs. Being understanding the consequence of pregnancy complication well that is bad might be the probable reasons for preferring institutional delivery to home delivery. Perceptions toward institutional delivery and pregnancy complications have an influence on place of child delivery. Study conducted in South Africa showed that for only a few cases of respondents, choice of place of

delivery has influenced by perceptions that their most recent labour and delivery could have endangered their own or their baby's health (9).

Majority of the respondents 229 (71.1%), of this study perceived as they are at high risk to encounter problems come due to pregnancy where as 93 (28.9%) of the mothers perceived as they are at low risk to encounter pregnancy related complications and only 192 (59.6%) of the respondents agreed that pregnancy complications were high. From qualitative finding also, most of the respondents claimed that they were susceptible to pregnancy complication like any other mothers. One of the respondents responded that, *"...Even I fear for this pregnancy because, I faced prolonged labor for my recent child labor." (23 years old mothers, from Kachisi kebele, at Gindaberet Hospital)* Of note in Kenya, 64% of those mothers who delivered outside a health facility were aware of the potential risks, and could identify one or more complications that could occur (21). Similarly, 87% of the women of Jimma Town felt that they may be susceptible to develop pregnancy and child birth complications and 93% of them perceived that delivery complications can be hazardous to their health (20). This study finding is smaller than result of study conducted in Jimma town. This difference could be residence and educational status difference of the two study areas.

In this study, history of still birth, under-one year child death and history pregnancy complication during their recent child pregnancy were some of the reasons for mothers to have high perceived susceptibility and severity of pregnancy complication. In Turkey, the main conditions that are perceived as risk during pregnancy are the immobility of the unborn offspring, hemorrhages and miscarriage threats. Miscarriages, still birth, babies born with deformities, or important illnesses experienced by people around pregnant women, increase the risk perceptions of pregnant women (24).

From the total 322 mothers included in the study, two hundred five (63.7%) of the respondents reported that the benefits of institutional delivery is high that complication related to pregnancy can be alleviated at health institution while the remaining 117 (36.3%) of the respondents claimed the benefits of institutional delivery is low. Review articles done by, Global Health, Medline and Health Management Information also showed that perceived benefit comprises factors influencing the perception of how a facility delivery with skilled attendance would benefit mother and newborn and/or how big the personal need for such care is (25). But in Jimma of 93% of respondents who perceived that delivery complications can be hazardous to their health, 95.2 % of them agreed that if they get a skilled attendant during delivery, it will be beneficial to their health and

the health of their newborns (20). Reasons stated for perceived severity difference also the probable reasons for the difference.

Mothers participated in this study perceived that money mothers pay for transportation to get to the health facility, history of poor obstetric outcome, pregnancy complications, gravidity, lack of transportation, approaches of health personnel and service they had taken before are determinants of place of delivery. Study conducted in Tanzania, Uganda and Kenya revealed that distance from health facility, financial limitation, condition of the labor, parity and age of mothers have an influence on institutional delivery (15, 21). In North Gondar also preference to give birth in the presence of relatives, trust in TBAs, cultural reason and lack of money were some of the reasons why mothers haven't utilized health institutional delivery (17).

From the total 322 mothers interviewed during the study period, equal proportions (50:50) of mothers have high self-efficacy or confident enough to deliver at health institution and low self efficacy to give birth at health facility.

Among the total 195 mothers, who discussed about place of their recent child with husbands, relatives, friends and neighbors, only 55 (28.2%) of them delivered at health institution. This showed that those mothers discussed where to deliver were less likely to deliver at their home by 0.1. But in Tanzania those women ever discussed with their husbands or partners on where to go for delivery were 2.37 times to deliver at health facility than those mothers didn't discuss with their husbands (15). Those mothers informed by health professionals where to deliver their recent child were 2.16 times more to deliver at health institution than those mothers weren't informed. Similarly, study conducted in Tanzania revealed that those who were advised during ANC by health workers were 1.82 times higher to deliver in a health facility than those who were not (15). This study finding is a little more than that of Tanzania. 198 (61.5%) of this study respondents claimed that they decided where they delivered their recent child, 22% of place of delivery decided by the husbands. Similarly, study conducted in Jimma showed that, 62.3% could make by themselves, while the rest should get the decisions either from their husbands or their relatives (20).

When I come to where mothers intended to deliver, marital status, husband educational status and mothers' educational status were statistically significant with where mother intended to deliver their current pregnancy. Those women whose husbands can't read and write were 0.5 less likely to deliver health institution than those mothers whose husband attended secondary and above educational status. This finding is similar with study conducted in Jimma that, those women whose

husbands have formal education were 4.6 times more likely intended to deliver in health institution (20).

Among obstetric factors history of danger sign and symptoms for current pregnancy statistically significant with where mothers intended to deliver when it was adjusted for other obstetric factors. Mothers that encountered pregnancy danger signs and symptoms were 11 times more intended to deliver at health institution. In the same manner those mothers who had high perceived susceptibility to encounter pregnancy complications were intended more to deliver at health institution. This could be the fear of delivery complications they may face if they deliver at their home.

Those mothers were told by health professionals to deliver at health institution were 0.19 times less likely to deliver at home than those mothers weren't told and those mothers Heard/read from different media about place of delivery were 0.09 times less likely to deliver at home than those mothers haven't any information about place of delivery. In line with this finding study conducting in North Gondar, those women without access to radio were less likely by 0.41times to deliver at a health institution than women with access to radio (17).

To the final when cues to action of place of delivery assessed for association, discussed where to deliver their last child and informed by health professional where to deliver their last child weren't statistically significant with where mothers intended to deliver when adjusted for socio-demographic, obstetric, perceptions and other cues to action of institutional delivery.

Strength and Limitation of the study

Strength of the study

- Similar sex interviewers were used who were non-health workers that are unaware of the expected response
- Having using familiar model for the study
- Supplementation of quantitative study with qualitative study.
- Multiple logistic regression were used to control possible confounding effects

Limitation of the study

- Re-call biases, like responses to obstetrics and related factors of recent child
- Because of study was a cross-sectional design, the limitations of a cross-sectional study are also unavoidable
- Lack of similar study (literatures) to compare with the results

Chapter -7: Conclusion and Recommendation

7.1. Conclusion

Socio-demographic factors like mothers' educational status, husbands' educational status, husbands' occupation and residence were the predictors of place of delivery. Obstetric and related factors have a vital role in determining place of child delivery as well intension where mothers intend to deliver. History of antenatal care visit, number of antenatal care received, obstetric outcomes and pregnancy danger signs and symptoms have significant contribution on place of delivery and where mothers intends to deliver. Perceived susceptibility and perceived severity to pregnancy complications and perceived barriers of institutional delivery utilization have positive effects on place of recent child delivery and place where mothers intends to deliver their current pregnancy.

Discussion of place of delivery with the partner, relatives, neighbors and health professional play a great role to utilize institutional delivery. The majority 229 (71.1%) and more than half of the respondents 192 (59.6%) have high perceived susceptibility and severity to pregnancy complications respectively. Even though the majority of mothers have perceived barrier of institutional delivery, with a little more, equal proportion of mothers have high perceived benefits to institutional delivery. More than one third (36.3%) of the mothers have low perceived benefits of institutional delivery. Similar figures of the mothers have high and low perceived self-efficacy to give birth at the health institution.

7.2. Recommendation

Health post, health centers and hospital should gave emphasis for those mothers have no formal education, mothers whose their husbands have no formal education and rural in residence to utilize institutional delivery. Additionally woreda heath facility should encourage mothers to visited antenatal care service more and should assess and inform the mothers about pregnancy and related problems.

Health personnel work on maternal and child health department should increase the perceptions of mothers on pregnancy complications through extensive health information dissemination. More effort is expected from health posts, health centers and hospital to increase mother's perceived benefits of institutional delivery. In order to increase the confidence of mothers to decide and practice health institution delivery more is expected from those health professionals have close contact with pregnant mothers.

There should a time for a mother to discuss where to deliver their pregnancy with their husbands, relatives, neighbor and health professional. Every mother should consult health professional for their health problems, especially during pregnancy that they can be informed for the problems as it related to pregnancy or not.

Lastly I recommend that further study on mothers' perception toward pregnancy complication and institutional delivery utilization is encouraged.

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Annexes

Annex-1: Questionnaire in English

A. Quantitative

JIMMA UNIVERSITY COLLEGE OF PUBLIC HEALTH & MEDICAL SCIENCE POST GRADUATE SCHOOL, DEPARTMENT OF HEALTH EDUCATION AND BEHAVIORAL SCIENCES

Questionnaire Prepared to Assess Determinants of Health Institution Delivery among ANC followers from Gindaberet and Abuna Gindaberet District health institutions, West Shewa Zone, Oromia Regional state, Central Ethiopia, 2010.

To the interviewer, please inform the respondent about the aim of the study as described below. Dear respondent, my name is _____ and I am working with researcher from Jimma University. The aim of this study is to find determinants of institutional delivery among those mothers following ANC from health institution. You are one of the mothers, who are selected to participate in this study, therefore you are kingly requested to participate in this study and provide the information required from you. I would like to inform you that the responses that you provide the questions are not only very essential for the successful accomplishment of the study but also for producing relevant information which will be helpful in improving the maternal and child health. You have the right not to participate or withdraw at the middle of the interview. All the information you will give us will be used for research purposes only and will be kept confidential. Your name or other identification related with you will not be revealed to anybody.

Would you willing to participate in this study? Yes _____ No _____

If '**Yes**,' continue interviewing

If '**No**,' thank and stop interviewing, wait for the next interviewer.

Name of interviewer _____ Sign ____ Date of interview ___ / ___ / 2002 E.C

Name of supervisor _____ Sign_____ Date of interview ___ / ___ / 2002 E.C

Identification: Name of Health institution _____ **Resident**: 1. Urban, 2. Rural

Nº	Questions	Response	Skip
Part-I: Socio-demography			
Q101	How old are you?	____ years	
Q102	What is the highest level of schooling you have ever attended?	1. Never attended 2. Only read & write 3. If formal education, write the higher grade you attended _____	
Q103	What ethnic group do you belong to?	1. Oromo 2. Amhara 3. Tigre 4. Gurage 5. Other (Specify) _____	
Q104	Marital status:	1. Single- never married 2. Married 3. Widowed 4. Divorced 5. Separated 6. Other (specify) _____	
Q105	Occupation:	1. House wife 2. Employee 3. Student 4. Daily laborer 5. Merchant 6. Farmer 7. Other (specify) _____	
Q106	What is your religion?	1. Orthodox Christian 2. Protestant Christian 3. Wakefata 4. Muslim	

		5. Other (specify) _____	
Q107	Husband age:	_____ years	
Q108	Husband occupation	1. Employee 2. Farmer 3. Merchant 4. Daily laborer 5. Student 6. Other specify _____	
Q109	Husband educational status	1. Never attended 2. Only read & write 3. If formal education, write the higher grade you attended _____	
Q110	Source of income	1. Regular employment/job (monthly, annually] 2. Irregular employment 3. Contribution from relatives/others 4. Other (specify) _____ 5. No response	
Q111	What is the approximate total monthly HH income:	_____ Ethiopian Birr	
Q112	Age of mother at her first delivery	_____ years	
Q113	How long does it take you to get to 1. Health center 2. Hospital	1. _____ hr(s) _____minutes 2. _____ hr(s) _____minutes	
Q114	How do you get to health Center?	1. On foot 2. On horse/mule 3. Vehicle 4. Other (specify) _____	
Q115	How do you get to Gindaberet Hospital?	1. On foot 2. On horse/mule	

		3. Vehicle 4. Other (specify) _____	
Q116	How much does it cost to get to this health facility by any transportation service? 1. Health center 2. Gindaberet Hospital	1. _____Ethiopian Birr 2. _____Ethiopian Birr	
Part-II: Obstetric and related questions			
Q201	Number of pregnancy (gravida)	____	
Q202	Number of delivery (Para)	____	
Q203	Number of live birth	____	
Q204	Number of abortion	____	
Q205	Number of still birth	____	
Q206	Number of infant death	____	
Q207	Is your current pregnancy planned?	1. Yes 2. No	
Q208	What for do you think would be the benefits of ANC?	1. For the benefits of baby 2. For the benefits of mother 3. Other (specify) _____ 4. Has no benefits 5. I don't know	
Q209	Were you attending ANC for your last child delivery?	1. Yes 2. No	**If 2 (No) → Q217**
Q210	If '**Yes' to Q210** what was the total number of visits	1. One 2. Two 3. Three 4. ≥Four	

Q211	If **'Yes' to Q210** to which health institution did you go?	1. Hospital 2. Health center 3. Health station/Clinic 4. Health post 5. Other (specify) _____	
Q212	If '**Yes' to Q210** at what gestational age did you go?	____ month(s)	
Q213	How would you rate the antenatal care services you received for the pregnancy of your last baby?	1. Poor 2. Average 3. Good	
Q214	Do health information given to you today?	1. Yes 2. No	
Q215	How is the service of today	1. Poor 2. Average 3. Good	
Q216	Should healthy pregnant women attend ANC clinics?	1. Yes 2. No	**If '2' →Q220**
Q217	If '**Yes to Q218'** at what month/gestational age should a pregnant woman attend ANC?	_____ month(s)	
Q218	Which of the following danger or warning sign(s) and symptoms of a problem during **pregnancy or birth** you know? (More than one answer is possible)	1. Persistent vomiting 2. Vaginal bleeding (during pregnancy, after pregnancy) 3. Seizure 4. Abnormal fetal position 5. Retained placenta 6. Hypertension / high blood pressure 7. Severe headaches 8. Swelling of face, hands, feet or legs 9. Loss of consciousness 10. Dizziness 11. Cessation of fetal movement / baby does not move	

		12. Foul smelling discharge from vagina (birth canal) 13. Prolonged labour - "sun set two times" 14. Water break early before labour 15. Other (specify) _____ 16. I don't know	
Q219	What should a woman do if she has any of these problems or warning signs?	1. Visiting traditional birth attendants 2. Visiting health professional 3. Both 4. Other (specify) _____ 5. Nothing 6. I don't know	
Q220	Did you experience any of the above problems listed under **Q218** for your last child pregnancy?	1. Yes 2. No	
Q221	Did you experience any of the above problems listed under **Q218** in your current pregnancy?	1. Yes 2. No	
Q222	If at least one response is 'yes' for **Q220** & **Q221:** What did you do when you faced any of the problems or warning sign(s)?	1. Visiting traditional birth attendants 2. Visiting health institution 3. Both 4. Other (specify) _____ 5. Nothing 6. I don't know	
Q223	Where did you deliver your last baby?	1. Hospital 2. Health center 3. Health post 4. Home 5. Other (specify) _____	If '**4**' →**Q229**
Q224	If **health institution**, what	1. It is close to where I live	

	was your reason? (More than one answer is possible	2. Health institution able to manage pregnancy related complication 3. Good approaches of health workers 4. Little expense to deliver in this particular institution 5. Other (specify) _____	
Q225	If you delivered at '**home'**, why? (More than one answer is possible)	1. Expenses for delivery at health institution is unaffordable 2. Dislike behaviors of health workers at health institution 3. Wishes to deliver at home where relatives are nearby 4. More trust on TBAs/relatives than health workers at health institution 5. The labor condition was fast 6. Other (specify) _____	
Q226	If you deliver at '**home'**, who assisted you during delivery?	1. Health workers 2. Traditional birth attendants 3. Trained traditional birth attendants 4. Close relatives/friends 5. Neighbor 6. No one 7. Other (specify) _____	
Q227	Who made the final decision about your **place of delivery**?	1. I my self 2. My husband 3. My relatives 4. Neighbor 5. Other (specify) _____	
Q228	Have you paid for delivery service at health institution? (**only for those gave birth at health institution)**	1. Yes 2. No	If "**2**" → **Q231**

Q229	How do you rate the price of the delivery service?	1. Expensive 2. Fair 3. Cheap 4. I can't assess it	
Q230	How would you rate the labour and birth services you received?	1. good 2. average 3. poor	
Q231	Would you recommend the labour & birth services you took to other women?	a. Yes b. No	
Q232	Whom do you prefer to attend your delivery?	1. Health professional 2. Traditional birth attendant 3. Trained traditional birth attendant 4. Relatives/family members 5. Other (specify) _____	
Q233	Where do you **intend** to deliver your current pregnancy?	1. Home 2. Health institution 3. I can't say nothing	**If '1' → Q235**
Q234	Why do you prefer to deliver in '**health institutions**'? **'if answer for Q233 is 2 only'**	1. Better service 2. Better outcomes from institutional delivery 3. I have faced poor outcome from home delivery 4. The new born has faced poor outcome from home delivery 5. Other (specify) _____	
Q235	Why do you prefer to deliver at '**home**'? **'if answer for Q233 is 1 only'**	1. I feel more comfortable just being at home 2. Close attention from relatives & family members 3. I have faced poor out come from health facility delivery 4. Staff was not respectful (because of bad approach of health personnel) 5. I have never faced any problem in my last home delivery 6. It is my usual practice 7. Other (specify) _____	

Q236	For the current pregnancy, if you want to deliver in health facilities, who will make the final decision?	1. I myself 2. My husband 3. My relatives 4. Friend 5. Neighbor 6. Other (specify) _____	
	Part-III: perceived susceptibility questions		
Q301	Any pregnant woman is **susceptible** to face delivery complications?	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q302	Like any pregnant women, I am **susceptible** to face delivery complications	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q303	Those mothers have history of danger sign (prolonged labor, retained placenta…) during their **current pregnancy** are **at risk** of delivery complication?	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q304	Those mothers have history of danger sign during their **last delivery** are **at risk** of developing similar complication during her delivery?	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Part IV - Perceived severity question			
Q401	Delivery complications can be **severe** and may be	1. Strongly Agree	

	hazardous to my well being.	2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q402	Delivery complication(s) can be **severe** and may be hazardous to the newborn.	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q403	Home delivery complication(s) can be **severe** to mother	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q405	Home delivery complications can be dangerous to baby	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q406	Delivery complication may lead to death to both mothers and/or new born	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Part V - Perceived benefits questions			
Q501	Being attended by a skilled delivery attendant may be **beneficial** to my well being.	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	

Q502	Being attended by a skilled delivery attendant may be **beneficial** to the newborns well being.	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q503	In case, if I may encounter pregnancy complication, there is a solution from health institution for my baby and me	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q 504	There is better outcomes from institutional delivery than home delivery for my baby and me	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q 505	Birth attended by skilled birth attendants is safe/clean	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Part – V: Perceived barrier questions Even if I want to get a skilled help during child birth, I might not get it, because of the following reasons			
Q601	Unavailability of Health facilities	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q602	Unavailability of expected skilled attendant in Health	1. Strongly Agree	

	Facility	2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q603	I can't pay for services	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q604	I can't get transportation services	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q605	Very distant Health facilities	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q606	I fear delivery procedure	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q 607	Health staffs have good approach for the servants	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	

Q 608	Service given for me during my labor/delivery is very nice	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Part-VII: Self-efficacy			
Q701	If somebody opposes or is against me from delivering at health institution, I can find a way to get it.	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q702	It is easy for me to stick to my plans and accomplish my goals.	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q 703	I am sure that I will go to health center or hospital soon I face pushing down pain	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q 704	I can get help from skilled birth attendants if I go health facility for my labor.	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Q 705	When I am having a problem during my labor, I can usually find health institution that can give further solution.	1. Strongly Agree 2. Agree 3. Neutral	

		4. Disagree 5. Strongly Disagree	
Q 706	I strengthen my child birth intension or plan at health facility as my gestational age increases	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
Part-VIII: Cue action			
Q801	With whom did you discuss where to deliver your last child?	1. My husband 2. Relatives 3. Friend 4. neighbor 5. Other (specify) _____ 6. I didn't discuss	
Q802	Have you ever seen any mothers who have been suffer from pregnancy complication (prolonged labor, still birth, retained placenta) in your area?	1. Yes 2. No	
Q803	Have you ever seen/heard any mothers die of pregnancy complication in your area?	1. Yes 2. No	
Q804	Have you ever heard from any media to give birth at health institution like radio, TV, Written material, …	1. Yes 2. No	
Q 805	For your last delivery, do health professional informed you to deliver at health institution?	1. Yes 2. No	

B. Qualitative

GUIDELINES FOR FOCUS GROUP DISCUSSION

Objective: To assess determinants factors of institutional delivery and mothers' perception on pregnancy complication

Methods:

PREPARATION

- Invitation of the participants; participation will be absolutely voluntary
- Preparation of the room; as much as possible neutral/quite place will be selected

GROUP COMPOSITION:

- 8- participants
- Selection of participants will be purposive.
- Participants will be selected on the base of homogeneity (pregnant mothers)

TIME: 1:00 to 1:30 hr

Things to be discussed:

1. Where most mothers including you give birth in your area?
2. Why most mothers give birth at their home?
3. What do you think the advantage of institutional delivery?
4. What do perceive the obstacle of being not giving birth at health institution?
5. How do you perceive the pregnancy complication mothers/you faced because of pregnancy prolonged labor, retained placenta…?)
6. How do you perceive the susceptibility of pregnant mother to contract pregnancy complication?
7. What factors do you think enforce mothers to give birth at health institution?

ANNEX-2: QUESTIONNAIRE IN AFAN OROMO

UNIVARSIITII JIMMAA KOOLLEJJII 'FAYYAA HAWAASAA FI SAAYNISII MADIKAALAA' TTI MANA BARUMSA EEBBA BOODDEE, MUUMMEE 'BARUMSA FAYYAA FI SAAYNISII AMALAA'

Gaaffileen kun haawwan hordoffii dahumsa duraa Godina Shawaa Lixaatti dhaabbilee fayyaa Aanaa Gindabarat fi Abuna Gindabaratitti hordofaa jiraniif wantoota mana yaalatti dahuuf murteessaa ta'an sakatta'uuf kan qophaayedha.

Guca Waliigaltee

Gaafataaf: Maaloo kaayyoo qorannichaa armaan gaditti ibsame gaafatamtootaaf ibsi.

Nagaa obbolee, ani maqaan koo _____ jedhame. Ani qorattoota Univarsittii Jimmaa irraa dhufan waliina hojjechaan jira. Kaayyoon qorannichaas haawwan hordoffii dahumsa duraa dhaabbilee fayyaa irraa fudhachaa jiraniif wantoota mana yaalatti dahuuf murteessoo ta'an sakatta'uuf. Ati/isin dubartoota qorannicha keessatti hirmaachuuf filataman keessaaa tokko. Kanaaf odeeffannoo barbachisoo ta'an nuuf gummachuun/kennuun hirmaattuu qorannichaa akka taatu/taaatan isin gaafanna. Wantan isinitti himuun natti tolu keessaa, deebiin isin gaaffii gaafatamtaniif deebiftan fiixaab bahumsa qorannichaa qofaaf osoo hin taane, fayyaa haawwanii fi daa'immanii fooyyessuuf, madda odeeffannoo cimaadha. Eerga jalqabdanii booda xumuruuf ykn gidduutti addaan kuttanii deemuuf mirgi keessan kan eeggamedha. Odeeffannoon isin nuuf kennitan qorannicha qofaaf fayyadamamu ta'ee icittii keessan sirritti ni eegna. Maqaan keessan ykn ibsi biraa eenyummaa keessan waliin wal qabate nama tokkoofillee hin ibsamu.

Qorannichatti hirmaaachuuf fedhii qabduree? Eeyyee _____ Lakki _____

Yoo 'Eeyyee' ta'e, itti fufii gaafadhu!

Yoo 'Lakki' ta'e, galateeffadhuu gaggeessiittii, gafatamaa itti aanu eegi.

Maqaa gaafataa _____ Mallattoo ____ Guyyaa itti gaafate ___ / ___ / 2002 E.C

Maqaa Suuppervayzeraa _____ Mallattoo _____ guyyaa hordoffii ___ / ___ / 2002 E.C

Maqaa Mana Yaalaa _____ Teessoo: 1. Magaalaa, 2.Baadiyyaa

Lakk	Gaaffilee	Deebii	Irra utaalcha
Kutaa-I: 'Sooshoo Dimograafii'			
Q101	Umuriin keessan waggaa meeqa?	Waggaa ____	
Q102	Sadarkaan barumsaa keessanii meeqa? (**Kutaa meeqa barattan**?)	1. Homaa hin baranne 2. Dubbisuuf barreessuu qofa 3. Yoo barumsa idilee, kutaa meeqa baratte? _____	
Q103	Sanyii/qomoon kee maali?	1. Oromoo 2. Amaaraa 3. Tigree 4. Guraagee 5. Kan biroo (ibsi) _____	
Q104	Haala fuudhaa fi heerumaa	1. Hin heerumne 2. Heerumeen jira, 3. Abbaan manaa koo du'eera 4. Abbaa manaa koo waliin wal-hiikneerra 5. Abbaa manaa koo waliin lafa adda aaddaa jiraanna 6. Kan biroo (ibsi) _____	
Q105	Hojiin keessan maali?	1. Haadha manaa 2. Hojjettuu mootommaa/miti-mootummaa 3. Barattuu 4. Dafqaan bultuu 5. Daldaaltuu 6. Qotee bulaa 7. Kan biroo (ibsi) _____	
Q106	Amantiin keessan maali?	1. Kirsitiyaana ortodoksii 2. Kirsitiyaana pirotistaantii/pheenxee 3. Waaqeffataa	

		4. Misiliima 5. Kan biroo (ibsi) _____	
Q107	Umuriin abbaa manaa keessan meeqa?	Waggaa _____	
Q108	Hojiin abbaa manaa keessanii maali?	1. Hojjettuu mootommaa/miti-mootummaa 2. Barataa 3. Dafqaan bulaa 4. Daldaalaa 5. Qotee bulaa 6. Kan biroo (ibsi) _____	
Q109	Abbaan manaa kee kutaa meeqa baratan?	1. Homaa hin baranne 2. Dubbisuuf barreessuu qofa 3. Yoo barumsa idilee, kutaa meeqa hordofte _____	
Q110	Maddi galii keessan maali	1. Hojii/qacarrii dhaabbataa (ji'aan, waggaan) 2. Hojii/qacarrii dhaabbataa hin taane 3. Gargaarsaa firoottan koofii nama biroo 4. Kan biroo (ibsi) _____ 5. Himuu hin barbaadu	
Q111	Tilmaamaan maddi galii keessan qarshii ykn midhaan kuntaala meeqa ta'a?	Qarshii _____ kuntaala _____	
Q112	Umuriin jalqaba itti deesse meeqa ture?	Waggaa _____	
Q113	Mana yaala kana dhufuuf sa'aa meeqa sitti fudhata	Sa'aa ___ fi daqiiqaa ___	
Q114	Maal yaaphattee dhufte?	1. Miilaan deemee 2. Farda/gaangee yaaphadhee 3. Konkolaataadhaan 4. Kan biroo (ibsi) _____	
Q116	Osoo fardaan ykn konkolaataan dhuftee qarshii meeeqa si gaafata?		

	1. Buufata fayyaa irraa **(warra buufata fayyaatti gargaaraman qofaadhaaf)** 2. Hospitaala Gindabarat irraa woo (**dubartoota hundumaafuu**)	1. Qarshii _____ 2. Qarshii _____	
Kutaa-II: Gaaffii Ulfaa fi Garaatti baachuu waliin wal-qabate			
Q201	Meeqa ulfoofte/garaatti baatte (gravida)?	____	
Q202	Meeqa deesse (Para)?	____	
Q203	Nama meeqa fayyaa deesse?	____	
Q204	Osoo hin gayin ulfi sirraa baye/yaa'e meeqa?	____	
Q205	Mucaa meeqa du'aa deesse?	____	
Q206	Fayyaa deessee wagaa odoo hin gayin kan du'e meeeqa	____	
Q207	Kan amma garaadhaa qabdu kana karooraan ulfooftee?	1. Eeyyee 2. Lakki	
Q208	Hordoffii dahumsa duraa (mirmaraan) kun eenyu fayyada/gargaara jettee yaadda?	1. Mucaa koo 2. Anuma fayyada 3. Kan biroo (ibsi) _____ 4. Fayidaa hin qabu 5. Ani hin beeku	
Q209	Mucaakee isa xiqqaa yeroo garaatti baattu hordoffii dawumsa duraa (mirmaraa) fudhatteettaa?	1. Eeyyee 2. Lakki	Yoo lakki (2) → **Q214**
Q210	**'Eeyyee'** yoo ta'e, Yeroo meeqa fudhatte turte?	1. Tokko 2. Lama 3. sadi 4. ≥Afur	
Q211	'**Eeyyee'** yoo ta'e, mana yaalaa kamii	1. hospitaala	

	hordofaa turtan?	2. buufata fayyaa 3. kilinika 4. keellaa fayyaa 5. kan biroo (ibsi) _____	
Q212	'**Eeyyee'** yoo ta'e, ji'a meeqatti kan ati jalqabde?	Ji'a ____	
Q213	Tajaajila hordoffii da'umsa duraa (mirmaraa) yeroo mucaa kee isa xiqaaf fudhattan akkamitti ilaaltu?	1. Gaarii dha 2. Giddu galeessa 3. Yaraa dha/garii miti turre	
Q214	Har'a barumsi fayyaa isiniif kennameeraa?	1. Eeyyee 2. Lakki	
Q215	Tajaajilli har'aa woo akkamitti ilaaltu?	1. Garii dha 2. Guddugaleessa 3. Garaadha/ garii miti ture	
Q216	Dubartoonni kamiyyuu hordoffii da'umsa duraa (mirmaraa) fudhachuu qabu jettanii yaadduu?	1. Eeyyee 2. Lakki	**Yoo '2' →Q218**
Q217	**'Eeyyee'** yoo jettan ji'a meeqaa kaasanii hordofuu qabu jettu?	ji'a ___ hin beeku ____!	
Q218	Yeroo dubartoonni garratti baatan ykn dahan rakkinni _____ akka muudataa beektaa? (**deebiin tokkoo ol ni danda'ama**)	1. Hooqisa yeroo dheeraa walitti fufee namarra turu 2. Dhiigi qaama hormaataan nama yaa'uu 3. Gaggabdoo 4. Mucaan bakka sirrii irraa goruu 5. Obbatiin dafee bawuu diduu 6. Dhiibbaa dhiigaa olka'aa (dam giffiitii) 7. Dhukkubii mataa cimaa 8. Fuulla ykn miilla nama dhiitessuu/furfursuu 9. Lafti namaan maruu 10. Mucaan osoo garaa keessa jiruu taphachuu dhiisuu 11. Nafa saalaan dhangala'oo foolii badaa yaa'uu 12. Ciniinsuun namarra turuu – 'osoo ciniinsurra jiranii yoo	

		biiftuun al lama namatti lixe' 13. Ciniinsuun odoo nama hin jalqabin bishaan mataa dhangala'uu 14. Kan biroo (ibsi) _____ 15. Ani hin beeku	
Q219	Dubartii tokko yoo rakkinni armaan ol gaaffii **Q218** jalatti tarreeffame ishee mudate maal gochuu qabdi?	1. Ogeettii/deessistuu aadaa bira dhaquu qabdi 2. Mana yaalaa daqxee ogeessa mariisisuu qabdi 3. Lachanuu gochuu qabdi 4. Kan biroo (ibsi) _____ 5. Homaa gochuu hin qabdu 6. Ani hin beeku	
Q220	Yeroo mucaa kee isa xiqaa garaatti baattu rakkooleen gaaffii **Q218** jalatti tarreeffaman keessaa si muudate jiraa?	1. Eeyyee 2. Lakki	
Q221	Rakkoolee gaaffii **Q218** jalatti tarreeffaman keessaa ulfa ammaa garaadhaa qabdu kana keessatti wanti si muudate jiraa?	1. Eeyyee 2. Lakki	
Q222	Gaaffii **Q220** ykn **Q221** keessaa tokko illee yoo **'Eeyyee'** ta'e: Ati woo rakkinna simuudate suniif furmaata akkamii fudhatte?	1. Ogeettii/deessistuu aadaan mariisise 2. Mana yaalaan dhaqee ogeessa mariisise 3. Lachanuu raawwadheera 4. Kan biroo (ibsi) _____ 5. Homaa hin goone 6. Ani hin beeku	
Q223	Mucaa kee isa xiqqaa eessatti deesse?	1. Hopsitaala 2. Buufata fayyaa 3. Keellaa fayyaa 4. Mana koo 5. Kan biroo (ibsi) _____	yoo '**4**' →**Q225**
Q224	Sababni **mana yaalaatti** dawuu filatteef maal ture? Yoo **mana yaalatti** deesse	1. Manni yaalaa mana kootti dhiwoo waan ta'eef 2. Manni yaalaa rakkina ulfaa fi dawumsa waliin wal-qabatee dhufuuf furmaata laachuu waan danda'uuf	

	ta'e: (Deebiin tokkoo ol ni danda'ama.)	3. Simannaan ogeessi fayyaa namaaf gaarii waan tu'eef 4. Kaffaltiin tajaajila dawumsaaf kaffallu xiqqoo waan ta'eef 5. Kan biroo (ibsi) _____	
Q225	Sababni **mana keetti** dawuu filatteef maal ture? Yoo **manatti** isheetti deesse ta'e: (deebiin tokkoo ol ni danda'ama)	1. Kaffaltiin tajaajila dawumsaaf kaffalamu waan cimuuf 2. Amalli ogeeyyii mana yaalaa gaarii waan hin taaneef 3. Lafa firoonni koo jiranitti dawuu waanan barbaadeef 4. Deessistuu aadaa ykn firoottan koo waanan ogeessa fayyaarra amanuuf 5. Ciniinsuun waan natti ariifateef/muddeef 6. Kanaan dura yeroon dawu rakkinni waanan hin agarreef 7. Kan biroo (ibsi) _____	
Q226	Yeroo manatti deesse sun eenyutu si deessisse?	1. Ogeessa fayyaa 2. Deessistuu aadaa 3. Deessistuu aadaa leenjite 4. Fira koo 5. Ollaa koo 6. Namni tokkollee nabira hin turre 7. Kan biro (ibsi) _____	
Q227	Lafa/iddoo itti deesse kana murtoo dhumaa kan murteesse eenyu?	1. Ana mataakoo 2. Abbaa manaa koo 3. Firoottan koo 4. Ollaa koo 5. Kan biroo(ibsi) _____	
Q228	Tajaajila dahumsaaf **mana yaalatti** kaffaltii kaffaltee beektaa? (**Yoo mana yaalatti yoo deesse qofa gaafatama**)	1. Eeyyee 2. Lakki	Yoo "**2**" → **Q231**
Q229	Kaffaltii tajaajila dawumsaaf kaffalte sun akkamitti ilaalta?	1. Cimaadha 2. Waanuma ta'uu qabu ture 3. Salphaa ture 4. Madaaluun narrakkisa	

Q230	Walumaagalatti tajaajili ciniinsuu/da'umsaa mana yaalaa irraa fudhatte akkamitti madaalta/ilaalta?	1. Gaarii dha 2. Giddugaleessa 3. Garii miti	
Q231	Tajaajila ciniinsuuf/da'umsaaf mana yaaa irraa kennamu dubartoota kan biroof ni hawwitaa?	1. Eeyyee 2. Lakki	
Q232	Mucaa amma garaadhaa qabdu kana, eenyu harkatti dawuu filatta?	1. Ogeessa fayyaa 2. Deessistuu aadaa 3. Deessistuu aadaa leenji'an 4. Maatii ykn firoottan koo harkatti 5. Kan biroo (other) _____	
Q233	Mucaa amma garaadhaa qabdu kana eessatti dawuu barbaadda?	1. Mana koo 2. Mana yaalaa 3. Deebii hin qabu	**Yoo '1' → Q235**
Q234	Sababni mana yaalaatti dawuu filatteef maal? (**yoo mana yaalaatti dawuu filatte qofa gaafatama**)	1. Tajaajilli gaariin waan mana yaalaati argamuuf 2. Mana yaalatti dawuun bu'aa gaarii waan qabuuf 3. Kanaan dura manatti dawuu kootiin waanan hubameef 4. Kanaan dura manatti dawuun mucaan koo waan miidhameef 5. Kan biroo (ibsi) _____	
Q235	Maliif mana keetti dawuuf filatte? (**yoo mana isheetti dawuu filatte qofa gaafatama**)	1. Manatti dawuun waan natti toluuf 2. Maatii fi firoottan koo yaada dhiyoo waan naaf qabaniif 3. Kanaan dura bu'aan mana yaalatti dawuukoo garii waan hin turreef 4. Hojjettonni mana yaalaa seeraan waan nama hin keessummeessineef 5. Manatti yeroon kanaan dura dahe rakkinni tokko illee waan na hin qunnamneef 6. Barsiisuma koo waan ta'eef 7. Kan biroo (ibsi) _____	

Q236	Mucaa amma garaadhaa qabdu kana, yoo mana yaalatti dawuu barbaadde eenyutu murteessa?	1. Ana mataa koo 2. Abbaa manaa koo 3. Firoottan koo 4. Hiriyyaa koo 5. Olla koo 6. Kan biroo (ibsi) _____	
	Kutaa- III: Gaaffii hagam akka <u>balaaf saaxilamoo</u> ta'an sakatta'u		
Q301	Dubartii garaatti baattu kamiyyuu, rakkini ulfa waliin wal-qabate ishee muudachuu danda'a	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q302	Akkuma dubartoota kaanii, siinillee rakkina ulfa waliin wal-qabatee dhufu muudachuu danda'a!	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q303	Dubartoonni rakkina ulfa waliin wal-qabatee dhufu amma yeroo garaatti baatan isaan muudate yeroo dawumsa isaanii rakkinni isaan muudachuu danda'a	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q304	Dubartiin yeroo mucaa ishee isa xiqqaa deessu rakkini ishee muudate, ulfa isa ammaa kana irratti rakkinni isaa duraa waliin wal-fakkaatu ishee muudachuu danda'a	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Part IV – gaaffii ilaalcha miidhaa cimaa sakatta'uu			
Q401	Rakkinni ulfa waliin walqabatee dhufu cimaa waan	1. Baay'een irratti waliigala	

	ta’eef, fayyaa haadhaatiif sodaachisaadha.	2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay’iseen irratti walii hin galu	
Q402	Rakkinni ulfa waliin walqabatee dhufu cimaa waan ta’eef, fayyaa mucaa dhalatuuf sodaachisaadha.	1. Baay’een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay’iseen irratti walii hin galu	
Q403	Rakkinni dahumsa waliin wal-qabatee manatti dubartii muudatu miidhaa guddaa ishee irraan gahuu danda’a.	1. Baay’een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay’iseen irratti walii hin galu	
Q404	Rakkinni dahumsa waliin wal-qabatee manatti dubartii muudatu mucaa dhalatu irraan miidhaa guddaa irraan gahuu danda’a	1. Baay’een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay’iseen irratti walii hin galu	
Q405	Rakkinni dawumsa waliin wal-qabatee dhufu haadhas mucaas ajjeesuu danda’a	1. Baay’een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay’iseen irratti walii hin galu	
Kutaa- V: Gaaffii ilaalcha faayidaa sakatta’u			
Q501	Ogeessa fayyaa harkatti dawuun fayyummaa keetiif bu’aa guddaa qaba	1. Baay’een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti	

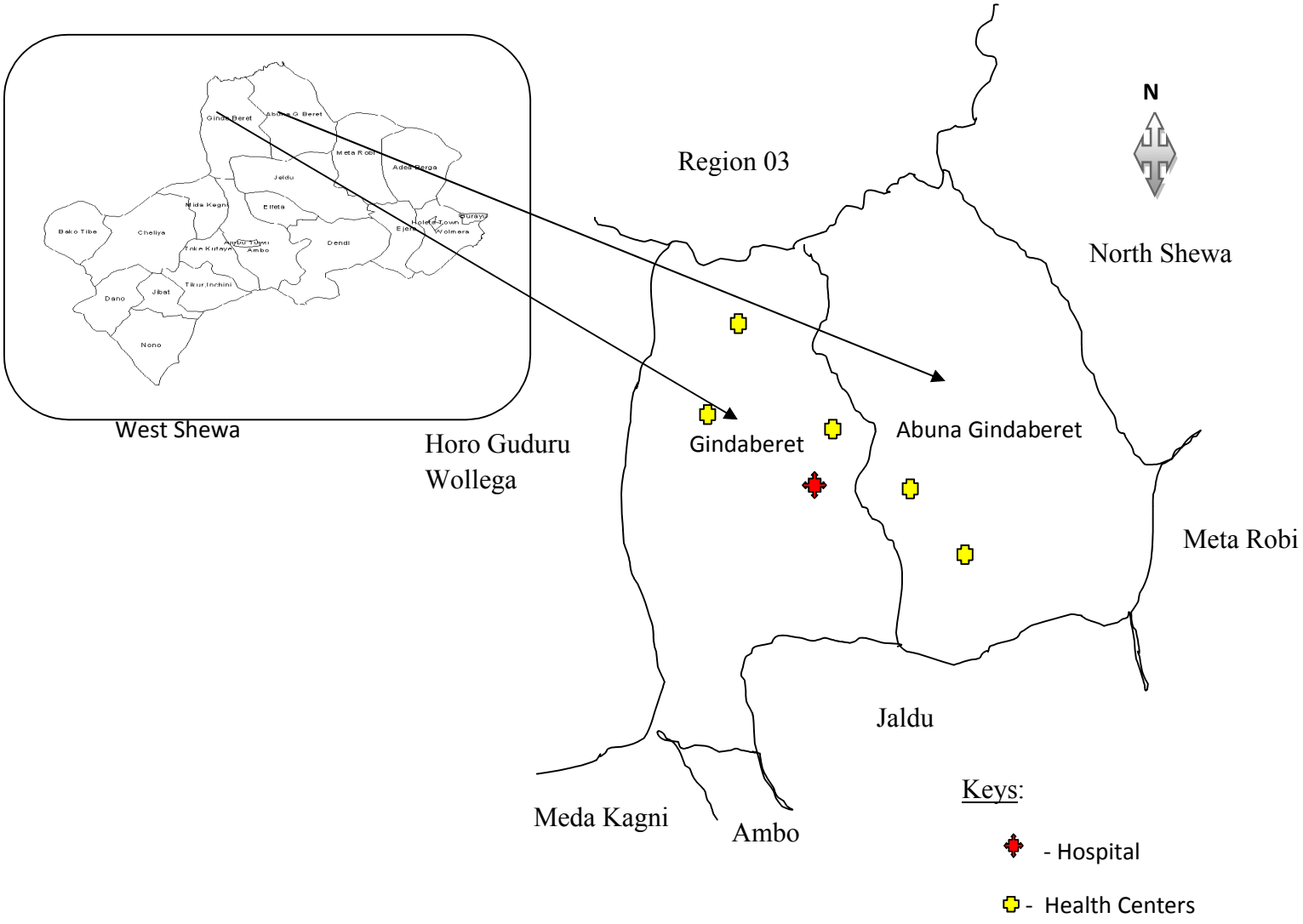
		4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q502	Ogeessa fayyaa harkatti dawuun fayyummaa mucaa keetiif bu'aa guddaa qaba	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q503	Akka tasaa, yoo rakkinni dahumsa waliin walqabatee dhufu simuudate siifis ta'ee mucaa keetiif furmaanni mana yaalaatii argama	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q 504	Manatti dawuurra mana yaalatti dawuun fayyaa keetiif ta'ee fayyaa mucaa keetiif bu'aa guddaa qaba	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q 505	Mana yaalatti ogeessaan dawuun qulqullina qaba	1. Baay'iseen irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Part – V: Gaaffii ilaalcha mana yaalatti dahuurra dhorku sakatta'u			
Ogeessa fayyaatiin dawuu barbaaduyyuu, sababa armaan gadiitiifiyyuu argachuu baachuun danda'a			
Q601	Manni yaalaa waan hin jirreef	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	

Q602	Ogeessi fayyaa ani barbaadu waan hin arganneef	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q603	Kaffaltii tajaajila dawumsaa kaffaluu waanan hin dandeenyeef	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q604	Geejjiban mana yaalaa dhaqu waanan argachuu hin dandeenyeef	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q605	Manni jireenyaa koo mana yaalaa irraa baay'ee fagoo waan ta'eef	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q606	Waanan gocha ogeessi fayyaa nadeessisuuf na irratti raawwatu sodaadhuuf **FKN**: lilmoo si woraanuu, maqasiidhaan qaama kee muruu…	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q 607	Ogeessi fayyaa haala namatti toluun tajaajilamtoota gargaaru	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	

Q 608	Taajaajilli mana yaalaatti yeroo ciniinsuu ykn dawumsaa namaaf godhamu baay'ee gariidha.	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Part-VII: Gaaffilee ofitti amanamummaa sakatta'u			
Q701	Namni kamiyyuu akkan ani mana yaalaatti hin deenye godha yoo ta'e, ani mana yaalatti dawuuf duubatti hin jedhu, malas nan baafadha	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q702	Karoora kootti qabamee akkan karoorfadhetti mana yaalatti dawuun anaaf salphaadha!	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q 703	Guutummaan guututti nan jedha, akkuma ciniinsuun na eegaleen gara mana yaalaa nan deema!	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q 704	Yeroo ciniinsuu ykn yeroon dahumsaa nan amana ogeessi fayyaa na gargaara!	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Q 705	Yeroo ciniinsuu kee yoo rakkinni simuudate, daftee mana yaala dhaqxa, achiis furmaata argatta	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu	

		5. Baay'iseen irratti walii hin galu	
Q 706	Akkuman dawumsatti dhiyaachaa deemtu, karoora ykn yaada mana yaalaatti dawuu kee ni cimsatta	1. Baay'een irratti waliigala 2. Irrattan waliigala 3. Anaaf homaa jechuu miti 4. Irratti walii hin galu 5. Baay'iseen irratti walii hin galu	
Part-VIII: Cue action			
Q801	Mucaakee isa xiqqaa lafa itti deessu eenyu waliin mari'atte?	1. Abbaa manaa koo 2. Fira koo 3. Hiriyyaa koo 4. Olla koo 5. Kan biroo (ibsi) _____ 6. Hin mari'anne	
Q802	Ollaa keetti dubartii rakkina ulfaan walqabatee dhufu ykn yeroo deessu rakkattu agartee beektaa?	1. Eeyyee 2. Lakki	
Q803	Naannoo keetti dubartiin rakkina ulfa waliin walqabatee dhufuun lubbuun ishee darbe dhageesse ykn argitee beektaa?	1. Eeyyee 2. Lakki	
Q804	Midiyaa gara garaa kan akka **raadiyoo, Televizyiinii, barreeffama gara garaa** irraa akka mana yaalatti dawuu qabdu dhageessee ykn dubbiftee beektaa?	1. Eeyyee 2. Lakki	
Q 805	Mucaa kee isaa dhumaa ogeessi fayyaa akka mana yaalaati deessu sitti himeeraa?	1. Eeyyee 2. Lakki	

Annex-3: Map of Study Area



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.

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Date of submission: June 17, 2010

This thesis has been submitted for examination with my approval as University advisor

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