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A COMMUNITY BASED CROSS SECTIONAL STUDY ON ASSESSMENT OF SKILLED BIRTH ATTENDANT UTILIZATION AMONG WOMEN OF CHILDBEARING AGE (15-49) IN SNNP REGION, GEDEO ZONE, YIRGACHEFFE TOWN.

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Abbreviations

AAU	Addis Ababa University
ANC	Antenatal Care
AIDS	Acquired Immune Deficiency Syndrome
HIV	Human Immunodeficiency Virus
CI	Confidence Interval
CSA	Central Statistics Agency
DHS	Demographic and Health Survey
EPIINFO	Epidemiological Information
HF	Health Facility
ID	Institutional delivery
MCH	Maternal and Child Health
MDG	Millennium Development Goal
OR	Odds Ratio
SDA	Skilled Delivery Attendant
SPSS	Statistical Package for Social Sciences
TBA	Traditional Birth Attendant
TTBA	Trained Traditional Birth Attendant
UNFPA	United Nations Population Fund (formerly United Nations Funds for Population Activities)
UNICEF	United Nations Children's Fund (formerly United Nations Internationa Children's Emergency Fund)
USAID	United States Agency for International Development

WHO	World Health Organization
EDHS	Ethiopia Demographic and Health Survey
MMR	Maternal Mortality Rate
SSA	Sub Saharan Africa
SNNPR	South Nations Nationalities and Peoples Region
MOH	Ministry Of Health
UN	United Nation
NGOs	Non-Governmental Organizations
UHEW	Urban Health Extension Worker
BSC	Bachelor of Science

Abstract

Background: Skilled attendant for every pregnant woman during childbirth is the most critical intervention for improving maternal and child health. Evidence showed that the majority of births are delivered at home and the proportion of deliveries assisted by skilled birth attendant is very low. Every day, at least 1,600 women die worldwide from the complications of pregnancy and childbirth, 90% of which occurring in Asia and sub-Saharan Africa. Maternal mortality rate was shown to have the largest discrepancy between developed and developing countries. A lifetime risk of maternal death in developing countries is forty times higher than that of the developed world. In Ethiopia, maternal and infant mortality and morbidity levels are among the highest in the world. Studies had clearly demonstrated that the utilization of existing maternal health services is very low in the country. Only a quarter of Ethiopian women received antenatal care (ANC) and less than 10 percent of mothers deliveries assisted by skilled birth attendant.

Objective: To assess utilization of skilled birth attendant at delivery, among mothers who gave birth the past two year prior to the survey in yirgachefe town.

Methods: A community based cross-sectional quantitative study method was conducted among women residing in Yirgacheffe town. The study populations were randomly selected women who gave birth in the last two year in the town. After establishing the sampling frame of each household, systematic random sampling technique was used to identify the list of households in each kebele's to reach to 440 women included in the survey. Data was collected using adapted interviewee administered Amharic version questionnaires and data analyzed using SPSS version 16. A different proportion was computed and crude and adjusted Odds ratios and confidence intervals were performed for the association between variables and stepwise multiple logistic regressions were used to identify factors that affect utilization of skilled birth attendant.

Result: A total of 440 women were included in the study. 58.9% of the women utilize skilled birth attendant during delivery. Reasons given for home delivery includes, feeling of more comfortable just being at home, usual practice, close attention from relatives & family members, short and smooth labor, to exercise cultural values, not liking health facility due to bad experience, unwelcoming approach of health workers and other reasons. Births to women with primary education are two times more likely (OR=2.3 and 95% CI=1.24-4.2), and births to women with secondary and above education are four times more likely (OR=3.6 and 95%CI=1.5-8.4) to utilize SDA as compared to illiterate women. Women who are Governmental

employee were four times more likely to utilize SDA than those who had private bissnuss (OR=3.6 and 95%CI=1.5-8.4). Women with one and two to four pregnancies and births were three and two times more likely utilize SDA than women who have >=5 pregnancies and births (OR=2.6, 95% CI= 1.17 to 4.45) and (OR=2.3, 95% CI=1.41 to 4.65) respectively. Women who have ANC visits (,OR=16.7 and (95%CI= 8.2, 33.89), more likely utilized SDA than who did not visit. Preference of the respondent's husbands and families, those who prefer delivery with health professional were four times and five times more likely to utilize skilled delivery attendant as compared with those, their husbands and families prefer delivery without health professional (TTBA,TBA and family and relatives) OR= 4.03 (95%CI=1.37 to 11.8),OR=4.6,95%CI=1.5 to 13.9) respectively.

Conclusion： The study finding revealed that utilization of SDA was more than half, still there is a gap between users and providers and those are interrelated to each other. Consequently, Community members should be discouraged harmful traditional and usual practices that hinder health facility delivery care utilization. Incourage favourable influences from their husbands and relatives about their delivery practices, women empowerment, promotion of maternal education, prenatal care utilization, communication on obstetric risks and general health service expansion were recommended.

1.Introduction

1.1 Background

Maternal health is the complete physical, social and psychological well-being of a woman of reproductive age. Addressing maternal health encompasses social, cultural, health systems and health policy factors. Maternal mortality and morbidity is the most important indicator of maternal health status (1).

The vast majority of maternal deaths and disabilities could be prevented through appropriate reproductive health services before, during and after pregnancy, and through life-saving interventions when complications arise.(2) At least 40% of all pregnant women will experience some type of complication during their pregnancies. For about 15% this complication will be potentially life threatening. Attempts to predict these complications before they occur have not been successful since most complications are unexpected.

Complications of pregnancy and childbirth are the leading cause of disability and death among women between the ages of 15-49. Approximately, 585,000 women die every year from pregnancy and childbirth complications. Every minute, 110 women in the world experience a complication in their pregnancy, and one of them will die. For each woman that dies, more than 25 others suffer a debilitating injury, often with life-long consequences. More than 90% of these deaths and morbidities occur in developing countries (2). Maternal mortality is the leading cause of premature death and disability among women of reproductive age in developing countries (3).

Moreover, providing skilled care at birth goes hand in hand with the MDG 4 strongly influenced to reduce child mortality, particularly neonatal mortality. Nearly 3.4 million of the 8 million infant deaths each year occur within the first week of life and are often due to a lack of or inappropriate care during pregnancy, delivery and the post-partum period (4). In addition, in the developing world, complications from HIV/AIDS and malaria are increasingly becoming indirect causes of maternal deaths and morbidity (4).

In almost all countries where health professionals attend more than 80% of deliveries, maternal mortality rates are below 200 per 100,000 live births (4).

Skilled attendance at all births is considered to be the single most critical intervention for ensuring safe motherhood, and has often been used as a proxy indicator for measuring effectiveness of interventions intended to reduce maternal mortality including MDG (2).

In Ethiopia, health services are still beyond the reach of most women , every year there are 2.8million births, 118,000 new born deaths and 500,000 maternal disabilities (5) and Maternal mortality in Ethiopia is high relative to developed countries and some developing countries(6). According to EDHS 2011, only 34% of mothers received antenatal care from health professionals, and less than 11% of births took place in health facilities. In SNNPR, only 27.3% received ANC and less than 7% mothers delivered at health facilities (7).

Utilization of skilled delivery attendant is more likely to be similar or slightly increase from institutional delivery because births delivered at a health facility are more likely to be delivered by a trained health professional and births delivered at home are usually more likely to be delivered without assistance from a health professional (6) and A study done in Jimma town, in 2005, to determine utilization of safe delivery found that maternal age, their educational status, influence from their husbands and relatives in relation to delivery attendants, women's power to make the decision in terms of getting institutional delivery services and ANC follow up are important predictors of their place of delivery (8).

1.2 Statement of problem

Use of a skilled attendant has been cited as the single most critical intervention for improving maternal and child health (9).

Every year, over half a million women die from conditions related to pregnancy and child birth. More than half of these deaths occur in sub-Saharan Africa, whereas only less than one percent takes place in the developed countries (10).

Maternal mortality rates ranged from 1 to 2100 in 100,000 live births among the different countries (11)and Significant reduction has been noticed over time in maternal mortality ratios in parts of the world (12). The trend of maternal deaths and the achievement in its reduction in the developed world indicate that almost all maternal deaths are preventable (12). Thus, reducing maternal deaths has become the target for the Millennium Development Goal (MDG).MDG 5 targets to reduce maternal mortality ratios (MMR) by 75 percent between 1990 and 2015 (13). To reach this target it requires an average reduction of 5.5 percent each year. However, this goal has been reported to be an area with little progress the average reduction being less than one percent a year during the period between 1990 and 2005 (13). In Sub Saharan Africa (SSA), where maternal mortality ratios remain high an average annual reduction of 0.1% has been reported (10).

It has been established that majority of maternal deaths take place during labor, delivery or within 24 hours after delivery (14). It is well known that majority of deaths and illnesses related to pregnancy and child birth are primarily caused by hemorrhage and infection, which is associated with lack of proper care and poor hygienic conditions (15). Ensuring proper care and a clean and hygienic environment during delivery reduces the risk of the resulting death and illness (16, 12). Therefore, care during delivery has been suggested to be crucial to reduce maternal deaths. WHO strongly recommends a universal access to skilled birth attendance to all deliveries as a strategy to reduce maternal mortality (9,17).Nevertheless, the percentage of skilled birth attendance remains low in most of the developing countries due to socioeconomic, infrastructural and cultural reasons (11, 13). As a result, the countries sustain continuous high ratios of maternal mortality (14, 10, 16). Therefore, a strategy that recognizes the socioeconomic, cultural and infrastructural circumstance, and which is relevant to the situation of the countries needs to be in place in the countries widely affected to prevent these deaths.

In Ethiopia, the majority of births take place at home in poor hygienic conditions, and births at home are usually attended by unskilled people (without any supervision from health professionals) who do not have any training about proper care during delivery. Whereas, 34 percent of women who gave birth received antenatal care from a trained health professional at least once for their last birth and only ten percent give birth at health facility and are assisted by trained personnel (18). An attempt to increase the rate of skilled birth attendants by increasing health facility delivery, and by ensuring deliveries at home to be conducted by trained professionals require adequate financing and resources including trained professionals, functional health facilities and better infrastructure which might need years to go in order to make it practical (19).

One explanation for poor health outcomes among women and children is the nonuse of modern health care services by sizable proportion of health professional with women in Ethiopia. The study is carried out in 2006 in Ethiopia, that sustains high maternal mortality rate 673per 100,000 live births and the lowest percentage of skilled birth attendance, which is six percent respectively (6).

1.3 Significance of the study

Though women comprise a large proportion of a given society, still many women in developing countries are at greater disadvantage. A large number of women are needlessly dying due to factors related to pregnancy and childbirth. Experiences from both developed and some developing countries have shown that these deaths could have been prevented if women had access to basic maternity care services. However, in less developed world particularly in SSA countries availability and utilization of maternal healthcare services are low (2).

In Ethiopia, the levels of maternal and infant mortality and morbidity rates are the lowest among the highest in the world due to the lowest utilization of skilled birth attendant. According to EDHS, 2011only 34% of women attend ANC, while only 10% of women have their deliveries attended by health professionals (7).

In SNNP, 6.1% of deliveries were assisted by health professionals which are the lowest coverage from all regionals and city administrations of the country (7). The government is committed to improve the situation through an integrated plan at national and regional levels and implementing key internationally accepted initiatives/strategies. The government has set target of reducing MMR to 350 per 100 000 live births by 2015 (20).This urges need for information on determinants of the service utilization.

Therefore, this study is to measure proportion of women who delivered with the assistance of a skilled birth attendant and to identify the factors that influence utilization of skilled attendant at delivery among mothers who gave birth in the past two years in yirgachefe Town, SNNP Regional state of Ethiopia. It is hoped that the result of this study will give information on the proportion of deliveries conducted by skilled delivery attendant and identify factors which influence the utilization of SDA and can help program planners, policy makers, health care providers and researchers to focus on the factors, that affect utilization of skilled birth attendant.And also serve as an important tool for any possible intervention aimed at improving the low utilization of SDA in the town.

2. Literature Review

2.1 Maternal Mortality Rate

Where nothing is done to avert maternal death, natural mortality is around 1000–1500 per 100 000 births. If women were still experiencing natural maternal mortality rates today, then the scale of maternal death would be four times its current size, totaling over two million maternal deaths per year worldwide. The truth is that three quarters of these deaths are currently avoided throughout the world: nearly all the natural maternal mortality is avoided in developed countries, but only two thirds in the South-East Asiaand only one third in African countries. Most of the deaths and disabilities attributable to childbirth are avoidable, because the medical solutions are well known. The challenge that remains is therefore not technological, but strategic and organizational (21).

More than 70% of maternal deaths are due to causes directly related to pregnancy and child birth. These are obstetric hemorrhage (25%), infection/sepsis (15%), complications of unsafe abortion (13%), hypertension (12%), obstructed labor (8%) and others like ectopic pregnancy, embolism, and anesthesia complication. Indirect determinants are defined as preexisting diseases or diseases that develop during pregnancy (not related to direct obstetric determinants) that are aggravated by the physiological effects of pregnancy; the principal indirect determinants in many settings include anemia, malaria, hepatitis and diabetes (3).

By the broad MDG regions, MMR in 2005 was highest in developing regions (at 450 maternal deaths per 100 000 live births), in stark contrast to developed regions at 9 per 100 000 live births. Among the developing regions, sub-Saharan Africa had the highest MMR (at 900(400-1500), followed by South Asia (490) and Eastern Asia at 50(22)and In developing countries, millions of women and newborns die or experience serious health problems related to pregnancy and childbirth each year. Maternal mortality has been difficult to measure accurately in resource-poor settings and, In general, trend comparisons are unreliable. A study conducted in Botswana to assess factors associated with the nonuse of maternal health services revealed that Maternal mortality ratios in most sub- Saharan African countries range from 600 to 999 per 100,000 live births (19).

According to World Health Organization (WHO) estimates of maternal mortality in 2005, in Ethiopia there were 22,000 maternal deaths giving MMR of 720 (460-980) per 100,000 live births. Maternal death accounted for 28% of adult female (15-49 years) (22). DHS in Ethiopia, in 2005, found that 197 maternal deaths giving MMR of 673 (95% CI; 548-799) per 100 000 live births for the period 1998-2004. Maternal mortality rate were 1.34 per 1000 women aged 15-49 for the mentioned period. Maternal deaths accounted for 21 percent of all deaths to women aged 15-49 in this period (6).

The study done in Ethiopia in 2004, concerning maternal mortality showed that sepsis, abortion complications, eclampsia, obstetric hemorrhage, ruptured uterus and obstructed labor as main causes of maternal mortality.The death was higher for mothers with high total fertility (23).

Study done in ,Ambo hospital showed that, the major causes of maternal deaths were obstetric hemorrhage(54.8 percent), puerperal sepsis (30.1 percent), the women were from hypertensive disorder of pregnancy(12.3 percent). These maternal deaths were from direct obstetric causes(obstetric hemorrhage, obstructed labor, hypertensive disorders, unsafe abortion, and infection)(97.3 percent) while the rest were due to indirect obstetric causes ((not related to direct obstetric determinants) that are aggravated by the physiological effects of pregnancy; the principal indirect determinants in many settings include anemia, malaria, hepatitis and diabetes) (2.7 percent).The entire maternal mortality ratio was 1,852 per 100,000 live births (24).

2.2 Factors influencing utilization of skilled attendant at birth

2.2.1 Socio-demographic factors

For the low coverage of professionally attended deliveries, there are factors that influence the care a pregnant woman receives and many of these following studies have alsoshowed that utilization of attended delivery is strongly affected by sociodemographic factors.

Age is as one of socio demographic factors that found to have a significant influence on use of skilled care at delivery. Study in Nepal (25) gave result that women over the age 35 are less likely to utilize prenatal care but more likely to utilize delivery and postnatal care. However, a study in Bangladesh indicated that type of assistance utilized at delivery does not differ significantly with the age of the mother (26).

Study in Rwanda, the percentage of women delivering in health care facilities decreased with age from 47.6% at 15-19 years to 22.3% at 45-49 years. Older women were more likely to deliver at home, with the odds increasing with increasing age (at 45-49 years, OR=3.61, CI: 2.11-6.16, $p < 0.01$) (27).

The role of socio economic and demographic factors in influencing demand for utilization of attended delivery.According to WHO report on the reduction of maternal mortality, showed that many of the studies that have utilization of attended delivery is strongly affected by women's education. That is educated women are more likely to have attended institutional delivery (9).

Study in India showed mother's education had large positive effects on the institutional delivery (28). Another study conducted in Bangladesh the utilization of a trained attendant consistently increased with mother's education. About 46% of women with ten or more years of schooling delivered in a health facility compared to 13% with no education (28).

Study in Ethiopia in North Gondor zone showed that mothers whose educational status was secondary school and above, eleven times more likely to give birth at health institutions than women with other level of education (29) and Another Study in Adigrat town revealed that literate mothers were about two times more likely to prepare for birth and complication than their illiterate counterparts (30).

Study done in Mekele town also showed that births to women with primary education are two times more likely and births to women with secondary or higher education are four times more likely to utilize skilled birth attendant than illiterate women(31)and years spent in school also showed a significant association with seeking of skilled care during delivery, Women who have more schooling years are having higher proportion of deliveries attended by skilled personnel compared to those with fewer years of schooling or those who did not go to formal schooling with (OR 13.3,95%CI=7.37-23.97) and (OR 3.05,95%CI=1.84-5.05) respectively (32).

A study done in Rwanda on utilization of maternity care revealed that single women were almost three times more likely to deliver at a health facility than married women (OR=2.59, CI: 1.97-3.24, P < 0.01). While just over half (51.5%) of single women used health facilities for delivery, most (>70%) married women and women living in a permanent relationship did not use health facilities for their delivery (27)and Regarding to residence,Just over half (52.5%) of urban women delivered in health facilities compared to a quarter (24.8%) of rural women. Rural women were significantly more likely to deliver at home than their urban counterparts (OR=3.35, CI: 2.91-3.86, p <0.01) (27).

Study done in Ethiopia to determine utilization of Maternal Health Care Services found that, Although there is little difference in utilization of antenatal care by marital status, unmarried women are more than twice as likely as married women to receive delivery assistance from a health professional. However, married women are more likely to receive postnatal care than unmarried women (33) and there was significant variation in the utilization of maternal health care by religion. Orthodox/Catholic, Muslim, and Protestant women exhibit greater use of maternal health care services than women who follow traditional beliefs (33).

Astudy done in Rural Bangladesh in 2002, to determine utilization of health facilities and trained birth attendants for child birth found that place of residence can also be an important determinant of the use of modern health care resources for childbirth. A higher proportion of births in urban areas occur in modern health care facilities compared to rural areas (26).

Regarding place of residence EDHS 2011 showed that , 51 percent of birth in urban area were assisted by trained health professional compared with only 4 percent of births in rural area(7).

Study done in Ethiopia to determine utilization of Maternal Health Care Services showed that the use of delivery care services is significantly shaped by place of residence, women from Addis Ababa are more likely to receive care from a doctor, nurse, or midwife than women from other urban areas or rural areas. Eighty-three percent of women in Addis Ababa received antenatal care, 71 percent received delivery care, and 19 percent received postnatal care. Utilization of maternal health care services is lowest in rural areas. Twenty-two percent of rural women received antenatal care, and 2 percent received delivery or postnatal care. Sixty-three percent of women from the other urban areas received professional antenatal care, 31 percent received delivery assistance, and 10 percent received postnatal care (33).

Study done in Ephratanagidim District, North Shoa Zone to assess factors affecting safe delivery service utilization among women of childbearing age found that, those mothers who reside in urban area were nearly six times higher to give birth at health institutions than the rural counter parts (OR 5.68, 95%CI= 3.57-9.04) (32).

Women's economic factor also determines utilization of skilled attendant care. For this reasons even when formal fees are low or non-existent, poor women often face expenses of transport, drugs, and food or lodging for the women for delivering and other pregnancy related emergencies (9).

Study done in Nepal in 2007, to assess skilled care at birth among rural women practice and challenges found that dependence on men for economic survival has been a principal barrier to women's control over their reproductive behavior in developing countries. Empowering women with more economic participation and control in their households and communities might be the key to their achieving control over their own reproductive health. Employment can increase women's economic autonomy and reproductive health status because it raises awareness and provides new ideas, behavior and opportunities through interaction with other people outside the home and community (25).

One study in Kenya in 2000, on the analysis of factors associated with maternal mortality in Kenyan hospitals reported that the antenatal care visits tend to start earlier for women in paid employment. They are likely to have greater knowledge about pregnancy and childbirth due to freedom of movement outside household. They also tend to seek information on services available for pregnancy care during work (34).However; employment may not necessarily be associated with greater use of maternal health care, like in Nepal study done on skilled care at birth among rural women practice and challenges in 2007 found that, because non-working women may be better off than working women. In the context of developing countries, women's work is largely poverty induced and is likely to have a negative impact on utilization of maternal health services (25).

Regarding income EDHS 2005 showed that those having highest quintile of wealth were used professionally assisted delivery, nearly twenty six times higher than lowest quintile (6).

2.2.2 Previous Obstetric care utilizations

Worldwide experience verifies that antenatal care use is higher than delivery by skilled attendants. In most studies antenatal follow up of pregnant mother have been found to have strong positive correlation with institutional delivery.In Andhra Pradesh India, pregnant mothers who received an antenatal checkup are found several times more likely to give birth in a medical institution than mothers who didn't receive any antenatal checkup, even after controlling for a number of potentially confounding variables. With age, birth order, religion, and tribe controlled by holding them constant at their mean values in the underlying logistic regression, the odds ratio of giving birth in a medical institution is 5.4 times higher for mothers who received an antenatal checkup than for mothers who did not receive on antenatal checkup (28).

Although use of some maternal health services, particularly antenatal care has increased over the last two decade, these increases have not lead to reduction in maternal mortality. The maternal health of women is vital for the survival of families, and for economies to prosper. The Women Deliver conference launched in London in 2007, aimed to focus the world's attention on the investment needed to save the lives and health of women, mothers, and newborn babies around the globe. Women are more likely to die during or after child birth than during pregnancy but use of delivery and postpartum care increased the least (35).

Women who get antenatal care are also more likely to have a skilled attendant present during child birth (4). More than half of all women in developing world now receive at least four antenatal visit during pregnancy (the number recommended by WHO) (4).

Study in Rwanda showed that, of 5225 women considered, 94.4% attended antenatal care. Most antenatal care seen in the second trimester (2855/4923 [58.0%]) or in the third trimester (1657/4923 [33.7%]) while only 411/4923 (8.3%) attended antenatal care in the first trimester of the pregnancy. More women (3662 [70%]) delivered at home than in health facilities (1573 [30%]) (27).

According to the EDHS 2011 report, 34 percent of mothers received ANC care from health professionals; there are large differences between urban (76%) and rural (26%) in utilization of ANC service (7) and Study done in Ethiopia to determine utilization of maternal health care services found that women with secondary schooling are two to three times more likely to receive antenatal care as women with no education (33).

A community based study done in Asaita and Dufti town to assess factors affecting utilization of maternal health care services showed that 73.2 percent of the women need their first visit in their second trimester pregnancy (36).

Study done in Mekele town to assess utilization of skilled birth attendant at delivery found that ,the prenatal service utilization of respondents 539 (89.8%) have attended at least once for the last pregnancy and 453 (84.2%) have received information on pregnancy and delivery complications during their visit. Only 425 (78.8%) were informed to deliver in health facility and 386 (71.6%) of them were recommended to use health professional during their delivery (31).

A community based study in Gondor indicated women who did not have any booking of antenatal visit were less likely to give birth at health facilities (OR 0.09, 95% CI: 0.06, 0.15) than those received antenatal care. Moreover, mothers who have had past history of intrapartum complication were more likely to seek safe delivery care than those with no such history (OR 1.63, 95% CI: 1.1, 2.24) (29).

A study done in Rural Cambodia to assess determinants of skilled birth attendance indicated that delivery with skilled attendant at the preceding delivery was a significant determinant for subsequent use of skilled attendant. Once a woman has delivered with the aid of an unskilled attendant, she is five to seven times less likely to seek skilled help than a primipara (37).

A study conducted in Rwanda to determinants of the utilization of delivery services found that, Parity was the strongest predictor of place of delivery with women with 6 or more children about 5 times more likely to deliver at home than a primiparous woman (OR= 5.01, CI: 4.11-6.31)(27).

Study done in Ethiopia to determine utilization of Maternal Health Care Services found that, Mothers with one live birth are more likely to use maternal health services for first births than for second and higher order births. Generally, utilization of maternal health services is lower among mothers of birth order five and higher. Similarly, women who had only one birth in the past five years were also more likely to utilize maternal health care than women who had more than one birth in the same period (33).

Study done in maternal care service utilization in southern Ethiopia indicated that a professional assisted delivery to mothers is inversely related to women's parity. Women with more than one child are 50% less likely to receive professional delivery care than parity one women (38).

A baseline survey done in South and North Wollo Zone showed that 5.5 % deliveries were managed by health professionals while health extension workers were mentioned to be involved at delivery only by nine of the respondents (39).

A study done in north Gondor to assess safe delivery service utilization among women of childbearing age found that, 13.5 percent of the respondent had delivered in health institution. The reasons for not utilizing the service were 44.7 % of the respondents reported that labor was short and smooth, needed relatives attention during labor 14.3%, facility too far and the presence of TBA were 15.2% and 14.9% respectively. About seven percent gave a reason of lack of money (29).

A study done in Mekele town to assess utilization of skilled birth attendant at delivery showed that, among the 600 interviewed 404 (67.3%) were having institutional delivery while 196(32.7%) home delivery. From the total ANC service attendants 386 (71.6%) have used health professional during their actual delivery. Delivery in health facility is more common among younger mothers (age <35 yrs), 378 (93.6%).Out of the total home deliveries only 6 (3.1%) were attended by skilled attendants. 27 (13.8%) of the home deliveries were encountered problem at the time of delivery and out of these only 15 of them were taken to health facility. In general utilization of skilled delivery attendant among total number of live births surveyed, among the age group 15-49 years with a birth in the 1 year prior to the survey was 410 (69.3%)(31).

The use of professionally assisted delivery service is very low in Ethiopia. Only 10 percent of women who delivered in the five years preceding EDHS, 2011 survey, analysis of utilization of Maternal Health Care Serviceswere assist by a health professional for their most recent pregnancy(7).

Concerning the place of delivery, study conducted in Ephratanagidim District, North Shewa Zone, among 605 responders, 471(78.6%) of the women had preferred to deliver either at home or at parents' house while 128 (21.4%) gave their birth at health institutions with (14.6%) rural and (49.2%) urban. Among the 128 institutional deliveries, 67(52.3%) were in standard health center, 27(21%) in hospital, 17(13.3%) in growing health centers and only 6(1%) deliveries were at the health posts (32).

2.2.3 Women's decision making power

Women's decision-making power is another factor usually exists within the community that influences use of skill attendant at delivery. In many parts of the world, women's power to make decisions is limited, even over matters directly related to their own health. Study In Bangladesh, it is usually the mother in law and husband who make the decisions to seek (or not to seek) care (40).

A study in India showed that women would consult family members, usually the head of the household and/or whoever controlled the cash/family finances before seeking care. Approximately half (51.2 percent) of women consulted their husbands, 44.5 percent consulted family members such as their mother-in-law or sister-in-law and 3 percent consulted neighbors and friends. Women who earned money through self-employment or credit used the small amount of money they earned to pay for health care, but most women would only seek care on their own accord if services were free (41).

Study in Ethiopia North Gondor showed that, in 44.8 percent of women it was the husbands who decide where and when to seek help during labour (29) and Another study done in north shewa ,on women decision making power, almost a quarter of mothers said that health service and place of delivery were decided by husband and their relatives (32).

2.2.4 Predisposing factors for womento utilization of skilled brith attendant

Progress in preventing and seeking care to reduce maternal deaths in rural Africa depends on women's and communities knowledge and attitudes to maternal health. Study done in Rural Malawi in 2006,to assess women's perceptions of maternal health issue showed that women individually have little knowledge of maternal health problems (42) and A study done in Tanzania in 2007,to assesspattern of maternal health services and determinants of skilled care during delivery indicated that women with knowledge of pregnancy risk factors arealmost three times more likely to use skilled attendance at birth than those without theknowledge (OR 2.95 (95% CI 1.65-5.25) (43).

Studies conducted in Ethiopia had showed that knowledge of mothers about maternal andchild health care was significantly lower for women who wanted to deliver at home compared to those who wanted to deliver at health institutions. Study conducted in north shewa, regarding the knowledge of giving birth at health facility 399 (66.6%) responded at least one benefit, of them (47.6%) reported that it lowers maternal exhaustion, (35.3%) and (28.6%) mentioned timely treatment of problem followed by early detection of problem (32) and Study done in Mekele town showed that, among the 600 respondents only 258 (43.0%) were knowledgeable about the advantage of prenatal care service (31).

Study done in north shewa to assess factors for safe delivery service utilization among women of childbearing age revealed that positive and negative attitude to pregnancy, delivery risks and about health facility delivery service (61.6%) and (47.4%) have favorable attitude to the above mentioned issues respectively (32) and Study done in Mekele town, among 600 respondents of mothers who delivered at health facility towards institutional delivery, 394 (97.5%) were having positive attitude while 9 (2.2%) had negative attitude. Almost all of the respondents 595 (99.1%) agree that any pregnant women could face pregnancy & delivery complications. 552 (92%) women visited health facility for different reasons during their pregnancy time however only 404 of them attended skilled delivery(31).

A study done in Rural Karnataka, India in 2001, to assess antenatal natal care, care-seeking and morbidity indicated that many women, even if they received antenatal care services at a facility, they preferred to deliver at home in a familiar environment, often with the assistance of someone

known to them andfeeling that birth is a normal phenomenon that does not need an institutional setting (44).

Study conducted in Rural Bangladish in 2002, to assess the utilization of health facilities and trained birth attendants for childbirth found that cultural perspective on the use of maternal health services suggests that medical need is determined not only by the presence of physical disease but also by cultural perceptiveness of the illness. In most African rural communities maternal health services coexist with indigenous health care services, therefore, women must choose between the options (45).

A study done in southern Ethiopia, professionally assisted delivery was very low. A medically trained person attended only 3.3% of the women during the study period (38). For this low coverage Cultural norms, perceptions and practices of mothers may negatively impact on skill attendant care at delivery.

A study conducted in Ethiopia, Mekele town, among 600 responders reasons given for home delivery includes, short labor 59 (30%), usual practice 63 (32.1%), feeling of more comfortable just being at home 21 (10.7%), close attention from relatives & family members 15 (7.7%), to exercise cultural values 12 (6.1%), not liking health facility 2 (1.0%) and other reasons 24 (12.4%) and reasons given for institutional delivery were, better service in health facility 206 (51.0%), better outcomes from Institutional delivery 128 (31.7%), informed to deliver in HF 30 (7.4%), close to where they live 24 (5.9%), Poor out comes from home delivery13 (3.2%) and Others 3 (0.7%)(31).

Study conducted in Ephratanagidim District, North ShewaZoneto assess factors for safe delivery service utilization among women of childbearing age found that, different reasons were mentioned for the preference of home delivery for the last birth. The majority 286 (47.7%) and 97(16.2%) of the respondent mentioned that it was due to smooth progress of labor, followed by need to be with relative. Of the 471 home deliveries, 198 (42.1%) and 273(57.9%) were attended by traditional birth attendance and untrained relatives respectively and about the preference to deliver at health facility, the reason given by the majority, 83 (64.8%), were need better service while encountered difficulty of labor accounted for (11.7%) (32).

2.2.5 Enabling factors for utilization of skilled brith attendant

Studies indicate that one of the reasons women give for choosing not to use available obstetric care is poor access to health institutions. Study in Mozambique revealed that health care accessibility is a significant and important factor in women's choice of delivery location, of which 75 percent of mothers with a distance of less than half an hour, while 42 percent of mothers greater than three hours were utilized the service (46).

Study conducted inEphratanagidim District, North ShewaZoneregarding, the health service utilization, an overwhelming majority, 561(93.7%), of the respondents are having health facility in their proximity, of which, 433 (77.2%) were within one hour walking distance from the facility to their home and 371 (66.1%) of mothers said the nearest facility provide delivery service. Four hundred eighty (80.1%) had ever used modern health services, of which 295(61.6%), 169(35.2%), 44(9.2%) had attended ANC, delivery and postnatal services, respectively (32).

Concerning the reason for not using modern health service, (44.4%) of the respondents reported as not seriously ill, followed by too busy with household chores and high cost of the facility (15.4%) and (13.5%), respectively. One hundred sixty nine (28.2 %), of the women have ever used the delivery service in the health facility, 151 (89.3%) had paid for the delivery service while 15 (8.9%) utilized the service free of charge. Concerning the opinion to the payment (38.5%) and (48.7%) had claimed it was expensive and fair respectively (32).

2.2.6 Reinforcing factors for utilization of skilled brith attendant

Influences from husbands and other relatives is some times very crucial in determining ID service utilization by the women, because the influences from these people may not always end by only encouraging or discouraging the women to utilize the services, as in some instances these same people might be the primary decision makers about ID service utilization of the women as demonstrated in a series of studies conducted in rural Bangladesh, which finds out that the influences of husbands, mothers and mother in laws were important in determining women's ID service Utilization, and to complicate the matter more these same people are the primary decision makers in regard to who should be consulted for obstetric care (47).

A study done in Ethiopia, Mekele town to assess utilization of skilled birth attendant at delivery showed that, the preference of delivery attendant, the women expressed that 438 (84.4%) of their husbands, 446 (74.3%) of family members & relatives, were preferred the use of skilled birth delivery attendants. However, a number of husbands 81(15.6%), family & relatives 154 (25.6%), were preferred to use TBA, family members & neighbors, and TTBA (31).

3. Objectives

3.1 General Objective

To assess utilization of skilled birth attendant at delivery, among mothers of childbearing age (15-49 years) who gave birth during the last two year prior to the survey in yirgachefe town, Gedeo Zone, SNNPR, 2011/12

3.2 Specific Objectives

- To estimate the proportion of deliveries assisted by skilled birth attendant, among mothers who gave birth during the last two years.
- To identify factors affecting utilization of skilled birth attendant at delivery, among mothers who gave birth during the last two years.

4. Methodology

4.1. Study area and study period

The study was conducted in Yirgacheffe town of Gedeo Zone, which is located about 395 Kms to the south of Addis Ababa, the capital city of Ethiopia. The Gedeo zone has six Woredas and two towns namely, Dilla and Yirgachefe. In the Yirgacheffe town, there are three kebeles, with total population of 18,375. Off these, 9004 are males and 9,371 are females. Among the 9, 371 total account, 4,281are females in the age groups of 15-49 (Yirgacheffe town health unit report). Concerning the health infrastructure, there are one health center, two private clinics, two drug store, three rural drug vender and three NGOs in the town.

The study was conducted from September, 2011 to May, 2012.

4.2. Study design

A community based cross-sectional quantitative study design was conducted.

4.3. Populations

4.3.1 Source population

The source populations are all women in the age group of 15-49 years residing in the town.

4.3.2 Study population

The study populations were those mothers aged 15-49 years and have given birth within the last two years.

Inclusion criteria

In this town, women's fulfilling the following criteria was included in the study;

-Women's reproductive age group (15-49) who had given birth in the last two years prior to the study time and were living in the town.

Exclusion criteria

In-the town, women's fulfilling the following criteria were excluded from the study;

-Mothers who did not gave birth in Yirgacheffe town in the last two years prior to the study time.

- Mothers who stayed in the town for less than six month prior to the last birth.
- Mothers who were not mentally capable of being interviewed were excluded

4.3.3 Sample size

Sample size of the study was calculated by using single proportion statistical formula by considering the "proportion of women who have institutional delivery as a key variable.

$$n = z^2.p\ q / d^2$$

Where n=the required sample size.

Z ($Z_{\alpha/2}$)=Value of the standard normal distribution curve corresponding to level of significance alpha 0.05 = 1.96

P = proportion of women having institutional delivery of 10 % from preliminary EDHS, 2011 reported in Nation (EDHS, 2011).

q = 1-p = 0.939

d =the margin of error tolerated at 3% (0.03)

$$n = z^2 X\ p.\ q / d^2$$

n = 400

By Adding 10 % for non-response rate, the required sample size was **440.**

4.3.4 Sampling procedure

The town has three kebeles. All these three kebeles were included in the study. The list of households in all kebeles and Sampling frame of each household was identified in consultation with yirgacheffe town municipality and urban health extension workers in the town. After establishing the sampling frame of women aged group between 15-49 for each kebeles,was used systematic random sampling method was used to identify the list of households in each kebeles women who had given birth in the last two years prior to the survey were included. If there was, more than one eligible women in a household, one was selected randomly by using a lottery

method during data collection time; however, if no eligible woman could be found was selected to the study, the next immediate household to the right of the index household. The required sample size was calculated from each kebele's by using proportional allocation formula as follow.

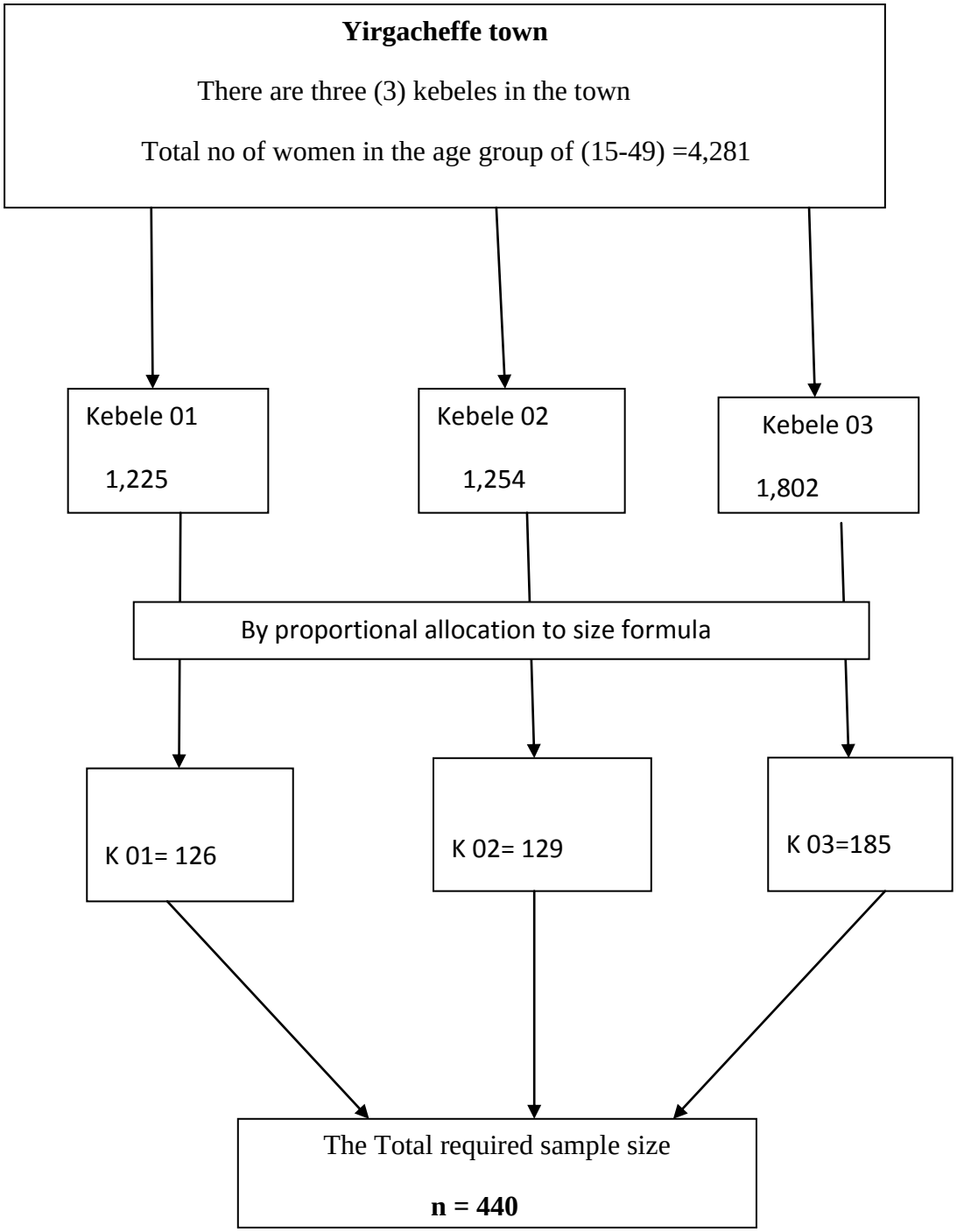


Figure 1 Schematic presentation of sampling procedure

4.4 Data collection

4.4.1 Data collection procedures

Data was collected by using adapted interviewer questionnaires, which was adapted from different literature reviews. Questionnaire was prepared in English language and later was translated to Amharic. It was Amharic version questionnaire that was used for data collection. Moreover, pretest was done out of the study kebeles by using 10% of study populations, which was 44 sample population was used in Dilla town to check clarity and consistency of the questionnaires prior to the actual data collection. After the pretest, necessary correction was made based on the feedback. Five diploma UHEWs (Data collectors) and two BSc health professional (supervisors) were trained for three days by the principal investigator. Supervisors/Facilitators were assigned during data collection day to oversee the process of data collection and coordinate data collection smoothly. Questionnaires that are found incomplete or inconsistent were re-administered or were omitted from the study.

4.4.2 Variables of the study

Independent variables

- Socio demographic factors (Age of mother, marital status, Religion, Ethnicity, occupation, education, monthly income, husband's education status).
- Previous obstetric histories (parity, gravidity, age at first pregnancy and age at first marriage)
- ANC utilization
- Predisposing factors(knowledge of mothers about pregnancy and delivery complications and services, attitudes of mothers about health facilities, place of delivery, perception of mothers about benefits of having skilled attendant at delivery, perceive severity and susceptibility)
- Reinforcing factors (influence from husband and relatives Information)
- Enabling factor (referral system, availability and accessibility of delivery service)
- Women's decision making power

Dependent variables

- Utilization of skilled birth attendant at delivery

4.4.3 Operational definitions

- **Skilled birth attendant:** A person with midwifery skills (e.g, midwife, nurse, nurse-midwife, or doctor) who has been trained to manage normal pregnancy, labor, birth, and the immediate postpartum and newborn periods and to manage or refer complications.
- **Urban Town:** Are localities in which urban kebelle administration that have 5000 or more persons whose inhabitants are primarily engaged in nonagricultural activities are identified as towns.
- **Maternal death:** Deaths of women while pregnant or within 42 days after termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.
- **Predisposing factors:** Any characteristics of an individual which facilitates or hinders utilization of skilled birth attendant, like knowledge, perception.
- **Reinforcing factors:** are influences of significant people that encourage or discourage behavioral change.
- **Enabling factors:** are factors that make it possible or convenient for the individuals to carry out the utilization of skilled birth attendant.
- **Favourable attitudes:** from those attitude questions who answered more than or equal to 75% of the score have good attitude for institutional or home delivery.
- **Unfavourable attitudes**: from those attitude questions who answered less than 75% of the score have bad attitude for institutional or home delivery.
- **Perceived severity**: woman's perception towards severity of the possible delivery is highly danger forcomplications and their outcomes.
- **Perceived susceptibility**: women's perception that they are susceptible to the possible delivery complications and their outcomes.
- **Perceived benefits**: women's perception about the benefits of having a skilled delivery attendant in preventing the untoward outcomes of delivery complications.
- **Childbearing agewomen**: Any women aged 15 to 49 years old irrespective her fertility status.
- **Skilled delivery service Utilization:** Giving birth at a setup where safe delivery service is being provided, most of the time at health facilities.

- **Knowledgeable:** From those Knowledge questions who answered two and above of the scored have knowledge on pregnancy and delivery complications and services in institutional delivery.
- **Accessibility:** defined as population living within less than 1hr walking distance from a health facility.
- **Availability:** measures the extent to which the provider has the requisite resources, like presence of health institution and personnels (health professionals) to meet the needs of the client.
- All institutional deliveries considered as utilize skilled birth attendant

4.4.4 Data quality management

Structured questionnaires were adapted from other research instrument after proper modification. Linguistic teachers in Dilla University were tasted the standard questionnaires for its validity and reliability through retranslate Amharic version to English to compare the consistency. In addition, the quality of data was ensured through proper training of data collectors and pre-testing of the questionnaire and close supervision of data collectors. All collected data were checked for completeness, accuracy and consistency by the principal investigator every day. Moreover, anything that was unclear and corrected and communicated to the data collectors. The principal investigator with supervisors were gave thorough orientation on how to complete the questionnaires, the benefit of the study and what was expecting from each respondents in a clear and convincing ways.

4.5 Data processing and analysis

Data was entered and cleaned by using, EpI Info vision 3.5.1. The data, after cleaned by the EpI Info was transferred to SPSS V-16 for analysis. Simple frequencies were used to see the overall distribution of the study subjects with the dependent variable. Binary logistic regression was used for bivariate analysis and finally stepwise multiple logistic regressions were used to identify factors of utilization of skill birth attendance. Different proportions were computed and relevant associations and statistical tests of significance (α = 95% CI) was used for the association between variables. P-value and 95% confidence interval (CI) for OR were used in judging the significance of the associations.

4.6 Ethical consideration

The survey was conducted after approval by the IRB (Institutional Review board) school of nursing and midwifery, collage of health science, AAU. Official letters were obtaining from school of Nursing and Midwifery, AAU to the respective officials. After getting letters, permission letter was also obtained from the concerned bodies of Yirgacheffe town Administration bureaus and from each respective kebele's Administration to get collaboration. Verbal consent was obtained from each individual respondent during data collection. During data collection information regarding utilization of skill birth attendant was provided. Participation was voluntary and they could withdraw from the study at any time. In addition, the information gathered during this study remained confidential in a locked drawer.

4.7 Dissemination of results

After the study is accomplished, the findings of this study will be submitted to School of Nursing and midwifery, Addis Ababa University as partial fulfillment of the MSc degree. Besides, it will be disseminated to SNNPR, and Gedeo Zone Health Departments and yigacheffe health bureau and for regional as well as Zonal concerned other bodies. Finding will also be disseminated to different organizations that will have a contribution to promote maternal and child health. The finding will also be present at various seminars and workshops. Moreover, publication in peer reviewed national or in a scientific journal will be attempted.

5 . Results

5.1 Socio demographic characteristics of study population

A total of 440 women reproductive age group were interviewed for the survey; 24(5.5%) were less than the age of 20 years; 366(83.2%) between the age of 20 and 34 and the remaining 50(11.4%) were between the age of 35 and 49 years with mean age of +_ (SD) of 27+_ (5.2) yrs and concerning marital status; all women were currently married. With regard to religion; 198(45%) were Orthodox Christians, 190(43.2%) were Protestant Christians, 40(9.1%) were Muslims while 12(2.7%) were Catholics.

205(46.6) were Gedeo, 68(15.5%) were Gurage, 64(14.5) were Amhara, 34(7.7%) were Oromo Ethnic group. Among the interviewed mothers;185(42%) have primary education(1-8),92(20.9%) have secondary education and above(9-12+),58(13.2%) have read and write and the rest 105(23.9) were illiterate(no education).With regard to husband's education of the respondents'210(47.7%) have secondary education and above(9-12+),177(40.2%) have primary education,35(8%) have read and write and the rest 7(1.6%) were illiterates.

By occupation 276(62.7%) were housewives, 104(23.6%) were having private business, 45(10.2%) were having government employee and the rest 15(3.4%) were having private employee. With regard to monthly income of the respondents, 280(63.6%) were having >= 500ETB, 126(28.6%) were having between 150 and 499ETB and the rest 34(7.7%) were having less than 150ETB (table 1).

Table 1.Socio-demographic characteristics of women in Yirgacheffe town, Gedio zone, SNNPR, Ethiopia, 2011/12 (n=440)

Variables	Number	Percent
Age		
Mean +_ SD	*27+_5.2*	
15-19	24	5.5
20-34	366	83.2
35-49	50	11.4
Marital status		
Marriad	440	100
Religion		
Orthodox	198	45
Catholic	12	2.7
Protestant	190	43.2
Muslim	40	9.1
Ethnicity		
Gedeo	205	46.6
Gurage	68	15.5
Wolyta	19	4.3
Amhara	64	14.5
Oromo	34	7.7
Tigre	12	2.7
Selite	37	8.4
Occupation		
Housewife	276	62.7
Private Employee	15	3.4
Gov. Employee	45	10.2
Private business	104	23.6
Educational status		
Illiterate	105	23.9
Read and write	58	13.2
Primary Education (1- 8)	185	42.0
Secondary education& above (9-12+)	92	20.9
Monthly Income in Birr		
<150 Birr	34	7.7
150-499 Birr	126	28.6
>= 500 Birr	280	63.6
Husband's Education Status		
Illiterate	14	3.2
Read and write	36	8.2
primary Education (1- 8)	179	40.7
Secondary education& above (9-12+)	211	48

5.2 Previous Obstetric History and ANC Experience of the respondents

Among 440 respondents, 205(46.6%) were first married below the age of 18 years and the rest 235(53.4%) women >=18 years. The majority, 324(73.6%) of the women were >=18 years at their first pregnancy, 116(26.4%) of the women were below the age of 18 years. 245(55.7%) of mothers have 2 to 4 pregnancies and 127(28.9%) mothers have one pregnancy. Among the respondents, 245(55.7%) have 2-4 children, 127(28.9%) have one child and 68(15.5%) have >=5 children.

Regarding the prenatal service utilization of respondents 358(81.4%) have received ANC for the last pregnancy and 302(68.6%) have received information on pregnancy and delivery complications during their visit. Only 333(93%) were informed to deliver in health facility and 248(69.3%) of them were recommended to use health professional during their delivery (table2).

Table 2.Previous obstetric history and ANC visits of women in Yirgacheffe town, Gedio zone, SNNPR, Ethiopia, 2011/12 (n=440)

Variables	Number	Percent
Age at first marriage		
<18	205	46.6
>=18	235	53.4
Age at first Pregnancy		
<18	116	26.4
>=18	324	73.6
Gravidity(Total No. of pregnancy)		
1	127	28.9
2-4	245	55.7
>=5	68	15.5
Parity(Total No. of births)		
0-1	127	28.9
2-4	245	55.7
>=5	68	15.5
Attended ANC follow up for the last pregnancy		
Yes	358	81.4
No	82	18.6
During ANC follow up got any information regarding pregnancy and delivery complications (n=358)		
Yes	302	68.6
No	20	4.5
I do not know	36	8.2

Informed about where to deliver (n=358)		
Yes	333	93.0
No	25	7.0
Recommend you to delivered (n=333)		
Health facility	333	100
Home	-	-
Informed as to who should attend you during delivery (n=358)		
Yes	248	69.3
No	110	30.7

5.3 proportion of mothers attended by skilled birth attendant

Among the total 440 interviewed 241(54.8%) were having institutional delivery and that of skilled delivery attendant was 58.9% while 199(45.2%) home delivery.From the total births 429(97.5%) were live births and 11(2.5%) were still births. 22 (11.1%) of the home deliveries were encountered problem at the time of delivery (table 3 and fig 2).

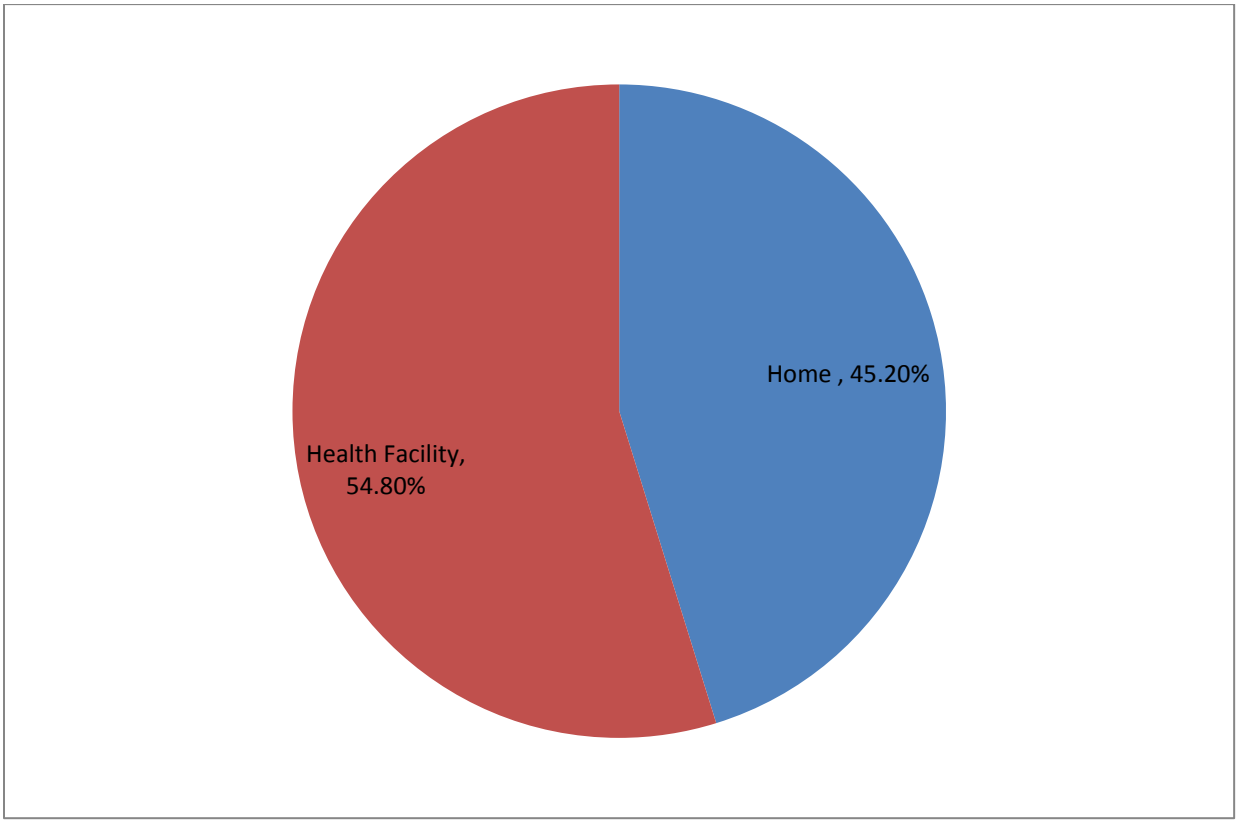


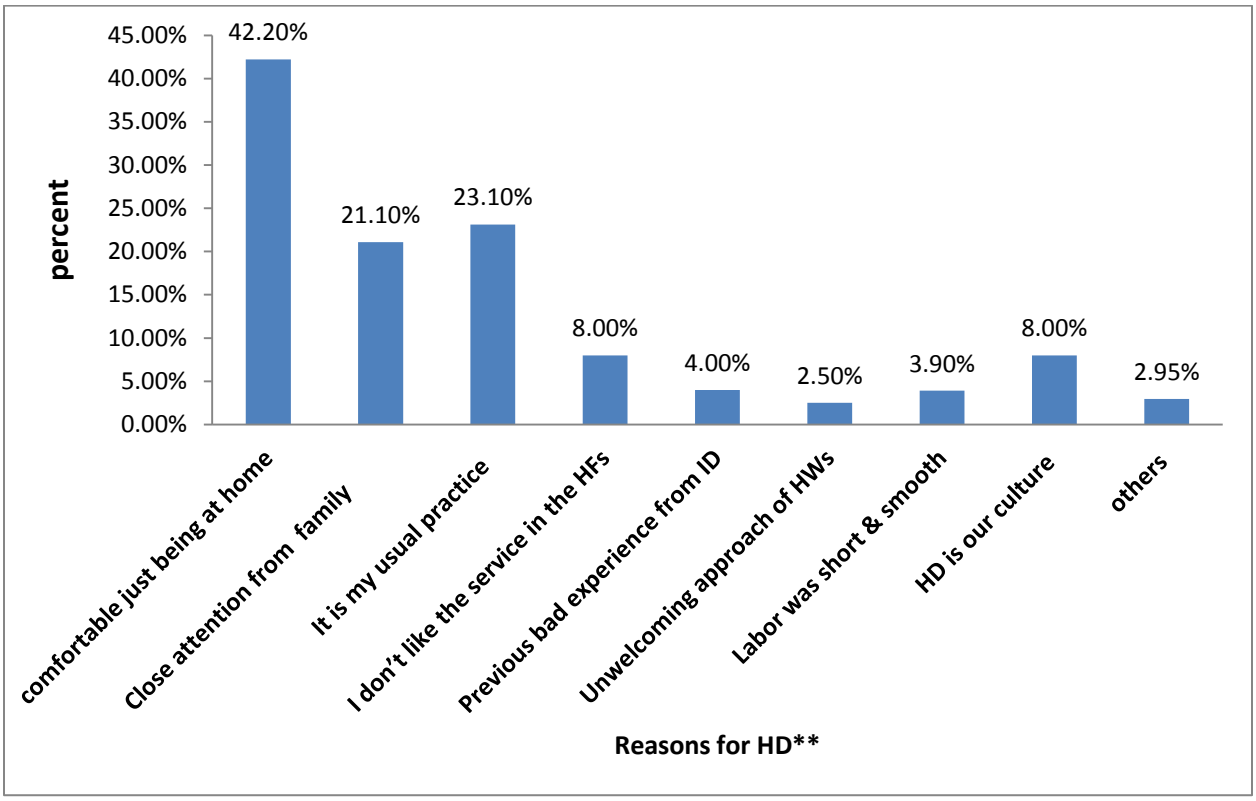
Figure 2 **Respondent's place of delivery of last child**

Table 3 .proportion of mothers by attending skilled birth attendant in previous two years in Yirgacheffe town,Gedeo zone,SNNPR,Ethiopia,2011/12 (n=440)

Variables	Number	Percent
The birth in the last 24 months resulted alive or dead		
Live birth	429	97.5
Still birth	11	2.5
You delivered (this specific birth)		
Home	199	45.2
Health Facility	241	54.8
Any problem gave birth at home (n=199)		
Yes	22	11.1
No	177	88.9

5.3.1 Barriers to utilization of skilled birth attendant

Reasons given for home delivery includes, feeling of more comfortable just being at home 84 (42.2%), usual practice 46(23.1%), close attention from relatives & family members 42 (21.1%), short and smooth labor 17(3.9%), to exercise cultural values 16(8%), not liking health facility due to bad experience 8(4%), unwelcoming approach of health workers 5(2.5%) and other reasons 13(2.95%). Out of the total home deliveries only 18 (4.1%) were attended by skilled attendants and the remaining, 19(4.3%) no attendant, 45(10.2%) Trained TBA, 58(13.2%) Untrained TBA, 55(12.5%) families and relatives, 4(0.91%) others (neighbours, husband) (fig 3 and 4).



**=multiple answer

Figure 3. Reasons for HD delivery, yirgacheffe town,Gedeo zone, SNNPR, Ethiopia,2011/12, (n=199)

Others= deficiency of knowledge.they thaught, they would not be accepted because they were sent home with the diagnosis of false labor previously, husband's parent choice, and my husband hold me during delivery.

HD= home delivery

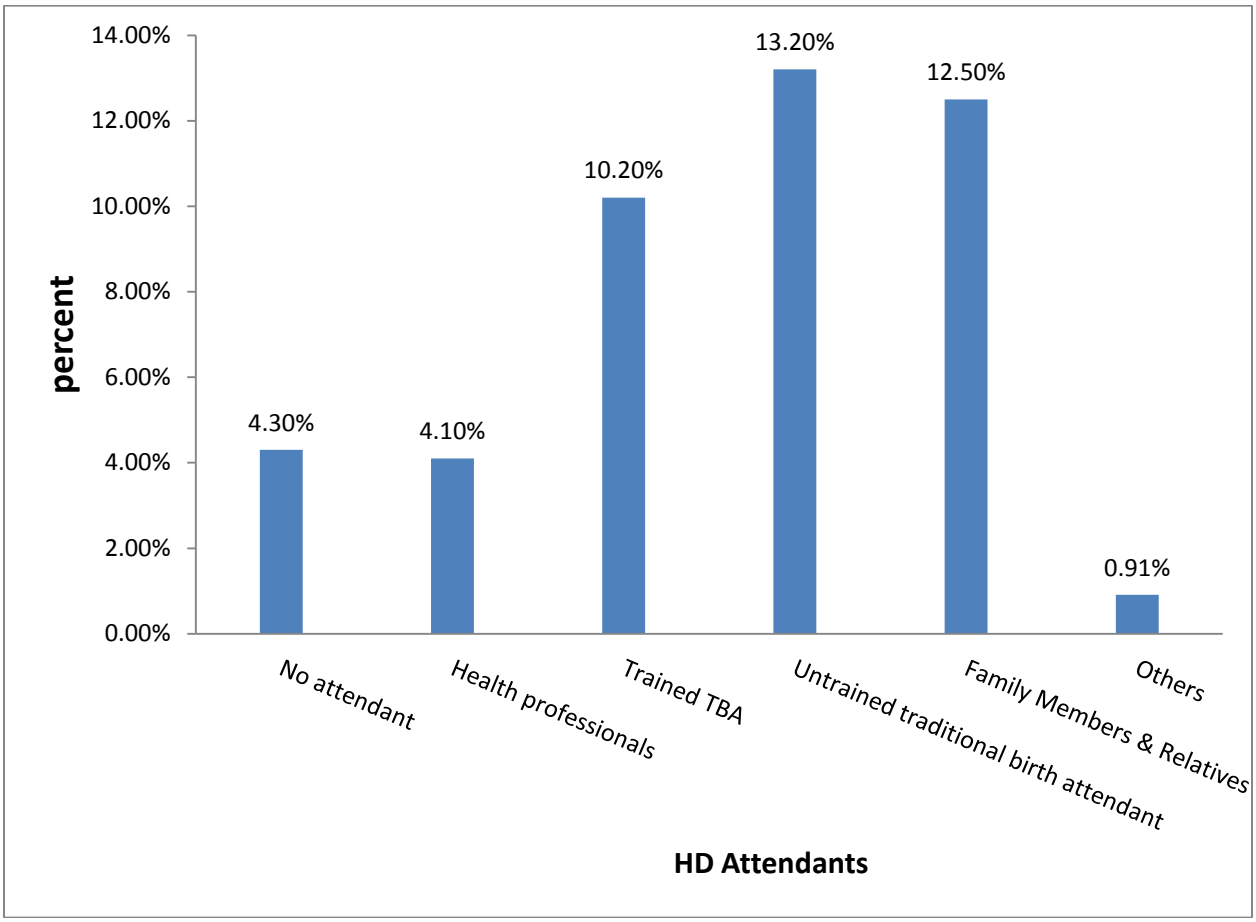


Figure 4. home delivery attendants in yirgacheffe town,Gedeo zone, SNNPR,Ethiopia,2011/12 (n=199)

Other=neibours and husband

5.4 Predisposing factors

5.4.1 Attitudes on health facilities, and home delivery

Regarding attitude of mothers among the total respondents towards institutional delivery, 380 (86.4%) were having good attitude while 31 (7%) had bad attitudes and the rest 29(6.6%) were indifferent.

Regarding attitude of mothers among the total respondents towards home delivery, 263(59.8%) were having bad attitude while 144(32.7%) had good attitudes and the rest 33(7.5%) were indifferent (table 4).

Table 4.Attitudes on health facilities, home delivery, and delivery attendant in yirgacheffe town, Gedeo zone, SNNPR, Ethiopia, 2011/12 (n=440)

Variables	Number	Percent
Opinion towards institutional delivery services		
Good	380	86.4
Bad	31	7.0
Indifferent	29	6.6
Opinion towards Home delivery		
Good	144	32.7
Bad	263	59.8
Indifferent	33	7.5

5.4.2. Perceptions (Perceived severity, Susceptibility and Benefits) of women on pregnancy, labor & delivery and institutional delivery

In regard to their perceptions about pregnancy and labor & delivery complications, 127(28.9%), 240(54.5%) of the women feel that they are susceptible to develop pregnancy and labor & delivery complications respectively.Majority of the respondents, 313(71.1%) perceive that they are not susceptible to develop pregnancy complications.Among susceptible to develop labor and delivery complications, 110(45.8%) of them perceive that delivery complications can be hazardous to their health and 130(54.2%) of them perceive that delivery complications can be hazardous to their newborn. Among the total respondents 440, 350(79.5%) of them agreed that if

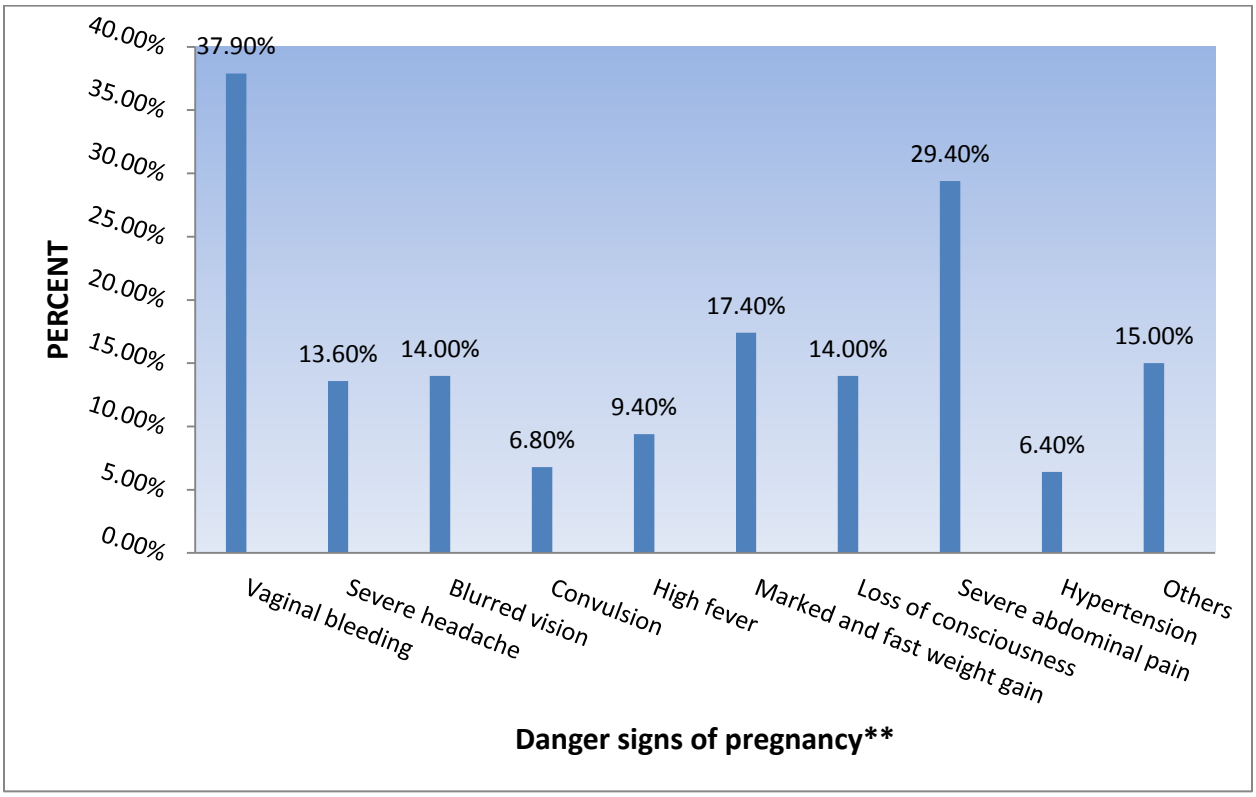
they get a skilled attendant during labor and delivery, it will be beneficial to their health and the health of their newborns (table 5).

Table 5. Perceptions (Perceived severity, Susceptibility, Benefits) of women on pregnancy, labor & delivery and institutional delivery in Yirgacheffe town, Gedeo zone, SNNPR, Ethiopia, 2011/12 (n=440)

Variables	Number	Percent
Susceptible to face pregnancy complication		
Yes	127	28.9
No	313	71.1
Susceptible to face labor and delivery complication		
Yes	240	54.5
No	200	45.5
Labor and delivery complication can be severe and may Be hazardous to my wellbeing (n=240)		
Yes	110	45.8
No	130	54.2
Labor and delivery complication can be severe and may Be hazardous to the newborn wellbeing (n=240)		
Yes	130	54.2
No	110	45.8
Attended by a SDA beneficial to my and newborn wellbeing		
Yes	350	79.5
No	90	20.5

5.4.3 Women on Knowledge of pregnancy and delivery complications and services

More than half of mothers, 235(53.4%) know at least one of the pregnancy risks. Of these 89(37.9%), 69(29.4%), 41(17.4%) said vaginal bleeding, severe abdominal pain, marked and fast weight gain respectively. The remaining 33(14%) loss of consciousness and blurred vision, 32(13.6%) severe headache,28(6.4%) hypertention,22(9.4%) high fever,16(6.8%) convulsion and 66(15%) said others. 110 (46.8%) were knowledgeable about the advantage of prenatal care service(fig 7) .



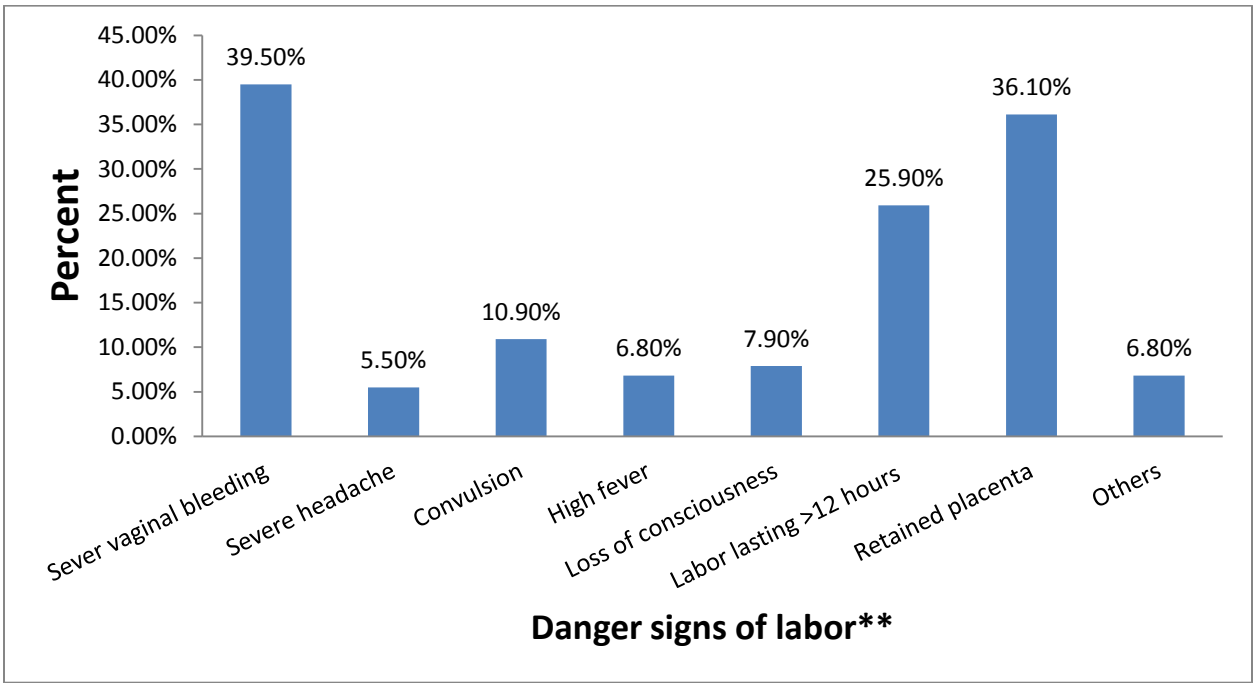
**=multiple response

Figure 5. Mentioned danger signs of pregnancy yirgacheffe Town,Gedeo zone, SNNPR, Ethiopia,2011/12 (n=235)

Other=severe anemia, persistant vomiting, malposition of fetus.

266(60.5%) of the respondents know at least one danger signs of labor.105(39.5%) said severe vaginal bleeding,96(36.1%) said placenta not delivered after 30 minutes baby is delivered,69(25.9%) labor lasting >12 hrs,29(10.9%) convulsion,24(5.5%) severe headache,21(7.9%) loss of consciousness and the rest 30(6.82%) said others. 85(32%) were knowledgeable about the advantage of labor and delivery(fig 6).

Regarding their knowledge about the advantages of pregnancy and delivery related services, among the total respondents 440, 193(43.9%) for appropriate management of health problems, 182 (41.4%) for early detection of health Problems, 167 (38.0%) for better care to the newborn, 135(30.7%) for better health care to the women, 6(1.4%) for anticipating of problem, and 18(4.1%) do not know (table 6).



**=multiple response

Figure 6. Mentioned danger signs of labor Yirgacheffe Town,Gedeo zone,SNNPR, Ethiopia,2011/12 (n=266)

Other=Abdominal cramp, Early rupture of membrane

Table 6.Women on Knowledge of pregnancy and delivery complications and services in Yirgacheffe Town,Gedeo zone, SNNPR, Ethiopia, 2011/12 (n=440)

Variables	Number	Percent
Do you know health problems during in the life of a pregnant woman		
Yes	235	53.4
No	44	10.0
Don't know	161	36.6
Know pregnancy danger signs (n=235)		
knowledgeable	110	46.8
Not knowledgeable	125	53.2
Do you know obstetric problems during labor and delivery		
Yes	266	60.5
No	34	7.7
I don't know	140	31.8
Know labor danger signs (n=266)		
Knowledgeable	85	32
Not Knowledgeable	181	68
Response of mothers about advantages of pregnancy and delivery related services (n=440)**		
For anticipating of problem	6	1.4
For early detection of health Problems	182	41.4
For appropriate management of health problems	193	43.9
For better health care to the women	135	30.7
For better care to the newborn	167	38.0
Don't know	18	4.1
Others(*)	8	1.82

**=for vaccination*
***=multiple answer*

5.5 Enabling factors (Availability, Referral system and Accessibility of services)

In relation to availability of facilities where they can get skilled delivery attendants (SDAs), 422(95.9%) of them said that such facilities are available in the town, nearby to their place of residence and the majority of the respondents 398(90.5%) lived within less than one hour walking distance of health institution from their home and 386(87.7%) of them could afford to pay for services from Skilled delivery attendant.

Concerning referral of mothers to higher health institutions, 304(69.1%) of the respondents has information that health facilities refer mothers to higher health service in case of emergency during delivery, however, 77(17.5%) mothers have no information whether health facilities refer mothers. Only 59(13.4%) mothers responded as health institutions do not refer mothers to higher level (table 7).

Table 7.Enabling factors (Availability, Referral system and Accessibility of services) in Yirgacheffe Town,Gedeo zone,SNNPR,Ethiopia,2011/12 (n=440)

Variables	Number	Percent
Health facility with skilled Delivery attendant in your nearby		
Yes	422	95.9
No	9	2.0
Do not know	9	2.0
Afford to pay for services from Skilled delivery attendant		
Yes	386	87.7
No	34	7.7
Do not know	20	4.5
Heard that Health Centers refer mothers to higher Health Facility		
Yes	304	69.1
No	77	17.5
Do not know	59	13.4
Walking hrs to nearest HF		
<1hr	398	90.5
>=1hr	42	9.5
Get health related information on maternal and child health		
Yes	343	78.0
No	97	22.0
Source of the information**		
Radio	48	14.0
TV	150	43.7
Newspaper	25	7.3
Health workers	269	78.4
Others(*)	1	0.2

*=from other people

**=multiple answer

5.6 Women decision making power and the preference of others to regarding place of delivery and delivery attendant

Concerning preference of others place of deliveries, 272(61.8%), 222(50.5%), 246(55.9%) were prefers health institutions by husbands, family members & relatives and community members respectively.Among 61.8% of husbands were prefered health institutions, 26.3% of mothers were delivered at health institutions by the decision making of their husbands and among 50.5% of family members & relatives were preferred health institutions ,only 4.6% of mothers were delivered at health institutions by the decision making of their families & relatives.

Among 36.1% of husbands were prefered home deliveries, 11.8% of mothers were delivered at home by the decision making of their husbands.Among 49.1% of family members & relatives were preferred home deliveries, 9.3% of mothers were delivered at home by the decision making of their families & relatives.Regarding the preferences of delivery attendants, the women expressed that 279(63.4%) of their husbands, 222(50.5%) of family members & relatives, 245(55.7%) of community members were preferred to utilize SDA (table 8).

Concerning women decision making power for the last child birth, half of the respondents, 49.7% and 19.4% of women were decided by themselves and health professionals to deliver at health facilities respectively and 70.3%, 11.8%, 9.3% of women were decided by themselves, their husbands and family & relatives to deliver at home respectively (table 9).

Table 8.Reinforcing factors (Influences and Social supports) in Yirgacheffe Town,Gedeo zone, SNNPR, Ethiopia, 2011/12 (N=440)

Variables	Number	percent
preferences husband to place of delivery		
Home delivery	159	36.1
Institutional delivery	272	61.8
Other(*)	9	2.0
Husband's preference to Delivery Attendant		

Skilled Delivery Attendant	279	63.4
TTBA	66	15.0
TBA	39	8.9
Family member &Relatives	46	10.5
Others(#)	10	2.3
Preference of other family members to place of delivery		
Home delivery	216	49.1
Institutional delivery	222	50.5
Others(*)	2	0.5
Families preference to delivery attendant		
Skilled Delivery Attendant	222	50.5
TTBA	79	18.0
TBA	49	11.1
Family members & Relatives	87	19.8
Others(*)	3	0.7
Preference of other community members to place of delivery		
Home delivery	186	42.3
Institutional delivery	246	55.9
Others(*)	8	1.8
Preference of other community members to delivery attendant		
Skilled Delivery Attendant	245	55.7
TTBA	99	22.5
TBA	67	15.2
Family members & Relatives	21	4.8
Others(*)	8	1.8

=no comment,#=did not told me

Table 9.Women's decision making power in Yirgacheffe Town, SNNPR, Ethiopia, 2011/12 (N=440)

Variables	Number	Percent
Decision maker for HF delivery(n=350)		
Just me	174	49.7
My husband	92	26.3
My family & relatives	16	4.6
Health Professionals	68	19.4
Decision maker for home delivery(n=246)		
Just me	173	70.3
husband	29	11.8
My family & relatives	23	9.3
TBA	4	1.63
Labor was an emergency	8	3.3
Will of God	5	2.03
Others (*)	4	1.63

*=my father & HPs
HP=health professional

5.7 Bivariate and Multivariate analysis

5.7.1Socio- demographic influencing factors on Utilization of skilled Delivery attendant

Crude analysis of socio-demographic variables on binary logistic regression showed that, occupation, educational status, monthly income, were all significantly associated with utilization of skilled delivery attendant at p<0.05. On the other hand, maternal age, husband education status, marital status, ethnic group and religion of the respondents did not show statistical association with utilization of skilled delivery attendant. Among the literates, those secondary & above and primary educations were eight and three times more likely to utilized SDA than illiterates women (COR=7.9, 95% CI=4.1 to 15.2), (COR=3.1,95% CI=1.87 to 5.1)respectively. Women whose Monthly income >=500birr are two times more likely to utilize SDA than women who have <150 birr (COR=2.35, 95% CI=1.15 to 4.83) and women who are governmental employee are six times more likely to utilize skilled delivery attendant than private bisnness women (COR=6.1, 95% CI=2.23 to 16.71).

But by applying Multiple Logistic regression, when they were adjusted for other socio demographic variables, only educational status and occupation of the women were significantly associated with utilization of skilled delivery attendant.(p< 0.05). If women have primary education (1-8) and secondary education and above (9-12+) two and four times more likely to utilize SDA than illiterate women.(OR=2.3 and 95% CI=1.24 to 4.2), OR=3.6 and 95% CI =1.5 to 8.4) respectively and women whose governmental employee have four times utilization of skilled delivery attendant than private bissness women (OR = 3.6 and 95% CI = 1.5 – 8.4). Maternal age, husband educational status, religion, ethinic group and monthly income status have shown no significant difference between women who had utilized skilled delivery attendants and those who had not utilized skilled delivery attendants (Table 10).

Table 10.By applying Bivariate And Multivariate Analysis on socio demographic factors influencing utilization of skilled birth attendant adjusted for Socio- demographic variables, in yirgacheffe town,Gedeo zone,SNNPR,Ethiopia,2011/12 (N=440)

Variables	Utilization of skilled birth attendant within the previous 24 months				
			C OR (95%CI)	p value	AOR (95% CI)
	YES	NO			
Age				0.474	0.21
15-19	12(2.7%)	12(2.7%)	1		1
20-34	220(50.0%)	146(33.2%)	1.51(0.66-3.45)		0.98(0.4-2.5)
35-49	27(6.1%)	23(5.2%)	1.17(0.44- 3.11)		0.53(0.2-1.6)
Religion				0.00	0.53
Orthodox	136(30.9%)	62(14.1%)	0.64 (0.29-1.42)		0.54(0.2-1.88)
Catholic	8(1.8%)	4(0.9%)	0.58 (0.14-2.38)		0.6(0.08-4.01)
Protestant	84(19.1%)	106(24.1%)	0.23 (0.1-0.5)		0.41(0.11-1.5)
Muslim	31(7.0%)	9(2.0%)	1		1
Ethinicity				0.00	0.01
Gedeo	82(18.6%)	123(28.0%)	0.6(0.08-0.48)		0.4(0.1-1.42)
Gurage	53(12.0%)	15(3.4%)	0.32(0.04-2.69)		1.5(0.4-5.6)
Wolyta	14(3.2%)	5(1.1%)	0.26(0.03-2.5)		1.7(0.32-9.4)
Amhara	49(11.1%)	15(3.4%)	0.3(0.04-2.5)		1.5(0.4-6.3)
Oromo	21(4.8%)	13(3.0%)	0.15(0.02-1.3)		0.64(0.2-2.5)
Tigre	11(2.5%)	1(0.2%)	0.28(0.32-2.5)		4.4(0.4-50.41)
silte	28(6.4%)	9(2.0%)	1		1
Occupation				0.02	0.14
Housewife	151(34.3%)	125(28.4%)	0.92(0.6-1.5)		1.4(0.8-2.33)
Private Employee	9(2.0%)	6(1.4%)	1.14(0.4-3.45)		0.7(0.22-2.44)
Gov. Employe	40(9.1%)	5(1.1%)	6.1(2.23-16.71)		3.6(1.5-8.4)
Private business	59(13.4%)	45(10.2%	1		1

Educational status				0.00	0.02
Illiterate	36(8.2%)	69(15.7%)	1		1
Read and write	35(8.0%)	23(5.2%)	2.92(1.5-5.7)		1.9(0.9-4.1)
Primary Education	114(25.9%)	71(16.1%)	3.1(1.87-5.1)		2.3(1.24-4.2)
Secondaryeducation& above	74(16.8%)	18(4.1%)	7.9(4.1-15.2)		3.6(1.5-8.4)
Monthly income in Birr				0.02	0.24
<150ETB	15(3.4%)	19(4.3%)	1		1
150-499ETB	62(14.1%)	64(14.5%)	1.23(0.57-2.63)		0.7(0.3-1.6)
>=500ETB	182(41.4%)	98(22.3%)	2.35(1.15-4.83)		1.04(0.4-2.5)
Husband's Education Status				0.004	0.56
Illiterate	7(1.6%)	7(1.6%)	1		1
Read and write	19(4.3%)	16(3.6%)	1.12(0.33-3.8)		1.05(0.3-4.3)
Primary Education	89(20.2%)	88(20.0%)	1.01(0.34-3.31)		0.7(0.2-2.44)
Secondary education & above	142(32.3%)	68(15.5%)	2.1(0.7-6.23)		0.95(0.3-3.4)

5.7.1Previous obstetric history and ANC follow up of women

Crude analysis of previous obstetric history and ANC variables on binary logistic regression showed that, Among the obstetric and ANC variables, age at first pregnancy, women gravidity, parity, ANC use were significantly associated with utilization of skilled delivery attendant at p<0.05. On the other hand, age at 1st marriage was not significantly associated with utilization of skilled delivery attendant Women with first pregnancy were four times OR=4.11and 95%CI= 2.20, 7.68) more likely to utilize skilled delivery attendant than women who have > 5 pregnancies.

Women with age at first pregnancy,>=18 years were two times more likely to utilization of SDA than age <18 years (COR=1.97, 95% CI=1.3 to 3.03). Women with first and two-four pregnancies and births were two times more likely to utilize skilled delivery attendant than women who have >= 5 pregnancies and births (COR=1.71, 95% CI=1.2 to 2.5). Women who had

ANC visits were sixteen times more likely to utilize skilled delivery attendant when compared to those who did not have ANC visit (COR=16.45, 95% CI=8.2 to 33.1).

By applying Multiple Logistic regression, when they were adjusted for other previous obstetric history and ANC follow up variables, only gravidity, parity and ANC follow up of the women were significantly associated with utilization of skilled delivery attendant. ($p< 0.05$). If women who have one and two to four pregnancies and births, three and two times more likely utilize SDA than women who have >=5 pregnancies and births (OR=2.6, 95% CI= 1.17 to 4.45) and (OR=2.3, 95% CI=1.41 to 4.65) respectively.

women who were attending ANC follow up during the last pregnancy, are sixteen times more likely to utilized SDA when compared to women who were not attending ANC follow up (OR= 16.7, 95% CI = 8.2 to 33.89)(Table 11).

Table 11.By applying Bivariate And Multivariate Analysis on previous Obstetric Factors and ANC follow up Influencing For Women Utilization Of Skilled Delivery Attendant, in yirgacheffe town,Gedeo zone,SNNPR,Ethiopia,2011/12 (n=440)

Variables	utilization of skilled birth attendant within the previous 24 months				
			C OR (95% CI)	pvalue	A OR (95% CI)
	Yes	No			
Age at first marriage				0.06	0.35
<18	101(23%)	104(23.6%)	1		1
>=18	158(35.9%)	77(17.5%)	1.68(0.96-2.94)		0.52(0.3-0.95)
Age at first Pregnancy				0.02	0.96
<18	54(12.3%)	62(14.1%)	1		1
>=18	205(46.6%)	119(27%)	1.97(1.3-3.03)		0.98(0.53-1.84)
Gravidity(Total No. of pregnancy)				0.00	0.007
1	77(17.5%)	45(10.2%)	1.71(1.2-2.5)		2.6(1.17-4.45)
2-4	151(34.3%)	89(20.2%)	1.7(1.31-2.21)		2.3(1.41-4.65)
>=5	31(7.0%)	47(10.7%)	1		1

Parity(Total No. of births)			0.00	0.007
0-1	77(17.5%)	45(10.2%)	1.71(1.2-2.5)	2.6(1.17-4.45)
2-4	151 (34.3%)	89(20.2%)	1.7(1.31-2.21)	2.3(1.41-4.65)
>=5	31(7.0%)	47(10.7%)	1	1
Received ANC last pregnancy			0.00	0.00
Yes	249(56.6%)	109(24.8%)	16.45(8.2-33.1)	16.7(8.2-33.89)
No	10(2.3%)	72(16.4%)	1	1

5.7.3 Predisposing, enabling and reinforcing factors influencing utilization of skilled delivery attendant

Crude analysis of predisposing, enabling and reinforcing variables on binary logistic regression showed that, Predisposing(know pregnancy danger signs,know labor danger signs,attitude to delivery service in HFs and women's perceptions about pregnancy and delivery complications),Enabling(presence of SDA in nearby HF,afford to pay for services from SDA,they know about referral to higher health institutions,health related information on MCH,walking hrs to nearest HF) and Reinforcing variables(husband's,families and communities preference to delivery attendant) were significantly associated with utilization of skilled delivery attendant at $p<0.05$.

Women who know about danger signs of pregnancy and labor complication are six and seven times more likely to give birth at HF than those who did not know (COR=5.47,95% CI=3.3 to 9.2),(COR=6.73,95% CI=3.57 to 12.67) respectively. Moreover, mothers with favorable attitudes towards HF delivery service were 86.4% more likely to give birth at HF than those with unfavorable attitudes (COR=2.04, 95% CI=1.65 to 2.53) and women's who had positive perceptions about pregnancy complications, five times more likely to utilization of SDA than those who had negative perceptions.

Women who obtained MCH information were two times more likely to utilize skilled delivery attendant than those who did not get information (COR=1.53, 95% CI=1.01 to 2.3).

Those women who walking less than one hour distance to go to health facility are almost two times more likely to utilize skilled delivery attendant than those who walking >=one hours.(COR=2.41,95% CI=4.42 to 10.28) and Mothers who said fees were affordable were four

times more likely to give birth at a HF as those that said fees were unaffordable (COR=3.65, 95%CI=1.98,6.7).

Regarding the preference of the respondent's husbands, families and communities, those who make decisions about delivery with health professional by themselves were twenty five, twelve, and seven times more likely to utilize skilled delivery attendant as compared with those, their husbands, families and communities prefer delivery without health professional(TTBA,TBA and family and relatives)(COR=25.2,95% CI=14.9 to 42.7),(COR=12.1,95% CI=7.59 to 19.31) and (COR=6.7,95% CI=4.42 to 10.28) respectively.

When applying Multiple Logistic regression, they were adjusted for others predisposing, enabling, and reinforcing variables. Husband's and families' preference to delivery attendant were significantly associated with utilization of skilled delivery attendant ($p< 0.05$). Regarding the preference of the respondent's husbands and families, those who make decision about delivery with health professional were four times and five times more likely to utilize skilled delivery attendant as compared with those, their husbands and families prefer delivery without health professional (TTBA, TBA and family and relatives) OR= 4.03 (95%CI=1.37 to 11.8), OR=4.6, 95%CI=1.5 to 13.9) respectively (table 12).

Table 12.By applying Bivariate And Multivariate Analysis on Predisposing, Enabling, and Reinforcing variables with women's utilization of skilled delivery attendant, in yirgacheffe Town,Gedeo zone,SNNPR,Ethiopia, 2011/12 (n=440)

Variables	utilization of skilled birth attendant within the previous 24 months			
			C OR (95% CI) pvalue	A OR (95% CI)
	Yes	No		
Presence of Skilled attendant in nearby HF			0.04	0.2
Yes	255(58.0%)	167(38.0%)	5.34(1.73-16.5)	2.2(0.58-8.3)
No	4(0.9%)	14(3.2%)	1	1

Afford to pay for services from skilled delivery attendant			0.00	0.5
Yes	242(55.0%)	144(32.7%)	3.65(1.98-6.7)	1.9(0.22-17.32)
No	17(3.9%)	37(8.4%)	1	1
know about referral to higher health services			0.43	0.47
Yes	189(43.0%)	116(26.4%)	1.53(1.01-2.3)	1.5(0.5-4.8)
No	70(15.9%)	65(14.8%)	1	1
Health related information on maternal and child health			0.00	0.03
Yes	234(53.2%)	108(24.5%)	6.33(3.81-10.5)	0.03(0.002-0.7)
No	25(5.7%)	73(16.6%)	1	1
Husband's preference to delivery attendant			0.00	0.01
Delivery with health professional	234(53.2%)	49(11.1%)	25.2(14.9-42.7)	4.03(1.37-11.8)
Delivery with out health professional	25(5.7%)	132(30.0%)	1	1
Families preference to delivery attendant			0.00	0.07
Delivery with healthprofessional	189(43.0%)	33(7.5%)	12.1(7.59-19.31)	4.6(1.5-13.9)
Delivery without health professional	70(15.9%)	148(33.6%)	1	1
Communities preference to delivery attendant			0.00	0.31
Delivery with health professional	192(43.6%)	54(12.3%)	6.7(4.42-10.28)	1.68(0.62-4.6)
Deliverywithouthealthprofessional	67(15.2%)	127(28.9%)	1	1

Walking hrs to nearest health facility			0.019	0.15
<1hr	227(51.6%)	171(38.9%)		
>=1hr	32(7.3%)	10(2.3%)	2.41(1.15-5.04)	0.15(0.01-2.08)
			1	1
Know pregnancy danger signs			0.00	0.94
Knowledgeable	93(39.6%)	17(7.2%)	5.47(3.3-9.2)	0.97(0.36-2.6)
Not Knowledgeable	95(40.4%)	30(12.8%)	1	1
Know labor danger signs			0.00	0.13
Knowledgeable	74(27.8%)	11(4.1%)	6.73(3.57-12.67)	2.4(0.76-7.3)
Not Knowledgeable	117(44.0%)	64(24.1%)	1	1
Attitude to delivery service in health facilities			0.00	0.1
Good	255(58.0%)	125(28.4%)	2.04(1.65-2.53)	6.89(0.51-93.4)
Bad	4(0.9%)	56(12.7%)	1	1
Women's Perceptions about pregnancy complication			0.00	0.32
Yes	105 (23.9%)	22(5.0%)	4.9(2.96-8.2)	1.6(0.61-4.4)
No	154(35.0%)	159(36.1%)	1	1

6. Discussion

This community based study has attempted to identify the extent and factors associated with utilization of skilled attendant at delivery in yirgacheffe town. Consequently, factors influencing women's utilization of skilled delivery attendants were identified in the town. The factors were related to the mother (user) and health facility (provider). Most of these findings are consistent with most studies conducted elsewhere in Ethiopia or abroad.

The study finding revealed that proportion of institutional delivery was 54.8% and that of skilled delivery attendant was 58.9% and home delivery was 45.2%. The finding is less likely consistent with study conducted in Afar Region, Assayta and Dufti town, 54.2% of the deliveries took place at home, and 45.8% at health institution and in contrast, with the previous studies, home deliveries were 88%, 83%, 86.5% Butajira, Adamitulu and Gonder respectively,(50,51,52).This large difference is explained by the fact that the present study is exclusively urban population based.The urban women tend to have better access to health facilities, education, and information about maternal health care services that showed to have effect on the preference to institutional deliveries. In addition, health promotion programs, which use urban, focused mass media, may work to the advantage of the urban residents. All of these studies reported that large numbers of women are delivering at home being assisted by untrained traditional birth attendants and other possible reasons, mothers preferred to give birth in the presence of relatives, trust TBAs, cultural reasons and lack of money as reasons for non-use of the services.

This study also showed that births to women with primary education were two times more likely and births to women with secondary and above education were four times more likely to utilize skilled birth attendant than illiterate women. The finding is consistent with many studies in Ethiopia and other developing countries (29, 33, 41). This can be explained in different ways. Education is likely to enhance female autonomy so that women develop greater confidence and capability to make decisions about their own health. In addition, education leads to better health awareness so that educated women seek out higher quality services and have greater ability to use health care inputs that offer better care.

This study found that government employee workers were four times more likely to utilization of skilled delivery attendant than those who had private bissness. This finding is consistent with other studies, a study done in Rwanda showed that,farmers and manual workers were more likely to deliver at home than women working in professional,technical and management areas(27).

The possible explanation is employment can increase women's economic autonomy and reproductive health status and Government employee women are more likely, raises awareness and provides new ideas, behavior and opportunities through interaction with other people outside the home and community. Other explanations for this finding private bissness women are take more time for their bissness rather than providing reproductive health related information.

Gravidity is one obstetric variable found to be significantly affecting the utilization of skilled delivery attendant. Women with first pregnancy are three times more likely to utilize skilled delivery attendant as compared to those who are pregnant for >= 5. This finding is consistent with other studies, which indicate that women are more likely to utilize professional assistance for their first births (28,38,6). The possible reason, younger women is more likely to accept modern health care as they are likely to have greater experience to modern medicine and have greater amount of schooling than older women. Another possible explanation for this is that women pregnant with their first child were more cautious about their pregnancies and therefore sought out trained professionals. Older women on the other hand, tend to believe that modern health care is not as necessary due to experiences and accumulated knowledge from previous pregnancies and births and therefore likely to have more confidence about pregnancy and childbirth. Study in India, revealed that women are more likely to get care for their first delivering than others that follow.This is associated with factors like fear of the unknown or excitement that is probably associated with the first child birth (52).

Parity is another obstetric variable found to be significantly associating with the utilization of skilled delivery attendant.This study showed that, women who have one birth, three times more likely utilize SDA than women who have >=5 births. The current study has revealed that higher birth order mothers are less likely to give birth at HFs compared to those with lower order births. This study consistent with many studies done in Ethiopia and abroad, birth order was found to be an independent determinant for utilization of skilled delivery attendant (28,33,43).As birth order increased the chance of giving birth at health institution decreased. A possible explanation for this could be women develop confidence and may believe that modern health care is not as necessary due to the experience, self efficacy and knowledge accumulated from previous pregnancies and births. On the other hand, women who are pregnant for their first child are usually more likely to have difficulties during labor and delivery than women of higher parity, so that they tend to fear home deliveries. This may result in low parity women being more

motivated to deliver in medical facilities than high parity women. In Contrast, many studies reported that grand multiparas and primiparas are at greatest risk of maternal mortality and morbidity as well as having poor delivery outcome implying much effort has to be made to avert the practice (52, 53).

The health care that a mother receives during pregnancy and time of delivery is important for the survival and well being of the mother and child (2). In the present study majority (81.4%) had received prenatal care during the last pregnancy. However, only 56.6% of those who received ANC gave birth at HFs for the respective conception. On the other hand, among the core aims of providing ANC is to promote skilled attendance at birth. This implies that there is still need investigation on the gap between ANC and delivery care utilization which need to be linked to each other. This study showed that women who received prenatal care were more than sixtheen times more likely to utilize skilled delivery attendant (SDA) than those who did not. The finding is consistent with many studies conducted elsewhere (28, 41, 37).

The importance of ANC follow up in utilization of skilled delivery attendant, may be explained in such a way that, exposure of the women to the health service in general and the information as well as the experiences they have gathered during the follow up in particular, might have influenced them to deliver in HFs. Another possible explanation may be, considering facts that ANC follow up is service utilization by itself and both ANC and institutional delivery services are a continuum of pregnancy and delivery related service, factors which influence utilization of ANC might have influenced institutional delivery service utilization in a similar manner.In contrast, a study in Uganda suggested attendance at antenatal care actually may discourage delivery in a health unit; women who were told that their pregnancy is normal see no reason to deliver at the health unit (54).

Based on these findings it can be observed that, even though ANC attendance is important factor which promotes institutional delivery, it is not fully utilized as a conducive opportunity to provide pregnant women with the relevant information about pregnancy and child birth. But ,as this is just an observation from a study which is not designed to assess the quality of ANC services, these findings cannot be considered as conclusive ones, and hence, more comprehensive studies are recommended to evaluate whether the services related to ANC are provided appropriately or not.

Some of the barriers given by the respondents for utilization of skilled birth attendant were, feeling of more comfortable just being at home 84 (42.2%), usual practice 46(23.1%), close attention from relatives & family members 42 (21.1%), short and smooth labor 17(3.9%), to exercise cultural values 16(8%), not liking health facility due to bad experience 8(4%), unwelcoming approach of health workers 5(2.5%) and other reasons 13(2.95). An earlier study conducted at Mekelle Town to assess utilization of SDA also shows that the reasons given for preferring to home delivery were, short labor 59 (30%), usual practice 63 (32.1%), feeling of more comfortable just being at home 21 (10.7%), close attention from relatives & family members 15 (7.7%), to exercise cultural values 12 (6.1%), not liking health facility 2(1.0%) and other reasons 24 (12.4%) (31).The role that quality of care plays in the decision to seek care is related to people's own assessment of service delivery, which largely depends on their own experiences with the health system and those of people they know (38).

The finding from this study which showed that, women to whom their husbands and families preferred delivery with health professional are four and five times more likely to utilize skilled delivery attendant than those their husbands and families prefer delivery attendant other than health professionals This finding is consistent with findings from other studies (8, 31). Because, sometimes, the discouraging or encouraging influence from other people about delivery attendants may not always be limited by giving suggestions to the women about their place of delivery because in certain instances, these same people may be the primary decision makers in terms of utilizing ID services. And this implies that in such scenarios, women who are discouraged by other people from getting ID services and those who still cannot decideby themselves to get ID services are very unlikely to deliver in HFs.

According to some behavioural models human behaviours are sometimes influenced largely by the preferences or attitudes of influential people towards the behaviour or practice. In view of this assumption, and based on the finding from this study which shows that women to whom their husbands and families prefer SDA are more likely to deliver in health facilities suggests that the influences from these people are important determinants of women's delivery place.

Looking deeper into the barriers factors from this study, feeling of more comfortable just being at home 84 (42.2%), usual practice 46(23.1%), close attention from relatives & family members 42 (21.1%), short and smooth labor 17(3.9%), to exercise cultural values 16(8%), not liking

health facility due to bad experience 8(4%), unwelcoming approach of health workers 5(2.5%) and other reasons 13(2.95).

Finally, since this study is conducted in rural town where heath facilities are less likely available, the findings can only be generalized to similar settings with comparable socio demographic and health service coverage profiles. And hence similar studies are recommended in various settings, to come up with more representative findings which will be helpful in planning and implementing more contextual interventions to improve the utilization of skilled birth attendant in the county.

7. Strength and Limitation of the study

7.1 Strength

- Female interviewers were used, to increased response rate.
- Pretest was done out of the study kebeles to check clarity and consistency of the questionnaires prior to the actual data collection.

7.2 Limitations

- Selected variables that affect utilization of skilled delivery attendant have been investigated, and their importance was determined by comparing users and non users at a specific point in time. So difficult to know whether the determinant or the outcome occurred first (cause-effect).
- Since the study was retrospective cross-sectional, the probability of recall bias miss reporting of events was likely.
- It would have been more appropriate to use non-health worker data collectors to avoid the possibility of introducing desirable answers.
- The respondents might not know the credentials of their birth attendants which might increase the rate of skilled birth attendant.

8 Conclusions and Recommendations

8.1 Conclusion

The study finding revealed that proportion of skilled delivery attendant was fifty eight percent and home delivery was fourty five percent. Eventhough, utilization of SDA was more than fifty percent, still there is a gap between users and providers. This community based study has attempted to identify the extent and factors associated with utilization of skilled attendant at delivery. Consequently, factors influencing women's utilization of skilled delivery attendants were identified and those barriers are, feeling of more comfortable just being at home, usual practice of women, women provide close attention from relatives & family members, previous deliveries are short and smooth, to exercise cultural values, not liking health facility due to bad experience, unwelcoming approach of health workers and other reasons. In this study educational status and governmental occupation of the women, preferences of their husbands and families to delivery attendant were independent predictors of utilization of skilled delivery attendant and the number of pregnancy, parity and ANC visit were independent obstetric determinants of utilization of skilled birth attendant. Majority of the women had received prenatal care during the last pregnancy.however,utilization of skilled birth attendant during delivery is still unsatisfactory and one of the core aims of providing ANC is to promote skilled attendance at birth .Utilization of skilled birth attendant is higher among educated and gov'tal employee women,women with first pregnancy and lower order births,women who have ANC visit, women who have the power to decide by themselves about delivering in HFs and those women who have favourable influences from their husbands and relatives about their delivery practices, while it is lower among disadvantaged women.

8.2 Recommendations

Based on the findings of the study, the following areas were identified and specific Recommendations were made.

1. Health care providers should provide information on risks of pregnancy and labor & delivery of giving birth at home, benefits of giving birth at health facilities, danger signs during pregnancy and labor to mothers, family members and the community.
2. Community members should discourage harmful traditional and usual practices those hinder HF delivery care utilization and Community support groups should be formed to facilitate timely referral of labory mothers.
3. Health care providers should know their professional duties and responsibilities and respect their clients like,by welcoming approach ,respect client's duties and responsibilities etc….Gov'tal and Non- Gov'tal organizations are committed and focus on training of competent health professionals.
4. There should be increasing education opportunities for both groups and particularly for the girls and Increase women's autonomy with in the family, enhancing their ability to earn and control income and decide on their own health. Therefore, policy makers and concerned stockholders, government and non-government bodies should give great emphasis to education and women engagement in gainful employments.
5. Health professionals should promote ANC follow up and provide information on the problems of pregnancy and delivery complications and on the importance of skilled delivery attendant at every child birth for every woman who came to health facility in general antenatal care should be promoted and linked with delivery care.
6. Multi-gravidity, multi-parity and higher maternal age where less likely to utilize SDA implies that these group should be one of the priorities criteria for targeting education campaigns on the benefits of institutional delivery and MCH.
7. Community health activities such as community awareness programs, home visit, and community-based delivery systems must focus those who are not litrate, who did not get MCH information, who did not come for ANC, who have not the power to decide by them selves about delivering in HFs and who have unfavourable influences from their husbands and relatives about their delivery practices.
8. Further studies should be conducted on client –provider interaction, to address the effect on utilization of skilled delivery attendant

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10. Annexes

I. Conceptual Framework

To develop the conceptual framework, previous study findings and the framework developed based on the Concept of Precede, health belief and theory of planned behavior (by Ayele B, 2005) is used.

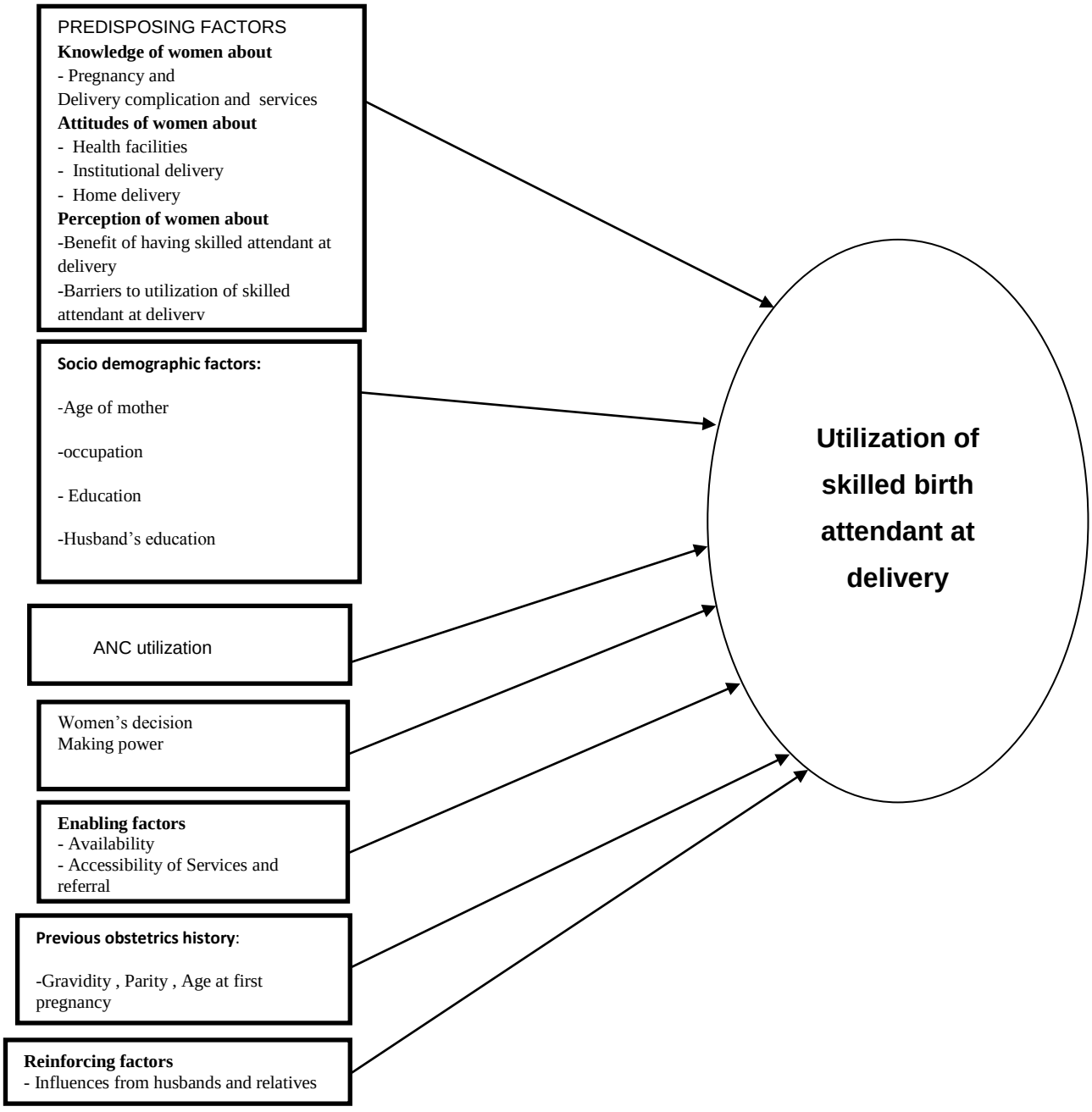

Figure 7. Conceptual frame work of the study

The concepts of these three behavioral models (the PRECE DE model, the Health Belief Model and the theory of planned behavior) areapplied to develop this conceptual frame work to present the factors in acomprehensive manner.

PRECEDE Model is a framework designed to diagnose important factors thatdetermine health behavior, which directs for a highly focused subset of the factors as targets for intervention (48) specific for this study, educational diagnosis phase of this model is adapted to identify predisposing, enabling & reinforcing factors whichdetermine utilization of skilled birth attendant at delivery.

Health Belief Model (HBM) is a paradigm used to product and explains healthbehaviors based on people's beliefs or perceptions (49). For this study women'sperceptions about their susceptibility to and severity of delivery complications theireruptions about benefits of getting SDA as well as potential barriers perceived by thewomen which may prevent them from getting institutional delivery services were identified to assess their effect in determining women's practices related to delivery service utilization.

The theory of planned Behavior is a theory which assumes that people'sperceived controls over the behavior are immediate predictions of their practices.The theory further assumes that people'sinfluenced by their attitudes towards the behavior (49). To serve the purpose of this study in the view of the assumptions from thetheory, women's attitudes towards ID services, the preferences oftheir husbands , relatives and communities towards place of delivery and delivery attendants and assessed to determine the effect of these factorsin influencing woman's institutional delivery service utilization.

II. Information Sheet

Addis Ababa University

College of Health Sciences

School of Nursing and Midwifery

Here, I the undersigned, at Addis Ababa University College of Health Sciences department of Nursing and Midwifery Graduate studies Program, currently I will be undertaking research on a topic entitled assessment of skilled birth attendant utilization among women of child bearing age (15- 49) in Yirgacheffe town , Gedeo Zone , SNNPR, Ethiopia.

For this study, you will be selected as a participant and before getting your consent or permission of your participation, you need to know all necessary information related to the study. Thus, this information will be detailed as;

Objective: To assess utilization of skilled birth attendant at delivery among mothers who gave birth during the last two year prior to the survey in Yirgacheffe town, Gedeo Zone, SNNPR, Ethiopia.

Significance of the study: This study is to measure proportion of women who delivered with the assistance of a skilled birth attendant and to identify the factors that influence utilization of skilled attendant at delivery among mothers who gave birth in yirgachefe Town, SNNP Regional state of Ethiopia. It is hoped that the result of this study will give information on the proportion of deliveries conducted by skilled delivery attendant and factors which influence the utilization of SDA and can help program planners, policy makers and health care providers to focus on the factors, that affect utilization of skilled birth attendant and serve as an important tool for any possible intervention aimed at improving the low utilization of SDA in the town and zone.

- **Participants to be included**: Those mothers aged 15-49 and have given birth within the last two year prior to the survey in Yirgacheffe town.
- **Confidentiality:** All information you give will be kept confidential and won't be accessible to any third party. Your name won't be registered on the question sheet so that you will not be identified.

- **Risks and Benefits of the study**

  Risks: The study will be carried out simply by asking you, the already prepared and structured questions. The procedure doesn't bear any physical or psychological trauma. Furthermore, you will not be forced to respond to the information you do not know.

  Benefits: For your participation in the study no payment will be granted or has no any special privilege to you. But, participating in the study and giving your information to questions asked will have great input in efforts to improve utilization of skilled birth attendant .

- **Consent:** Your participation in the study will be totally based on your willingness. You have the right not to participate from the beginning, or stop any time after starting participation. You will not be forced to respond to the information you do not know.
- **Name of principal investigator**: Dagnachew Kebede

  Date:_____ Signature_____

- **Address of PI:**

  Mobile: +251913345778

  E- Mail: dagnachewkebede36@yahoo.com or dagnachewk12345@gmail.com

III. English version questionnaire

A structured questionnaire for interview of women to assesskill birth attendant utilization among womenof child bearing age (15-49).

Verbal Consent Form

Hello, my name is _____ and I am from the research team of school of nursing and midwifery, AAU which is currently carrying out Survey Assessment of skilled birth attendant utilization among women of child bearing age(15-49) in Yirgacheffe town. As part of this survey we are collecting your information on socio-demographic, obstetric, perception and knowledgeabout pregnancy and delivery risk, women's decision making power and health service utilization. Skilled birth attendant at child birth improves maternal and newborn health. However, many mothers are not getting this important service. That is why we are collecting this information to identify factors influencing utilization of this important service. This information enables the government and other stakeholders to develop programs to improve maternal healthservices. The interview will take about 30minutes .Be assured that your name will not be recorded and any other identifying information will be kept confidential and burnt at the end of the survey.

Your participation is voluntary and you have the right not to participate fully or partially.Your decision about not to participate is respected and will not affect the health care youwould normally receive. You may stop the interview at any time. Do you have anyquestions on what we talked so far?

Now, do you agree to participate in the survey?

Yes_____ No _____If no respect the decision and thank her .If yescontinue the interview.

Interviewer name _____signature _____ Date_____

Supervisor name _____ Signature _____ Date_____

1 .Households Identification

01 Questionnaire code ----------

02 Woreda/ Town Administration----------

03 Kebele----------

04 House number----------

Part I.Scio-demographic factors information

No	Questions	Alternative/ choice of responses	skip
101	Age in years at interview time		
102	Marital Status	Married ----- 1 single ----- 2 Divorced------3 Widowed--- 4 Separated------ 5	
103	Religion	Orthodox -------1 Catholic------ 2 Protestant-----3 Moslem----4 Other, Specify _____88	
104	Ethnicity	Gedeo -----1 Amhara ------2Tigre----3 gurage-----4 Oromo--5 sidama-----6 Others,Specify------7	
105	Occupation	Housewife------1 Private Employee-------2 Gov. Employee-----3 Private business------4 Others, Specify--------5	
106	Educational Status	Illiterate-----1 Read and write-----2 primary Education (1- 8)---3 Secondary education& above (9-12+)------4	
107	Monthly Income in Birr		
108	Husband's Education Status	Illiterate-----1 Read and write-----2 primary Education (1- 8)---3 Secondary education&above (9-12+)-----4	

Part II.previous Obstetric history and Pregnancy related information

No	Questions	Alternative /choice of responses	Skip
201	Age at first marriage		
202	Age at first Pregnancy		
203	Gravidity(Total No. of pregnancy)		
204	Parity(Total No. of births)		
205	Did you attend ANC follow up for the last pregnancy?	Yes--------1 No--------2	
206	During ANC follow up did you get any information regarding pregnancy and delivery complications?	Yes------1 No------ 2 I do not know ------3	

207	Were you informed about where to deliver?	Yes --------1 No -------2	
208	If yes for question no, 207 where did they recommend you to deliver?	Health facility ---------1 Home------2	
209	If yes for question no, 207 were you informed as to who should attend you during delivery?	Yes ----------1 No----------2	

Part III. Proportion of mothers attended by skilled birth attendant in previous two year delivery information

No	Questions	Alternative/ choice of responses	
301	Did the birth in the last 24 months resulted in a baby that was born alive or dead?	Live birth----------1 Still birth ----------2	
302	Where did you deliver (this specific birth?)	1. Home 2. Health Facility 3. Other, Specify	
303	If your answer to question No.302 is Home, what was your reason did you choose to deliver at home? (More than one answer is possible)	1. I feel more comfortable just being at home 2. Close attention from relatives & family members 3. It is my usual practice 4. I don't like the service in the health facility 5. Previous bad experience from institutional delivery 6. Unwelcoming approach of Health workers 7. Others,specify	
304	If your answer to question No.302 is Home, Who assisted you during delivery?	1. No attendant 2. Health professionals 3. Trained TBA 4. Untrained traditional birth attendant 5. Family Members & Relatives 6. Others, Specify	
305	Have you had any problem while you gave Birth at home?	Yes----------1 No----------2	

Part IV. predisposing factors

A. Attitudes on health facilities, home delivery, and delivery attendant

No	Questions	Alternative/choice of response	skip
401	If your answer for Q.302 health facility, what was your opinion towards delivery services?	Good Bad Indifferent 1 2 3	
402	If your answer for Q.302 at home, what was your opinion to Home delivery?	Good Bad Indifferent 1 2 3	

B. Perceptions(Perceived severity, Susceptibility, Benefits)

No	Questions	Alternative/choice of response
403	Like any pregnant women, I am susceptible to face pregnancy complication.	Yes--------1 No--------2
404	I am susceptible to face labor and delivery complication.	Yes--------1 No--------2
405	Delivery complication can be severe and may be hazardous to my wellbeing.	Yes --------1 No ---------2
406	Delivery complication can be severe and may Be hazardous to the newborn.	Yes --------1 No ----------2
407	Being attended by a skilled delivery attendant May be advantageous to my and newborn wellbeing.	Yes -------1 No --------2

C. Knowledge on pregnancy and delivery complications and services

No	Questions	Alternative/choice of response	Skip
408	Are there some health problems that can Occur during pregnancy that could endanger the life of a pregnant woman?	Yes-------1 No------2 Don't know--------3	
409	If yes for Q.408 Can you mention obstetric problems that Can occur during pregnancy? (Probe: ask for the problems	1. Vaginal bleeding 2. Severe headache 3. Blurred vision 4. Convulsion	

	which are not mentioned spontaneously) (More than one answer is possible)	5. High fever 6. Marked and fast weight gain 7. Loss of consciousness 8. Severe abdominal pain 9. Others, specify	
410	Are there some obstetric problems that can occur during labor and child birth that could endanger the life of a pregnant Woman?	Yes ----------1 No----------2 Don't know--------3	
411	If yes for Q.410Can you mention obstetric problems that Can occur during labor and child birth? (Probe: ask for the problems which are not mentioned spontaneously) (More than one answer is possible)	1.Sever vaginal bleeding 2.Severe headache 3.Convulsion 4.High fever 5.Loss of consciousness 6.Labor lasting >12 hours 7.Placenta not delivered after30 minutes baby is delivered 8.Others, specify	
412	What do you think the advantages of Pregnancy and delivery related services? (More than one answer is possible)	1. For anticipating problems 2. For early detection of health Problems 3. For appropriate management of health problems 4. For better health care to the women 5. For better care to the newborn 6. Others, Specify	

Part V. **Enabling factors (Availability and Accessibility of servicesand referral system)**

No	Questions	Alternative/choice of response	Skip
501	Is there a Health facility with skilled Delivery attendant in your nearby?	Yes-------1 No------ 2 Do not know---- 3	
502	Can you afford to pay for services from Skilled delivery attendant?	Yes-------1 No------ 2 Do not know---- 3	
503	Have you heard that Health Centers refer mothers to higherHealth Facility?	Yes-------1 No------ 2 Do not know---- 3	
504	How long did it take to travel from your home to the nearestHealth facility which gave delivery service?	Time---------- Distance----------	

505	Do you usually get health related information on maternal and child health?	Yes-------1 No------ 2	
506	If yes to Q.No.505,What is the source of the information	Radio------1 TV------2 Newspaper----3 Health workers--------4 Others----------5	

Part VI. Reinforcing factors (Influences and Social supports)

No	Questions	Alternative/choice of response	Skip
601	What was the preference of your husband to your place of delivery?	1. Home delivery 2. Institutional delivery 3. Other, Specify	
602	What was the Preference of your Husband about your delivery attendant?	1. Skilled Delivery Attendant 2. TTBA 3. TBA 4. Family member &Relatives 5. Others, Specify	
603	What was the preference of other family members about your place of delivery	1. Home delivery 2. Institutional delivery 3. Other, Specify	
604	What was the preference of other Family members about your delivery attendant?	1. Skilled Delivery Attendant 2. TTBA 3. TBA 4. Family members & Relatives 5. Other, Specify	
605	What was the preference of other community members as your place of Delivery?	1. Home delivery 2. Institutional delivery 3. Other, Specify	

Part VII. Women's decision making power

No	Questions	Alternative/choice of response	Skip
701	If you were give birth at Health Facilities, who made the final decision to deliver at Health Facility?	1. Just me 2. My husband/ partner 3. My family & relatives 4. Health Professionals 5. Other people, Specify	
702	If you were give birth at Home, Who made the final decision to seek help when you have problem?	1. Just me 2. husband/ partner 3. My family & relatives 4. Health Professionals 5. TBA 6. Other people, Specify	

Date of Data collection_____

Name of Data collection_____

Code of Data collector_____

Signature of Data collector_____

Name and signature of supervisor_____

IV. Translated Amharic version of information sheet

በአዲስ አበባ ዩንቨርስቲ

ጤና ሳይንስ ኮሌጅ

ነርስ ት/ክፍል

የጥናቱ መረጃ ቅጽ ; ከዝህ በታች እንደተገለፀዉ በአዲስ አበባ ዩኒቨርስቲ የጤና ሳይንስ ኮሌጅ ነርስ ት/ክፍል የድህር ምረቃ መረሃ ግብረ በአሁኑ ወቅት" እናቶች የሰለጠነ የጤና ባለሙያ እንዳይጠቀሙ የሚያግዱትን ጉዳዮች ለይቶ የመፍትሄ መንገዶችን መጠቆም ነዉ።' በሚል ርዕስ በይርጋጨፌ ከተማ ጊድዮ ዞን በሚገኙ ህብረተሰብ ላይ ጥናት እያከሄድኩ ነዉ።

የዚህ ጥናት ተሳታፍ ለመሆን እርሶዎ ተመርጠዋል። በጥናቱ ላይ ለመሳተፍ ፍቃደኝነትዎ ከመጠየቅ በፊት ጥናቱን በተመለከተ አስፈላጊ የሆኑ መረጃዎችን ማግኘት ያስፈልጎታል። ስለዝህ በጥናቱ ላይ ለመሳተፍም ሆነ ላለመሳተፍ መጀመረያ ማወቅ የሚገባዎትን መረጃ እንደሚከተለዉ እናቀርብሎታለን።

1.የጥናቱ አላማ ፡ የምርምሩ አላማ እናቶች የሰለጠነ የጤና ባለሙያ እንዳይጠቀሙ የሚያግዱትን ጉዳዮች ለይቶ የመፍትሄ መንገዶችን መጠቆም ነዉ ።

2.በጥናቱ የሚካተቱ ተሳታፈዎች ፡መረጃዉ በሚሰበሰብበት ወቅት ማናቸዉም ባለፈዉ አንድ አመት ዉስጥ የወለዱ እናቶች በጥናቱ ይካተታሉ።

3.የጥናቱ ጥቅምና ጉዳት

3.1 ጉዳት ፡ ጥናቱ የሚካሄዳዉ ቀደም ብሎ ለዝሁ ጥናት ታስቦ የተዘጋጀዉን ጥያቄ በመጠየቅ ነዉ። ሆኖም በጥናቱ ተሳታፈዎች አካል ላይም ሆነ አእምሮ ለይ ፈጽሞ ጉዳት አይኖርም። ያልገባዎትን መረጃ ለመመለስ አይገደዱም።

3.2 ጥቅም፡ በጥናቱ በመሳተፎ የሚከፈልዎት ክፍያ ወይም የተለየ ጥቅም አይኖርም።በሌላ በኩል በጥናቱ በመሳተፎና ለጥያቄ ተገቢዉን መረጃ መስጠትዎ እናቶች በወሊድ ጊዜ በሰለጠነ የጤና ባለሙያ አገልግሎት አጠቃቀምን የሚያግዱ ነገሮችን ለይቶ ለማወቅ ከፍተኛ እገዛ ያደርጋል።

4.የጥናቱ ምስጥራዊነት፡ እርሶዎ የሚሰጡት መረጃ በሚስጥር ይጠበቃል እንድሁም ለሶስተኛ ወገን ተላልፎ አይሰጥም። ከማንኛዉም መረጃ ጋር ሰምዎ አይመዘገብም።

5.ፍቃደኝነትዎን በተመለከተ፡ በጥናቱ ላይ መሳተፈዎ ሙሉ በሙሉ የሚመሰረተዉ በራሶዎ ፍላጎትና ፈቃደኝነት ለይ ነዉ። ከመጀመረያዉ በጥናቱ ላይ ለመሳተፍም ሆነ ላለመሳተፍ ይችላሉ።ካልተስማማዎት በመሀል የማቋረጥ መብትዎ ሙሉ በሙሉ የተጠበቀ ነዉ። ያልገባዎትን መረጃ ለመመለስ አይገደድም።

6.ጥያቄዉ የሚወስደዉ ጊዜ ቢበዛ ሰላሳ ደቂቃ ብቻ ነዉ ። በመጨረሻም ለሰጡኝ መረጃዎች ከልብ ላመሰግንዎት እወዳለዉ። አመሰግናለዉ።

የጥናቱ ዋና ተጠሪ ስም ና አድራሻ

ሰም ፡ ዳኛቸዉ ከበደ ቀን_____ ፈርማ_____

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V. Amharic version questioners

መግለጫ እናቶች በወሊድ ጊዜ በሰለጠነ የጤና ባለሞያ አገልግሎት አጠቃቀምን የሚያግዱ ጉዳዮችን ለማጥናት የተዘጋጀ መጠይቅ

የሚስጥር አጠባበቅስምምነት

ጤና ይስጥልኝ

እኔ----------እባላለሁ። በአዲስ አበባ ዩኒቨርሲቲ ነርሲንግ እና ሚድዋይፍ ት/ቤት የጥናትቡድን አባልነኝ።ጥናቱበሳይንሳዊዘዴበተመረጡቤቶችላይ የሚሰራነዉ። የጥናቱዓላማ እናቶች የሰለጠነ የጤና ባለሙያ እንዳይጠቀሙ የሚያግዱትን ጉዳዮች ለይቶ የመፍትሄ መንገዶችን መጠቆም ነዉ።ለዚሁ ዓላማ የርስዎን ማህበራዊና ስነህዝባዊ፣በእርግዝናና ወሊድ ጊዜ ችግሮች ላይ ያሎዎትን ግንዛቤና አመለካከት መረጃዎችን እንሰበስባለን።በመሆኑም የሚሰጡን መረጃ መንግስትና ሌሎች ጉዳዩ የሚመለከታቸዉ አካላት የእናቶችን ወሊድ አገልግሎት አጠቃቀም ለማሻሻል የመፍትሄ መንገዶችን እንዲቀይሱ ይረዳቸዋል።ያለባለሙያ እገዛ የሚወልዱ እናቶችና የሚወልዳቸዉ ህጻናት በከፍተኛ ሁኔታ እስከሞት ለሚያደርሱ ጉዳቶች ይጋለጣሉ።በጥናቱ ላይ የሚሳተፉት በፍላጎትዎ ሲሆን በሙሉም ሆነ በከፊል ያለመሳተፍ መብትዎ የተጠበቀ ነዉ። ጥናቱ ላይ ያለመሳተፍ ዉሳኔዎ የተከበረ ከመሆኑም በላይ የጤና አገልግሎት አጠቃምዎት ላይ ምንም ዓይነት ችግር አይከሰትም።በምንሰበስባቸዉ መረጃዎች ላይ ስምዎት ስለማይመዘገብና ሌሎችም መለያመረጃዎች በሚስጥር ተጠበቀዉ ከጥናቱ በሗላ ስለሚቃጠሉ ሚስጥርዎት እንደማይባክን እርግጠኛ ይሁኑ።

ቃለ መጠይቁ 30 ደቂቃ'ች ያህል የሚወስድ ሲሆን በማንኛዉም ጊዜ ማቆም ይችላሉ። እስካሁን በተነጋገርንባቸዉ ጉዳዮች ላይ ያልገባዎትና ግልፅ ያለሆነ ነገር ካለ መጠየቅ ይችላሉ።አሁን በጥናቱ ላይ ለመሳተፍ ተስማምተዋል?

አዎን---------- አይደለም---------- ፈቃደኛ ካለሆኑ ዉሳነያቸዉን አክብረሽ/ህ በማመስገን ወደ ቀጣዩ ቤት ሂጂ/ድ።

የተስማሙ ከሆነ ቃለመ ጠይቁን ቀጥይ

ቃለ መጠይቁን ያደረገችዉ/ገው ስም---------- ፊርማ-------- ቀን----------

የተቆጣጣሪዉ ስም----------ፊርማ---------ቀን----------

<u>የመለያ መረጃዎ ቅጽ</u>

001. **የመለያ (ኮድ) ቁጥር**
002. **የመኖሪያ አድራሻ**

ከፍተኛ.....ቀበሌ.....የቤት ቁጥር _____

ክፍል 1 ማህበራዊና ሰነ-ህዝባዊ መረጃዎች

101. የተጠያቂዋ ሴት እድሜ /በአመት/ _____

102.የጋብቻ ሁኔታ

1.ያገባች

2.ያላገባች

3.የተፋታች

4.ባለቤቷ የሞተባት

103. ሐይማኖት

1.ኦርቶዶክስ

2.ካቶሊክ

3.ፕሮቴስታንት

4.ሙስሊም

5.ሌላ ካለ ይገለፅ

104.ብሔር

1.ጌድኦ

2.አማራ

3.ትግሬ

4.ጉራጌ

5.ኦሮሞ

6.ሲዳማ

7.ሌሎች

105.የስራ ሁኔታ

1.የቤት እመቤት

2.የግልተቀጣሪ

3.የመንግስት ተቀጣሪ

4. የግል ስራ

5.ሌላካለይጥ

106.የትምህርት ሁኔታ

1.ምንም ያልተማረች

2.ማንበብና መፃፍ የምትችል

3.1ኛ ደረጃ ትምህርት የተማረች

4.2ኛ ደረጃ ትምህርት ወይም ከዚያ በላይ

107. የቤተሰብ ወርሀዊ ገቢ/በብር/ _____

108.የባለቤትዎ የትምህርት ሁኔታ

1.ምንም ያልተማሩ

2.ማንበብና መፃፍ የሚችል

3.የመጀመሪያ ደረጃ ትምህርት የተማሩ

4.ሁለተኛ ደረጃ ትምህርት ወይንም ከዚያ በላይ

ክፍልሁለት እርግዝናና ፅንስ መረጃዎች

201. ለመጀመሪያ ጊዜ ትዳር ሲመሰርቱ ዕድሜዎ ስንት ነበር? /በአመት/_____

202. ለመጀመሪያ ጊዜ ዕርጉዝ ሲሆኑ ዕድሜዎ ስንት ነበር? /በአመት/_____

203. እስከ አሁን ድረስ ምን ያህል ጊዜ አርግዘዋል? /በቁጥር/_____

204. እስካሁን ድረስ ምን ያህል ልጆች ወልደዋል?

205. በመጨረሻዎ የእርግዝና ወቅት የቅድመ ወሊድ አድርገው ነበር?

1.አዎ

2.አይደለም

206. በቅድመ ወሊድ ክትትልዎ ጊዜ በዕርግዝናና በወሊድ ወቅት ሊያጋጥሙ የሚችሉትን የጤና ችግሮችን በተመለከተ

ተሰጥቶዎት ነበርወይ?

1. አዎ

2. የለም

3. አላስታውስ

207. በቅድመ ወሊድ ክትትሎ ጊዜ የት መውለድ እንደአለቦዎት መረጃ ተሰጥቶት ነበርወይ?

1. አዎ

2. አልተሰጠኝም

208. ለጥያቄ ቁጥር 207 መልሶ አዎ ከሆነ የት መውለድ እንዳለቦዎት መረጃ ከተሰጦዎት የት እንዲወልዱ ነው

የተነገሮዎት? 1. የጤና ተቋም ውስጥ

2. ቤት ውስጥ

209. ለጥያቄ ቁጥር 207 መልሶ አዎ ከሆነ በወሊዶ ጊዜ ማን ማዋለድ እንዳለቦት መረጃ ተሰጥቶዎት ነበርወይ?

1. አዋ
2. የለም

ክፍል ሶስት:-ባለፈው 2 አመት ጊዜ ከወሊድ ጋር የተያያዙ ጥያቄዎችን የተመለከተ

301. ባለፈው አመት ሲወልዱ የህኑ ሁነታ እንድት ነበር?

1. በሂወት ነበር
2. በሂወት አልነበረም

302. ባለፈው አመት ሲወልዱ የት ነበር የወለዱት?

1. ቤት ውስጥ
2. ጤና ማእከል ውስጥ
3. ሌላ ቦታ ካለ ይጥቀሱ

303. ለጥያቄ ቁጥር 302 መልሶዎ ቤት ከሆነ ቤት መውለዱዎን ለምንድን ነበር የመረጡት?

(ከአንድ በላይ መልስ መስጠት ይቻላል)

1. ቤት ውስጥ መሆኔ ራሱ የበለጠ ይመቸኛል
2. ከቤተሰቤና ዘመዶቼ እንክብካቤ ስለማገኝ
3. ከዚህ በፊትም የምወልደው ቤት ስለሆነ
4. ጤና ማዕከላት ውስጥ ያለውን አገልግሎት ስለማልወደው
5. ከዚህ በፊት ጤና ማእከል ውስጥ ወልጄ መጥፎ ነገር አጋጥሞኝ ስለነበር
6. የጤና ባለሙያዎቹ አቀራረብ መጥፎ በመሆኑ
7. ልላ ምክንያት ይጥቀሱ

304. ለጥያቄ ቁጥር 302 መልሶዎ ቤት ከሆነ ማን ነበር ያዋለዶዎት?

1.አዋላጅ አልነበረም /ሰው አጠገቤ አልነበረም
2. የሰለጠነ የጤና ባለሙያ
3. የሰለጠነ የልምድ አዋላጅ
4. ያልሰለጠነ የልምድ አዋላጅ

5. ቤተሰብ ወይም ዘመድ
6. ልላ ካለ ይገለፅ

305. ለጥያቄ ቁጥር 302 መልሶዎ ቤት ከሆነ ቤት በወለዱዎ ጊዜ ያጋጠሞዎት የወሊድ ችግር ነበር?

1. አዎ
2. የለም

ክፍል አራት ጤና ተቋም ውስጥ እንዳይወልዱ ሊያጋልጡ የምችሉ ምክንያቶች

ሀ/ ከአመለካከት ጋር የተያያዙ ጥያቄዎች

401. ለጥያቄ ቁጥር 302 መልስዎ የጤና ተቋም ውስጥ ነው ከሆነ ይህንን ጥያቄ ይጠየቁ

በጤና መዕከላት ውስጥ ስለሚሰጡ የወሊድ አገልግሎቶች በተመለከተ ያለዎት አመለካከት

1. ጥሩ ነው
2. መጥ ፎለው
3. ምንም አስተያየት የለኝም

402.ለጥያቄ ቁጥር 302 መልስዎ ቤት ውስጥ ነው ከሆነ ይህንን ጥያቄ ይጠየቁ

ቤት ውስጥ መውለድን እንዴት ይመለከቱታል?

1. ጥሩ ነው
2. መጥፎ ነው
3. ምንም አስተያየት የለኝም

ለ)እርጉዝ እናቶች ከወሊድ ጋር ስለ ተያያዙ ችግሮች አስከፊነት እና የስልጠና ባለሙያ እርዳታ ማግኘት በወሊድ ውጤትላይ የሚያስከትለውን ለውጥ በተመለከተ የሚጠየቁ ጥያቄዎች

403. እንደማንኛውም እርጉዝ ሴት በእርጉዝና ምክንያት ለሚመጡ የጤና ችግሮች የተጋለጥኩኝ ነኝ.

1. አዎ
2. አይደለም

404. እንደማንኛውም እርጉዝ ሴት በምጥ እናበወሊድ ምክንያት ለሚመጡ የጤና ችግሮች የተጋለጥኩኝ ነኝ.

1. አዎ
2. አይደለም

405.በወሊድ ምክንያት የሚመጡ የጤና ችግሮች አስቸጋሪ በመሆናቸው በጤናዬ ላይ አስከፊ ውጤትንሊያስከትል ይችላል፡፡

1.አዎ

2.አይደለም

406.በወሊድ ምክንያት የሚመጡ የጤና ችግሮች አስቸጋሪ በመሆናቸው በምወልደው ልጅ ጤና ላይ አስከፊ ውጤትን ሊያስከትል ይችላሉ፡፡

1. አዎ
2. አይደለም

407.በወሊድ ወቅት የሰለጠነ የጤና ባለሙያን እርዳታ ካገኘሁ ከወሊድ በኃላበእኔ ናበልጄ ላይ የተሻለ የጤና ሁንታ ሊኖረን ይችላል፡፡

1. አዎ
2. አይደለም

ሐ) እውቀትን በተመለከተ የሚጠየቁ ጥያቄዎች

408. እርግዝናን ተከትለው አደጋ ላይ ሊጥሉ የሚችሉ የጤና ችግሮች እንዳሉ ያስባሉ?

1. አዎ
2. አይደለም
3. አላውቅም

409. ለጥያቄ ቁጥር 408 *መልስዎ* አዎ ከሆነ ይህንን ጥያቄ ይጠይቁ

እርግዝናን ተከትለው አደጋ ላይ ሊጥሉ ከሚችሉ የጤና ችግሮች ውስጥ እርስዎ በዕርግዝና ወቅት

ሊያጋጥሙ የሚችሉ የጤና ችግር ምንድን ናቸው?

1. በማህፀን ደም መፍሰስ
2. ከባድ ራስ ምታት
3. የአይን ብዝታ
4. ማንቀጥቀጥ
5. ከፍተኛ የሆነ ትኩሳት
6. ከፍተኛ የሆነ ክብደት መጨመር
7. ራስን መሳት
8. ከፍተኛ የሆነ የሆድ ህመም
9. ሌሎች ምልክቶች ከሆኑ ይጥቀሱ

410. ምጥን እና ወሊድን ተከትለው አደጋ ላይ ሊጥሉ የሚችሉ የጤና ችግሮች እነዳሉ ያውቃሉ?

1. አዎ
2. አይደለም
3. አላውቅም

411. ለጥያቄ ቁጥር 410 መልሰዎ አዎ ከሆነ በምጥን ና በወሊድን ጊዜ ሊያጋጥሙ የሚችሉ ችግሮችን ይጥቀሱ?

1. ከፍተኛ የሆነ ማህፀን ደም መፍሰስ
2. ከባድ ራስ ምታት
3. የአይን ብዝታ
4. ከፍተኛ የሆነ ትኩሳት
5. ራስን መሳት
6. ከ12 ሰዓት በላይ የቆየ ምጥ
7. ህፃኑ ከተወለደ ከ 30 ደቂቃ በላይ እንግዴ ልጁ ሲቆይ
8. ሌሎች ምልክቶች ከሆኑ ይጥቀሱ

412. የእርግዝና እና ወሊዲ አገልግሎት ክትትል በመኖሩጥቅሙ ምን ሊሆን ይችላል?

1. ችግሮችን ለማባባስ
2. ቀድሞ ሊመጡ የሚችሉየ ጤና ችግሮችን ለማወቅ
3. ለሚመጡ የጤና ችግሮች አስፈላጊውን ክትትል ለማድረግ
4. ለእናትዬዋ የተሻለ ጤና እንክብካቤ ለማድረግ
5. ለልጁ የተሻለ ጤና እንክብካቤ ለማድረግ
6. ሌሎች ጥቅሞች ካሉ ይጥቀሱ

<u>ክፍል አምስት</u> እርጉዝ እናቶች በወሊድ ወቅት የጤናአገልግሎትማግኘትና የአገልግሎቱን አቅርቦት በተመለከተ ያላቸው አመለካከት የጤናአገልግሎቱ መኖርንና አቅርቦትን በተመለከተ

501. የሰለጠነ የጤና ባለሙያ የሚገኝበት የጤና ማዕከል በአቅራቢያዎ/በአካባቢዎ ያለ ይመስልዎታል?

1. አዎ
2. የለም
3. እኔ አላውቅም

502. በወሊድ ወቅት የሰለጠነ የጤና ባለሙያ እርዳታ ለማግኘት የመክፈል አቅም ያለዎት ይመስልዎታል?

1. አዎ
2. የለም
3. እኔ አላውቅም

503. ወላድ እናቶችን ከወሊድ ጋር በተያያዘ ችግር ከጤና ጣቢያ ወደ ሆስፒታል/ከፍተኛ ተቋም ሲላኩ

ሰምተው ያውቃሉ?

1. አዎ
2. የለም
3. እኔአላውቅም

504. በሚወልዱበት ጊዜ የሰለጠነ የጤና ባለሞያ ወደሚገኝበት ወደ አካባቢዎ/በሚቀርብዎ የጤና ማዕከል ለመድረስ ምን ያህል ጊዜ ይፈጅብዎታል?

505. የእናቶችና የህፃናት ጤና ነክመረጃዎችን/ጤና እንክብካቤን/ በተመለከተ አቅርቦት ያለ/ያገኙ ይመስልዎታል)

1.አዎ

2.የለም

506. ለጥያቄ ቁጥር 505 መልስዎ አዎ ከሆነ ይህንን ጥያቄ ይጠይቁ

ምንድን ነበር የመረጃዎ ምንጭ?

1. ሬዲዮ
2. ቲቪ
3. መፅሔት
4. የጤናባለሙያዎች
5. ልላ ካለ ይግለፁ

<u>ክፍልስድስት</u> የእርጉዝ ሴቶች ባለቤቶች የቤተሰብ አባላት እንዲሁም ሌሎች የህዝብ አካላት ቤት ውስጥና በጤና ማዕከል ውስጥ ለሚሰጡ የወሊድ አገልግሎት በተመለከተ የሚጠየቁ ጥያቄዎች

601. ባለቤትዎ እርስዎ በወለዱ ጊዜ የት እንደወለዱ መርጠውልዎት ነበር?

1.ቤትውስጥ

2. በጤና ማዕከል ውስጥ

3. ሌላ ቦታ ከሆነ ይግለፁ

602. ባለቤትዎ እርስዎ በወለዱ ወቅት ማን እንዲያዋልድዎት መርጠውልዎት ነበር?

1. የሰለጠነ የጤና ባለሙያ
2. የሰለጠነ የልምድ አዋላጅ

3. ያልሰለጠነ የልምድ አዋላጅ
4. ዘመድ ወይም ሌላ የቤተሰብ አባል
5. ሌላ ከሆነ ይግለፁ

603. ሌሎች የቤተሰብ አባላት እርሶ በወለዱ ወቅት የት እንድወልዱ መርጠውልዎት ነበር?
1. ቤት ውስጥ
2. በጤና ማዕከል ውስጥ
3. ሌላ ቦታ ከሆነ ይግለፁ

604. ሌሎች የቤተሰብ አባላት እርሶ በወለዱ ጊዜ ማን እንዲያዋልድዎት መርጠውልዎት ነበር?
1. የሰለጠነ የጤና ባለሙያ
2. የሰለጠነ የልምድ አዋላጅ
3. ያልሰለጠነ የልምድ አዋላጅ
4. ዘመድ ወይም ሌላ የቤተሰብ አባል
5. ሌላ ከሆነ ይግለፁ

605. ሌሎች የህዝብ አካላት እርሶ በወለዱ ጊዜ የት እንዲወልዱ መርጠውልዎት ነበር?
1. ቤት ውስጥ
2. በጤና ማዕከል ውስጥ
3. ሌላ ቦታ ከሆነ ይግለፁ

606. ሌሎች የህዝብ አካላት ማን እንዲያዋልድዎት መርጠውልዎት ነበረ?
1. የሰለጠነ የጤና ባለሙያ
2. የሰለጠነ የልምድ አዋላጅ
3. ያልሰለጠነ የልምድ አዋላጅ
4. ዘመድ ወይም ሌላ የቤተሰብ አባል
5. ሌላ ከሆነ ይግለፁ

<u>ክፍል ሰባት</u> ከወሊድ ጋር የተያያዘ የእናቶች ዉሳኔን የተመለከተ

701. ለጥያቄ ቁጥር302 መልሶዎ ጤና ተቋም ውስጥ ከሆነ ጤና ተቋም እንዲወልዱ ማን ነበር የመጨረሻውን

ውሳኔ የወሰነልዎት?

1. እኔ እራሴ
2. ባለበቴ ወይም ጓደኛ
3. ቤተሰብ እና ዘመድ
4. የጤና ባለሞያ
5. ሌላ ካለ ይጥቀሱ

702. ለጥያ ቁቁጥር 302 መልሶዎ ቤት ውስጥ ከሆነ የመጨረሻ ውሣኔ የወሰነልዎት ማን ነበር?

1. እኔ እራሴ
2. ባለበቴ ወይም ጓደኛ
3. ቤተሰብ እና ዘመድ
4. የጤና ባለሞያ
5. የሰለጠነ የልምድ አዋላጅ
6. ሌላ ካለ ይጥቀሱ

Assurance of Principal Investigator

The undersigned agrees to accept responsibility for the specific ethical and technical conduct of the research project and for provision of required progress reports as per terms and conditions of the Research Publications Office in effect at the time of grant is forwarded as the result of this application.

Name of the Student:- Dagnachew kebede

Date;

Signature……

Approval of the Primary Advisor

Name of the Primary Advisor:-Bazie Mekonnen

Date;

Signature…….