



**ADDIS ABABA UNIVERSITY  
COLLEGE OF HEALTH SCIENCE  
SCHOOL OF PUBLIC HEALTH**

**MALE PARTNERS INVOLVEMENT IN SPOUSAL SKILLED BIRTH ATTENDANCE  
UTILIZATION AND FACTORS AFFECTING IT IN BERBERE DISTRICT, BALE  
ZONE, OROMIYA, SOUTH EAST ETHIOPIA**

**BY  
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**A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS  
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ADDIS ABABA, ETHIOPIA**

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## List of Acronyms

AAU	Addis Ababa University
EDHS	Ethiopia Demography and Health Survey
EmOC	Emergency Obstetric Care
FGDs	Focal Group Discussions
FMOH	Federal Ministry of Health
CHWs	Community Health Workers
HEW	Health Extension Workers
ICPD	International Conference on Population and Development
MDGs	Millennium Developmental Goals
MMR	Maternal Mortality Ratio
NGO	Non-Governmental Organization
SPH	School of Public Health
PHC	Primary Health Care
PMTCT	Prevention of Mother to Child Transmission
RH	Reproductive Health
SBA	Skilled Birth Attendants
TBA	Traditional Birth Attendants
UN	United Nations
UNFPA	United Nations Population Fund Agency
UNICEF	United Nations Children's Fund
WHO	World Health Organization

## Abstract

**Background:** Each year, more than 500,000 women worldwide die from complications related to childbirth. With good quality obstetric care, approximately 90% of these deaths could be averted. The assistance of a skilled birth attendant during labor, delivery, and the immediate postpartum period is one important component of quality obstetric care. In most locality around the world, whether in developing or developed countries, men are little involved in their partners' health care during pregnancy and delivery. Reproductive health has long been viewed as solely a woman's issue.

**Objectives:** To assess male partner involvement in spousal skilled birth attendance utilization and factors affecting it in Berbere District of Bale, Ethiopia in 2013.

**Methods:** A community based cross-sectional study using quantitative data collection method and supported by qualitative were conducted in rural area of Berbere Woreda, Bale zone, Oromiya, South East Ethiopia. Multistage sampling technique was used to randomly select 605 households/ fathers of under-one children from 4 kebeles. Data was collected from 605 male partners using structured questionnaire. The completed data were processed using EPI-Info software and exported to SPSS for analysis. Logistic regression analyses were conducted to assess factors associated with skilled birth attendance utilizations and male partner's involvement in spousal skilled birth attendance utilizations.

**Results:** Approximately, about one out of ten women delivered assisted by skilled birth attendant in the study area though 72.9% of the mothers attended at least one ANC services during their last pregnancy. Only 24.7% of male partners were involved in spousal skilled birth attendance utilizations. In multivariate logistic regression analysis, male partners that discussed on the place of delivery with his wife and educational status of male partners showed significant association with male partners' involvement in spousal SBA utilization. Male partners who completed at least primary school were more than eight times as likely involved in their wives use of skilled birth attendant than those with non formal education [AOR=8.14, 95% CI= 4.14, 16.00]

**Conclusion:** Both skilled birth attendance utilization and male partner's involvement in spousal skilled birth attendance utilizations in the District were low. Educational status, discuss with their wives about place of delivery and level of male partner's involvement were significantly associated with SBAs utilization. To increase male partners' involvement in spousal SBAs utilizations requires commitments at all levels, in the family, in the community, at the national and at the country level. Therefore, male partners involvement should be encouraged by health educations during the antenatal period at health facilities and at community level though HEW and health developmental army.

# 1. Introduction

## 1.1 Background

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. Around 80% of maternal deaths are the result of complication arising during pregnancy, delivery and postpartum periods. Additionally 300 million women suffer from short and long-term illness related to childbearing. Complications of pregnancy and Child birth were the leading causes of disability and death among women in the reproductive age (15-49) years (1). Although nearly all (99%) births are assisted by skilled birth attendances (SBAs) in developed countries, the proportion is only 35.3% in the least developed countries. More than half of all births in South Asia still occur at home or in other non-health facility settings. Of the total, around 48% of deliveries are conducted by SBAs in this region, while the remaining is conducted by an unskilled person (2).

In most locality around the world, whether in developing or developed countries, men are little involved in their partners' health care during pregnancy (3). In Africa a study conducted in South Africa revealed that husbands were less likely to support their partners at delivery (66%) compared to other activities such as being accompanied to postpartum visits (94%) (4). A study on male partners and their spouses conducted in Kenya showed a significant relationship between level of education and level of income of the male partner and his support for skilled delivery. Skilled birth attendance utilizations were very low in Ethiopia but maternal mortality was very high. In the EDHS 2011, 10 percent births were delivered with assistance of a trained health professional that is a doctor, nurse, or midwife (5).

Despite these, there are little evidences across the country on factors affecting skilled birth attendance utilizations (6, 7) and none of these studies address the level of male partners involvement in spousal skilled birth attendance utilization. Therefore, the purpose of this study was to assess male partners' involvement in spousal skilled birth attendance utilization and factors affecting it in men partners who have 0-12 month's child preceding the survey in, Bale zone, Berbere District, South East Ethiopia.

## 1.2 Statement of the problem

The World Health Organization (WHO) estimates that in 2010 about 287, 000 women died during and following pregnancy and childbirth. Nearly all (99%) of these deaths occur in developing regions. The maternal mortality ratio (MMR), number of maternal deaths per 100,000 live births, is 280 in this region, which is in stark contrast to developed regions where the figure were only 14 deaths per 100,000 live births (1). According to 2011 EDHS, MMR is 676/100,000 live birth and NMR is 37/1000 live birth (8).

The International Safe Motherhood Initiative made maternal mortality an international priority by way of improving effective access to basic maternity care during pregnancy and delivery to all women. However, discrepancies continue to exist in access to maternal health care between the more developed and the developing world, the richer and poor, urban and rural, and the educated and uneducated societies (9).

Study conducted in Kenya revealed that majority of male partners exhibited very low knowledge regarding complications that are associated with pregnancy and delivery, with 24.9% of them responding that they did not know a single complication and those who were able to mention at least one complication were very few (10). Study conducted in North Shoa revealed that (63.8%) did not know about risks during pregnancy, 36.2% who mentioned at least one risk during pregnancy, 48.8%, 38.2% and 12% said pregnancy related disease, maternal death and fetal death respectively. About danger signs of pregnancy, 67.4% and 32.6% of them did not know any danger sign of pregnancy and knew at least one, respectively. Of the mentioned 44.4% said vaginal bleeding followed by 30.3%, severe abdominal cramp and 23.6% swelling of the leg were the commonest mentioned signs (6).

Skilled delivery service utilization in Oromiya Region was low as many other parts in the country, 8 percent of the deliveries in the region were assisted by SBA while 92 % taken place at home (5). In addition there was limited or no study conducted on the assessment of magnitude of male partners involvement in spousal SBA utilization in our county was not carried out. That was why the study to be crucial to identify those factors affecting utilization of skilled delivery service, magnitude and factors affecting male partners' involvement in spousal skilled birth attendance utilizations in the studying area. The information obtained will help the Woreda health office to develop intervention plan to improve the use of health facility delivery care services, policy makers to implement and scale up safe motherhood program in an attempt to reduce the highest maternal mortality ratio and neonatal mortality rate of Ethiopia and ultimately achieve the millennium development goal of reducing the high rates of maternal mortality.

### 1.3 Rationale of the study

Worldwide, each year more than 500,000 women die from complications related to pregnancy and childbirth. With good quality obstetric care, approximately 90% of these deaths could be averted. The assistance of a skilled birth attendant during labor, delivery, and the immediate postpartum period is one important component of quality obstetric care. Worldwide, male attendance of skilled delivery care remains a challenge to safe motherhood (1). In September 2000 the members of the United Nations (UN) adopted the Millennium Declaration and set eight millennium development goals, one of which is reducing maternal mortality (2).

Delivery by SBAs serves as an indicator of progress towards reducing maternal mortality worldwide and was the fifth Millennium Development Goal (MDG). Use of SBAs during labour and delivery period could prevent many instances of maternal morbidity and mortality (2). Most husbands consider pregnancy (and delivery) to be a natural event and generally do not take their pregnant wives to hospital for prenatal care or delivery (10). The Ministry of Health of Ethiopia also has strategy to increase the proportion of births attended by skilled health personnel in health facilities to 60 percent in 2015. Equip one health center per 25,000 populations to provide basic EmOC and newborn care. Equip one rural/district hospital (250,000 population coverage) to provide comprehensive EmOC. Reduce maternal mortality to 350 deaths per 100,000 live births by 2015 (8).

There was limited or no study conducted on male partner involvement in spousal skilled birth attendance utilization in Ethiopia. Even though male roles on skilled birth attendance utilization was not studied in our country, magnitude of male partners involvement in utilization of skilled birth attendance by their spouse and male partners discussion on the place of delivery with health workers and their spouses were its own contribution to low level of skilled birth attendance utilization. In spite of the fact that male partners' involvement in spousal skilled birth attendance utilization is the key factor to improve the maternal health, little is known about the current magnitude of male partners' involvement in spousal skilled birth attendance utilization and factors influencing it in Ethiopia. This study, therefore, aimed assessing the magnitude of male partners' involvement in spousal skilled birth attendance utilization and to explore the factors that are assumed to be barriers to male partners' involvement in spousal skilled birth attendance utilizations in Oromiya Region, Bale Zone, Berbere Woreda, South East Ethiopia.

## 2. Literature Review

### 2.1 Reproductive and Maternal health services

The Cairo (International Conference on Population and Development, ICPD) 1994 and Beijing, 1995 conferences have brought necessity of involving men as partner under sharp focus. “Male involvement” in reproductive health and family planning programmes is not just promoting the use of male methods of contraception, but men’s supportive roles in their families, communities and workplaces to promote gender equity, girls’ education, women’s empowerment and sharing of child rearing and caring. In particular it was argued that further progress in attaining reproductive health goals would depend on men changing their attitude and behavior towards reproductive health and gender issues (9). Furthermore, maternal health was reinforced in the United Nations Millennium Summit of 2000, when it was included as one of the Millennium Development Goals (MDGs). The goal, which has the aim to improve maternal health, includes two targets: reduce maternal mortality ratio by three quarters between 1990 and 2015 and achieve universal access to reproductive health by 2015. Proportion of births attended by skilled birth attendants (SBAs) and coverage of ANC are the two main indicators to measure these targets. The presence of a SBA at delivery, either at home or at a health facility has been strongly emphasized throughout the international initiatives on maternal health (2).

Poverty and limited access to appropriate care pose major challenges to improving maternal health and reducing maternal mortality. Poor women have limited access to appropriate information and health services. A combination of social, economic and cultural barriers also prevents poor women from easy access to care and health services even when quality health services are geographically within reach (1, 9). The role of a man during the pregnancy and delivery of his wife was critical. However, the evidence demonstrates that many barriers remain for husbands’ involvement particularly in developing countries such as socioeconomic and cultural (11, 12).

## 2.2 SBA and factors affects of SBA service utilization

The use of health services was influenced by the characteristics of the health delivery system for example, accessibility, quality, and cost of the services (2). However, even where there was a good supply of services, those services may not be fully used, even under the same circumstances of availability; some women are more likely to use services than others (1). Therefore, a health delivery system was not the only factor that determines the level of use of health care services. Other factors such as social characteristics and structure influence the use of health care services. Several studies emphasize factors like cultural beliefs, socio-demographic characteristics, economic conditions, and physical and financial accessibility to important determinants of the skilled delivery utilizations (6, 11, 13).

In developed countries nearly all (99%) births are assisted by skilled birth attendances (SBAs), the proportion is only 35.3% in the least developed countries. More than half of all births in South Asia still occur at home or in other non-health facility settings. Of the total, around 48% of deliveries are conducted by SBAs in this region, while the remaining is conducted by an unskilled person (2). In sub-Saharan Africa, where nearly half of the world's maternal deaths occur, only 46 per cent of deliveries are assisted by skilled attendants..

Study conducted in Tanzania shows less than half, (46.7%) of respondents reported to have delivered in a health facility in their most recent delivery. Of these, 35% delivered in a hospital level and 65% delivered in dispensaries or in health centers. Skilled attendance at delivery was reported by 433 (44.5%) of the respondents and 16 (3.6%) were home deliveries. Women who did not deliver at a health facility were asked the reasons they did not deliver in a health facility. More than six women in ten (61 percent) stated that a health facility delivery was not necessary, and three in every ten (30 percent) stated that it was not customary. Fourteen percent of women said that the health facility was either too far or that they did not have transportation (14).

According to the study conducted in Busia Kenya in 2011, from the male partners (61.1%) stated that the fees charged at health facilities was high and beyond their reach, 54% indicated that the health workers are harsh and uncooperative(10). Also about 48% of the male partners stated that when they accompany their wives to the antenatal clinics, they are forced to take HIV tests without adequate counseling these leaders to low involvement of male partners in spousal maternal health care utilizations. In spite of lack of support by male partners to the spouses, most mothers (72%) interviewed felt that their male spouses should at least set aside funds to be used in assisting them access skilled delivery services while 54% indicated that they wanted their male partners to be accompanying them to health facilities for antenatal care and delivery services (10).

Ten percent of births in Ethiopia delivered at a health facility, 9 percent in a public facility and 1 percent in a private facility. Nine women in every ten deliver at home. Only eight percent of deliveries were assisted by skilled birth attendant in Oromiya regional state. The percentage of deliveries in a health facility doubled from 5 percent the 2005 EDHS, while home deliveries decreased slightly from 94 percent to the current level of 90 percent in 2011(5). From the report of the Berbere Woreda it was also indicated that out of more than 3939 expected deliveries in the District only 239 ( 6%) took professionally assisted delivery care and 220 (5.6%) and 471(12%) deliveries attended by HEWs and TBAs respectively (15).

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 labour accounted for (11.7%). Of the complication during labour and delivery 104 (17.4%) had encountered health problem, of which 47 (45.2%) were reported as excessive vaginal bleeding and 35 (33.7%) were reported as prolonged labour. From these, 44 (42.3%) were taken to health facility and for the 35 (33.7%) of those no action were taken (6).

### **2.3 Barriers towards male partners involvement**

Socio-cultural barriers to husband's participation in reproductive health programs have been identified. The fact that most reproductive health programs and services are targeted towards women excludes men; who are, in most cases, responsible for making reproductive health decisions (10, 13). A lack of knowledge and information regarding reproductive health, particularly for husbands as well as economic constraints has been documented as a barrier to their wives accessing modern health care (16, 17). Studies report that the economic status and social situations of husbands of pregnant women in developing countries in Africa are major factors that determine their involvement in their wife's prenatal care and delivery services (4).

A poor family that is living in a rural area should not be expected to attend a modern health care service for prenatal care and delivery due to restricted finances according to a large study in Nigeria. In this study approximately 6/10 informants (husbands and wives) reported that it is the husband who decides on the use of place of delivery. The husbands make the decision for their pregnant wife's prenatal care at modern healthcare based on their financial capability and power (18). According to the study conducted in Gulu district of Northern Uganda in most husbands' involvement in prenatal care was limited by poverty and ignorance about pregnancy due to social taboos on teaching children about pregnancy (19).

Study conducted in Kenya show that socio-cultural factors affect the involvement of male partners in supporting their spouses to access skilled delivery services. For instance, about 33% of the male partners stated that their newly born babies must be kept indoors for three days for boys and two days for girls and taken out only after the naming ceremony and about 45% of them said that child-birth is a woman's affair which does not require their participation, 39% stated that the placentas must be buried secretly to avoid babies from being bewitched which they felt was not possible if deliveries took place at health facilities (10). Most of the male partners also have limited knowledge regarding complications related to child-birth as 40% stated that delivery is a natural phenomenon that does not require men's participation, and 48.2% of the male partners said that they will be ridiculed by their peers and be seen as being "ruled" by their wives if they were seen accompanying them to health facilities for delivery (20).

Pregnant women are more vulnerable to live in poverty due to gender subordination to their husbands and these two issues have a double effect on their ability to access prenatal care services. Primary health care services (prenatal care, delivery and postnatal) for the poor rural population are subsidized, there may be informal fees or other costs that pose significant barriers to pregnant women's use of the services (21).

In Ethiopia, the knowledge of reproductive health was very low among the general society. Most husbands consider pregnancy (and delivery) to be a natural event and generally do not take their pregnant wives to hospital for prenatal care or delivery. Pregnant women are advised by husbands to go to traditional birth attendants, if they face problems during pregnancy and delivery rather than going to modern care facilities (8).

#### **2.4 Role of Male's Involvement in skilled Birth Attendance**

Studies investigated husbands' involvement in their wives' pregnancy care and delivery. For example, a recent study from Nepal shows that husbands' involvement in the prevention of ill maternal health during pregnancy and delivery was a vital contribution. It was noted that husbands provided supports such as fetching water, bringing nutritious food, arranging and accompanying their wives at prenatal care visits, advising their pregnant wives not to carry heavy loads and providing money for transport and medical costs. In this study the authors also identified the ongoing existence of gender and social-based practices such as social pressure and religion of the family as barriers to the husbands' involvement in household chores and support to their pregnant wives (22).

A study conducted in Bangladesh found that majority of husbands in the State accompany their wives for the first check up to confirm pregnancy; but the women generally went alone or with the other female members of the family for subsequent visits. Delivery and post delivery periods were found to be exclusively women's affairs. Poor knowledge of men related to contraception, pregnancy and delivery care coupled with women's dependence on men for accessing healthcare is one of the barriers for poor utilization of reproductive and child health care services (13).

In Malawi the findings show near universal agreement among women and men about the norms related to maternal health care. Both men and women viewed pregnancy and childbirth as the domain of women. The participants expressed that they have been brought up to believe that maternal health services are for women. Although the participants reported that with the introduction of male involvement programme some men accompanied their spouses to antenatal clinic, but were quick to say that it was a taboo for men to enter the labour and delivery room. Even during home deliveries, participants mentioned that husbands are not allowed to be near the birthing hut. Culturally, childbirth is a women's business (12).

In addition study conducted in South Africa identify that, most men mentioned lack of knowledge about male involvement in maternal healthcare at a health facility as one of the barriers for husbands' participation. The men that missed these sensitization campaigns and whose wives did not communicate with them about the importance of husband involvement expressed ignorance about husband participation in maternal health care (4).

Most Ethiopian women do not go to prenatal care services due to the burden of their household activities: cooking, cleaning and shopping. Men and women perform different activities or have a division of labour which is endorsed socio-culturally. Child rearing was viewed, in most of Ethiopian society, as the sole responsibility of women and this in turn limits and restricts their movements to seek prenatal care services. Women's status was low in terms of control over and access to and utilization of information, education, and income and more generally speaking over their sexual and reproductive health issues such as prenatal care services (8). A study performed in central Ethiopia, found that husbands' approval of formal prenatal care at modern healthcare facilities for his wife was based on their exposure to modern healthcare practices, the age of the husband and the individual husband's interpretation of religious values, tribal identity, and adherence to traditional norms and beliefs (7).

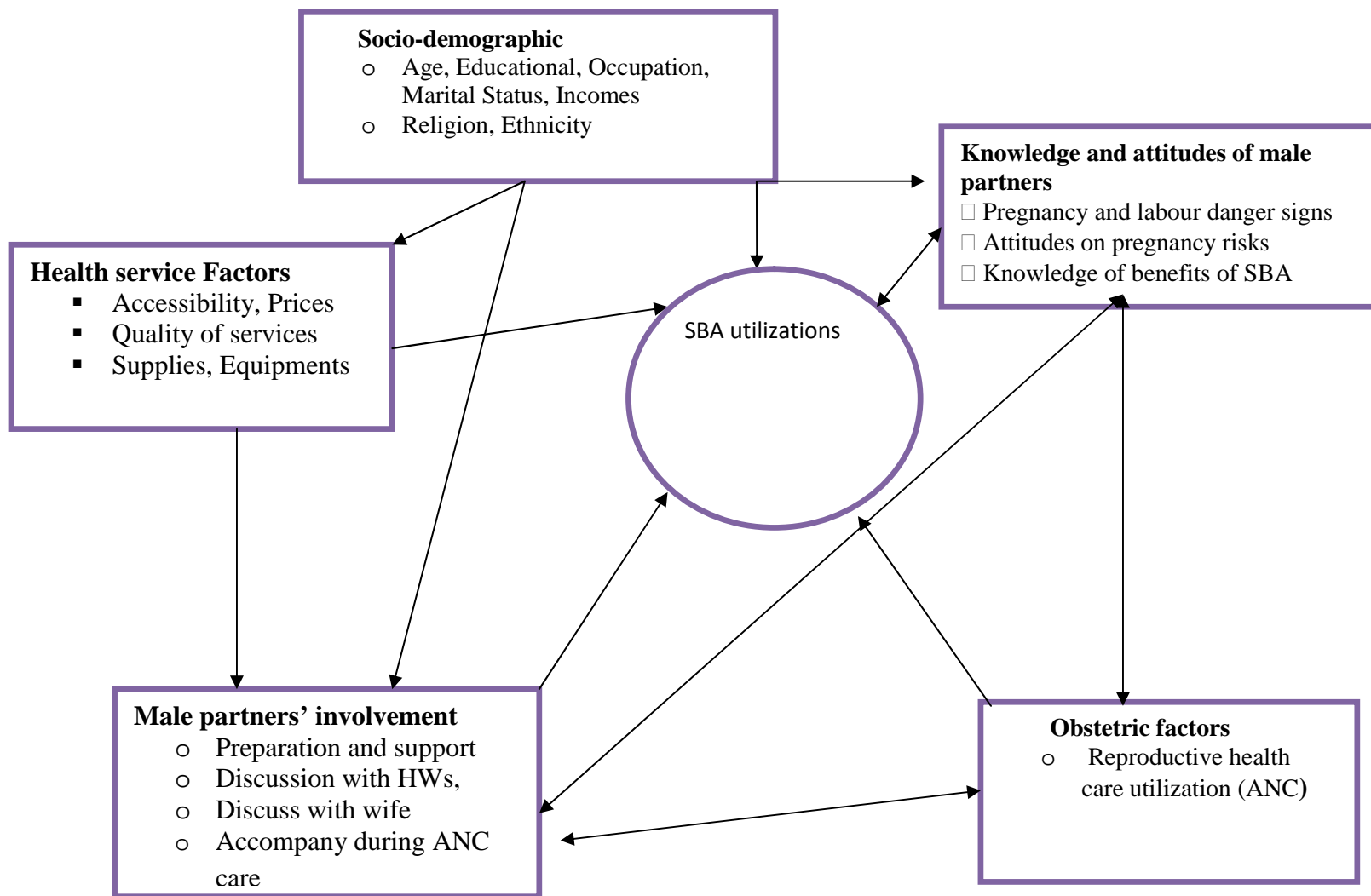


Figure1. Conceptual framework to analyze determinants of male partners involvements in spousal SBA utilization

### **3. Objectives**

#### **3.1 General Objective**

To assess male partner involvement in spousal skilled birth attendance utilization and factors affecting it in Berbere District of Bale, Ethiopia, 2013

#### **3.2 Specific Objectives**

1. To determine the magnitude of SBAs utilization in Berbere District of Bale Zone, 2013
2. To identify factors associated with SBA utilization in Berbere District of Bale Zone, 2013
3. To measure the knowledge male partners on benefits of SBA utilization in Berbere District of Bale Zone, 2013
4. To scale the magnitude of male partners involved in spousal skilled birth attendance utilization in Berbere District of Bale Zone, 2013
5. To identify factors affecting male partner involvement in spousal skilled birth attendance utilization in Berbere District of Bale Zone, 2013

## **Research questions**

- What is magnitude of skilled birth attendance service utilizations in the District?
- What is the level of knowledge on danger signs of pregnancy and labour?
- What are the factors responsible to affect the skilled birth attendance utilizations?
- What is the level of male partners' involvement in spousal skilled birth attendance utilization?
- What are the factors responsible to affect male partners' involvement in spousal SBA utilization in the district?

## 4. Methodology

### 4.1 Study Area

Berbere has an area of 1,112 square kilometers with an estimated population of 106,827. Administratively, the District was subdivided into one town and 17 farmer associations (23). From a total population 48.8% (52,083) of them are female, and 51.2% (54,744) are males with 7% (7,552) urban dwellers and the rest lives in rural kebeles (23). Number of children under one year of age, was 3.5% (3,738) and number of children under five years of age was 16.4% (17,551) from total population. Number of women of 15-49 years of age was 21.1% (23,608) and number of pregnant women in the District, was 3.8% (4,059) (15).

Climatically, it has got three zones, namely the Dega (cold zone), Woina Dega (temperate zone) and the Kola (hot zone) which constitute 5%, 25% and 70% respectively. The altitude of the Woreda ranges from 1050m to 2500m above sea level. The average annual temperature and rainfall is 20.5°C, and 850 mm respectively (23). Educationally, 42% were illiterate and 58% were at least able to read and write (24). In the District there were 4 Health Centers and 17 health posts with human resource profile of 13 bachelor's degrees and above, 44 diploma level Health Professions and 38 Health Extension workers. Overall Health service coverage was 94% with health center coverage of 92% and health post coverage 100% in kebeles but 84% potential health service coverage (in population size) (15).

According to the 2004 E.C report of the District 239 (6%) and 220 (5.5%) deliveries were attended by skilled health workers and health extension workers respectively. The rest 471 (12%) was delivery assisted by traditional birth attendant (TTBA) and others 76.5% by TBA and their relatives (15).

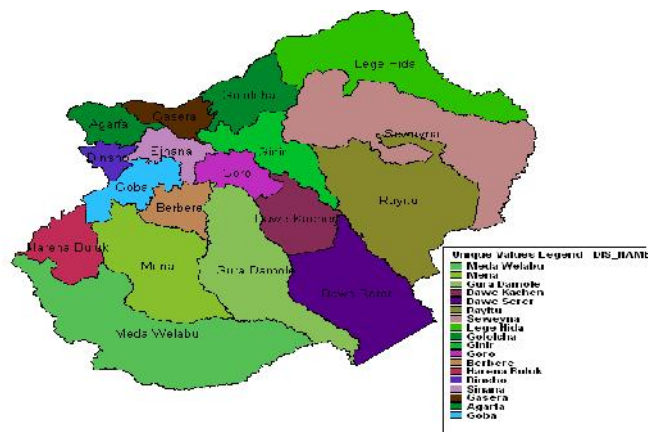


Figure 2: Maps of study area Bale Zone with Berbere District of study area May 2013.

## 4.2 Study Period

The survey was conducted from January 2013 to July 2013.

## 4.3 Study Design

A community based cross sectional descriptive study was conducted using quantitative methods and supported by qualitative in Berbere District, Oromia Region, South East Ethiopia.

## 4.4 Source Population for quantitative

All males, those live in the District and currently married or in union.

## 4.5 Study population.

All male partners that live in the selected farmers association that currently marriage or in union and those have children aged 0-12 months during the survey.

The inclusion criteria were:

- Sex- male, having 0-12 months of child,
- Inhabitants of the selected kebeles, and
- Marriage or in union and

Exclusion Criteria

- Seriously ill
- Un able to communicate and Un able to hear

## 4.6 Target Population for qualitative study

The qualitative data was collected from the Health Workers, TBA, Health Developmental Army and religious leaders in the study area using focus group discussion guide lines. Three FGDs was conducted in the study to strengthen the quantitative data.

## 4.7 Sample size for quantitative study

The required sample size of eligible male partners for the study was determined using the formula to estimate single population proportions for both out come. The following assumptions were made while calculating the sample size.

- 95% confidence limit with 5% margin of error for male involvement
- Population proportion of male partner involvement on skilled birth attendance was unknown (50%)
- 95% confidence limit with 3% margin of error for skilled birth attendance
- Proportion of SBA utilization was 8% in Oromiya regional state.

**Table1. Sample size determination options in the study area of Berbere Woreda, south east Ethiopia, 2013**

Options	Proportion (p), %	Z (95%,C.L)	Margin of error (d)	Design effect (D)	Calculated sample size	Remark
1	Male involvement, 50%	1.96	0.05	1.5	605	Unknown in the district
2	SBA utilizations, 8%	1.96	0.03	1.5	494	8% in Oromiya region

### Formula for sample size determination

$$n = \frac{(Z_{1-\alpha/2})^2 \cdot p(1-p)}{d^2}$$

Where, n = the number of households to be interviewed; i.e. sample size of the study

- Z = standardized normal distribution, 95% confidence interval, which was 1.96
- P = proportion of male partners who involved in spousal SBA utilization 50% (unknown in our country) and 8% SBA in Oromiya but 50% was taken so as to get the maximum sample size
- d = the margin of error was taken as 5% n = 384

In addition, 5% non respondents from previous study were considered for male partners who may refuse to participate on the study (10).

- D= Design effect (1.5)

Proportion of male partners' involvement, 50% was taken so as to get the maximum sample size.

- n = (384+19) x 1.5 = 605 male partners.

### Sample size for Qualitative

3 FGD were conducted in this study with 1 FGD having 8 members of key informants to compliment the quantitative data. A total of 24 participants were participated in three groups. In all 3FGDs 2 health workers, 2 religious leaders, 2 traditional birth attendants and 2 leaders of health developmental armies were included.

## 4.8 Sampling producers

### A. Sampling procedure for quantitative part

A cross-sectional community-based study using multi stage cluster sampling method was used. First, the rural 17 kebeles of the district were divided in to four clusters based on weather condition and distance from the main town. Then by simple random sampling one kebele from each cluster was selected. Then probability proportional to size was allocated for each kebele. Finally, from selected kebele of each cluster 605 male partners were selected by systematic sampling methods. Quantitative methods supported by qualitative were used in this study. The quantitative data was obtained from male partners using structured, interviewer administered questionnaires, while qualitative data was collected from FGD participant using focus group discussion guide lines to saturated levels.

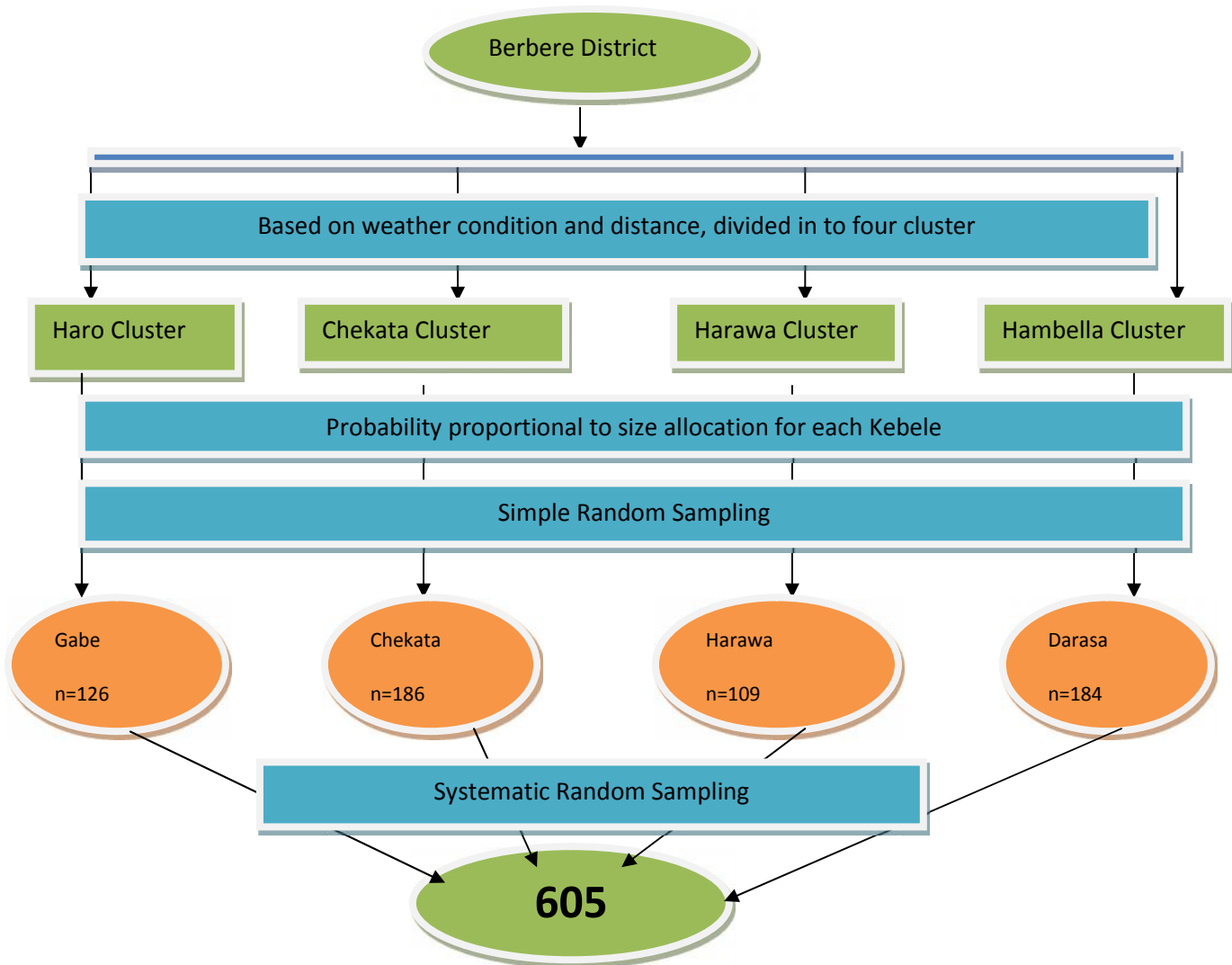


Figure 3: Schematic sampling procedures in study area of Bale Zone, Berbere District, South East Ethiopia May 2013

## **B. Sampling technique for Qualitative part**

For the qualitative part of the study, 3 FGDs were conducted in 3 kebeles using purposive sampling technique until redundant ideas were obtained. Because those participants that were included in the FGDs know more about factors affecting male involvement on skilled birth attendance. FGD participants discussed based on FGD guide questions. The categories of FGD participants involved in a group included:

1. Health workers from the health sectors
2. Religious leaders
3. Trained and untrained traditional birth attendants
4. Leaders of women development army

### **Pretesting**

A pretest was conducted in a rural village of the District that was adjacent to the studied kebeles with similar in socio economic back grounds. Five percent of the total sample size was taken for pretest. The trained data collectors administered the pretest. Some questions and repetitive ideas were corrected. Additional response categories were also added based on the pretest findings

### **4.9 Data collection technique**

A face to face interview was conducted by using structured questionnaire. The questionnaire was adapted from related thesis works after reviewing g relevant literatures (6, 10, 17). The English version of the questionnaire was translated to Afan Oromo for data collection. Prior to the actual data collection, the questionnaire was pre-tested on 5% (30) of the total sample size 605 men in adjacent Kebele. The purpose of the pre-testing was to ensure the respondents ability to understand the questions, to check the wording and logic of the questions in a sensible way to the respondents. Based on the results of pre-test, changes were made on the structure of the questionnaire before data collection began.

Eight data collectors that completed grade 10 and have certificate and also speak the local language were filled the questionnaire after adequate training as how to collect data using interview methods was given for two days. One supervisor was selected from senior health workers in each cluster. For the qualitative part three FGDs were conducted by principal investigator and note taker.

#### 4.10 Data Quality assurances

Pretested, structured and translated questionnaire was used to collect the quantitative data. The questionnaire was originally developed in English and then translated into Afan Oromo. It was then back translated to English to facilitate reliable responses and to keep the original meaning of the instrument. The local language questionnaires were used to collect the data using face to face interview method. Codes were given to the questionnaires and household during the data collection so that any identified errors were traced back using the codes. The supervisors closely followed the data collection process throughout the data collection period along with the principal investigator. Supervisors reviewed the filled questionnaires every day at the end of data collection day. The principal investigator and the supervisors checked the collected data for completeness and corrective measures was taken accordingly. The collected data was cleaned and coded before analysis.

#### 4.11 Measurements

**Male involvement:** Male involvement was scored based on summative score of questions designed to assess involvement, men with score above the median were considered as having better involvement in skilled birth attendant. A male partner accompany to labor unit, save money, well prepared, made decision to use SBAs and arrange transport during labor were used for scoring. If he answers less than or equal to 2 **low** and greater than or equals 3 **better** involvement in spousal SBAs utilization.

**Knowledge on danger sign of pregnancy:** Based on the summative score of questions designed to assess knowledge, men with above the median were considered as having better knowledge of complication of pregnancy and labor. Knowing danger signs that occurs during pregnancy: vaginal bleeding, increased blood pressure, swollen legs/face, leakage of amniotic fluids without labor and blurred vision were used for classification, if mentioned less or equal to 2 classified as **low** and greater than or equals 3, classified as **better** knowledge (25).

**Knowledge on danger sign of labor:** Based on the summative score of questions designed to assess knowledge, men with above the median were considered as having better knowledge of complication of pregnancy and labor. Knowing danger signs that occurs during pregnancy: prolonged labor, retained placenta, excessive vaginal bleeding, fetal death and loss of consciousness were used for classification, if mentioned less or equal to 2 classified as **low** and greater than or equals 3, classified as **better** knowledge (25).

## 4.12 Variables

### A. Independent Variables;

- Socio demographic: Age, Marital status, Ethnicity, Religion, income,
- Educational status (women/husband), Occupation (women/husband) and
- Knowledge and Perception on - obstetric risks, danger signs of pregnancy, labor and benefits of skilled delivery

### B. Dependent Variable

- Skilled birth attendance utilization
- Male partners involvement

## 4.13 Operational definitions

- a) **Skilled birth attendant:** A professionally trained health worker usually a doctor, midwife, or nurse with the essential skills to manage normal labour and delivery, recognize complication early and perform any essential interventions.
- b) **Safe delivery service utilization:** Expressed as the proportion of women in need of safe delivery service who actually receive the care within a given period of time in a health facility.
- c) **Trained Traditional Birth Attendant /TTBA:** Who has received a short course of training (usually of three months) through the modern health care sector to upgrade the required skills
- d) **Traditional birth attendant/TBA:** Who initially had acquired her ability by delivering babies by herself or through apprenticeships to other TBAs
- e) **Skilled delivery utilization:** Is expressed as the proportion of women in need of safe delivery service who actually receive the care within a given period of time in a health facility by skilled birth attendants.
- f) **Male involvement:** Based on the summative score of questions designed to assess involvement, men with score above the median were considered as having better involvement in skilled birth attendant.
- g) **Knowledge on danger signs:** Based on the summative score of questions designed to assess knowledge, men with above the median of were considered as having better knowledge of danger signs associated with child birth.
- h) **Well prepared to use SBAs:** When prepared by two or more from questions assessing preparation of male partners during pregnancy.

#### **4.14 Data cleaning and analysis**

Completed questionnaires were checked visually for completeness. The data was entered into EPI-INFO version 3.5.4 and analysis took by SPSS statistical package version 16. The data was coded, entered and cleaned before analysis. The results were present in the form of tables, figures and summary statistics. The strength of association of predictor variables with skilled delivery service utilization and male involvement were assessed using odds ratio with 95% confidence interval in logistic regression model.

The qualitative data were analyzed in to thematic areas of male involvement on SBA by performing coding and recoding of the transcribed ideas of the FGD responses and triangulated with quantitative findings.

#### **4.15 Ethical consideration**

Ethical clearance was obtained from Ethical Clearance Committee of the School of Public Health in Addis Ababa University. Permission to conduct the study was also obtained from the Regional Health Bureau and Berbere District Health Office. Informed oral consent was obtained from each study participant. Each respondent was informed about the purpose of the study that the findings of the study will inform policy makers and other concerned bodies. Participants had the right to refuse or discontinue at any time during interview. Confidentiality and privacy was maintained. Health educations were given on the benefits of male involvement and skilled birth attendant for those participants those wives gave birth at home and for those with knowledge gaps on the complication that occurs during delivery.

#### **4.16 Dissemination of the results**

The result of the study will be disseminated to all the concerned bodies including Berbere Woreda administration and health office, to the zonal health department, regional health office, FMOH and Addis Ababa University. Publication in national or international journals will be attempted.

## **5. Results**

A total of 605 male partners whose wives have given birth in the past one year before the survey were interviewed. A total of 30 participants were excluded from the study as, 25 refused to respond and 5 questionnaires were incomplete, giving response rate of 95 percent (N=575).

### **5.1 Socio-demographic characteristics**

From a total of 575 respondents who had a child in the last 12 months, 465 (80.9% were Muslim and 110 (19.1%) were Christians religions followers. Majority 320 (55.7 %) of the respondents were aged 20-34years and 14 (2.4%) were less than 20 years of age. Among the respondents, 509 (88.5%) were Oromo and the rest 66 (11.5%) were none Oromo.

Economically, 239 (41.5%) of the male partners had monthly income of less than ETB 500 and 36 (6.2%) had above ETB 1500 with median of ETB 804.73 monthly income. Majority 427 (74.3%) were none formal education and 118 (20.5%) were primary. While only 30 (5.3%) of the respondents having secondary and more than secondary educational level.

Regarding to occupation, majority of the male partners were farmers 525(91.6%), merchant 40(6.9%), and the rest, 10(1.7%) were employees. Regarding marital status of the respondents the majority 549(95.5%) were in union and 26 (4.5%) were not in union.

**Table2. Socio-demographic characteristics of study respondents, Berbere Woreda, South East Ethiopia, March, 2013 (n=575)**

Variables	Classifications	Frequency	Percent
Age distribution	< 20	14	2.4%
	20-34 years	320	55.7%
	35-49 years	213	37.0%
	49years & above	28	4.9%
Ethnic groups	Oromo	509	88.5%
	None Oromo	66	11.5
Religions	Muslims	465	80.9%
	Christians	110	19.1%
Marital status	In union	549	95.5%
	Not in union	26	4.5%
Educational levels	Non formal	427	74%
	Primary	118	20.5%
	Secondary and above	30	5.0%
Occupation	Employed	10	1.7%
	Farmer	525	91.3%
	Merchant	40	7.0%
Incomes	500 birr	239	41.6%
	500-1500	296	51.5%
	Above 1500	38	6.9%
Spouses educational Level	Non formal	477	82.9
	Primary	82	14.3%
	Secondary	11	1,9%
	More than secondary	6	1.0%

## 5.2 Utilization of maternal health services

Nearly one out of ten women delivered assisted by skilled attendant. Majority 507 (88.2%) of the deliveries in the study area were home delivery. From these, 454 (89.5%), 33 (6.5%) and 20 (4%) of them were conducted by trained and untrained traditional birth attendants, their relatives and by Health Extension Workers respectively. Only 65 (11%) delivered at health facilities while the rest, 4 (0.7%) of mothers were delivered in other places.

Regarding the prenatal service utilizations, 415 (72.2%) of spouse of respondents had ever attended ANC service of which only 64 (15%) had attended four ANC visits. This finding was supported by qualitative results, almost all group member of focus group discussants mentioned

*“ Most women were not used SBAs because equipped facilities by all resources are located in towns but vast majority of mothers reside in rural where there is no transport access”*.

And one religious leader said *“ Facilities are not attractive for mothers regarding the privacy; they are with bad odor, lack water and electric lighting and mothers come to health facilities after they failed any alternatives at their home”* (40 years old man, Daresa kebele). Other religious leader said *“ Mothers prefer to use traditional birth attendants at their own home because of the reasons that after delivery at health facilities there is no transport to return to their home and the babies exposed to bad air and develops pneumonia and also mothers having much freedom at home during labor time than being in health centers”* (45 years old man, religious leader from Gabe Kebele). One health developmental army said,

*“They leave you alone during your labour pain at the health centre; the TBA stays with you and helps you to deal with the pain.”* (35 years old, Daresa Kebele)

From male partners whose wife gave birth at home, 60% stated that the labor was simple and short, 20% presence of traditional birth attendant and 13.4 previous home delivery. This result supported by the focus group discussant. One of traditional birth attendant said:

*“The main reasons that the low utilization of health facility skilled delivery services were unexpected labor and the mothers consider, the labor was simple and short phenomena and decisions about place of birth are made when labour begins.”* (35 years old mother, Daresa kebele). On the other hand 21 % male partners stated lack of transport and 10 % claimed fees charged at health facilities were high (figure 2). This was also supported by qualitative findings that a mother said,

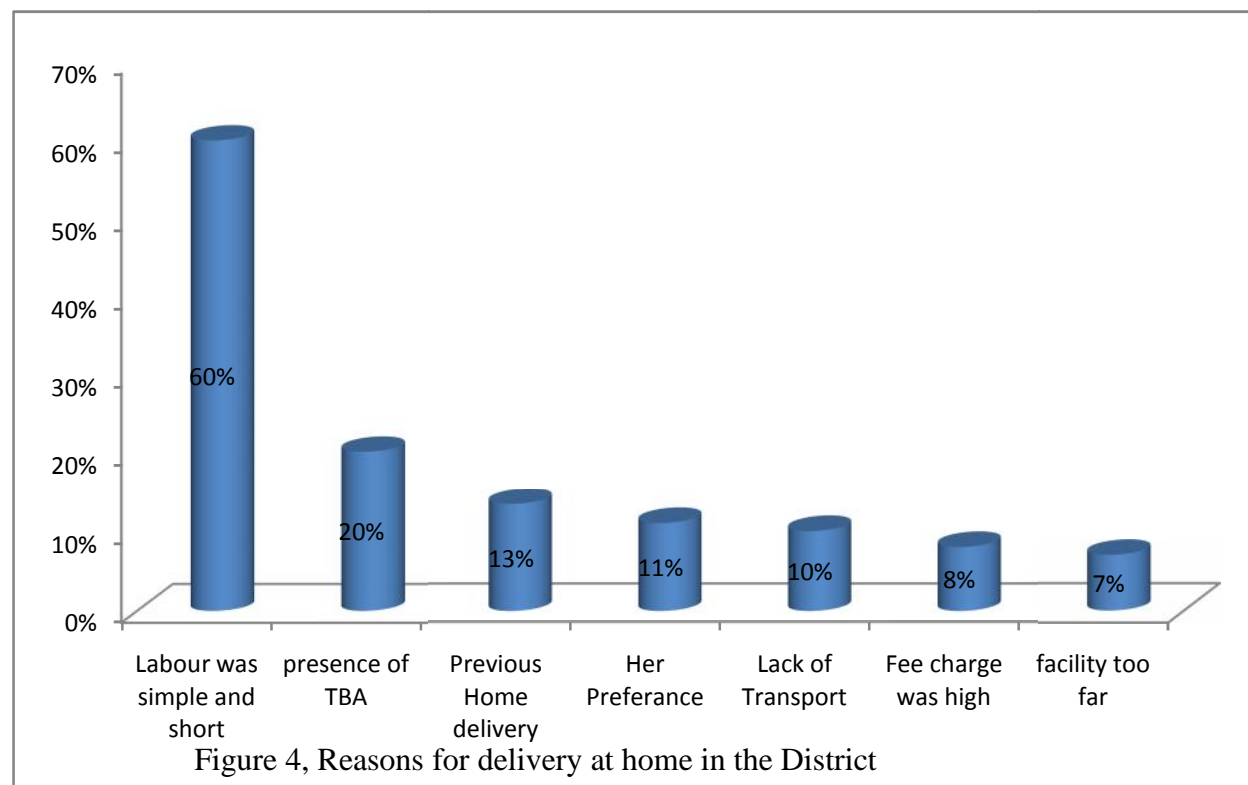
*“ Now a days the health facilities like health centers and hospitals have adequate supplies but fees charged at those health facilities, are high during treating the patients ”* (25 years old mother, leader of health developmental army, Gabe kebele).

Among male partners whose wife delivered at health facility the reasons that they prefer to go health facility, the majority, 35 (66%) reported their wives want HF for better service while 19(36.5%) want to health facilities due to encountered difficulty of labor (figure2).

**Table3. Utilization of maternal health services, Berbere District, South East Ethiopia, 2013**

Variable	Frequency	Percent
<b>ANC during last pregnancy</b>		
No ANC visits	160	27.8%
Only ones	171	29.7%
2-3 visits	180	31.3%
4 and Above	64	11.2%
<b>Place of Current Delivery</b>		
Health Center/Hospital	54	9.4%
Health Post	11	1.9%
Home	507	88.2%
Other Places*	3	0.5%

\*Other places like at market, street etc



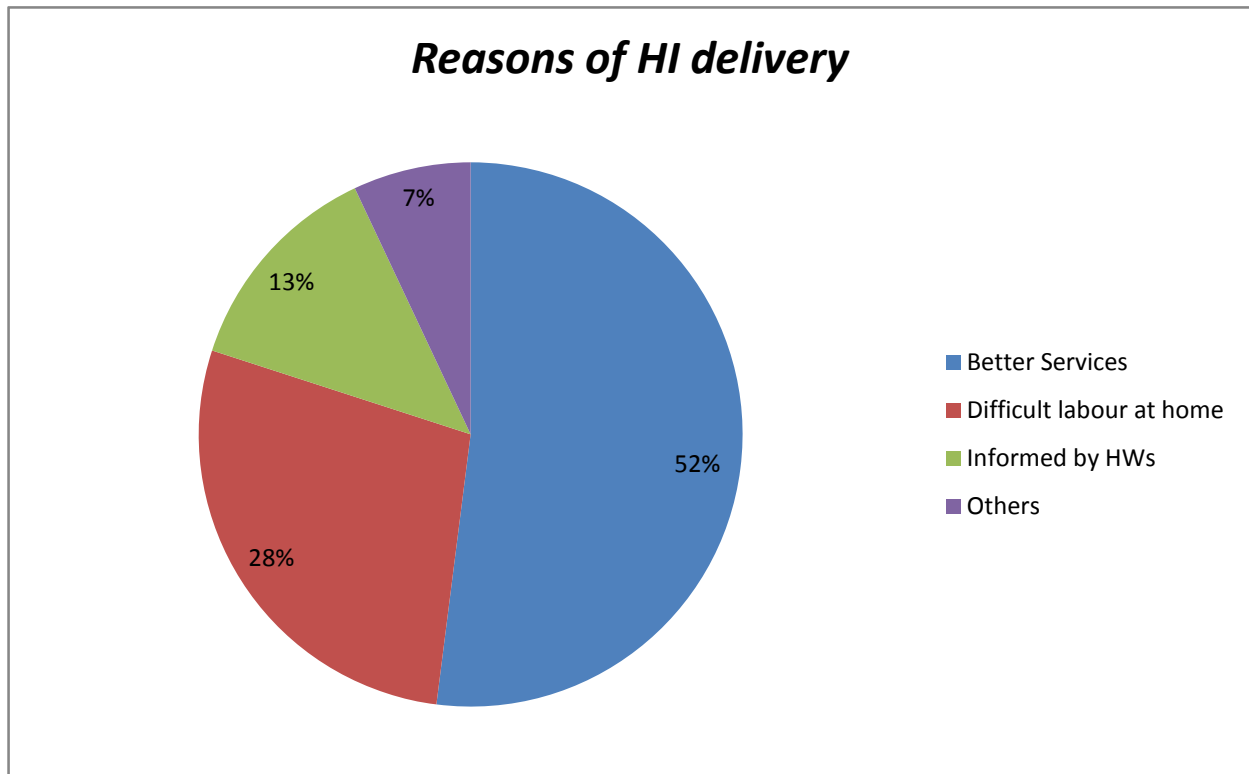


Figure 5: Reasons that the mothers prefer to deliver at health facilities in Berbere District, South East Ethiopia in 2013

### 5.3 Knowledge of male partners on danger signs of pregnancy and labor

Majority, 451 (78.6%) responded to pregnancy related danger signs. Of these 287 (49.9%), mentioned vaginal bleeding, 154 (26.8%), reduced/absence of fetal movement and 151(26%), leakage of amniotic fluid before onset of labor as pregnancy related complications. As shown in the tables 2, vaginal bleeding, followed by reduced/absence of fetal movement and leakage of amniotic fluid before onset of labor, respectively, were the most frequently mentioned signs. Only one hundred eight (18.8%) of male partners mentioned at least three danger signs during pregnancy and were labeled as better knowledge.

On the other hands, four hundred seventy eight (83.1%) of male partner responded to danger signs during labor, of whom 339 (58.9%) mentioned prolonged labor followed by retained placenta, 269 (46.8%), excessive vaginal bleeding, 202 (35%) and fetal death, 93 (16.0%). Only 102 (17.7%) were mentioned at least three danger signs and labeled as better knowledge.

Regarding the benefits of SBA utilization this study shows that 85% of male partners mentioned at least one benefit of health facilities delivery service. From this 46% mentioned early detection of the problems, 35% timely treatment of the problems and 31% better new born care.

**Table 4a: Knowledge of respondents about danger signs of pregnancy, labor and benefits of SBAs utilization, Berbere District, South East, Ethiopia March, 2013**

Variables	Frequency	Percent
<b>Mentioned key danger signs during pregnancy</b>		
Vaginal bleeding	287	49.9%
Reduced/ absence of fetal movement	154	26.7%
Leakage of amniotic fluid without labor	151	26.0%
Swelling of leg/face	138	24.0%
Blurring of vision	106	18.4%
Increased BP	63	10.9%
<b>Mentioned key danger signs during Labor</b>		
Prolonged labor (>12 hrs)	339	58.9%
Retained placenta (>1 hr)	269	46.8%
Excessive vaginal bleeding	202	35.0%
Fetal death	93	16.0%
Loss of consciousness	40	7.0%
Others	42	7.3%
<b>Mentioned benefits of HF delivery</b>		
Early detections of problems	265	46%
Timely treatment of problems	204	35%
Better new born care	178	31%

NB: Summation will not add up to 100 due to multiple responses

**Table 4b: level of knowledge on danger signs of pregnancy and labor of male partners, Berbere District, South East, Ethiopia, 2013**

Variables	Frequency	Percent
<b>Mentioned danger sign during pregnancy</b>		
Responded to only one danger sign	216	47.8
Responded to two danger signs	127	33.4
Responded to three danger signs	108	18.8
<b>Degree of knowledge on danger sign during pregnancy</b>		
Low knowledge	343	76.1
Better knowledge	108	23.9
<b>Mentioned danger sign during labor</b>		
Responded to only one danger sign	200	41.9
Responded to two danger signs	176	40.3
Responded to three danger signs	102	17.7
<b>Degree of knowledge on danger sign during labor</b>		
Low knowledge	376	79
Better knowledge	102	21

#### **5.4 Readiness and level of male partners involvement in spousal SBAs utilization**

During pregnancy, 307(53.4%) of male partners were prepared by money, 309(53.7%) by food and 121(21.1%) were prepared by other accessory materials. This was supported by focus group discussion; most of focus group discussants mentioned and agreed that,

*'' The roles of male partners are only to get prepared by money to buy materials that are used after delivery and he saves the money only to buy honey and butter that the mother uses after delivery for 15 days and to buy clothes for the new comer babies''*. One mother from the health development army mentioned that, *''Some mothers save the money for emergency conditions when she becomes pregnant''* (30 years old women, Harawa kebeles).

Role played by husband during labor, only 135(23.5%) mentioned accompanied patient to labor unit, 164(28.5%) providing transport or give money for transport, 364 (63.3%) mentioned calling TBA, 280(48.7%) assist her and 91(15.8%) mentioned role of husband was keeping older children.

One TBA said ‘‘ *the main role of male partners if he present in the compound during labor time he will call traditional birth attendant and the TBA decides whether the mother go to the health facilities or not*’’, (30 years old, TBA, Gabe kebele).

From 415 mothers those visit ANC, 32.7% of male partners accompany their spouse. Only 93(16.2%) of male partners discuss with health workers on place of delivery during accompany his wife for prenatal care. On the other hand 286 (49.7%) male partners discuss with his wife on place of delivery. Only 5.2% of male partners were final decision maker on place of delivery and 54.4% women were decision maker on place of delivery by themselves.

Regarding involvement of male partners in spousal skilled birth attendance involvement, only 142 (24.7%) were better involved, but the rest 433 (75.3%) were low involvement in spousal skilled birth attendance utilization in the District.

**Table 5: Readiness and level of male partners’ involvement in spousal skilled birth attendances utilization, Berbere Woreda, South East Ethiopia, 2013**

<b>Variables</b>	<b>Frequency</b>	<b>Percent;</b>
<b>Readiness of male partners during pregnancy</b>		
By money	307	53.4
By food	309	53.7
By accessory materials	121	21.1
Well prepared	121	21.1
Not well prepared	454	78.9
<b>Role of male partners during labor time</b>		
Accompany to labor unit	135	23.4
Provided transport/money for transport	164	28.5
Calling TBA	364	63.3
Assist her (support her)	280	48.7
Keeping older children	91	15.8
Food preparation	15	2.6
others*	42	7.3
<b>Level of involvement</b>		
Better	142	24.7
Low	433	75.3

\* Others, preparing materials used for cord tie, praying.

◆ Summations will not add to 100 because of multiple responses

## 5.5 Bivariate Analysis

### 5.5.1 Bivariate Analysis on Determinants of SBA utilization

Association of skilled birth attendant utilization with selected socio-demographic, socio-economic, and male partner's knowledge and practices variables on binary logistic regression were seen. Education, income, knowledge on complications that occurs during pregnancy and labor, discussion with health workers and their wives, occupation of male partners and male involvement in maternal health services were significantly associated with skilled birth attendant utilizations at  $p < 0.05$ . Paternal knowledge on benefits of giving birth at health facilities was also significantly associated with delivery at health facility,  $p < 0.05$ . On the other hand age of male partners, marital status, ethnic group and religion of the respondents did not show statistically significant association with skilled birth attendance utilization.

Male partners that had completed at least primary school were fifteen times more likely for his wife deliver at health facilities than those husbands who never attended any formal schooling [OR=15.49, 95% CI= 7.72, 31.06]. Mothers whose male partners have knowledge on obstetric risks, who know at least three complications that occurs during pregnancy were four and half times more as likely to use SBA than husbands who did not know the pregnancy complications [OR=4.55 ,95% CI=2.54, 8.16]. On the other hand, husband who know at least three complication that occurs during labor time were five times more likely that his wife uses SBA than those who do not have the knowledge on labor related complications [OR=5.44, 95 %CI=3.02, 9.78]. This was supported by focus group discussion,

*“ I know complications that occurs during pregnancy and labor, the last two births my wife give births at Health Center”* (35 years old religious leader, Hawara kebele). These finding clearly show that spouses of male partners with a high level of income are almost four times more likely to be delivered by skilled attendants than those whose partners have a low level of income [OR=3.95, 95 %CI=1.89, 8.25]. And male partners of non farmers, their wife uses skilled birth attendant almost five times more likely than farmers [OR=4.7 95 %CI=2.35, 9.46]. Male partners those involved in spousal maternal health utilizations were eighty times more likely their spouses uses skilled birth attendant [OR=80.33, 95 %CI=24.53, 263.04]

### **5.5.2 Bivariate Analysis of male partners' involvement in spousal SBA utilization**

Association of male partners involvement with selected socio-demographic variables on binary logistic regression showed that education, monthly income, knowledge on complications that occurs during pregnancy and labor, discussion with health workers and their wife about place of delivery and occupation of male partners were significantly associated with male partners involvements at  $p < 0.05$ . Paternal knowledge on benefits of giving birth at health facilities was also significantly associated with male involvement in spousal skilled birth attendant utilization,  $p < 0.05$ . On the other hand age of male partners, marital status, ethnic group and religion of the respondents did not show statistical association with male partners involvement in support of spousal skilled birth attendance utilization at  $p < 0.05$ .

The study showed that, male partners that completed at least primary schooling were four and half times more likely to be involved than those whose husbands had never attended any formal schooling [OR=4.59, 95% CI=2.53, 8.33]. Also male partners with high incomes were more likely to involve in support of spouse to use skilled birth attendant than that of counterpart. An odds ratio between the incomes of a male partner and the type of delivery showed significant associations [COR=1.99, 95% CI=1.32, 2.99]. Male partners that accompany during ANC visits were more than five times as likely involved in making their wives to use skilled birth attendant compared to those do not accompany their wives [OR 5.2, 95%CI=3.47, 7.79].

## **5.6 Multivariable analysis**

### **5.6.1 Multivariate Analysis of determinants of SBA utilizations**

Multivariate analysis was performed to determine the independent predictors of SBA utilizations in the District. After adjusting for confounding by involving all p-value less than 0.25 variables in a multivariable analysis, shown in table below, the factor that remained significantly associated with utilizations of skilled birth attendant were educational levels, male partners that discuss with his wife about place of delivery and male involvement in maternal health services shows significant association in skilled birth attendant utilization.

Male partners who completed at least primary school were more than three and half times as likely his wife to give birth at Health center or Hospital than those non formal educations [AOR=3.58, 95% CI=1.35, 9.53]. Regarding involvement of male partners, male partners those better involved in maternal health service utilizations fifty-four times more their wives uses skilled birth attendance than those less involved [AOR= 54.46, 95% C.I=12.22, 242.67].

**Table 6: Multivariate association of socio demographics and knowledge of male partners with SBA utilization in Berbere District, South East Ethiopia, 2013**

Variables	SBAs utilization		95 % C.I		p-value
	Yes (n=54)	No(n=521)	COR, 95% C.I	AOR, 95% C.I	
<b>Educational Status</b>					
Formal education	43	105	15.49 [7.72, 31.06]	3.58[1.35, 9.53]	0.001*
Non formal education	11	416	1		
<b>Monthly incomes</b>					
500 ETB	45	291	3.95 [1.89, 8.25]	.54[.19, 1.49]	
Less than 500 ETB	9	230	1		0.236
<b>Occupation</b>					
Non farmers	14	36	4.72 [2.35, 9.46]	1.05[.40, 2.71]	0.927
Farmers	40	485	1		
<b>Benefit of SBA</b>					
Yes	48	441	10.33[1.4, 75.74]	.28[.30, 2.68]	0.271
No	6	80	1		
<b>Knowledge on danger signs of pregnancy</b>					
Better	25	83	4.55[2.54, 8.16]	2.78[.95, 8.16]	0.062
Low	29	438	1		
<b>Knowledge on danger signs of labour</b>					
Better	26	76	5.44[3.02, 9.78]	69[.24, 2.01]	0.500
Low	28	445	1		
<b>Discuss with his wife on place of delivery</b>					
Yes	44	242	5.07[2.50, 10.30]	4.29[1.36, 13.85]	0.001*
No	10	279	1		
<b>Male involvement in spousal SBA</b>					
Better	42	87	80.33[24.53, 263.04]	54.46[12.22, 242.67]	0.000*
Low	12	434	1		

; Significant at P< 0.05

## 5.6.2 Multivariate Analysis of male partners involvement in spousal SBA utilizations

Multivariate analysis involving all p-value less than 0.25 variables on male involvement, education and male partners that accompany their wives during ANC visits showed significant association.

Male partners who completed at least primary school were about eight times more likely involved in their spousal uses SBA than with non-formal education [AOR=8.14, 95% CI=4.14, 16.00]. Male partners that accompany during ANC visits were more than two and half times as likely involved in making their wife to use skilled birth attendant compared to those do not accompany their wives [OR 2.51, 95%CI= 1.43, 4.41]. This was supported by focus group discussion,

*‘‘My husband accompany me during I was pregnant and discuss with health worker on my pregnancy and dived I must deliver at Hospital two years back. (25 years Leaders of health developmental army in Hawara kebele). Also, one mother said*

*‘‘ I have a chance to go to the health center during market days with my husband to discuss with health workers about place of delivery because of my husband was merchant’’ (30 years leader of women development army in Harawa Kebele). The associations were summarized as given in table 7 below.*

**Table 7: Multivariate association of male involvement with socio demographics and knowledge of male partners in Berbere District, South East Ethiopia, 2013**

Variables	Male partners		95% C.I		p-value
	Better (n= 142 )	Low (n=563 )	COR, 95% C.I	AOR, 95% C.I	
<b>Educational Status</b>					
Primary and above	93	55	4.59 [2.53, 8.33]	8.14 [4.14, 16.00]	0.000**
No education	49	378	1		
<b>Monthly incomes</b>					
500 ETB	100	236	1.99 [1.32, 2.99]	1.57 [0.83, 2.99]	0.169
Less than 500 ETB	42	197	1		
<b>Occupation</b>					
Non farmers	28	22	13.1[8.34, 20.39]	0.73 [0.29, 1.82]	0.499
Farmers	114	411	1		
<b>Knowing benefit of SBA</b>					
Yes	137	352	6.31[2.50, 15.89]	0.36[0.11, 1.167]	0.088
No	5	81	1		
<b>Accompany during ANC visits</b>					
Yes	87	101	5.2 [3.47, 7.79]	2.51 [1.43, 4.41]	0.001**
No	55	332	1		
<b>Knowledge about pregnancy danger signs</b>					
Better	70	38	10.1[6.33,02.1]	0.35[0.16,0 .77]	0.09
Low	72	395	1		
<b>Knowledge labor danger signs</b>					
Better	62	40	7.6 [4.78, 12.12]	1.03 [0.46, 2.3]	0.946
Low	80	393	1		

\*\* Significant at  $p < 0.05$

## 6. Discussions

This community based cross-sectional study attempted to measure the magnitude of skilled birth attendance utilization and magnitude of male partner's involvement on spousal skilled birth attendant utilization. Accordingly, associated factors among male partners, whose wives gave birth in the last 12 months preceding the survey, were identified in Berbere District. The factors were related to male partners' socio demographics and health facility. Socio demographic such as educational status, discussion on place of delivery and male partners' involvement were factors associated with skilled birth attendance utilizations in multivariate logistic regression analysis.

The study results showed that delivery attended by skilled attendant were 9.4 % , where as 1.9% delivered in the health post and the majority of mothers (88.7%) gave birth at home in the District. This study finding was almost similar with National and a bit higher than Oromiya region skilled birth attendance utilizations, EDHS shows 10% and 8%, respectively (5). This difference was possibly due to better accessibility of health center in the district than other Oromiya Districts. This result was also in agreement with the findings of community based cross sectional study among mothers of reproductive age group done in Sheka, Ethiopia which indicates 9.5% delivery attended by skill attendant (7) and a bit lower than study conducted in Seka, Ethiopia which showed 12.1 % delivered at health institutions, respectively (7, 26). Possibly similarity was due to similar socio-cultural back grounds and coverage of health facility with Sheka. But the finding was much lower than other studies done in Afar region, Asayta and Dupti Towns in which skilled delivery service utilization rate was 54.2% and in North Shoa, Ephirahatam District which shows 21,4% (6, 16). This large difference could be due study done in Afar Region included only urban Kebeles in which the negative influence of husbands and family members could be lower than rural Kebeles, and urban mothers might be able to decide on their own health.

Most of male partners mentioned the reasons that his wife gave birth at home. Sixty percent of male partners described labor as simple and short, followed by 20.3% due to presence of TBA and 13.4% due to previous home delivery, this was similar to study conducted in Southern Ethiopia, Sheka Zone which shows reasons of home deliveries, 57.2 % due to labor was short and lower proportion than 21.7% previous home delivery (26).

When knowledge on complications related to pregnancy was assessed, 21.4% of male partners responding that they did not know at least one of the pregnancies related complications. Of those mentioned pregnancy related complications, 287 (49.9%), 154 (26.7%) and 151 (26%) said pregnancy related complications, vaginal bleeding, reduced/absence of fetal movement and leakage of amniotic fluid before onset of labor, respectively. But, only 108 (18.8%) mentioned at least three complications related to pregnancy and classified as better knowledge. This study agrees with study conducted in Kenya 24.9% of male partners responding that they did not know a single complication (10). This was possibly due to socio cultural similarity. On the other hand, only 102 (17.7%) answers at least three complication related to labor and delivery, but 83% know at least one complication related to labor which was higher than study conducted in Nigeria in which 53.5% mentioned at least one complication that may occur during pregnancy, 52.9% during delivery as compared to knowledge of at least one complication by 78.6% and 83% of male partners in this study, respectively (27). This was may be due to awareness creation on danger signs by Health Extensions Workers at community level than Nigeria.

Regarding the benefits of SBA utilization this study shows that 85% of male partners know at least one benefit of health facilities delivery service. From this 46% mention early detection of the problems, 35.5% timely treatment of the problems and 31% mentioned better newborn care which was lower than study conducted in Malawi in which 53% mentioned early detection of the problems, 41% timely treatment of the problems and 45% mentioned better newborn care (12).

On the other hand, 63.3% male partners reported role played by male partners during labor time was calling TBA/TTBA, 28.5% provide transport or gave money for transport, 23.4% accompanies the patient to labor unit. While 15.8% and 2.6% reported role of the male partners were keeping older children and food preparation, respectively. Seven percent of male partners reported their role during labor as praying and collecting water. Compared to other findings from Uganda, the results were lesser in which 68.6% accompany the patient to labor unit, and 43.4% provide transport or gave money for transport (17). Most of the male partners (53.4%) prepared by food when his spouse becomes pregnant. While only 21% and 18.4% of male partners prepared by accessory materials and by saving money, respectively. This possibly due to most male partners considered preparation for child birth was only a responsibility of women.

This study has also identifies socio-demographic, socio-economic and other factors associated with male involvement in spousal SBA utilization. Socio demographic characteristics like educational background and male partner's involvement in spousal SBA utilizations, male partners those discuss with their wives about place of delivery were factors associated in male

partner's involvement in spousal skilled birth attendant utilization were identified in multivariate logistic regression analysis. In this study, there are no marked variations by monthly incomes in utilization of skilled birth attendance but a study in Northern Ethiopia had revealed that monthly income 400 and above was more than 3 times more utilized the service than monthly income below 100 birr. But Male partner's age, ethnicity, religion and occupation had not significant association in multivariate analysis with spousal SBA utilization.

These finding clearly show that, male partners who completed at least primary school were more than three and half times as likely his wife to give birth at Health center or Hospital than those with non-formal educational level [AOR=3.58, 95% CI=1.35, 9.53]. Since education leads to better health awareness, this may sensitize the family to decide and utilize health care provision at various facilities. Therefore, husbands with better education could be able to decide timely.

This was similar with study conducted in SSN, Sheka Zone, husband who completed at least secondary school were more than three times as likely to give birth at HF than those uneducated [AOR=3.26, 95% CI=1.51-7.06].

On the other hands male partners, those better involved in spousal maternal health service utilization during pregnancy were more than fifty times more likely their spouses assisted by skilled birth attendants than those whose partners have a less involvement [OR=54.46, 95% CI=12.22, 242.67]. Also male partners those discuss with their wives about place of delivery four times their spouse assisted by skilled attendant [AOR=4.29, 95% CI=1.36, 13.85]. Possibly due to male partners who were involved make a necessary decision on time during childbirth and better prepared to use skilled delivery than counter parts.

To identify factors that affects male involvement in spousal SBA utilization, multivariate analysis involving all p-value less than 0.25 variables on male partner's involvement in spousal SBA utilization were seen and only educational level and male partners that accompany during ANC visits with their wives showed significant association with male partner's involvement.

The study showed that, 24.7% of male partners were involved in spousal SBA utilization. This was higher than study conducted in Kenya Bursa which was very low (10). Majority of the male partners and focus group discussion discussants also reported that men regarded delivery as a natural phenomenon and hence saw no need of being involved. There was statistically significant difference between the educational level of the male partner and level of involvement ( $P=0.000$ ), more male partners with formal education more involved in spousal SBA utilization than those with non-formal educated male partners. It can be argued that male partners with some basic level of education better understand the complications associated with unskilled delivery.

Education also enables men to discard the negative attitudes and cultural beliefs. The study findings also agree with the findings of a study conducted in Nigeria to assess birth preparedness, complication readiness and father's participation in maternity care, which established that male partners with formal education were more likely to participate in spousal maternity care compared to those with non-formal education (20). Education was one of the major socio demographic factors that influence an individual behavior and attitude. The findings were also consistent with the findings in Tanzania, and Bangladesh (13, 28). On the other hand this study identify identifies male partners those accompany their wives during maternity care also determines male partner's involvement in utilizations of SBA by their spouses.

It can be argued that the thinking of men that delivery was a natural phenomena arise from their lack of knowledge regarding the complications that are associated with pregnancy, labour and delivery, and that perception has affected the male partner involvement in supporting their spouses in accessing delivery services from skilled attendants (10). Possibly since they were better informed, more likely to make better choices, more likely to develop and implement a birth plan, Only 32.7% of male partners accompany their wives during ANC visit and 14.3 % discussed with health workers about place of delivery, this finding was much lower than a study conducted in Uganda where 65.4 % accompany of them his wife during ANC visit (17).

Male partners who completed at least primary school were about eight times more likely involved in their spousal uses SBA than with no formal education [AOR=8.14, 95% CI=4.14, 16.00]. Male partners who discuss with their wives about place of delivery were more than five times as likely involved in their spousal uses SBA than those uneducated (AOR=50.8, 95% CI=20-128.5). This study results also agrees with study conducted in Kenya Bursa, established that the male partner's level of education (P=0.000) have an effect on his involvement in supporting his spouse to access delivery services from skilled attendants (10). On the other hand, there was no significant association between age of a male partner, occupation, monthly incomes, ethnic group or religion of male partners and male involvement in spousal skilled birth attendant utilizations.

## **7. Strengths and limitations of the study**

### **Strengths**

- The main strength of this study is that being community based, it could reflect the actual experience of the male partners during the study period.
- The study used both quantitative and qualitative study methods.
- Random selection of the kebeles and the study units minimized the selection bias in particular.
- Recruitment of data collectors who had completed grade ten and certificate holders, to reduce both selection and information biases since they know all the localities of their respective kebeles, live with respondents, speaks local languages

### **Limitations**

- The cross-sectional nature of the study means that it cannot establish causal associations.
- Recall bias could have been present even after restricting inclusion to males whose spouses last delivered 12 months prior to the survey.
- This study did not address in-depth why more women/male partners are not interested/able to/let to attend birth at health facility by skilled attendants.

## 8. Conclusions

Very low (9.4%) skilled birth attendant delivery utilizations were observed in the study area though 72.2% of the mothers attended at least one ANC services during their last pregnancy. Educational status, male partners those discuss with his wife about place of delivery and level of male partner's involvement were significantly associated with skilled delivery service utilization. 21.4% and 17% of male partners did not know at least one of the pregnancies and labour related danger signs. Only 24.7% of the male partners were involved in their spousal SBA utilization. Low levels of education, low knowledge of male partners on complications related to pregnancy and delivery, preference of the community to use the traditional birth attendants have affected the participation of male partners in promoting skilled deliveries for their spouses. Majority of the male partners exhibited negative views on child birth, viewing it as simple and short course of natural phenomena, and therefore, they see no need of being involved. Educational levels and were the main independent variable associated with male involvement in their spouses uses SBA. Moreover, to explore cultural factors and traditional beliefs related with involvement of male partners in spousal SBA utilization, qualitative study needs to be conducted.

## 9. Recommendations

Based on the findings of the study, the following recommendations were made.

### **At Policy and Program Level**

- There is a need for planners of maternal health programs to develop innovative approaches that promote male partners involvement in spousal skilled birth attendance utilization in at various levels.
- Should develop strategies to empower men with knowledge about skilled delivery services. Such strategies may contribute to increasing male partner's involvement in support to spousal SBA utilizations and improve skilled attendance at delivery service and improve maternal health outcomes.

### **At Facilities Level**

- Health facilities especially those closer to the rural majorities have to be equipped with basic equipments, water supply, and electricity and kept clean.
- Health care providers should provide information on risks of pregnancy, benefits of giving birth at health facilities, danger signs during pregnancy and labor to male partners.
- Strengthening promotion of antenatal and delivery care and creating strong linkage between the two services.
- Community education about pregnancy and child birth, particularly, the danger sign of pregnancy, labour and delivery and the actions ensuing complication need to get particular attention.

### **At Community level**

- TBAs and HEWs should be made aware of obstetric dangers signs and complications and when to refer mothers with complications.
- To increases the knowledge on obstetric danger signs, extensive awareness creation for male partners on risks of pregnancy, danger signs of pregnancy and labor has to be conducted in community levels by HEWs.
- For men to make the right decision for their wives regarding place of delivery and professional attention, they need to understand the importance of maternal health care.

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## **11. Annexes**

### **Annex 1: Informed Consent**

#### **Addis Ababa University**

#### **College of Health Science, School of public health,**

A structured Questionnaire for interview of male partners to assess factors associated with male involvement in spousal SBA utilization in Berbere District.

#### **Introduction**

Good morning/good evening, my name is \_\_\_\_\_ and I am from the research team of AAU, SPH which is currently carrying out Survey of male involvement in spousal skilled birth attendant utilization among husband that have under one child in Berbere Woreda , in scientifically sampled kebeles. The study design is community based Cross-sectional survey. The data will be collected through interview. The interview is voluntary and will take about 30 minutes.

#### **Information Sheet**

The purpose of this study is to identify factors affecting male partner involvement in spousal SBA utilization. This information enables the government and other stakeholders to develop programs to improve maternal health services. Health professional assisted at child birth improves maternal and newborn health. However, involvements of male partners are low. That is why we are collecting this information to identify factors influencing utilization of this important service. Your responses will be kept confidential by using coding and there will be no way of linking your individual responses to the final results of the study findings at any times.

### **Informed Consent**

As you are part of this survey I am collecting your information on socio-demographic, perception and knowledge about delivery risk, and health service utilization. The interview will take about 30minutes. Be assured that your name will not be recorded and any other identifying information will be kept confidential.

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 you would normally receive. You may stop the interview at any time. Do you have any questions on what we talked so far?

Now, do you agree to participate in the survey?

Yes \_\_\_\_\_ No \_\_\_\_\_

If no respect the decision and thank him .If yes continues the interview.

Interviewer name \_\_\_\_\_ signature \_\_\_\_\_ Date \_\_\_\_\_

For more information it is possible to contact the investigator by the following address;

Tadesse Gonfa

Mobile: 0911935584/0922761511

E-mail: [tadessebale@yahoo.com](mailto:tadessebale@yahoo.com) or

[yohatadesse@gmail.com](mailto:yohatadesse@gmail.com)

## Annex 2. English Version of Questioner

### Households Identification

001. Questionnaire code \_\_\_\_\_

002. Woreda \_\_\_\_\_ 003. Kebele \_\_\_ 004. Goti -----Date of data collection \_

### Section I: Background characteristics of the women

Ser. No	Question	Coding categories	Code	Skip
101	How old are you? ----- in complete years	<ul style="list-style-type: none"> <li>• Less than 20 years</li> <li>• 20-34 years</li> <li>• 35-49 years</li> <li>• 49years &amp; above</li> </ul>	1 2 3 4	
102	To which ethnic group do you belong?	<ul style="list-style-type: none"> <li>• Oromo</li> <li>• Amhara</li> <li>• Somali</li> <li>• Others, specify _____</li> </ul>	1 2 3 97	
103	What is your religion?	<ul style="list-style-type: none"> <li>○ Muslims</li> <li>○ Orthodox</li> <li>○ Protestants</li> <li>○ Others, specify _____</li> </ul>	1 2 3 97	
104	Marital status	<ul style="list-style-type: none"> <li>• In union/Married</li> <li>• Separated</li> <li>• Widowed</li> <li>• Divorced</li> </ul>	1 2 3 4	
105	What is the highest level of school you completed?	<ul style="list-style-type: none"> <li>• No formal education</li> <li>• Primary level</li> <li>• Secondary level</li> <li>• More than secondary level</li> </ul>	1 2 3 4	
106	What is you occupation?	<ul style="list-style-type: none"> <li>• Employed</li> <li>• Farmer</li> <li>• Merchant</li> <li>• Others</li> </ul>	1 2 3 97	
107	House hold incomes per month -----ETB	<ul style="list-style-type: none"> <li>○ 500 birr</li> <li>○ 500-1500</li> <li>○ 1500</li> </ul>	1 2 3	

## Section II: Background characteristics of wife

Ser. No	Question	Coding categories	Code	Skip
201	How old were you wife?	<ul style="list-style-type: none"> <li>• &lt; 20</li> <li>• 20-34 years</li> <li>• 35-49 years</li> <li>• 49years &amp; above</li> </ul>	1 2 3 4	
202	To which ethnic group she belong?	<ul style="list-style-type: none"> <li>• Oromo</li> <li>• Amhara</li> <li>• Somali</li> <li>• Others, specify _____</li> </ul>	1 2 3 97	
203	What was her religion?	<ul style="list-style-type: none"> <li>○ Muslims</li> <li>○ Orthodox</li> <li>○ Protestants</li> <li>○ Others, _____</li> </ul>	1 2 3 97	
204	What was her highest level of school she completed?	<ul style="list-style-type: none"> <li>• No formal education</li> <li>• Primary</li> <li>• Secondary</li> <li>• More than secondary</li> </ul>	1 2 3 4	
205	What was her occupation?	<ul style="list-style-type: none"> <li>• Employed</li> <li>• House wife</li> <li>• Merchant</li> <li>• Others, specify _____</li> </ul>	1 2 3 97	

## Section II Husband's perception, Knowledge and Attitudes on skilled birth attendant

S. No	Question	Coding categories	Code	Skip
301	Where your wife was give birth older than youngest child?	<ul style="list-style-type: none"> <li>• Home</li> <li>• Health facility</li> <li>• Others, specify _____</li> </ul>	1 2 97	
302	Do you think any women may face complication during pregnancy?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Don't know</li> </ul>	1 2 → 99	304
303	Which of the following you think associated danger signs during pregnancy? More than one answer was possible.	<ul style="list-style-type: none"> <li>• Swelling of leg/face Yes___ No ___</li> <li>• Vaginal bleeding Yes___ No ___</li> <li>• Reduced/absence of fetal movement Yes___ No ___</li> <li>• Increased BP Yes___ No ___</li> <li>• Leakage of amniotic fluid without labor Yes___ No ___</li> <li>• Blurring of vision Yes___ No ___</li> <li>• Sever head ache Yes___ No ___</li> <li>• Others, specify-----</li> </ul>		
304	Do you think any women may face complication during delivery?	<ul style="list-style-type: none"> <li>• Agree</li> <li>• Disagree</li> <li>• Do not know</li> </ul>	1 2 → 99	308
305	Which of the following you think associated danger sings during labour? More than one answer was possible.	<ul style="list-style-type: none"> <li>○ Excessive vaginal bleeding, Yes__ No __</li> <li>○ Prolonged labor (&gt;12 hrs) Yes___ No __</li> <li>○ Retained placenta (&gt;1hr) Yes___ No ___</li> <li>○ Fetal death Yes___ No ___</li> <li>○ Loss of consciousness Yes___ No ___</li> <li>○ Other, specify -----</li> </ul>		
306	Do you know dander signs during labour are treatable.	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Do not know</li> </ul>	1 2 99	
307	If the danger signs happened, what measure you took?	<ul style="list-style-type: none"> <li>• Taken to HF's</li> <li>• Took to traditional medicine</li> <li>• Consulted CHWs</li> <li>• No action taken</li> <li>• Other, specify-----</li> </ul>	1 2 3 4 97	

308	Does your wife have prenatal service for the last child?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Do not know</li> </ul>	1 2 → 99	311
309	If yes, do you accompany her for ANC?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	1 2	
310	How many times she attended prenatal care?	<ul style="list-style-type: none"> <li>• One</li> <li>• 2-3</li> <li>• 4<sup>+</sup></li> <li>• Don't know</li> </ul>	1 2 3 99	
311	Place of your wife deliver last birth?	<ul style="list-style-type: none"> <li>• Health center/Hospital</li> <li>• health post</li> <li>• Home</li> <li>• Other, specify -----</li> </ul>	1 → 2 3 4 97	If HFs 314
312	If she delivered at home who assisted her during delivery?	<ul style="list-style-type: none"> <li>• Health workers</li> <li>• TTBA/TBA</li> <li>• Close relatives/friends</li> <li>• HEWs</li> <li>• Others specify _____</li> </ul>	1 2 3 4 97	
313	Why do your wife prefer at home? More than one answer was possible.	<ul style="list-style-type: none"> <li>• Facility too far Yes___ No ___</li> <li>• Poor quality of health facilities Yes___ No ___</li> <li>• Too much cost of health facilities Yes___ No ___</li> <li>• Labor was smooth and short Yes___ No ___</li> <li>• Lack of transport Yes___ No ___</li> <li>• Her preference Yes___ No ___</li> <li>• Previous home delivery Yes___ No ___</li> <li>• Presence of TBA/TTBA Yes___ No ___</li> <li>• Others, specify -----</li> </ul>		
314	Why do your wife prefer at HFs?	<ul style="list-style-type: none"> <li>○ HF near to her Yes___ No ___</li> <li>○ Need better services Yes___ No ___</li> <li>○ Difficult labor Yes___ No ___</li> <li>○ Bad out comes with previous delivery Yes ___No —</li> <li>○ Was told to delivery at HF Yes___ No ___</li> </ul>		

		<ul style="list-style-type: none"> <li>○ Previous good outcomes with delivery at HF Yes___ No ____</li> <li>○ Other, specify-----</li> </ul>		
315	Being attended by a skilled birth attendant may beneficial to the newborn's well being?	<ul style="list-style-type: none"> <li>● Agree</li> <li>● Disagree</li> <li>● Do not know</li> </ul>	1 2 99	
316	Health professionals at HF's are skilled enough to detect and treat delivery complication?	<ul style="list-style-type: none"> <li>● Agree</li> <li>● Disagree</li> <li>● Do not know</li> </ul>	1 2 99	
317	Do you think child birth was risk?	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> <li>● Do not know</li> </ul>	1 2 99	→ 318
318	For whom it was dangers? Multiple responses were possible	<ul style="list-style-type: none"> <li>○ To mothers      Yes___ No ____</li> <li>○ To neonates      Yes___ No ____</li> <li>○ To both      Yes___ No ____</li> </ul>		
319	Do you know any benefits of giving birth at HF's	<ul style="list-style-type: none"> <li>○ Yes</li> <li>○ No</li> <li>○ Do not know</li> </ul>	1 2 99	→ 401
320	What benefits do you know? More than one answer was possible.	<ul style="list-style-type: none"> <li>○ Early detection of problems      Yes___ No ____</li> <li>○ Timely treatment of problems      Yes___ No ____</li> <li>○ Better new born care      Yes___ No ____</li> </ul>		

### Section IV: Husbands' Role in Skilled delivery utilizations

S. No	Question	Coding categories	code	Skip
401	Do you have any preparation during your wife pregnant?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	1 2 →	403
402	What was your preparation? Multiple responses were possible.	<ul style="list-style-type: none"> <li>○ Money Yes___ No ____</li> <li>○ Food Yes___ No ____</li> <li>○ Accessory materials Yes___ No ____</li> <li>• Others _____ specify</li> </ul>		
403	Do you have any preparation for delivery?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>	1 2 →	405
404	What was your role during delivery? Multiple responses were possible.	<ul style="list-style-type: none"> <li>• Provided transport/ money Yes ___ No ____</li> <li>• Accompanied patient to labor unit Yes _ No __</li> <li>• Stayed home with children Yes ___ No ____</li> <li>• Calling TTBA/TBA Yes ___ No ____</li> <li>• Support/assist her Yes ___ No ____</li> <li>• Others, specify _____</li> </ul>		
405	Who pay costs of transport and hospital care?	<ul style="list-style-type: none"> <li>• Used saved own money by mothers</li> <li>• Husband provided the money</li> <li>• Other relative provided money</li> </ul>	1 2 3	
406	Do you discussion with your wife about place of delivery?	<ul style="list-style-type: none"> <li>○ Yes</li> <li>○ No</li> </ul>	1 2	
407	Do you discussion with health professions about place of delivery?	<ul style="list-style-type: none"> <li>○ Yes</li> <li>○ No</li> </ul>	1 2	
408	Final decision maker about place of delivery	<ul style="list-style-type: none"> <li>• Myself</li> <li>• My wife</li> <li>• Both of us</li> <li>• Others, specify _____</li> </ul>	1 2 3 97	

THANK YOU

Name of data collector \_\_\_\_\_

Signature \_\_\_\_\_

Name of supervisé \_\_\_\_\_

Signature \_\_\_\_\_

### Annex 3: Guide lines for FGDS participants

1. What are complication that may occurs:  
During pregnancy and during labour
2. How do you see the status of delivery care (child birth) at health institutions?
  - Equipments and supplies, Staffing skill and Quality of care
3. In your opinion what are the most important factors that affect delivery provision?
  - Staffing (skill, behavior, commitment)
  - Equipment, supplies, infrastructure (drug, electricity, water...)
  - Transport(ambulance)
  - Service fee, User unable to afford
  - Lack of privacy
4. Where do women in your area prefer to deliver?
  - a) Home, Why?
  - b) Health facilities, why?
5. Where do you think the best place for delivering a child? Why?  
Home /Health institutions
6. Who do think the best person to assist during delivery? Why?  
Health workers, Traditional birth attendants, Relatives ....
7. What was the role of husband during labour of his wife?
8. Barriers of involving male in delivery
  - a. Culturally shames
  - b. Socio-economy
  - c. Knowledge gaps
  - d. Wife unwillingness in husband participations

## **Annex 4: Afan Oromo Version of Survey Questionnaires**

### **Univarsitii Finfinnee, Damee Barumsa Fayyaa Hawaasaa**

Gaafillee qindaa'a qo'annoo hirmaanaa Abbaa Warraa tajaajila da'umsaa ogeesa fayyaattiin fayyadamuu.

Akkam jirtan! Maqaan kiyya ----- jedhama, ani miseensa garee qorannoo kanaa keessaa isa tokko. Waa'ee Qorrannoo kanaa irrattii yeroo gababaaf akka waliin mariyannuu barbaada'. Marii keenyatti seenuu dura Kayyoo fi haala waligala qorranno kanaa yero siif dubbisuu sirritti eega dhaggefatee booda qorrannoo kana kessatti hirmaachu fi hirmaachu dhabuu kee akka naaf ibistuu si gaafadha.

#### **Unkkaa Oddefannoo**

Kayyoon qorannoo kanaa beekumsa midhaalee yeroo ulfaa fi yeroo da'umsaa walqabatan fi hirmaanaa abbaa warraa dubartoota waggaa tokkoon dabran keessa dahan Kan Aana Barbaree ilaaludha. Oddefannoo qorrannoo kanaa irraa argamuu fayyaa haawwani fi daa'imani foyyessu fi rakkoolee fi du'a sababoota ulfa fi dahumsa wal qabattan irri'suuf gargaara.

Oddefannoon karaa gaafi fi deebiitiin sassabama. Gaafi fi deebii kan fedhi irratti hunda'ee fi shallaggiin hanga daqiiqa 30 fudhachuu danda'aa. Deebiin keessan iccitidhan qabama. Deebiin namoota dhunfaa karaa kaminuu bu'aa argannoo qorrannoo kanatiin wal hinqabatu. Gabbasni bu'aa qorrannoo kana yoo kan maxxafamuu tahee iddeffannoo wali galaatin qofaatu dhihaata.

## Unkaa waliigaltee Afaanii

Nagaa bultanii/ oltanii , maqaan koo \_\_\_\_\_ yoo jedhamu kanan dhufe Univarsitii Finfinnee dame dhaabata qo'annoo irraa bakka bu'ee yoota'u qa'onnoo hirmaanaa Abbaa warraa tajaajila da'umsaa ogeesa fayyaatiin kennamu argachuu irratti aanaa Barbaree gandoota carraan filataman irratti gegeesu dha. Akka hirmaataa qa'onnoo kanaata ragalee bu'ura Hawaasummaa, hubbannoo.ilaalicha fi beekumsa akkasumas rakkoolee da'umsaa walin waliqabatee dhufuu danda'u irratti nifunaanama.tajaajila da'umsaa ogeesa fayyaatiin kennamutti fayyadamuun fayyaa haadholeefi daa'imani fooyesuuf gahee qaba. Haata'u malee hirmaanaa abbaa warraa baayi'ee xinnoo dha. Sanaaf ragalee kana funaanuun barbaachise. Ragalee kun qajeelfamoota fi tarsimoo mootummaa basuuf gahee mata isaa qaba. Gaafiin daqiqaa 30 kan fudhatu yoo ta'u maqaan kee kan hin ibsamineefii icittiin kee kan eegamu ta'uu isaati.

Hirmaanaan kee fedhii iraatti kan hundaa'efii guutumaan guututti yookkin muraasa hirmaachuu ni dandeesa.

Hirmaanaan kee kan fedhii irratti hundaa'e ta'ee tajaajila fayyaa argachuuf dhiibaa tokko hin qabu. Gaafilee yeroo barbaadetti addaan kutuu nidandeeta. Gaafii ni qandaa?

Amma, irratti hirmaachuufi murteesitee jirtaa?

Eeyyee \_\_\_\_\_ lakkii \_\_\_\_\_

Yoo lakki jedhan galateefadhaa gegeesaa, yoo eeyyee jedhan itti fufaa.

Maqaa Gaafataa \_\_\_\_\_ mallattoo \_\_\_\_\_ guyyaa \_\_\_\_\_

Odeefannoo Dabalataatiif

Taaddasaa Gonfaa

Lakk. Bilbilaa 0911935584/0922761511

E-mail: [tadessebale@yahoo.com](mailto:tadessebale@yahoo.com)

[yohatadesse@gmail.com](mailto:yohatadesse@gmail.com)

**Gaafilee Qo’annoo hirmaana Abba Warraa itti faayyama tajaajila da’umsaa ogeesa fayyaatii kennamu irratti qaban, Aanaa Barbarree, Godina Baalee, Naannoo Oromiyaa, Itiyoopiyaa, 2013**

1 .Abbaa Warraa adda baasuu

001. Koodii Gaafilee \_\_\_\_\_ 002. Aanaa \_\_\_\_\_ 003. Ganda , 004. Gooxxi -----

**Kutaa I: Ragaa bu’uraa kan Hawaasummaa Abbaa Warraa**

T.L	Gaafilee	Raammaddii Garee	Koodii	Darbi
101	Umriin keessan waggaa meeqaa? Waggaa guutuun _____	<ul style="list-style-type: none"> <li>• Waggaa 20gadi</li> <li>• 20-34</li> <li>• 35-49</li> <li>• 49 fi sanaa oli</li> </ul>	1 2 3 4	
102	Sabni keessan maalii?	<ul style="list-style-type: none"> <li>• Oromoo</li> <li>• Amaara</li> <li>• Sumaalee</li> <li>• Kan biroo, ibsi _____</li> </ul>	1 2 3 97	
103	Amantaan keessan kamii?	<ul style="list-style-type: none"> <li>○ Musliima</li> <li>○ Ortoodoksii</li> <li>○ Proteestantii</li> <li>○ Kan biroo, _____</li> </ul>	1 2 3 97	
104	Haala fuudhafii heerumaa	<ul style="list-style-type: none"> <li>• Fudhee/waliin jira</li> <li>• Addan bahee</li> <li>• Jalaa dutee jirti</li> <li>• Hiikee jira</li> </ul>	1 2 3 4	
105	Barumsa hanga meeqaa baratee jirtaa?	<ul style="list-style-type: none"> <li>• Barumsa bu’uraa</li> <li>• Sadarkaa tokkoffaa</li> <li>• Sadarkaa lammaffaa</li> <li>• Sadarkaa lammaffaa oli</li> </ul>	1 2 3 4	
106	Hojiin keessan malii?	<ul style="list-style-type: none"> <li>• Qacaramanii hojetu</li> <li>• Qonaan bulaa</li> <li>• Daldalaa</li> <li>• Kan biroo. Ibsi _____</li> </ul>	1 2 3 4	
107	Galii ji’aani argatu meeqaa? Maallaqa Itiyoopiyaa _____	<ul style="list-style-type: none"> <li>○ Qarshii 500 fi sanaa gadi</li> <li>○ 500-1500</li> <li>○ 1500 fi sanaa oli</li> </ul>	1 2 3	

## Kutaa II: Ragaa Bu'uraa kan Hawaasummaa Haadha manaa

T.L	Gaafilee	Raammaddii Garee	Koodii	Darbi
201	Umriin hadha waraa keessan waggaa meeqaa?	<ul style="list-style-type: none"> <li>• Waggaa 20gadi</li> <li>• 20-34</li> <li>• 35-49</li> <li>• 49 fi sanaa oli</li> </ul>	1 2 3 4	
202	Sabni ishee kamii?	<ul style="list-style-type: none"> <li>• Oromoo</li> <li>• Amaara</li> <li>• Sumaalee</li> <li>• Kan biroo, ibsi_____</li> </ul>	1 2 3 97	
203	Amantaan ishee kamii?	<ul style="list-style-type: none"> <li>○ Musliima</li> <li>○ Ortoodoksii</li> <li>○ Proteestantii</li> <li>○ Kan biroo, _____</li> </ul>	1 2 3 97	
204	Barumsa hanga meeqaa baratani?	<ul style="list-style-type: none"> <li>• Barumsa bu'uraa</li> <li>• Sadarkaa tokkoffaa</li> <li>• Sadarkaa lammaffaa</li> <li>• Sadarkaa lammaffaa oli</li> </ul>	1 2 3 4	
205	Hojiin isanii malii?	<ul style="list-style-type: none"> <li>• Qacaramanii hojetu</li> <li>• Haadha manaati</li> <li>• Daldaala</li> <li>• Barataa</li> <li>• Kan biro, ibsi; -----</li> </ul>	1 2 3 4 97	

**Kutaa III: Beekumsaafi ilaalicha abba warraa itti fayyadama tajaajila da'umsa ogeesa fayyati kennamu irratti qaban**

T.L	Gaafilee	Raammaddii Garee	Koodii	Darbi
301	Haati warraa keessan hangafa daa'ima xiqqaa eessatti da'anii?	<ul style="list-style-type: none"> <li>• Mana</li> <li>• Dhaabilee fayyaa</li> <li>• Iddoo biroo, ibsi-----</li> </ul>	1 2 97	
302	Dubartii yeroo ulfaa rakkoon niqunama jettee niyaadaa?	<ul style="list-style-type: none"> <li>• Eeyyee</li> <li>• Miti</li> <li>• Hin beeku</li> </ul>	1 2 99	→304
303	Rakkoowwan armaan gadii keessa kamitu qunamuu danda'a? Deebii tokkoo oli nidanda'ama.	<ul style="list-style-type: none"> <li>• Dhitoo lukaa ykn fuulaa Eyee ___ Miti _____</li> <li>• Dhiiga qaama saalatiin bahuu Eyee ___ Miti _____</li> <li>• Sochiin daa'ima dhaabachuu Eyee ___ Miti _____</li> <li>• Dhiibaani dhigaa dabaluu Eyee ___ Miti _____</li> <li>• Dhangala'ani jiguu Eyee ___ Miti _____</li> <li>• Ijarratii martoo maruu Eyee ___ Miti _____</li> <li>• Bowoo cimaa Eyee ___ Miti _____</li> <li>• Kan biro, ibsi -----</li> </ul>		
304	Dubartiin yeroo da'umsaa rakkoon niqunama jettee niyaadaa?	<ul style="list-style-type: none"> <li>• Walii gala</li> <li>• Walii hin galu</li> <li>• Hin beeku</li> </ul>	1 2 99	→308
305	Rakkoon yeroo da'umsaa qunamuu danda'u kamii? Deebii tokkoo oli nidanda'ama.	<p>Dhiigni baayi'een qaama salaam bahuu Eyee ___ Miti _____</p> <p>Ciniinsuun sa'aa12 oli yoo irra ture Eyee ___ Miti _____</p> <p>Obbaatiin sa'aa tokko oli yoo ture Eyee ___ Miti _____</p> <p>Daa'imin yoo du'e Eyee ___ Miti _____</p> <p>Ofi walaaluu Eyee ___ Miti _____</p> <p>Kan biro, ibsi -----</p>		
306	Rakkoon yeroo da'umsaa qunamu yaalamuu nidanda'aa?	<ul style="list-style-type: none"> <li>• Eeyyee</li> <li>• Miti</li> <li>• Hin beeku</li> </ul>	12 2 99	→308
307	Rakkoon yoo qunama maali gochuu qabnaa?	<ul style="list-style-type: none"> <li>• Dhaabata fayyaa geesuu</li> <li>• Yaala aadaa geesuu</li> <li>• Hojetoota fayyaa hawasaati himuu</li> <li>• Homaa hin godhamu</li> <li>• Kan biro, ibsii -----</li> </ul>	1 2 3 4 97	

308	Haati warraa keessan tajaajila da'umsa duraa argatee?	<ul style="list-style-type: none"> <li>• Eeyyee</li> <li>• Miti</li> <li>• Hin beeku</li> </ul>	1 2 → 311 99	
309	Yeroo hati warraa kee tajaajila da'umsaa deemtu waliin deemtee jirtaa?	<ul style="list-style-type: none"> <li>• Eeyyee</li> <li>• Miti</li> </ul>	1 2	
310	Yeroo meeqa tajaajila argatan? Kaardiin yaa ilaalamu	<ul style="list-style-type: none"> <li>• Tokko</li> <li>• 2-3</li> <li>• 4 fi sanaa oli</li> <li>• Hin beeku</li> </ul>	1 2 3 97	
311	Daa'ima xinnoo eessatti daa'ani?	<ul style="list-style-type: none"> <li>• Buufata Fayyaa/Hospitaala</li> <li>• Keellaa fayyaa</li> <li>• Mana</li> <li>• Kan biroo, ibsii -----</li> </ul>	1 → 2 3 97	Dhaab ilee fayyaa 314
312	Manatti yoo deese yeroo da'umsaa eenyutu gargaaren?	<ul style="list-style-type: none"> <li>• Ogeesa fayyaa</li> <li>• Deesistuu aadaa</li> <li>• Fura dhiihoo/hiri'aa</li> <li>• Hojetoota iksteenshinee fayyaa</li> <li>• Kan biroo, ibsii _____</li> </ul>	1 2 3 4 97	
313	Maaliif hati manaa keessan manatti da'uu filatani? Deebii tokkoo oli nidanda'ama.	<ul style="list-style-type: none"> <li>• Fageenya dhablee fayyaa      Eyee ___ Miti _____</li> <li>• tajaajila gahumsa qabu waan hin kennineef Eyee ___ Miti ___</li> <li>• Gaatiin dhaabilee fayyaa      Eyee ___ Miti _____</li> <li>• Ciniinsun salpaafi gabaabaa ta'uu      Eyee ___ Miti _____</li> <li>• Geejiba dhabuu      Eyee ___ Miti _____</li> <li>• Filannoo ishee      Eyee ___ Miti _____</li> <li>• Duraan manatti waan deesefi      Eyee ___ Miti _____</li> <li>• Deesistu aadaa waan jiraniif      Eyee ___ Miti _____</li> <li>• Kan biroo, ibsii -----</li> </ul>		
314	Dhaabata fayyaa maaliif filatani? Deebii tokkoo oli nidanda'ama.	<ul style="list-style-type: none"> <li>○ Dhiihoo waan ta'eefi      Eyee ___ Miti _____</li> <li>○ Tajaajila gaarii waan kennaniif      Eyee ___ Miti _____</li> <li>○ Ciniinsun waan itti cimeef      Eyee ___ Miti _____</li> <li>○ Duraan rakkoon waan qunnameef      Eyee ___ Miti _____</li> <li>○ Waan itii himameefi      Eyee ___ Miti _____</li> <li>○ Kan dabre haala gaariin waan deesef      Eyee ___ Miti _____</li> <li>○ Kan biroo ibsii -----</li> </ul>		

315	Ogeesa fayyaatiin dahuun daa'imaaf bu'aa qabaa?	<ul style="list-style-type: none"> <li>• Eeyyee</li> <li>• miti</li> <li>• hin beeku</li> </ul>	1 2 99	
316	Ogeesi fayyaa dhaabata fayyaa keessa7hojetan dandheetifii beekumsa gahaa qabu jettee niyaadaa?	<ul style="list-style-type: none"> <li>• Eeyyee</li> <li>• miti</li> <li>• hin beeku</li> </ul>	1 2 99	
317	Da'uun hameenya qabaa?	<ul style="list-style-type: none"> <li>• Eeyyee</li> <li>• Miti</li> </ul>	1 2	319
318	Eenyuuf hamaadha? Deebiin heddu ni danda'ama	<ul style="list-style-type: none"> <li>• Haadhaaf Eyee ___ Miti _____</li> <li>• daa'imaafi Eyee ___ Miti _____</li> <li>• lachuu Eyee ___ Miti _____</li> </ul>		
319	Dhaabata fayyatti da'uun bu'aa qabaa?	<ul style="list-style-type: none"> <li>○ Eeyyee</li> <li>○ Miti</li> </ul>	1 2	401
320	Bu'aa maalifaa beektaa? Deebii tokkoo oli nidanda'ama.	<ul style="list-style-type: none"> <li>• Rakkoo dafanii adda baasu Eyee ___ Miti _____</li> <li>• Yaala yeroon kennuuf Eyee ___ Miti _____</li> <li>• Daa'ima dhalateef kunuunsa gaarii godhu Eyee ___ Miti _____</li> </ul>		

Kutaa IV: Gahee abbaa warraa tajaajila da'umsaa ogeesa fayyattiin argachuu irratti qabu

T.L	Gaafilee	Raammaddii Garee	Koodii	Darbi
401	Yeroo hati warraa kee ulfaa qophii nigootaa?	<ul style="list-style-type: none"> <li>• Eeyyee</li> <li>• Miti</li> </ul>	1 2 →	403
402	Qophii akkamii taasiftaa? Deebii tokkoo oli nidanda'ama.	<ul style="list-style-type: none"> <li>• Maallaqaan Eyee ___ Miti ___</li> <li>• Nyaata Eyee ___ Miti ___</li> <li>• Meeshalee barbaachisoo Eyee ___ Miti _</li> <li>• Kan biro, ibsi _____</li> </ul>		
403	Yeroo hatti warra kee deesu qophii nigootaa?	<ul style="list-style-type: none"> <li>• Eeyyee</li> <li>• Miti</li> </ul>	1 2 →	405
404	Yeroo da'umsaa gaheen kee maalii ? deebii tokko oli ni danda'ama.	<ul style="list-style-type: none"> <li>• Geejiba/ Mallaqaa kennuu Eyee ___ Miti ___</li> <li>• Dhaabata fayyaa waliin deemuu Eyee ___ Miti ___</li> <li>• Ijoolee qabee mana ta'uu Eyee ___ Miti ___</li> <li>• Deesistuu Aadaa waamuu Eyee ___ Miti ___</li> <li>• Kan biro, ibsii _____</li> </ul>		
405	Tajaajila geejibaa tiif kan yaalaa eenyutu kafalaa?	<ul style="list-style-type: none"> <li>• Kan kuufate kafalti</li> <li>• Abba warratu kennaafi</li> <li>• Firootan birootu kennaf</li> </ul>	1 2 3	
406	Iddoo itti dahuu qabdu waliin mari'atuu?	<ul style="list-style-type: none"> <li>○ Eeyyee</li> <li>○ Lakki</li> </ul>	1 2	
407	Iddoo itti dahuu qabdu ogeesa fayyaa waliin ni mari'atuu?	<ul style="list-style-type: none"> <li>○ Eeyyee</li> <li>○ Miti</li> </ul>	1 2	
408	Baka itti dahuu qabdu eenyutu murteessaa?	<ul style="list-style-type: none"> <li>• Ana</li> <li>• Hadha manaa</li> <li>• Lachuu</li> <li>• Kan biro, ibsi _____</li> </ul>	1 2 3 4	

GALATOOMAA

Maqaa Sasaabaa raga \_\_\_\_\_

mallattoo \_\_\_\_\_ guyyaa \_\_\_\_\_

Maqaa to'ataa \_\_\_\_\_

mallattoo \_\_\_\_\_ guyyaa \_\_\_\_\_

## Annex 5: Afan Oromo Version of guide lines for FGDs participant

Gaaffilee hirmaatota marii gareetiif qophaaye

1. Wantootiin du'aatiif dhukkubii haadholeetiif sababa ta'an maalifaa'a?  
Yeroo ulfaa fi Yeroo da'umsaa
2. Dhaabileen fayyaa tajaajila da'umsaa kenuun sadarkaa maali irra jiru isinitti fakkataa?
  - o Meeshalee fi dhiyeesii birootiin
  - o Humsa namaa guutuu fi dandheetii
  - o Qulqulina tajaajilaa
3. Akka illalcha keettiti rakooleen itti fayyadamu tajaajila da'umsaaf gufuu ta'ani maal malii?
  - o Ogeesa (dandheetii, aamala, kaka'umsa)
  - o Meeshalee, ibsaa , bishaani kkf.
  - o Geejiba
  - o Kafaltii
  - o Icittii eeguu
4. Dubartiin naannoo keessanii eessatti da'uu filatu?
  - a) Mana, maaliif?
  - b) Dhaabilee fayyaa, maaliif?
5. Iddoo kamitu da'umsaaf gaarii jettee yaada?  
Mana, maaliif?, Dhaabilee fayyaa, maaliif?
6. Yeroo da'umsaa eenyu osoo gargaaree gaariidha? Ogeesa fayyaa, Desistuu addaa , Fira/olaa
7. Yeroo ciniinsuu gaheen dhiraal maaliif?
8. Hirmaanaa dhiraal tajaajila da'umsaa ogeesa fayyatiin argachuu irratti wan gufuu ta'ani maaliif?
  - a. Aadaa
  - b. Qabeenya
  - c. Beekumsa dhabuu
  - d. Haati warraa hayyamamaa ta'uu dhiisuu.

## Annex 6: Declaration

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

Name: Tadesse Gonfa (B.Sc)

Signature: \_\_\_\_\_

Date: November, 2013

This thesis work has been submitted for Examination Board with my approval as university advisor.

Name: Mr. Worku Tefera (MPH, PhD fellow)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_