



HOUSEHOLDS' WILLINGNESS TO PAY AND ASSOCIATED FACTORS  
FOR THE NUTRITION SERVICES PROVIDED TO PREGNANT WOMEN  
AT MATERNITY WAITING HOMES IN EAST WOLLEGA, WESTERN  
ETHIOPIA

**By: Adisu Ewunetu (BSc)**

A Research Thesis Submitted to the Jimma University, Institute of Health, and  
Faculty of Public Health, Department of Health Economics, Management and  
Policy in Partial Fulfillment of Requirements for the Master of Science in Health  
Economics

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*Jimma, Ethiopia*

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*October, 2018*

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## **ABSTRACT**

### **Background**

*Maternity waiting home is a residential facility located near qualified medical facilities where pregnant woman can wait to give birth and provided a nutrition service. Lack of access to obstetric services is one of the main causes of the high incidence of maternal and newborn deaths. In Ethiopia, Most (86%) of the Maternity waiting homes had no budget allocated from government funds and there is lack of revenue for the long term sustainability of the nutrition services at Maternity waiting homes. Therefore, this study is important to sustain the services provision to pregnant mothers at the maternity waiting homes.*

**Objective:** *The study aimed to identify an average annual maximum amount of households' willingness to pay and its associated factors for the nutrition service provided to a pregnant women staying at the Maternity waiting homes in East Wollega Zone of Oromia National regional state, Ethiopia, September 2018.*

**Methodology:** *A community based cross sectional study design using double bounded dichotomous choice contingent valuation method was used. The required sample size was determined by using single population proportion. Data entry and analysis were made using EpiData version 3.1 and SPSS for windows version 20 software respectively. Descriptive statistics of frequency, binary and multiple logistic regression analysis were performed. The association between explanatory variables and outcome variable were presented by an AOR and confidence interval.*

**Results:** *A total of 845 respondents included in the study making a response rate of 98%. Majority 80.8% of the respondents reported the seriousness of distance problem to the pregnant women and all (100%) of the respondents reported the importance of the service. About 94.3% of them were willing to pay above the currently paid price. The annual median maximum amount of willingness to pay for the service was 15ETB (US\$0.55) per year per household.*

*The factors significantly associated with willingness to pay for the nutrition service, marital status (being married: AOR=3.533, 95% CI=1.007-12.39), average monthly income (median monthly income 1000ETB: AOR=3.287, 95%CI=1.194-9.049). More over, distance from the health facility (at less than 5KM: AOR = 3.64, 95%CI = 1.256-10.55) and availability of food (AOR=3.714, 95%CI=1.331-10.364), enough beddings (AOR=5.353, 95%CI=2.207-13.010) and availability of cooking facilities (AOR=4.044, 95%CI=1.353-12.088) at a maternity waiting homes were found to be predictors of maximum willingness to pay.*

**Conclusion and Recommendation:** *Maximum willingness to pay is mainly influenced by factors such as: Marital status, monthly income, and distance, availability of food, beddings and cooking facilities at maternity waiting homes. Majority of the respondents reported the seriousness of distance problem and the importance of the service. Almost all of the respondents were interested in and needed to support the services. The annual median maximum amount of willingness to pay per year per household was higher than the currently paid price. Therefore, there should be consideration in the availability of supplies and equipments at maternity waiting homes and in amount of price to be paid per year per household in order to strengthen the long-term financial sustainability of the service.*

**Keywords:** *Maternity waiting home, Nutrition service, pregnant women, Willingness to pay, associated factors.*

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## List of Acronyms and Abbreviations

<b>AOR:</b> .....	Adjusted Odd Ratio
<b>DBDC</b> .....	Double Bounded Dichotomous
<b>CVM:</b> .....	Contingent Valuation Method
<b>ETB:</b> .....	Ethiopian Birr
<b>FMOH:</b> .....	Federal Ministry of Health
<b>HC:</b> .....	Health Center
<b>HDA:</b> .....	Health Development Army
<b>HEW:</b> .....	Health Extension Workers
<b>HF:</b> .....	Health Facility
<b>HH:</b> .....	Household
<b>JU:</b> .....	Jimma University
<b>MNCH:</b> .....	Maternal Neonatal and child health services
<b>MWH:</b> .....	Maternity Waiting Home
<b>NGO:</b> .....	Nongovernmental Organization
<b>OR:</b> .....	Odd Ratio
<b>SD:</b> .....	Standard Deviation
<b>SMAGs:</b> .....	Safe Motherhood Action Groups
<b>SPSS:</b> .....	Statistical Package for the Social Sciences
<b>USD:</b> .....	United States Dollar
<b>WHO:</b> .....	World Health Organisation
<b>WTP:</b> .....	Willingness to Pay

## **CHAPTER ONE: INTRODUCTION**

### **1.1. Background**

Pregnancy is a crucial time to promote healthy behaviors and parenting skills. Inadequate care during this time breaks a critical link in the continuum of care, and affects both women and babies. Good care during this time is important for the health of the mother and the development of the unborn baby. Antenatal care (ANC) and postnatal care (PNC) is a key strategy to improve maternal and infant health.(1-3)

The chances of women dying as a result of complications during pregnancy, delivery or the postpartum period remain high in many parts of the world. Lack of access to obstetric services is one of the main causes of the high incidence of maternal and newborn deaths.(3-5)

In many rural, and poor districts of sub-Saharan Africa; maternal mortality is high and utilization of maternal health services is low. Study done in some parts of Ethiopia showed that maternal mortality and home delivery is still high. Long distances, poor transport facilities and inadequate distribution of health care facilities are responsible for low utilization of health care services in many rural districts in low-income countries(3-5).

Access to comprehensive emergency obstetric care is limited in Ethiopia. Maternity waiting homes are part of the strategies utilized to improve access to hard to reach rural populations. In Ethiopia, the practice has not been adequately assessed so far. It can be one approach to improving access to comprehensive emergency obstetric care for rural mothers in Ethiopia who are challenged by distance to access services(5,7).

Maternity waiting homes (shelters) are residential facilities located near qualified medical facilities where pregnant woman can wait to give birth. The shelters could play a key role in helping ensure access to comprehensive maternity care, provided communities are willing to help sustain them. The aim of the MWH is to improve accessibility and thus reduce morbidity and mortality for mother and neonate should complications arise(4,7).

Active community involvement and quality care within the health care facility are key to the use and sustainability of a MWH. To improve sustainability of these community owned and managed shelters; Contributions, either in the form of individual donations or an annual community contribution, have potential to support the long-term financial sustainability of the shelters. To be successful, maternity waiting homes should have community involvement and support(8-10,33).

Willingness to pay (WTP) is the maximum amount that an individual states they are willing to pay for a good or services, which uses contingent valuation method (CVM). It is also known as contingent valuation method. CVM is about asking people directly what they are willing to pay for goods or services in the future(9,31).

In a CV survey, respondents are presented with a series of policy scenarios where the quality of the services or goods improves or deteriorates in response to protective measures. After ensuring the respondents have reached a sufficient understanding of the policy alternatives and their consequences, a CV survey asks the respondents how much they are willing to pay for the improvement of a given service quality or how much they are willing to accept for the loss of some good or service values(9,21,31).

The mean and median of the willingness to pay can be estimated by analyzing the CV responses statistically. It is based on economic theories that assume utility maximization, which provides a solid theoretical basis to contingent valuation methods including dichotomous choice valuation questions that are being used more frequently(9,31).

Double bounded dichotomous (DBDC) choice is a contingent valuation method which involves two iterated binary questions. The double bound dichotomous choice question format is a method used to improve the efficiency of parameter estimation by inquiring CV respondents with two-stage questions. In the first question, a respondent is asked "Are you willing to pay "A" dollars for a certain service or good." If the answer is yes, the next question is asked with a higher bid. Contrarily, if the answer for the first question is no, the next question is asked with a lower bid. Nowadays, the double bound dichotomous choice question format is widely used in the practice of the CV surveys(9,10).

Therefore, since the service is financed by communities' annual contribution, it is important to study how much they are willing to pay for the service and some of the important factors influencing their motivation to pay for the service by directly asking the households', about their willingness to pay for the service using contingent valuation methods so that to sustain the provision of the service to pregnant mothers staying at maternity waiting homes.

## **1.2. Statement of problem**

The lack of access to obstetric services is one of the main causes of the high incidence of maternal and newborn deaths. The chances of women dying because of complications of pregnancy and childbirth are still high in many parts of the world. The poor utilization of maternal health services and antenatal care in areas where deaths are high is mainly the result of barriers to access. The result of study conducted in different regions of Ethiopia showed that poor utilization of the maternal health services is the main cause of maternal and neonatal death before and during labour(3-6).

Financing health care is a sensitive issue that is currently being discussed around the world. The quality of health services provided and increasing in the healthcare cost are the main concerns related to this. In many developing countries; people are expected to contribute to the cost of healthcare from their own resources. But, willingness to pay for health care is beyond the financial capacity of a person and has multifactorial influences(11).

In developing countries lack of adequate health care budgets is a severe problem. Traditional ways such as raising health care tariffs is not an adequate response to the increasing costs of health care. Lower income groups such as rural residents, unlike medium and higher income groups, lack the ability to pay and are more sensitive to price changes in health care services (7)

Thus; Innovative ways to raise funds for the provision of health services are often sought. However, a rural households' willingness to pay for health care services and if so, how much and what factors determine their willingness to pay for the sustainability of the health care services are still not well known. The need for, and willingness to pay (WTP) for, health care services varies between areas. Average households' willingness to pay may match or exceed the cost of their health care(8).

In Ethiopia, many MWHs were built with the support of the community, which usually contribute money for the services provided to mothers staying at these waiting homes. Funding is required to lower other barriers to utilization, such as food provision. Most (86%) of the MWHs had no budget allocated from government funds and there is lack of revenue for the long term sustainability of the MWH services (11,14-15).

Community participation is mandatory to improve sustainability of this community- owned and managed shelters; but it is unknown how much they might be willing to contribute and what factors determines their willingness to pay for the services to use community-managed shelters. Determining the recurrent cost for a renovating the shelter to provide food and to assess this cost in relation to willingness to pay is important. There are also women who give birth at home because of lack of affordability for the suggested donation at the maternity waiting home service(4-6,10-11).

In addition; studies conducted in different parts of Ethiopia showed that there is shortage of food availability, kitchen utensils and fuel as well as lack of basic social and healthcare services such as; inadequate beddings, water and sanitary services, lack of visits to mothers staying at a MWH were the factors deterring the use of MWHs were some of the barriers to access and utilization of a MWH (6,14-15).

In Ethiopia, concepts such as: - how much households are willing to pay for the nutrition services provided to a pregnant women at a MWH, what are the factors influencing households' WTP for the nutrition service and the households' attitude and support towards the nutrition service provided to pregnant women staying at maternity waiting homes are some of the issues that not addressed regarding the maternity waiting homes.

Since each household contribute annually for the nutrition service provided to pregnant mothers staying at maternity waiting home; this study is, therefore, meant to identify critical factors that determine household's WTP for the nutrition service provided to a pregnant women at a MWH and the maximum amount of households' WTP per year for the nutrition services provided to the pregnant women staying at a MWH. In addition, it is aimed to identify the households' attitude and support torards the nutrition service provided to pregnant women at MWHs.

### **1.3. Significance of the study**

Maternity waiting homes (shelters) in East Wollega Zone are residential facilities located in or around qualified medical facilities where pregnant women come to stay in few weeks before and after delivery at their last trimester of pregnancy to receive essential emergency obstetric care. It solves problems that might be raised before and after deliveries due to second delay (distance of the pregnant women's houses from the qualified health facilities) and important to solve problems that occur during pregnancy as well as during delivery.

Pregnant women who stay at maternity waiting homes should get nutrition services both before and after delivery while staying at the maternity waiting home. The nutrition service (porridge and coffee ceremony) provided to the pregnant women staying at the maternity waiting home are contributed in cash by the households annually.

Since there were no study conducted on the households' willingness to pay for this service and factors affecting the households' WTP for the services were not identified and also there were no a setted tarriff for how much should households have to contribute averagely for the service ; this study is aimed to assess the households' WTP for the nutrition services provided at the maternity waiting home and it will also identify some of the critical factors associated with the households' WTP for the services.

Therefore; the findings of this study will help to:

Contribute policy makers and government the annual maximum amount of money households are willing to pay for the nutrition services provided to a mothers staying at a MWH which helps them for decision making. It will also important identify factors determinig the communities' WTP for the nutrition service so that help health facilities governig bodies minimize those factors. More over, the finding of this study will contribute to identify the value placed on the service by communities through asking their interest in and support to the service. Contribute a base line data for future researchers who want to utilize for further study on this areas.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1. Maternity waiting home**

Maternity waiting home (MWHs) is a residential dwelling located near health facilities where pregnant women stay to await delivery and receive immediate postpartum services or it is a facility within easy reach of a hospital or health centre in which pregnant Women may stay in and provides emergency obstetric care (EmOC). [ 1,7,10-11]

The waiting homes are intended for not only women identified as high risk but also women who live far from the health center or face other geographic barriers, such as rivers during the rainy season. Any pregnant woman is eligible to stay in the waiting homes, but priority is given to women from rural areas (e.g. living more than two hours from the facility by walking) and women with risk factors for complications (e.g. age less than 16 or more than 40 years, first birth, more than six births) (10,11,13)

### **2.2. Importance of MWHs**

The MWH provides the opportunity for pregnant women to come closer to the health facility before labour starts, avoiding the reluctance to walk several miles after contractions begin. It is also used in a variety of settings as a ‘geographic bridge’ to overcome distance and transportation barriers that can prevent women from receiving timely skilled obstetric care[11,12,13] .

Maternity Waiting Homes increase institutional deliveries in this context by addressing some of the factors leading to the first and second delays in seeking and reaching maternity care and consequently decrease maternal mortality caused by the delay in reaching obstetric care and also offer a way to better provide perinatal obstetric care and improve new born outcomes[10,12,13].

Promote Institutional Delivery and Pregnant Women’s Access to Skilled Care. It is believed that MWHs, by addressing the distance and transportation barriers, will increase the use of skilled birth attendants, thereby reducing maternal and neonatal morbidity and mortality in rural, low resource areas(7,12).

### **2.3. Experiences of other countries in funding MWHs services**

Several studies suggests that; people are expected to contribute to the cost of healthcare from their own resources and also Income generating skills training such as vegetable gardening and food processing of locally grown foods for market with a



percentage of the profits returned to the MWH for community members was also discussed as a mechanism to support the MWHs[7,8,12,13].

Study also showed that; Community groups played an active role in the development, construction and operation of maternity homes. SMAG/Neighborhood Health Committee members with support from chiefs and faith-based organizations had mobilized to build the homes and provide transport for pregnant women, including during emergencies after delivery(12,13).

#### **2.4. Theoretical concepts of WTP**

WTP is the maximum amount that an individual states they are willing to pay for a good or services. WTP surveys measure potential demand for products or services by asking consumers, “*Would you purchase this product if it were offered at this price?*” They are frequently used in health, social, and environmental programs for price setting and cost-benefit analysis.(14,20)

#### **2.5. Applications of WTP**

WTP survey uses CVM as a tool to elicit the potential services user maximum WTP for a certain goods or services. CVM is a survey based approach for eliciting a consumer's monetary valuations for program benefits for use in cost benefit analysis and can be used to investigate peoples’ maximum willingness to pay for different levels of service that are not currently available and for the program already established to improve it quality or prevent its deteriorating.(13,15)

Theories showed that in contingent valuation questions; all respondents are asked exactly three price questions: their current price [P (0)], a medium price increase [P (2)], and, depending on their answer to the medium price increase, either a low price increase [P (1)] or a high price increase [P (3)]. No single respondent is asked about all four prices, and the actual prices asked will differ among respondents according to differences in the prices they are currently paying. (13,14)

Contingent valuation model is a utility based and people are asked how much money they would be willing to pay to maintain or improve services or activities and Contingent valuation questionnaires are designed to assess consumers valuation of improving the quality of services or goods.(15,22)

## **2.7. Empirical literature on factors influencing willingness to pay for the nutrition service provided to a pregnant women at a MWH.**

### **2.7.1. Socio- demographic factors**

According to study conducted in some parts of Africa including Ethiopia, there are some socio demographic factors that can influence an individual's willingness to pay for maternal services which includes; closeness to a health facility (distance), education, income and marital status. In addition, age, occupation and family size member were found to be significant predictors of willingness to pay for maternal services.[5,16, 24-25,34]

### **2.7.2. Socio-economic factors**

The findings of the study conducted in different areas of Africa including Ethiopia showed that socio economic factors such as; ability to pay, decision on money spending and average monthly income of an individual were some of the factors influencing an individual's WTP for a given good or services including health care services.[16-18, 25,26,34]

### **2.7.3. Influence of other individuals**

The result of study conducted in China (2014) and some parts of Ethiopia revealed that social influence factors such as; effect of peers, relationship between health care providers as well as perception about who should pay for the health care were predictors of WTP for health care services. (15,25,29)

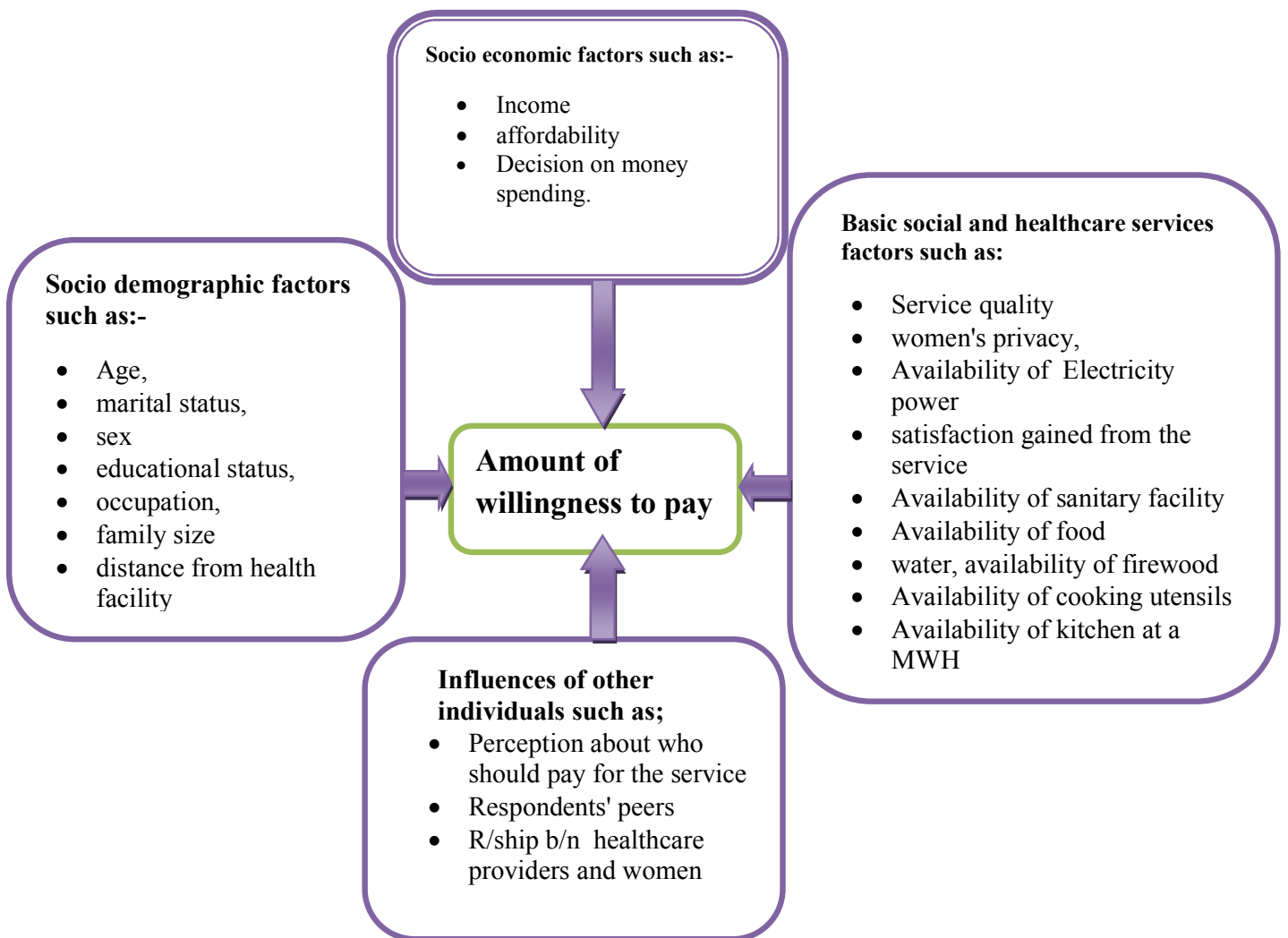
### **2.7.4. Basic social and healthcare service factors**

According to the findings of study done on the maternity waiting homes in some parts of Ethiopia at different time basic social and healthcare service factors such as; shortage of food availability, kitchen utensils and fuel as well as inadequate beddings, water and sanitary services, lack of visits and privacy to mothers staying at MWH, service quality and lack of follow up to women at a MWH were some of the factors influencing the pregnant women's utilization and challenges to mothers staying at MWH.[6,12,14-15,18]

## 2.8. Conceptual Frame work

The finding of study conducted in China (2014) found that there are different factors that would affect willingness to pay; including socio demographic characteristics of the respondents (age, marital status, educational status, gender, the family size, occupation, type of place of residence (distance) and etc) ,socio economic characteristics (income of individuals or the households, ability to pay, decision on money spending), social influence factors such as respondents' peers and healthcare providers.(15,28)

Different studies suggested that basic social and healthcare services factors such as ; inadequate sleeping space, beddings, water and sanitary services, food and cooking facilities and lack of visits to mothers in the health facilities were found to be some of the factors deterring their utilization of MWHs and willingness to pay.[2,10,19](Fig 1)



**Figure 1:** Conceptual frame work of WTP and associated factors in East Wollega Zone, Oromia regional state, Ethiopia, September 2018.(4,25,15,26,27)

## **CHAPTER THREE: OBJECTIVE**

### **3.1. General objective**

- To determine an average maximum amount of households' willingness to pay and associated factors for the nutrition service provided to a pregnant women staying at the Maternity waiting homes in East Wollega Zone of Oromia regional state, Ethiopia.

### **3.2. Specific Objectives**

- To identify household's attitude and their support towards nutrition service provided to a pregnant women staying at a maternity waiting home by the end of September, 2018.
- To determine an average maximum amount of households' willingness to pay for the nutrition service provided to a pregnant women staying at Maternity Waiting Homes
- To identify factors determining households' willingness to pay for the nutrition service provided to a pregnant women staying at a Maternity Waiting Homes

## **CHAPTER FOUR: METHODS AND MATERIALS**

### **4.1. Study area and period**

This study was conducted from August 13-September 02/2018 in East Wollega zone of Oromia Regional state, Ethiopia. East Wollega Zone is one of the zones in oromia region and its Town is Nekemte. It is located 333 km from Addis Ababa and has 17 woredas and has a total population of 1,535,415. The zone has 225,599 total numbers of households and it has a total of 59 health centers, 189 primary clinics, and 05 medium clinics.

The zone has seventeen (17) rural and fourty seven (47) urban drug stores. In the zone eleven woredas have maternity waiting homes, but all the households in the zone pay for the nutrition services provided to the pregnant mothers. The zone has a total of three hundred fifteen(315) kebeles and there are one hundred sixty two(162) kebeles in the nine (9) randomly selected woredas(28).

### **4.2. Study design**

Community based cross sectional study design was employed to identify and analyze willingness to pay and associated factors for the nutrition service provided to a pregnant women at the maternity waiting home in East Wollega zone.

### **4.3. Population**

#### **4.3.1. Source population**

All households in East Wollega Zone were considered as source population of the study.

#### **4.3.2. Study population**

All the households in the selected woredas were taken as study population.

**4.3.3. Study unit:** Head of the household (fathers or mothers) is the primary target.

### **4.4. Inclusion and Exclusion criteria**

#### **4.4.1. Inclusion criteria**

Head of the households who were living in that area for at least one (1) year and want to participate in this study were included in the study after taking consent.

#### **4.4.2. Exclusion criteria**

Head of the households who were living in that area for less than 1 year and head of the households who were seriously and mentally ill was excluded from the study.

## 4.5. Sample size and sampling procedures

### 4.5.1. Sample size determination

The sample size was determined by using single population proportion formula. Since there were no study done on this area in the country, the sample size was calculated by assuming the (P) =50%, means the proportion of households' willingness to pay(p) for the nutrition service provided to a pregnant women in East Wollega Zone and 95% confidence interval (Z= 1.96) with a margin of error (d=0.05).(29).

Therefore ;by inserting the values in the following formula:  $n=(Z_{\alpha/2})^2 p(1-p)/d^2$  ;where:  $Z_{\alpha/2}$  is standard score value for 95 % confidence level for two sides normal distribution,  $P = (50\%)$  where as  $d =$  is margin of error which is equal to 5% and  $n$  is the maximum possible sample size . Therefore, sample size was **384**. By multiplying it with the design effect of two (2) and adding **10%** for potential non-response, the final sample size became **845**.

### 4.5.2. Sampling procedures

Having the WHO assesment guideline as a reference, out of **seventeen (17)** woredas in East wollega zone; **50 %( 9)** of the woredas were selected. Similarly; out of three hundred fifteen (**315**) kebeles in the zone **10% (32)** of the kebeles were selected.(30) These **nine (9)** woredas and **thirty two (32)** kebeles were selected randomly by using a lottery method. The required numbers of kebeles were proportionately allocated to their respective woredas and the required numbers of households were proportionately allocated to their respective kebeles.

The following formula was used to proportionally allocate the number of kebeles to each woredas as well as households to each kebeles:  $n_i = nN_i/N$  where;  $n_i$ =the sample size of the  $i^{th}$  kebele,  $n$ =sample size,  $N_i$ =population size of the  $i^{th}$  kebele and  $N$ =the total population of the catchment area. Finally; the households were randomly selected by a lottery method using the family folder (a registration containing the name of members each households) at the health posts as a sampling frame (*Table 1*).

**Table 1:** Sampling procedures of the study areas and the study participants in East wollega Zone, Oromia regional state, Ethiopia, September 2018.

S/no	Name of randomly selected woredas	Proportionally allocated numbers of kebeles	Proportionally allocated numbers of households
1	B/Boshe	3	65
2	W/Hagalo	3	83
3	W/Tuqa	3	82
4	S/Sire	3	132
5	L/Dulacha	4	77
6	J/Arjo	4	149
7	G/Gida	4	105
8	G/Sayo	4	69
9	Diga	4	83
<b>Total</b>		32	845

#### 4.6. Data collection tool and Method

##### 4.6.1. Data collection tool development

Both closed ended and open ended double bounded dichotomous(DBDC) contingent valuation questionnaires were used in this study. The questionnaire was designed to have four important sections: The *first section*: introductory part which states the purpose of the study, confidentiality, and selection procedure of the households by the researcher. The *second section*: designed to elicit the necessary socio economic and demographic characteristics of the selected household unit. The *third section*: is a scenario stating an existing status of a nutrition services at a maternity waiting home in the catchment area (East Wollega Zone) and hypothetical market for the nutrition services provided to pregnant women at a maternity waiting home.

*Fourth section*: It contains an attitudinal questions to determine the households' attitude and support towards the the nutrition service provided to a pregnant women and semi-structured double bounded dichotomous contingent valuation bidding questions with a yes/no answer to elicit the respondents willingness to pay. *Lastly*; reason for not willing to pay questionnaires was adapted after reviewing different literatures, theories and guidelines [13,15,21,31] and translated into Afan Oromo (the local language) and retranslated back into English to ensure its consistency.

This also will help data collectors to communicate easily with respondents. The questionnaire was pre-tested using 43 (5%) of sample size at sassiga woreda in order to ensure that whether it was clear or not for respondents and also whether the tool has error or not and correction such as position of the bids, inclusion of " I don't know" alternatives to each WP questions offered to

respondents was performed after pretest was conducted. For the purpose of this particular study four data collectors and two supervisors were assigned. These data collectors and supervisors were trained by principal investigator on (1) the purpose of the study (2) how to interview respondents using CVM and (3) about reading scenario stated for all respondents in order to minimize information bias etc was given to the trainees for **three (3)** days before the pre test and actual field work started.

#### **4.6.3. Data collection technique**

Data was collected by using face-to-face interviewer administered including both closed and open ended questionnaires. Double bounded dichotomous contingent valuation (DBDC CV) questionnaire was used to elicit the respondents' maximum willingness to pay. Head of the households' who were available at home during the study period and willing to participate in this study were interviewed.

If the head of a households are not available at home during the data collection period, data collectors were interviewed the head of a households by making a repeated visit for **two (2)** times until they got these selected household. If head of the household was not found after two repeated visits; the next head of the households who fulfilled the inclusion criteria were interviewed by the data collectors.

##### ***4.6.3.1 The summary of how the bidding game was conducted using a CVM.***

In this study a well-designed both closed and open ended double bounded dichotomous contingent valuation questionnaires were used to elicit the necessary information from the respondents. It started by a scenario stating the existing status of maternity waiting home and nutrition services in the country and in the catchment area in brief and addresses the health problems of geographical gap or barrier to pregnant women and problems caused by lack of emergency obstetric care in particular.

Awareness creation about a need for a nutrition services provided to a pregnant women staying at a maternity waiting homes was given to the households and the hypothetical market for the nutrition services provided to a pregnant women staying at a maternity waiting home was described. A comprised of a four point likert scale questions designed in such a way to elicit the respondent's attitude towards the problem of geographic gap to a pregnant women as well as towards the importance of the service.



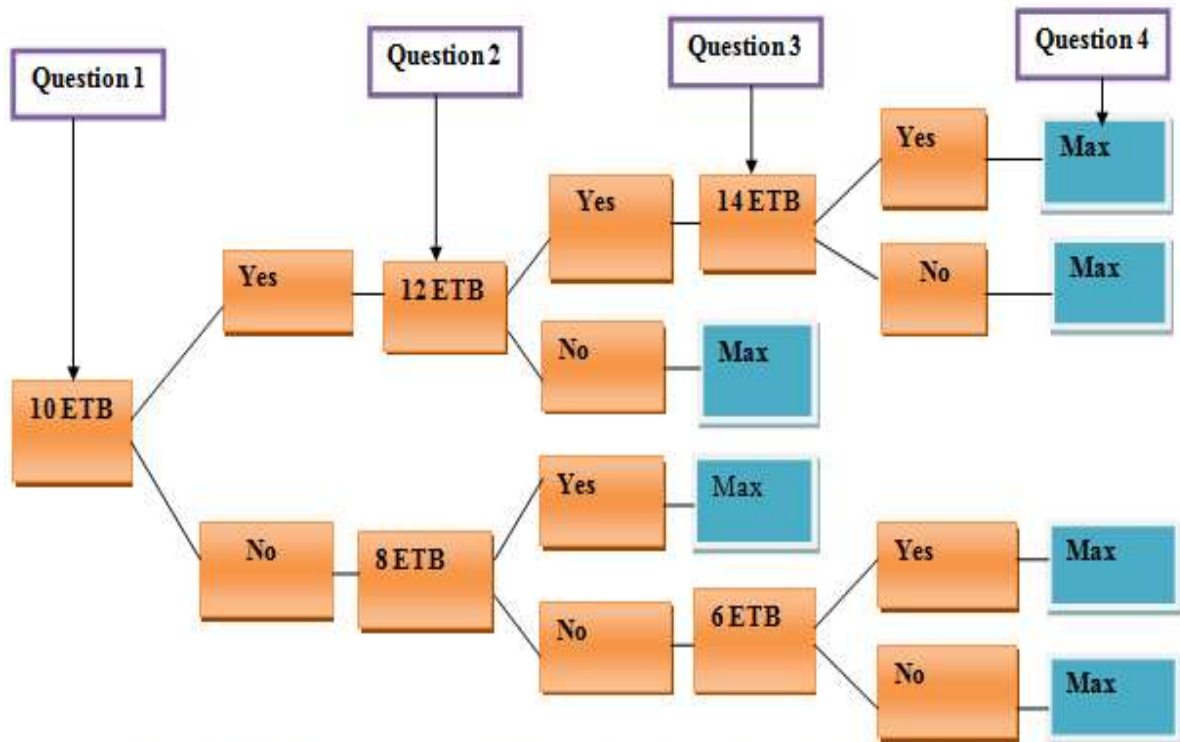
In addition; a dichotomous questions to identify their support towards the nutrition services provided to pregnant women staying at a maternity waiting home and willingness to pay questions to elicit the respondents' stated preference for the improvement of the service.

Those respondents who support the program were asked a participatory question for their willingness to pay. Then a double bounded dichotomous choice contingent valuation for willingness to pay were asked followed by one or more dichotomous choice format question(s) for sequential bids at (6 ETB, 8 ETB, 10 ETB, 12 ETB and 14 ETB) accordingly.

Respondents were asked whether or not they accept some specified sum, and then a question was repeated with a higher or a lower amount, depending on the initial response, and so on until the true value was finally bracketed. Finally debriefing questions were asked for those who do not support the nutrition service program and/or those who were not willing to pay a premium for services. The starting bid price in this study were derived from the currently paid price to nutrition services in the catchment area and the estimation is made by Zonal health office.(32).

The contingent valuation method (CVM) was used for the data collection and interviewees were given different bids before being asked about their maximum WTP for the nutrition service. A sequence of dichotomous choice questions, i.e: yes or no to the bid offered in each question. Final open ended question about the respondents' maximum WTP was asked. The respondents were given a starting price bid of 10 ETB (~ US\$ 0.36) which was the currently paid price for the service (32).

For the respondent who accepted the price, the bid was raised to 12 ETB. If he or she again accepted this amount the bid was raised to 14ETB. At this level the respondent was asked about his/her maximum WTP either if he or she accepted or rejected the 14 ETB bid. In a similar way, if the respondent rejected the starting bid 10 ETB, the bid was lowered to 8 ETB. A respondent who accepted this bid was asked about her or his WTPmax. But for a respondent, who rejected 8ETB, the bid was lowered to 6 ETB and then the respondent was asked about his or her maximum WTP (*fig: 2*)



*Fig 2:* The sequence of willingness to pay questions depending on the respondents' response to the each price bid in East Wollega Zone, Oromia National regional state, western Ethiopia, September 2018.( 20,34)

## 4.7. Study variables

### 4.7.1. Dependent variable

- Amount of willingness to pay

### 4.7.2. Independent Variables

#### ➤ **Socio demographic factors such as:-**

- Age,
- Marital status,
- Sex ,
- Educational status,
- Occupation,
- Distance from the health facility
- Family size

#### • **Socio economic factors such as:-**

- Income
- Affordability
- Decision on money spending

#### ➤ **Basic social and healthcare services factors such as: -**

- service quality,
- Satisfaction gained from the services,
- Privacy at a MWH
- Availability of sanitary services,
- Availability of food,
- Availability of water,
- Availability of beddings
- A of cooking facilities,
- Availability of power (electricity)
- Lack of visits to mothers at MWH.
- **Influences of other individuals such as;**
- Effect of peers
- cooperation b/n Healthcare providers and pregnant women,
- Perception about who should pay for the services

#### **4.8. Operational Definitions**

**Maternity waiting home:** Room built near health facility where pregnant women far from a qualified health facility come and stay in for a few weeks before birth (at 36 weeks) and after birth(1week) in order to receive emergency obstetric care.

**Nutrition at the maternity waiting home:** Is a food service (:-porridge and coffee) provided to a pregnant women staying at a maternity waiting homes

**Willingness to pay:** The maximum amount of money that households in East Wollega Zone are willing to pay for the nutrition provided to pregnant women at a maternity waiting home per year which is determined by the households' state of preferences to a price bides at **6ETB, 8ETB, 10 ETB, 12 ETB** and **14 ETB** (These bids were setted up according to local context and after ocnversation with government key informants in East Wollega zonal health office).

**Maximum willingness to pay:** The amount of price that the households in the East Wollega Zone could be able to pay per year for the nutrition provided to a pregnant women at a MWH which is will be measured by catagorizing into WTP less than 10ETB and WTP greater than or equal to 10ETB so that the median maximum amount of money that the households are WTP for the nutrition service provided to pregnant women per year will be used to recommend the policy makers or the government.(28)

**Ability to pay:** The capacity or an affordability of the household to contribute for the nutrition services provided to a pregnant women annually staying at the maternity waiting home in East Wollega Zone.

**Cooking facilities:** They are equipments and supplies such as: cooking utensils that are used to make meal for the pregnant women staying at maternity waiting homes.

**Financial sustainability:** The continuity in the availability of the resources contributed by the households of East Wollega Zone annually for the nutrition services provided to pregnant women at the maternity waiting home.

**Food:** The nutrition provided to a pregnant women staying at a MWH in the East wollega zone.

**Household:** A group of persons who live together and eat from the same pot

**Household head:** A person responsible for leadership and financial decision in the house.

**Kitchen:** It is a room built besides the maternity waiting home where the families of the pregnant women prepare meal for the mothers staying at a maternity waiting home.

#### **4.9. Data management and Analysis**

The completed questionnaire was checked for completeness, consistency and coded by the principal investigator and supervisors. After completeness of each questionnaires checked, data were entered using EpiData version 3.1 and analyzed using SPSS for windows version 20 software. Frequency distribution of dependent and independent variables were performed.

Bivariate analysis was carried out to determine associations of selected variables with dependent variable and p-value of less than or equal to 0.25 was taken as a cut off point to candidate variables for the final multiple logistic regression. Independent predictors were determined using adjusted odds ratio with 95% confidence interval in a multiple regression analysis.

#### **4.10. Data quality assurance**

Training was given for data collectors and supervisors by the principal investigator to clarify how to interview the participants using both closed and open ended questionnaires. Questionnaires for participants were translated to local language (Afan Oromo) and were pre-tested by 43 respondents (accounts 5% of the total sample size) before conducting the actual data collection. Pretest results were not included in the study. Data collectors were instructed to check the completeness of each questionnaire at the end of each interview. The completeness of the questionnaire at the end of the day was rechecked by supervisors. It was also double checked by the principal investigator.

#### **4.11. Ethical considerations**

Ethical Approval was taken from JU Health Institute, Faculty of Public Health, department of Health Economics, Management and Policy and formal letter of permission was taken from the JU and then the letter of permission was taken from the Zonal Health Office and given to selected Woredas to obtain consent and required information from all subjects. Objective of the study was explained in a simple language to all subjects and also confidentiality was maintained as much as possible. Responses of respondents' were anonymous and data collectors were informed respondents that they have full right to discontinue or refuse to participate in the study if they were not willing to participate.

#### **4.13. Dissemination plan for Study results**

The findings of the study will be communicated to Jimma University Health Institute, Faculty of Public Health, and department of Health Economics, Management and Policy. On top of this, hard and soft copies of the document were submitted to the respective departments. The document will also be submitted to each selected woredas for study, East Wollega zonal health office and other stakeholders so as to recommend areas of improvement and to make the rest of the people accessible; the study document will be published.

## CHAPTER FIVE: RESULTS

### 5.1. RESULTS

#### 5.1.1. Socio demographic characteristics of the respondents

A total of **845** households in East wollega zone were included in the study of which **830** responded, making response rate (**98%**). More than half of the respondents (54.7%) were females household heads and the mean of the age of the respondent was 30.58 years (SD±8.6). Majority of the respondents' religion (54.5%) was protestant. With regard to the ethnicity of the respondents, about 92.7% of them were Oromos and the remaining (7.3%) were Amharas.

Majority of the participants 83.7% were married and the average households' family size was 5.07(SD±1.95). Education wise, majority 37.83% of them were elementary (1-8) where as (38.6%) of the respondents were unable to read and write. More than half of the respondents 58.1% were farmers where as only 80(9.64%) were government employers. The median monthly income of the respondents was 600 ETB and the mean distance of the health facility from the households was 4.6(SD±2.58) (*Table 2*).

**Table 2:** Socio-demographic characteristic of the respondents in East Wollega Zone, Oromia regional state, Ethiopia, 2018

Variables	WTP for the nutrition service		Total
	WTP <10 ETB	WTP ≥ 10ETB	
<b>Sex</b>			
Male	17(36.2)	359(45.8)	376
Female	30(63.8)	424(54.2)	454
<b>Age</b>			
18-24 years	19(40.4)	159 (20.3)	178
25-34 years	15(31.9)	392 (50.1)	407
35-44 years	4(8.5)	190(24.3)	194
45 years and above	9(19.1)	42 (5.4)	51
<b>Marital status</b>			
Married	34(72.3)	661(84.4)	695
Single	13(27.7)	122(15.6)	135
<b>Ethnicity</b>			
Oromo	43(91.5)	726(92.7)	769
Amhara	4(8.5)	57(7.3)	61
<b>Religion</b>			
Orthodox	17(36.2)	253(32.3)	270
Muslim	9(19.1)	99(12.6)	108
Protestant	21(44.7)	431(55)	452
<b>Educational status</b>			
Illiterate	30(63.8)	290(37)	320
Can read and write	7(14.9)	70(8.9)	77
Elementary (1-8)	9(19.1)	305(39)	314
Secondary(9-12)	0(0)	78(10)	78
College and above	1(2.1)	40(5.1)	41
<b>Occupational status</b>			
Farmer	23(48.9)	459(58.6)	482
Student	0(0)	9(1.1)	9
House wife	15(31.9)	116(14.8)	131
Government Employer	2(4.3)	78(10)	80
Merchant	0(0)	79(10.1)	79
Daily laborer	7(14.9)	42(5.4)	49
<b>Average monthly income</b>			
Less than 200 ETB	7(14.9)	92(11.7)	99
200-400 ETB	13(27.7)	149(19)	162
401-692 ETB	18(38.3)	191(24.4)	209
Greater than 692 ETB	9(19.1)	351(44.8)	360
<b>Distance of the HHs from the health facility</b>			
Less than 5KM	40(85.1)	553(70.6)	593
Greater or equal to 5km	7(14.9)	230(29.4)	237

*Note: The classification of the above variables in to different category was adapted from similar studies conducted in the countries(33)*



### **5.1.2. Proportions and determinants of households' WTP for the nutrition service provided to pregnant women at a MWH.**

#### ***5.1.2.1. Proportion of households' WTP for the nutrition service provided to a pregnant women at a MWH.***

Among 830 respondents , 783(94.3%) were willing to pay greater or equal to 10 ETB where as only 47 (5.7%) were willing to pay less than 10 ETB with a minimum of 5ETB and maximum of 8ETB for the nutrition service in East Wollega Zone.

### **5.1.3. Households' Attitude and their support towards a nutrition service provided to a pregnant women staying at a maternity waiting homes.**

One of the objectives of this study is identifying households' attitude and their support towards a nutrition service provided to a pregnant women staying at a maternity waiting home. In order to do so respondents were asked three questions. Firstly, they were asked about their attitude towards the seriousness of the distance problem to pregnant women. Secondly, they were asked about the importance of providing nutrition to a pregnant women staying at a maternity waiting home. Thirdly, they were asked about their attitude about whether they support the program or not.

Four point likert scales were used to compute seriousness index: a serious problem, moderate problem, a simple problem and not a problem at all. Majority 80.8% of the respondents acknowledged the seriousness of the distance problem from the health facility to a pregnant women while only 146(17.6%), 6(0.7%) and 9(1.1%) were stated distance as moderate problem, a simple problem and not a problem, respectively. This implies that majority of the respondents were aware of the problem of distance from the health facility from pregnant women's house.

The second attitudinal question was importance of the provision of nutrition to a pregnant women staying at a MWH. Four point likert scale alternatives were given to the respondents: very important, important, and not important and I don't know. Majority 86% of the respondents agreed that the provision of nutrition to a pregnant women staying at a maternity waiting is very important where as only (14%) of the respondents were stated as it is important. This indicates that, the respondents had seen the benefit of the service to the pregnant women and it might also indicate that they are in need of the service.

The last attitudinal question was about their support towards the program, i.e., whether they support the program or not. The result showed that; almost all of the respondents 99.5% were interested to support the program (*Table 3*). The reason for not supporting this service was

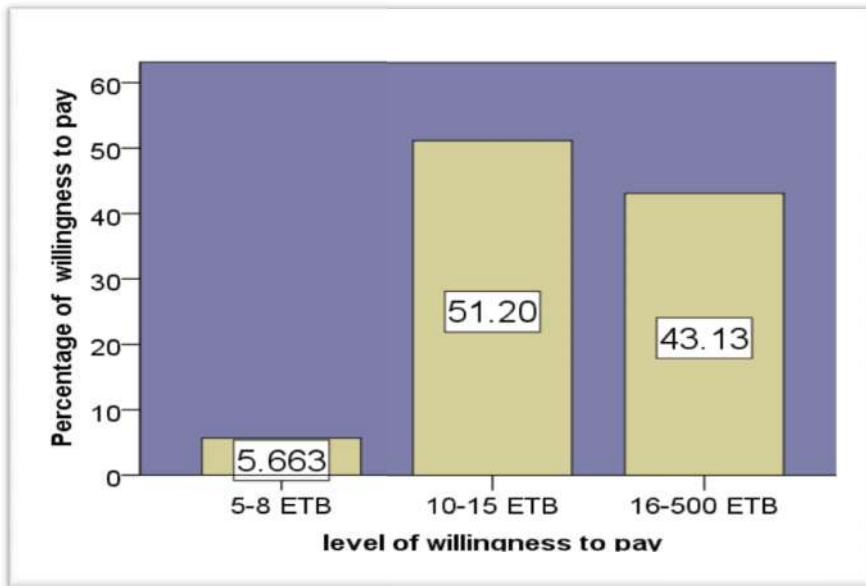
that, some of them perceive as it is a government's responsibility and mentioned that there is lack of facilities such as cooking facilities, beddings as well as inadequate availability of food to a pregnant women staying at a MWH.

**Table3:** Households' attitude and support towards the nutrition service provided to a pregnant women staying at a MWH in East Wollega zone, Oromia regional state, Ethiopia, 2018.

Variables	WTP for the nutrition services		Total
	Less than 10 ETB, n= 47 (%)	Greater or equal to 10 ETB, n=783 (%)	
<b>Household's perception about distance problem to the pregnant women</b>			
A serious problem	37(78.7)	634(81)	671
A problem	8(17)	138(17.6)	146
A simple problem	0(0)	6(0.8)	6
Not a problem at all	2(4.3)	5(0.6)	9
<b>Perception of the households about the importance of provision of a nutrition to a pregnant women at a MWH</b>			
Very important	44(93.6)	671(85.7)	715
Important	3(6.4)	112(14.3)	115
<b>Households willingness to financially support to the nutrition service provided to pregnant women staying at MWHs</b>			
Yes	47(100)	779(99.5)	826
No	0(0)	4(0.5)	4

#### 5.1.4. The average maximum amount of households' WTP for the nutrition provided to a pregnant women at a maternity waiting homes.

The median maximum amount of respondents' willingness to pay for the nutrition provided to a pregnant women staying at MWH was found to be **15 ETB (0.55 USD)** per year per household with a minimum of 5 ETB and maximum of 500 ETB. Around 45.2% of the respondents were willing to pay below the average where as about 43.1% of the respondents were willing to pay above the average. About 5.7 % of the respondents were willing to pay below 10 ETB while 51.2 % of the respondents were willing to pay between 10 ETB and 15 ETB. The median maximum amount of WTP below and above the average (15 ETB) were 10ETB (SD±1.8) and 20 ETB (SD±88.2) respectively. (*Table 4 and figure 3*)



**Figure 2:** Percentage of respondents in relation to level of willingness to pay for the nutrition service provided to pregnant women at a MWH in East Wollega Zone, Ethiopia, September 2018. (Exchange rate: US\$1=27.471 ETB, source (34))

**Table4:** Frequency Distribution of Maximum WTP per year per household for the nutrition provided to pregnant women at MWHs East Wollega Zone, oromia regional state, Ethiopia, September, 2018 (ETB)

<i>Maximum WTP per HH (ETB)</i>	<i>Frequency</i>	<i>Percent</i>	<i>Comulative percent</i>
5	5	.6	.6
6	10	1.2	1.8
7	1	.1	1.9
8	31	3.7	5.7
10	236	28.4	34.1
12	52	6.3	40.4
13	1	.1	40.5
14	39	4.7	45.2
15	97	11.7	56.9
16	6	.7	57.6
18	3	.4	58.0
20	181	21.8	79.8
25	20	2.4	82.2
30	21	2.5	84.7
40	10	1.2	85.9
50	55	6.6	92.5
60	2	.2	92.8
88	1	.1	92.9
100	29	3.5	96.4
105	1	.1	96.5
110	1	.1	96.6
120	3	.4	97.0
150	3	.4	97.3
160	1	.1	97.5
200	5	.6	98.1
300	2	.2	98.3
350	1	.1	98.4
400	6	.7	99.2
500	7	.8	100
<b>Total</b>	<b>830</b>	<b>100</b>	

### 5.1.5. Percentage of their monthly income that the respondents were willing to pay.

To know how much percent of their monthly income the respondents were willingness to pay in maximum per year per household, each respondent's maximum willingness to pay was divided by their average monthly income of the respondents and multiplied to hundred. Majority, 78.3% of the respondents were willing to pay 1-5% of their monthly income per year where as about 9.3% of the respondents were willing to pay 6-10 % of their monthly income per year. Moreover, about 10.4% of the respondents were willing to pay more than 10% of their monthly income where as only 2.2% of the respondents were willing to pay less than one (1%) of their monthly income per year. (Table 5).

**Table 5:** Percentages of their monthly income that respondents' were willing to pay per year for per household for the nutrition service provided to pregnant women at MWHs in East Wollega Zone, Oromia regional state, Ethiopia.

Respondents frequency (number of respondents)	Percentage annual maximum respondents WTP from their monthly income (ETB)
18	Less than 1
188	1
197	2
132	3
70	4
62	5
14	6
18	7
16	8
3	9
26	10
2	11
4	12
9	13
4	14
3	15
3	16
8	17
1	18
1	19
8	20
1	22
6	25
1	28
3	30
1	32
1	33
2	38
1	47
5	50

1	53
1	55
1	62
3	63
2	67
1	70
1	75
1	79
1	80
1	100
1	120
1	125
1	133
1	167
1	267

**5.1.5. Summary of respondents' maximum willingness to pay for the nutrition services provided to pregnant women per year per household at maternity waiting homes.**

The median maximum WTP for the nutrition service less than currently paid price was found to be 8 ETB per year per household with the minimum of 5 and maximum of 8 ETB where as the median maximum respondents' WTP above the average (15ETB) was 20 ETB per year per household with the minimum of 16 ETB and maximum of 500 ETB. In addition, the median maximum respondents' WTP below the average was 10 ETB per household with the minimum of 5ETB and maximum of 14 ETB (*Table 6*).

**Table 6:** Summary of the respondents' maximum willingness to pay for the nutrition service provided to a pregnant women at MWH per year per household in East Wollega Zone Oromia regional state, Ethiopia.

Variables	Maximum WTP for the nutrition service		
	Minim (ETB)	Maximum(ETB)	Median (ETB)
Less than 10 ETB	5	8	8
Between 10 and 15 ETB	10	15	10
Above 15 ETB	16	500	20

### **5.1.6. Association of willingness to pay for the nutrition provided to a pregnant women at a maternity waiting home with other types of variables.**

Out of 425(51.2%) who were willing to pay between 10 and 15 ETB, majority 47.1% of them were respondents of a mean age 28.42 years ( $SD \pm 2.56$ ) and from those who were willing to pay less than 10 ETB 47(5.7%), about 19(40.4%) of them were respondents of a mean age 21.3 years ( $SD \pm 2.07$ ). From those who were willing to pay above the average (15 ETB) 358 (43.1%), majority 53.6% of them were respondents who had a mean age 28.42 years ( $SD \pm 2.56$ ) and around 22.1% of them were respondents of a mean age 37.84 years ( $SD \pm 2.57$ ).

Average monthly income wise, majority 52% of the respondents who were willing to pay above the average were respondents of the median monthly income of 1000 ETB where as only 10.1% was accounted by respondents of median monthly income of 100 ETB. Among those who were willing to pay 10 ETB and above, majority 44.83 % were respondents who had median income of 1000 ETB ; about 19 % and 24.4% were accounted by respondents who had a median monthly income of 300 ETB and 500 ETB respectively.

Regarding family size, among 783 respondents who were willing to pay 10 ETB and above, around 60.5% were accounted by respondents of mean family size 3.82 ( $SD \pm 0.96$ ) where as about 34.1% and 5.4% were accounted by respondents of mean family size 6.68 ( $SD \pm 0.78$ ) and 9.73 ( $SD \pm 0.1.04$ ) respectively.

Distance wise, out of 358 respondents who were willing to pay above average; majority 72.9% of them were at a mean distance of 2.36km ( $SD \pm 1.14$ ) where as only 27.1 were accounted by those who are at a mean distance of 6.64 km ( $SD \pm 1.68$ ) and among 783 who were willing to pay 10 ETB and above, about 70.6% and 29.4 % were from those who were at a mean distance of 2.36km ( $SD \pm 1.14$ ) and 6.64km ( $SD \pm 1.68$ ) respectively (**Table 7**).

**Table 7:** Frequency distribution of selected variables with the respondents' maximum WTP for the nutrition service provided to a pregnant women at a MWH in East Wollega Zone, Oromia National regional state, Ethiopia.

Variables	Willingness to pay for the nutrition service			Total
	Less than 10 ETB, n= 47(%)	10 -15 ETB n=425 (%)	16 and above n=358 (%)	
<b>Mean age of the respondents</b>				
21.3 years(SD±2.07)	19(40.4)	95(22.4)	64(17.9)	178
28.42 years(SD±2.56)	15(31.9)	200(47.1)	192(53.6)	407
37.84 years(SD±2.57)	4(8.5)	111(26.1)	79(22.1)	194
52.78 years(SD±8.09)	9(19.1)	19(4.5)	23(6.4)	51
<b>Median of the households' monthly income</b>				
100 ETB	7(14.9)	56(13.2)	36(10.1)	99
300ETB	13(27.7)	93(21.9)	56(15.6)	162
500ETB	18(38.3)	111(26.1)	80(22.3)	209
1000ETB	9(19.1)	165(38.8)	186(52)	360
<b>Mean of the family size</b>				
3.82 (SD±0.96)	40(85.1)	242(56.9)	232(64.8)	514
6.68 (SD±0.78)	5(10.6)	160(37.6)	107(29.9)	272
9.73 (SD±1.04)	2(4.3)	23(5.4)	19(5.3)	44
<b>Mean distance from the health facility</b>				
2.36 km (SD±1.14)	40(85.1)	292(68.7)	261(72.9)	593
6.64 km (SD±1.68)	7(14.9)	133(31.3)	97 (27.1)	237

*Exchange currency: 1 USD=27.471 ETB (34)*

#### **5.1.7. Reason for willing to pay less for the nutrition service provided to a pregnant women staying at a MWH.**

Out of 830 respondents, majority 69.5% of the respondents were mentioned that there is inadequate food to a pregnant women staying at a MWH and about 54.1% of the respondents stated that there is lack of adequate beddings at a MWH at the same time they also claimed that inadequacy of these facilities would affect their motivation to pay for the service. More than half of the respondents 56% were claimed that there is lack of adequate cooking facilities at a MWH.

About 47.6 %% of the respondents stated that there is a problem of an effect of peers that would also a reason for not willing to pay for a nutrition provided to a pregnant women staying at a MWH. Around 45.7% of the respondents were perceived that paying for nutrition service provided to a pregnant women staying at a MWH as it is a governments responsibility and they were also mentioned it as a reason for not willing to pay. (*Table 8*)



Table 8: Reason for willing to pay less for the nutrition service provided to a pregnant women at a MWH in East Wollega Zone, Oromia, Ethiopia, and September, 2018.

Variables	WTP for the nutrition services			
		<10 ETB n= 47(%)	>=10 ETB n =783(%)	Total n=830
Women's privacy at a MWH	Yes	44(93.6)	696(88.9)	740
	No	3(6.4)	87(11.1)	90
Availabilityof sanitary facility at a MWH	Yes	36(76.6)	320(40.9)	499
	No	11(23.4)	320(40.9)	331
Availability food at a MWH	Yes	7(14.9)	250(31.9)	257
	No	40(85.1)	533(68.1)	573
Availability of water at a MWH	Yes	6(12.8)	213(27.2)	219
	No	41(87.2)	570(72.8)	611
Availability of adequate beddings at a MWH	Yes	13(27.7)	368(47)	381
	No	34(72.3)	415(53)	449
Availability of cooking facilities at a MWH	Yes	16(34)	350(44.7)	366
	No	31(66)	433(55.3)	464
Effect of peers	Yes	14(29.8)	421(53.8)	435
	No	33(70.2)	362(46.2)	395
Affordability	Yes	18(38.3)	496(63.3)	514
	No	29(61.7)	287(36.7)	316
Presence of cooperation between providers and women	Yes	35(74.5)	614(78.4)	649
	No	12(25.5)	169(21.6)	181
Health care providers follow up to pregnant women staying at a MWH	Yes	29(61.7)	518(66.2)	547
	No	18(38.3)	265(33.8)	283
Service quality	Yes	2(4.3)	89(11.4)	91
	No	45(95.7)	694(88.6)	739
Satisfied to the nutrition service provided at a MWH	Yes	4(8.5)	87(11.1)	91
	No	43(91.5)	696(88.9)	739
Decision on money spending in the household.	Yes	39(83)	646(82.5)	685
	No	8(17)	137(17.5)	145
Perceiving as it is the government's responsibility	Yes	17(36.2)	464(59.3)	481
	No	30(83)	319(40.7)	349
Availability of electric power at the MWH	Yes	2(4.3)	116(14.8)	118
	No	45(95.7)	667(85.2)	712
Availability of kitchen at a MWH	Yes	6(12.8)	220(28.1)	226
	No	41(87.2)	563(71.9)	604
Availability of firewood at a MWH	Yes	8(17)	267(34.1)	275
	No	39(83)	516(65.9)	555

### **5.1.8. Factors affecting willingness to pay for the nutrition service provided to a pregnant women staying at a maternity waiting homes.**

Logistic regression analysis was done to identify the effect of explanatory variables on the maximum amount of the households' willingness to pay for the nutrition service provided to a pregnant women staying at a MWH. Respondents who had a mean age of 37.84 years (SD  $\pm 2.57$ ) and 52.78 years (SD  $\pm 8.09$ ) were almost 91% and 94% times less likely to be willing to pay for the nutrition service provided to a pregnant women at a MWH respectively when compared to those who had a mean age 28.42 years (SD  $\pm 2.56$ ) counterparts. On the other hand, respondents who were ever married had higher willingness to pay (AOR=3.533, 95%CI=1.007-12.39) than unmarried counterparts.

Respondents who were graduates of college and above (AOR=0.346, 95%CI= 0.14-0.857) had lower willingness to pay for the nutrition service provided to a pregnant women at a MWH as compared to illiterate counterparts. Respondents who were house wife (AOR =2.625, 95%CI= 1.075-6.413) and daily laborers (AOR=3.593, 95%CI= 1.068-12.089) had higher willingness to pay than farmers. Respondents who had a median monthly income of 1000ETB (AOR=3.287, 95%CI = 1.194-9.049) were more likely to have higher WTP for the service as compared respondents who had a median monthly income of 100 ETB.

Respondents who were closer to the health facility (at less than 5km) (AOR = 3.64, 95%CI = 1.256-10.55) had higher willingness to pay for the nutrition service provided to a pregnant women at a MWH than those who were distant (at greater than 5km) from the health facility. Respondents who were reported availability food\_(AOR=3.714, 95%CI=1.331-10.364), beddings(AOR=5.353, 95%CI=2.207-13.010) and cooking facilities (AOR=4.044, 95%CI=1.353-12.088) at a MWH had significantly higher willingness to pay for the service than who were reported shortage of food, beddings, and cooking facilities at a MWH respectively.

Respondents who positively recommended by their relative or friends to pay for the service (AOR=2.691, 95%CI=1.204-6.011) were more likely to have willingness to pay than who were negatively recommended by their relatives not to pay for the service. Respondents who were not perceived as it was a government's responsibility (AOR=3.643, 95%CI=1.669-7.948) were more likely to be willing to pay for the nutrition service provided to a pregnant women at a MWH their counterparts. Adequacy and fitness of model were checked (*with Naskerkele R square of 45% and Hosmer Lemeshow of p-value > 0.06*). (**Table 9**)

**Table 9:** Predictors of WTP for the nutrition provided to a pregnant women at a MWH in East Wollega Zone, Oromia regional state, Ethiopia, September 2018.

Variables	WTP for the nutrition service		OR and 95% CI		
	<10ETB n=47(%)	>=10ETB n=783(%)	COR(95%CI)	AOR(95%CI)	
<b>Age</b>					
18-24 years	19(40.4)	159(20.3)	1		
25-34 years	15(31.9)	392(50.1)	0.558(0.235-1.322)	0.368(0.115-1.74)	
35-44 years	4(8.5)	190(24.3)	0.179(0.074-0.433)	<b>0.09(0.027-0.3)***</b>	
45 years and above	9(19.1)	42 (5.4)	0.098(0.029-0.334)	<b>0.06(0.013-0.25)***</b>	
<b>Marital status</b>					
Never married	13(27.7)	122(15.6)	1		
Ever married	34(72.3)	661(84.4)	2.072(1.036-4.039)	<b>3.53(1.007-12.39)*</b>	
<b>Educational status</b>					
Illiterate	30(63.8)	290(37)	1		
Can read and write	7(14.9)	70(8.9)	0.273(0.185-0.623)	0.510(0.167-1.554)	
Elementary (1-8)	9(19.1)	305(39)	0.285(0.133-0.611)	0.108(0.004-2.945)	
Secondary(9-12)	0(0)	78(10)	0.351(0.132-0.597)	0.284(0.175-1.05)	
College and above	1(2.1)	40(5.1)	0.242(0.032-1.82)	<b>0.346(0.140-0.86)*</b>	
<b>Occupational status</b>					
Farmer	23(48.9)	459(58.6)	1		
House wife	15(31.9)	116(14.8)	2.581(1.305-5.102)	2.63(1.08-6.4)*	
Daily laborer	7(14.9)	42(5.4)	3.33(1.35-8.21)	<b>3.59(1.1-12.1)*</b>	
<b>Average monthly income</b>					
Less than 200 ETB	7(14.9)	92(11.7)	1		
200-400 ETB	13(27.7)	149(19)	2.967(1.076-8.18)	1.307(0.34-5.020)	
401-692 ETB	18(38.3)	191(24.4)	3.403(1.424-8.132)	2.55(0.828-7.863)	
Greater than 692 ETB	9(19.1)	351(44.8)	3.675(1.62-8.339)	<b>3.29(1.194-9.049)*</b>	
<b>Distance of the HH from the health facility</b>					
Less than 5KM	40(85.1)	553(70.6)	2.377(1.049-5.383)	<b>3.6 (1.256-10.557)*</b>	
Greater or equal to 5 KM	7(14.9)	230(29.4)	1.00		
Availability of food at a MWH	Yes	40(85.1)	533(68.1)	2.68(1.184-6.067)	<b>3.7(1.331-10.364)*</b>
	No	7(14.9)	250(31.9)	1.00	
Availability of water at a MWH	Yes	41(87.2)	570(72.8)	2.554(1.069-6.101)	1.79(0.551-5.820)
	No	6(12.8)	213(27.2)	1.00	
Availability of beddings at a MWH	Yes	34(72.3)	415(53)	2.319(1.205-4.62)	<b>5.35(2.21-13)***</b>
	No	13(27.7)	368(47)	1.00	
Availability of cooking facilities at a MWH	Yes	31(66)	433(55.3)	1.566(0.843-2.91)	<b>4.04(1.4-12.1)*</b>
	No	16(34)	350(44.7)	1	
Effect of peers	Yes	14(29.8)	421(53.8)	1.00	
	No	33(70.2)	362(46.2)	2.741(1.444-5.203)	<b>2.7(1.204-6.011)*</b>
Affordability	Yes	29(61.7)	287(36.7)	2.784(1.519-5.103)	3.61(0.748-17.382)
	No	18(38.3)	496(63.3)	1.00	
Service quality	Yes	45(95.7)	694(88.6)	2.885(0.688-12.1)	1.1 (0.19-6.112)
	No	2(4.3)	89(11.4)	1.00	
Perceiving as it is the	Yes	17(36.2)	464(59.3)	1.00	

government's responsibility	No	30(83)	319(40.7)	2.567(1.392-4.733)	<b>3.6 (1.7-7.95)***</b>
Availability of electric power at the MWH	Yes	45(95.7)	667(85.2)	3.913(0.936-16.35)	3.61(0.748-17.382)
	No	2(4.3)	116(14.8)	1.00	
Availability of kitchen at a MWH	Yes	41(87.2)	563(71.9)	2.67(1.118-6.378)	1.25(0.406-3.822)
	No	6(12.8)	220(28.1)	1.00	
Availability of adequate firewood at a MWH	Yes	39(83)	516(65.9)	2.523(1.162-5.475)	2.52(0.933-6.78)
	No	8(17)	267(34.1)	1.00	

\**p-value*<0.05, \*\**p-value*<0.01, \*\*\**p-value*<0.001, 1=reference

## **CHAPTER SIX: DISCUSSION**

### **6.1. Discussion**

#### **6.1.1. Respondents' attitude and support towards the nutrition service provided to pregnant women at a MWH.**

Majority, **80.8%** of the respondents reported the seriousness of distance problem to a pregnant women during the last trimester of pregnancy and all of them stated the importance of providing nutrition service to pregnant women at MWH of which 86% and 14% stated as it is very important and important respectively. Almost all 99.5% of the respondents interested in and had a willingness to financially support the service when asked. This is inline with studies conducted in Zambia and Ethiopia (6,15). This might be due to the respondents' awareness on the distance problem to pregnant women and interested to the service provided to a pregnant women at a MWH.

#### **6.1.2. The median maximum amount of respondents' WTP for the nutrition service provided to a pregnant women at a MWH.**

The median maximum amount of WTP per household was found to be **15 ETB (~US\$ 0.55)** with a minimum of 5 ETB and maximum of 500 ETB.

#### **6.1.3. Predictors of respondents' WTP for nutrition service provided to a pregnant women at a MWH.**

Respondents who had a mean age of 37.84 years (SD  $\pm 2.57$ ) and 52.78 years (SD  $\pm 8.09$ ) were almost 91% and 94% times less likely to be willing to pay for the nutrition service provided to a pregnant women at a MWH respectively when compared to those who had a mean age 28.42 years (SD  $\pm 2.56$ ) counterparts. This finding is similar with the study conducted in other areas of the countries (5,16). The reason might be due to the respondents perception that they may not satisfied to service and might be due the respondents' perception not give birth as their age increase among those older respondents.

Respondents who were graduates of college and above were 65.4% times less likely to have WTP than respondents who were illiterate. This finding is inline with the study conducted in other parts of Africa and Ethiopia (16,27). The possible reason might be due to high risk perception among less educated respondents on maternity care services.

Respondents who were ever married were about **3.5** times more likely to be willing to pay for the nutrition service provided to a pregnant women at a MWH than those who were never married counterparts supporting with the findings of study conducted in other countries ((5,24).The possible reason might be related to the respondents previous utilization and seen its benefit among who were ever married than never married counterparts.

Occupation wise, respondents who were house wife and daily laborers were **2.6** and **3.6** times more likely to be willing to pay for the nutrition service provided to pregnant women at a MWH respectively as compared to who were farmers. This is inline with the finding of the study conducted in Vietnam on maternal WTP for the nutrition counseling services(24).The reason might be due to the fact that small traders or self employers can get at least few money daily than that of farmers who mostly get money annually.

Respondents of a median monthly income of 1000 ETB were almost **three** times more likely to be willing to pay above the currently paid price as compared to who had median monthly income of 100ETB. This is similar with the finding of the study done in china and some parts of Africa(18,24,33). The reason might be due to the respondents of a better economic status have a higher rate of WTP for a nutrition service than those at lower economic status.

Respondents who were closer (at less than 5km) to health facility were **3.6** times more likely to have WTP above the currently paid price than who were far (at greater than 5km) from the health facility. This finding is in line with the study conducted at other parts African countries including Ethiopia (23,25). The possible reason might be due to accessibility and awarness among who were closer to the facility than that were at distance from the health facility.

Respondents who were reported that there was availability of food (AOR=3.7,95%CI=1.33-10.36), availability of enough beddings (AOR=3.35,95% CI=2.21-13),and availability of cooking facilities (AOR=4.04,95%CI=1.4-12.1) at a MWH were more likely to be willing to pay above the currently paid price as compared to those who were reported that there was shortage of food availability,lack of enough beddings and shortage of cooking facilities at a MWH respectively.

This is consistent with the finding of the study conducted in some parts of Africa (12,15,18). The possible reasons might be due to the respondents' expectation of improved and well organized service to contribute for the service as well as after contributing for the service. It might also be due to lack of satisfaction to the service provided among those who were unwilling to pay for the service.

Respondents who had been positively recommended to pay for the service by their peers (AOR=2.7, 95%CI=1.2-6) were more likely to be willing to pay above the currently paid price when compared to those who had been prevented by their peers or neighbors from contributing for the service. This is inline with the study conducted on determinants of WTP for self- paid vaccines in china(24). The reason might be due to the effect of peers may positively or negatively affect an individual's WTP. So, in this case, those respondents who were positively recommended to pay by their relatives or friends were higher WTP as compared to their counterparts.

Respondents who had showed lower perceived government's responsibility (AOR=3.6, 95%CI=1.7-7.95) were more likely to have WTP above the currently paid price than who had higher perceived government's responsibility counterparts. This is consistent with the study conducted on WTP and WTJ for newly proposed SHI in Ethiopia(29).The possible explanation might be due to the respondents' higher perception towards the maternal care service as it was totally an exempted service.

In this study, majority 71.4% of the respondents were reported that there was a shortage of food availability and about 54.1% of them were reported that there was no enough beddings at a MWH. Around 60% of the respondents were reported that there were shortages of cooking facilities at a MWH. This result is higher when compared to study done in some regions of Ethiopia(14,34). This difference may due to the variability in the study settings and sample size used and it may be due to the difference in the scope of the study done.

Around 48% of the respondents were reported that there was negative effect of peers where as about 42% of them were reported that it is a government's responsibility to pay for the service. This is inline with the findings of the study conducted in Ethiopia and china (24, 29). This might be due to the services provided to a pregnant women were exempted and there might be recommended not to pay by their relatives as well as by their friends due to some of the barriers mothers faced at MWH.

#### **4.12. Limitation of the study**

The finding of this study showed the respondents' hypothetical or stated preferences to the services; but we do not know whether the respondents' stated willingness to pay would translate into actually paying for the services. In this study, the test-retest reliability to increase the reliability of the results and supplementary qualitative study should have been performed. But, due to time and resource constraint these could not be done.



## **CHAPTER SEVEN**

### **CONCLUSION AND RECOMMENDATION**

#### **7.1. CONCLUSION**

In conclusion, majority of the respondents reported the seriousness of distance problem to pregnant women during the last trimester of pregnancy and more than half of the respondents reported the importance of providing nutrition to pregnant women at a MWH. All of the respondents interested in and had a willingness to financially support the services. The annual average maximum amount of WTP per household was found to be high (15ETB) when compared to the currently paid price (10ETB).

The most important factors influencing the respondents' maximum amount of WTP for the nutrition services provided to pregnant women at a MWH were closeness to the health facility, age, marital status, occupation, average monthly income and educational status of the respondents. In addition, availability of food, presence of cooking facilities and enough bedding at a MWH were found to be predictors of WTP for nutrition service provided to pregnant women. More over, WTP was also associated with effect of peers and perception about who should pay for the nutrition provided to pregnant women staying at a MWH.

#### **7.2. RECOMMENDATIONS**

From the study findings we suggest that:

##### **FMOH and policy makers**

- Should modify the maximum amount of price that households should contribute for the services so as to sustain the service provision.
- Should promote and strengthen its functioning at all level of the health facility.

##### **Health facilities governing bodies:**

- Should ensure availability of supplies and equipments such as food, cooking utensils and beddings at a MWH through appropriate utilizing the resources contributed by the communities.
- Should create revenue generating activities for mothers staying at a MWH as well as for their families in the health facility to ensure the long-term financial sustainability of the program.

**Future researchers**

Should investigate,

- The problems associated with the management and utilization of resources contributed by communities.
- Conduct qualitative study to further explore factors determining the households' WTP for the nutrition service provided to mothers staying at maternity waiting homes.

**Health extension workers/Community members/community leaders**

- Should mobilize communities in order to strengthen the communities' ownership.
- Should work with women's affairs and 1-5 networks of women in the kebeles to increase awareness.
- Should strengthen HAD in the communities.

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**Annex 1: The percentage of their monthly income that the respondents were willing to pay for the nutrition service per year in East Wollega Zone, Oromia regional state, Ethiopia, September, 2018**

**Table 10:** The percentage of the respondents' maximum willingness to pay per monthly income per year for the nutrition service provided to a pregnant women in the East Wollega Zone of Oromia regional state, Ethiopia, September, 2018 (ETB)

Monthly Income	Max WTP	Max WTP/inc ome*100	Monthly Income	Max WTP	Max WTP/inc ome*100	Monthly Income	Max WTP	Max WTP/inc ome*100	Monthly Income	Max WTP	Max WTP/inc ome*100
50	60	120	1500	15	1	500	14	3	400	10	3
4600	150	3	2000	15	1	6036	100	2	300	10	3
400	25	6	2500	15	1	1000	50	5	600	12	2
300	160	53	2000	20	1	3500	50	1	700	20	3
500	20	4	1000	20	2	1000	20	2	300	12	4
1000	100	10	2000	15	1	100	50	50	400	10	3
800	400	50	1500	13	1	1000	10	1	500	20	4
90	14	16	800	10	1	7000	100	1	400	10	3
100	14	14	2500	20	1	600	10	2	400	20	5
70	12	17	1500	20	1	3000	10	0.33	300	10	3
80	15	19	1500	15	1	1200	10	1	700	10	1
110	14	13	2000	25	1	500	10	2	400	15	4
90	20	22	1500	25	2	800	120	15	600	20	3
70	10	14	1600	20	1	5000	15	0.3	250	15	6
100	15	15	1000	20	2	5000	50	1	500	20	4
150	14	9	1500	20	1	3000	200	7	400	20	5
100	14	14	800	15	2	600	30	5	500	12	2
800	40	5	1500	15	1	500	10	2	150	15	10
4000	10	0.25	1600	15	1	3000	10	0.33	200	20	10
80	8	10	1000	20	2	1500	30	2	300	20	7
50	15	30	1500	20	1	4000	100	3	150	15	10
80	100	125	700	12	2	4000	100	3	300	15	5
50	14	28	900	12	1	2600	20	1	1000	20	2
90	12	13	800	15	2	1500	50	3	500	15	3
100	100	100	1000	25	3	500	6	1	3000	15	1
60	10	17	1500	20	1	1000	10	1	100	20	20
100	14	14	800	10	1	2000	50	3	200	25	13
50	15	30	1000	12	1	800	500	63	1000	50	5
100	6	6	1000	12	1	2500	50	2	130	20	15
2000	50	3	800	20	3	500	20	4	700	20	3
400	50	13	1000	15	2	200	10	5	110	10	9
400	15	4	700	10	1	1000	15	2	2000	10	1
80	20	25	700	12	2	6000	50	1	400	20	5
10000	10	0.1	700	10	1	400	30	8	500	20	4
300	40	13	1000	10	1	500	12	2	500	10	2
6000	50	1	900	18	2	500	40	8	400	10	3

3000	16	1	2000	15	1	1000	10	1	800	30	4
200	15	8	850	10	1	500	20	4	170	20	12
300	50	17	562	10	2	1700	30	2	2000	20	1
80	50	63	1937	20	1	1500	20	1	400	20	5
100	100	100	30	5	17	100	10	10	400	40	10
700	10	1	1000	10	1	1500	10	1	500	50	10
150	400	267	800	10	1	1500	10	1	400	15	4
600	300	50	400	15	4	1200	5	0.4	400	10	3
900	15	2	1000	15	2	1500	10	1	300	10	3
800	14	2	2000	15	1	1000	20	2	500	20	4
600	400	67	600	10	2	1500	12	1	400	10	3
150	16	11	1000	10	1	500	20	4	400	20	5
1000	10	1	800	10	1	4000	50	1	300	10	3
200	10	5	800	10	1	5000	15	0.3	500	20	4
40	15	38	1000	10	1	11000	200	2	300	400	133
250	20	8	500	20	4	7500	50	1	600	20	3
60	10	17	500	10	2	1000	20	2	400	20	5
800	40	5	500	10	2	200	50	25	300	10	3
50	10	20	800	15	2	200	10	5	400	15	4
30	14	47	600	10	2	10000	500	5	500	15	3
800	10	1	500	10	2	1900	10	1	300	10	3
2500	10	0.4	400	10	3	1000	20	2	300	20	7
1000	10	1	500	10	2	450	10	2	350	10	3
500	10	2	1000	10	1	500	25	5	500	20	4
2000	100	5	800	10	1	500	12	2	500	20	4
1500	50	3	800	10	1	400	30	8	1000	20	2
40	10	25	1000	10	1	1500	10	1	400	15	4
1200	60	5	2208	20	1	100	10	10	500	20	4
600	10	2	645	10	2	1000	20	2	500	10	2
127	100	79	600	10	2	500	30	6	600	25	4
4000	10	0.25	800	6	1	800	20	3	300	10	3
1000	10	1	1000	20	2	300	10	3	400	15	4
900	40	4	700	15	2	5000	15	0.3	400	15	4
6000	50	1	600	10	2	8000	120	2	300	15	5
60	100	167	800	30	4	500	10	2	500	20	4
1000	10	1	500	6	1	1200	10	1	500	20	4
400	10	3	1000	10	1	3000	10	0.33	300	20	7
300	10	3	700	10	1	600	10	2	300	12	4
1500	100	7	4000	18	0.45	7000	100	1	500	15	3
700	10	1	2000	20	1	1000	10	1	500	25	5
350	40	11	700	10	1	100	50	50	150	10	7
1200	100	8	4000	20	1	800	500	63	300	20	7
400	10	3	800	10	1	2000	50	3	400	20	5
150	10	7	200	20	10	1000	10	1	1000	15	2
600	100	17	750	50	7	1000	20	2	500	15	3
200	110	55	562	15	3	1900	10	1	200	15	8
170	105	62	375	10	3	1000	10	1	200	15	8
1000	100	10	1333	15	1	100	50	50	400	20	5



1500	10	1	1500	12	1	800	500	63	300	25	8
300	10	3	375	10	3	2000	50	3	500	15	3
1200	14	1	980	12	1	1000	10	1	600	20	3
800	10	1	500	100	20	1000	20	2	400	20	5
700	10	1	875	10	1	1900	10	1	400	20	5
900	15	2	1666	10	1	10000	500	5	500	15	3
1000	8	1	940	10	1	200	10	5	100	10	10
400	15	4	600	10	2	200	50	25	150	12	8
200	20	10	400	20	5	7500	50	1	130	10	8
800	15	2	600	12	2	1000	20	2	200	20	10
2000	6	3	1000	50	5	11000	200	2	100	12	12
50	16	32	6000	50	1	1500	12	1	90	14	16
1600	14	1	6500	50	1	400	15	4	150	10	7
600	10	2	300	10	3	500	15	3	100	20	20
500	150	30	5000	20	0.4	400	25	6	80	10	13
5000	150	3	1500	100	7	400	40	10	105	10	10
2500	25	1	1000	5	1	500	400	80	200	20	10
2500	25	1	300	50	17	350	20	6	100	25	25
2000	20	1	800	20	3	400	10	3	500	20	4
1500	20	1	500	30	6	400	15	4	2000	10	1
2000	20	1	1000	20	2	400	10	3	90	8	9
1000	10	1	3500	100	3	400	10	3	200	14	7
100	10	10	450	20	4	550	15	3	400	10	3
500	14	3	600	20	3	400	8	2	1000	10	1
600	12	2	350	12	3	500	12	2	1500	30	2
300	10	3	700	20	3	3000	30	1	1500	50	3
120	14	12	400	14	4	500	20	4	1000	50	5
100	10	10	500	20	4	1000	20	2	1500	30	2
500	12	2	600	25	4	400	10	3	500	10	2
700	10	1	500	14	3	600	14	2	500	14	3
200	20	10	1000	20	2	500	50	10	1200	10	1
300	25	8	600	12	2	500	10	2	500	8	2
300	14	5	450	20	4	1000	10	1	450	8	2
400	12	3	300	10	3	400	20	5	1000	10	1
150	12	8	700	10	1	500	10	2	100	10	10
300	15	5	250	10	4	400	10	3	1000	20	2
250	12	5	400	12	3	1000	10	1	500	10	2
400	15	4	450	14	3	1500	20	1	500	12	2
500	20	4	600	20	3	1000	10	1	600	10	2
270	12	4	350	20	6	2000	30	2	1500	14	1
500	10	2	300	14	5	1000	20	2	458	8	2
300	14	5	250	10	4	400	20	5	1000	10	1
500	350	70	2915	10	0.34	1500	10	1	1000	20	2
150	12	8	700	10	1	600	12	2	600	20	3
300	14	5	650	20	3	1000	30	3	2000	15	1
400	20	5	2000	20	1	500	8	2	600	20	3
450	20	4	2000	20	1	1000	10	1	400	10	3
350	14	4	500	100	20	600	8	1	400	8	2

200	12	6	500	8	2	2500	10	0.4	2100	16	1
210	14	7	800	12	2	1300	12	1	500	10	2
600	30	5	300	8	3	30	10	33	1000	15	2
300	20	7	1000	20	2	1100	14	1	600	15	3
450	14	3	500	10	2	460	8	2	310	10	3
1600	20	1	600	10	2	3000	15	1	200	20	10
400	20	5	600	10	2	500	20	4	1000	20	2
400	25	6	400	8	2	600	12	2	800	20	3
300	15	5	500	6	1	600	20	3	600	20	3
400	15	4	1000	10	1	400	10	3	900	16	2
250	20	8	700	20	3	500	88	18	600	12	2
400	10	3	800	10	1	450	14	3	1000	14	1
400	20	5	500	10	2	800	15	2	200	20	10
300	20	7	500	20	4	1000	10	1	800	10	1
500	25	5	600	15	3	500	10	2	300	10	3
2915	50	2	600	20	3	800	12	2	400	12	3
350	20	6	500	20	4	900	15	2	800	10	1
250	10	4	500	10	2	500	12	2	600	20	3
500	20	4	500	10	2	300	10	3	500	10	2
400	10	3	400	10	3	500	8	2	800	5	1
600	14	2	1000	12	1	600	20	3	200	8	4
300	20	7	1000	20	2	500	25	5	600	20	3
500	20	4	400	50	13	800	18	2	400	12	3
400	20	5	600	14	2	800	20	3	500	10	2
400	300	75	400	12	3	700	20	3	800	20	3
400	15	4	1000	20	2	800	10	1	600	7	1
550	20	4	400	8	2	1000	20	2	1000	12	1
500	10	2	400	20	5	300	15	5	700	14	2
600	400	67	2000	30	2	600	10	2	800	15	2
400	15	4	1000	10	1	400	10	3	300	15	5
700	20	3	700	10	1	500	10	2	800	15	2
400	20	5	600	10	2	800	20	3	600	10	2
300	14	5	700	8	1	700	12	2	100	16	16
600	20	3	600	12	2	200	8	4	600	10	2
400	10	3	1000	20	2	1000	20	2	600	15	3
1000	10	1	600	10	2	800	10	1	500	20	4
1000	10	1	600	15	3	600	10	2	1000	15	2
2000	30	2	1000	10	1	500	20	4	400	25	6
1000	20	2	800	10	1	1500	20	1	1000	20	2
400	20	5	1500	14	1	1700	20	1	400	50	13
2000	20	1	600	15	3	1000	15	2	500	8	2
2000	20	1	500	20	4	600	10	2	300	8	3
500	100	20	2000	20	1	600	10	2	500	8	2
500	10	2	2000	20	1	400	8	2	800	12	2
1000	20	2	500	100	20	500	10	2	300	8	3
600	10	2	400	8	2	1000	10	1	800	10	1
600	10	2	500	6	1	700	20	3	500	10	2
500	20	4	600	20	3	500	10	2	400	10	3

600	15	3	500	20	4	500	10	2	1000	12	1
1000	20	2	400	20	5	6500	50	1	1000	10	1
500	50	10	1000	10	1	6000	50	1	2000	50	3
500	20	4	700	10	1	1000	50	5	8000	500	6
600	10	2	600	10	2	1500	12	1	1500	40	3
400	50	13	700	8	1	11000	200	2	6000	50	1
400	8	2	600	12	2	1000	20	2	1000	15	2
400	15	4	400	10	3	7500	50	1	200	10	5
500	10	2	1000	10	1	200	50	25	500	20	4
1000	20	2	1000	10	1	200	10	5	2500	50	2
600	14	2	2000	30	2	10000	500	5	500	6	1
400	12	3	550	15	3	1900	10	1	1500	50	3
1000	20	2	400	8	2	1000	20	2	2600	20	1
400	8	2	3000	10	0.33	1200	10	1	4000	100	3
2000	30	2	500	10	2	500	10	2	4000	100	3
500	14	3	600	30	5	200	10	5	1500	30	2
3500	100	3	3000	200	7	400	15	4	100	50	50
300	50	17	5000	50	1	500	15	3	1000	10	1
1000	5	1	1000	20	2	50	6	12	7000	100	1
1500	100	7	3500	50	1	600	15	3	600	10	2
5000	20	0.4	1000	50	5	100	20	20	3000	10	0.33
300	10	3	6036	100	2	350	15	4	1000	15	2
300	15	5	600	10	2	1000	15	2	6000	50	1
900	15	2	3000	10	0.33	1000	15	2	2000	40	2
40	15	38	500	6	1	800	20	3	8000	500	6
300	25	8	2500	50	2	200	10	5	2000	50	3
600	15	3	8000	120	2	500	8	2	7000	100	1
5000	15	0.3	1000	10	1						

**JIMMA UNIVERSITY**

**Institute of Health**

**Faculty of Public Health**

**Department of Health Economics, Management and Policy**

**Annex 2: Data collection tool: Questionnaires (English version)**

*Dear respondent:* My name is\_\_\_\_\_. I am collecting information for the research entitled: Willingness to pay and associated factors for the nutrition services provided to pregnant women at a maternity waiting home, East Wollega zone of Oromia regional states, Ethiopia, 2018 on behave of Mr. Adisu Ewunetu, who is a graduate student at Jimma University. The purpose of the study is to assess willingness to pay and its associated factors for the nutrition services provided to a pregnant women staying at a maternity waiting home.

We will not give you any compensation by way of reward or otherwise, as we do not anticipate any risk associated with your participation in the study. You may however, benefit from the overall findings and recommendations of the study. You are free to withdraw your consent to participate in the study at any point you so wish without any consequences to you. We shall use the information sought from you for academic purpose, which shall serve as a basis for offering appropriate recommendations to the relevant authorities in order to improve financial status and sustainability of the nutrition services provided to a pregnant women who are staying at a maternity waiting homes in your area. We shall try our possible best to handle the information with utmost confidentiality.

**Do you agree to participate freely? Yes [ ]    No [ ]**

Name of participant \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_

Name of Data collector \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_

For further information and general questions about the study, contact:

- 
- Principal investigator: *Adisu Ewunetu*
  - Contact address: [Tel:+251917095166](tel:+251917095166) E-mail: [adisuewunetu2018@gmail.com](mailto:adisuewunetu2018@gmail.com)
-

Name of kebele: \_\_\_\_\_

District/woreda \_\_\_\_\_

Respondent code \_\_\_\_\_

<b>SECTION-1 : SOCIO- ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS</b>			
<b>Code</b>	<b>Question</b>	<b>Possible choices/Answers</b>	<b>Code/skip</b>
101	Gender of the respondent	1. Male          2. Female	
102	Age of respondent(in year)	-----	
103	Religion	1. Orthodox   2.Muslim   3. Protestant 4. Catholic    5.Others	
104	Your Ethnicity	(1)Oromo        (2)Amhara      (3)Tigre (4)Gurage (5)Others	
105	Your marital status	1.Single        2.Married       3.Divorced 4.widowed 5.separated	
106	Your family size	_____	
107	Your Educational status	(1)Illiterate (2)can read and write (3) Elementary (1-8)(4)Secondary (9-12) (5)college & above	
108	what is your Occupation?	(1) Farmer (2) student (3)house wife (4) Government employee (5)Merchant (6)daily laborer (99)others	
110	What is your average monthly income of your HH?	-----	
111	Who provides monetary support for your family?	(1)Interviewee (2)Spouse/Partner (3) Children (99) others	
112	Who decide on money spending in your house?	(1) Husband (2) wife (3) both (99) others	
<b>SECTION 2: HEALTH AND HEALTH RELATED QUESTIONS</b>			
201	What is the Distance of your home from the nearest health Facility	_____ km	

202	How would you travel from your home to the nearest facility	(1) By Foot (2) By Taxi (3) By Car (4) By Bicycle (5) By Ox cart (6) Other (explain)	
203	How long would it take you to travel from your home to the nearest facility, using the method of transportation that you just mentioned?	_____ hours	
204	How old is your youngest son/daughter?	_____ months	
205	Where was your last child delivered?	(1) In a home (2) Health facility (3) Hospital (4) Other (specify)	
206	How long was the labour time?	_____ hours	
207	How long the mother stayed in the health facility to give birth to the last baby?	_____ days	
208	Did she faced problem when she gave birth to the last baby?	(1) Yes (2) No	
209	If YES to Quest 308; What problem did she faced during that time?	(1) Labour prolonged (2) Bleeding after delivery (3) Retained placenta (99)others	

**SECTION-3: ATTITUDINAL AND WILLINGNESS TO PAY QUESTIONS**

**INSTRUCTIONS TO THE INTERVIEWER:** The following statement should be read to every potential interviewee. Government wants to continue providing you with convenient, high quality nutrition services to pregnant women who are staying at the maternity waiting home before and after delivery when they become pregnant. In order to do this, it will be necessary for the government to raise the prices of the nutrition services provided to the pregnant women. We want to know how you will be affected by these price changes. There is no right or wrong answers, so please be honest and tell us what is true for you. The information being collected is for planning purposes only and there are no personal risks or benefits to your participation.

<p>Imagine that this mothers' shelter is safe, provides a space for you and your caretaker to sleep, has basic cooking facilities, and is adjacent to a health facility with quality services for you to deliver. In answering these questions, please bear in mind the following:</p> <p>1) assume that your household income stays the same;</p> <p>2) Most women stay on average about 14days, but you will not know in advance exactly how many days you will be staying. You will have to pay a fee for per year; and</p> <p>3) You have alternatives to staying in the mothers' shelter (for example, stay with a relative or with a friend).</p>		
301	<p>To what extent do you perceive that a distance from a qualified health facility is a problem to pregnant women?</p> <p>(1) A serious problem (2) A problem (3) A simple problem (4) Not a problem at all.</p>	
302	<p>To what extent do you think that a provision of nutrition services to pregnant women staying at maternity waiting home is important?</p> <p>(1) Very important (2) Important (3) Not important (4) Do not know</p>	
303	<p>Do you support a provision of nutrition services to a pregnant women staying at a maternity waiting home? (1) Yes (2) No</p>	
304	<p>Are you willing to pay a premium to the nutrition services provide to pregnant women staying at a maternity waiting home? (1) Yes (2) No</p>	<p>If yes; Go to....305 IfNo, Go to...sect 4</p>
305	<p>Suppose that the price to pay for the nutrition service provided to pregnant women staying at the Maternity waiting home per year per household is <b>10 ETB</b>; Are you willing to pay? (1) Yes (2) No (99) Don't know, no answer</p>	<p>If Yes; Go to..306 If No, Go to....308 I don't know...308</p>
306	<p>Suppose that the price to pay for the nutrition service provided to pregnant women staying at the Maternity waiting home per year per household is <b>12 ETB</b>?; Are you willing to pay? (1) Yes (2) No (3) I don't know</p>	<p>If Yes; Go to.. 307 If No, Go to....310 I don't know...310</p>
307	<p>Suppose that the price to pay for the nutrition service provided to pregnant women staying at the Maternity waiting home per year per household is <b>14 ETB</b>; Are you willing to pay? (1) Yes (2) No (3) I don't know</p>	<p>If Yes, Go to...310 If No, Go to....310 I don't know....310</p>
308	<p>Suppose that the price to pay for the nutrition service provided to pregnant women staying at the Maternity waiting home per year per household is <b>8 ETB</b>; Are you willing to pay? (1) Yes (2) No (3) I don't know</p>	<p>If Yes; Go to...310 If No,Go to...309 I don't know....309</p>
309	<p>Suppose that the price to pay for the nutrition service provided to pregnant women staying at the Maternity waiting home per year per household is <b>6 ETB</b>; Are you willing to pay? (1) Yes (2) No (3) I don't know</p>	<p>If Yes; Go to...310 If No, Go to...310 I don't know...310</p>

310	What is the maximum amount of birr you are willing to pay for for the nutrition service provided to pregnant women staying at the maternity waiting home? <b>Amount</b> _____ <b>ETB</b>	
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**SECTION-4: Reason for not willing to pay for the nutrition services provided to a pregnant women staying at a maternity waiting home.**

401	Do you think that there is pregnant women's privacy problem in the MWH room?	(1) YES (2) NO (99) I don't know	
402	If Yes, is that really a problem?	(1) YES (2) NO (99) I don't know	
403	Does it affect your motivation to pay for the nutrition services provided at a MWH?	(1)YES (2) NO (99) I don't know	
404	Do you think that there is a lack of sanitary facilities for a pregnant women staying at a MWH?	(1)YES (2) NO (99) I don't know	
405	If Yes, is it really a problem?	(1)YES (2) NO (99) I don't know	
406	Does it affect your motivation to pay for the nutrition services provided at a MWH?	(1)YES (2) NO (99) I don't know	
407	Do you think that there is problem of food availability at MWH?	(1) YES (2) NO (99) I don't know	
408	If YES, is it really a problem?	(1) YES (2) NO (99) I don't know	
409	Does it affect your motivation to pay the nutrition services provided at a MWH?	(1) YES (2) NO (99) I don't know	
410	Do you think that there is a problem with the availability of water at a MWH?	(1) YES (2) NO (99) I don't know	
411	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
412	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	



413	Do you think that there is problem of adequate beddings in the maternity waiting homes?	1. YES 2. NO (99) I don't know	
414	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
415	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
416	Do you think that there is problem of Cooking facilities at a MWH?	1. YES 2. NO (99) I don't know	
417	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
418	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
419	Do you think that there is a lack of adequate sleeping spaces for pregnant women staying at a MWH?	1. YES 2. NO (99) I don't know	
420	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
421	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
422	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
423	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
424	Do you think that there are peers who prevent people from contributing for the MWH?	1. YES 2. NO (99) I don't know	
425	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
426	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
427	Do you think that there is a lack of affordability to pay for	1. YES 2. NO (99) I don't	

	the nutrition services provided to pregnant women staying at a MWH?	know	
428	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
429	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
430	Do you think that there is a lack of cooperation between the service providers and pregnant women staying in the MWH?	1. YES 2. NO (99) I don't know	
431	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
432	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
433	Do you think that there is problem of healthcare providers follow up to a pregnant women staying at the shelter?	1. YES 2. NO (99) I don't know	
434	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
435	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
436	Do you think that there is a problem of services quality at the MWH?	1.YES 2.NO (99) I don't know	
437	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
438	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
439	Do you think that the nutrition services provided to a pregnant women staying at a MWH is satisfactory?	1.YES 2 .NO (99) I don't know	
440	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
441	Does it affect your motivation to pay for the nutrition	1. YES 2. NO (99) I don't know	

	services provided at a MWH?		
442	Who decides on money spending in your household?	1.Husband 2.wife (3) both (99)others(specify)	
443	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
444	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
445	Do you think that funding for the nutrition services provided to a pregnant women staying at a MWH is the governments' responsibility?	(1) Yes (2) No (99) I don't know	
446	If YES, is it really a problem?	(1)YES 2. NO (99) I don't know	
447	Does it affect your motivation to pay for the nutrition services provided to a pregnant women staying at MWH?	1. YES 2. NO (99) I don't know	
448	Do you think that there is a problem of power (Electricity) at the mothers' shelters?	1. YES 2. NO (99) I don't know	
449	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
450	Does it affect your motivation to pay for the nutrition services provided at MWH?	1. YES 2. NO (99) I don't know	
451	Do you think that there is a problem of availability of kitchen at the MWH?	1. YES 2. NO (99) I don't know	
452	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	
453	Does it affect your motivation to pay for the nutrition services provided at MWH?	1. YES 2. NO (99) I don't know	
454	Do you think that there is a problem of availability of firewood at a MWH?	1. YES 2. NO (99) I don't know	
455	If YES, is it really a problem?	1. YES 2. NO (99) I don't know	

456	Does it affect your motivation to pay for the nutrition services provided at a MWH?	1. YES 2. NO (99) I don't know	
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**CLOSING: Thank you for your time and cooperation.**

**INTERVIEWER'S EVALUATION**

INTERVIEWER: COMPLETE THIS EVALUATION AS SOON AS POSSIBLE AFTER THE INTERVIEW.

In your judgment, how well did the respondent understand what she or he was asked?

- 1) Understood completely
- 2) Understood a great deal
- 3) Understood somewhat
- 4) Understood a little
- 5) Did not understand very much
- 6) Did not understand at all
- 7) Others (specify) \_\_\_\_\_

Comments about the respondent: \_\_\_\_\_

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# JIMMA UNIVERSITY

## Institute of Health

### Faculty of Public Health

#### Department of Health Economics, Management and Policy

##### **Annex 3: Data collection tool: Questionnaires (Afan Oromo version)**

*Kabajamaa hirmaataa:* Maqaan koo \_\_\_\_\_ jedhama. Ani qorannoo mata dureen isaa: "Fedhii hawaasni nyaata deessuu bakka turtii haadhooliitti kennamuuf kaffaluuf qabuu fi wantoota akka hawaasni hin kaffalle taasisan" jedhu irratti karaa barataa maastersii Jimmaa Yuunivarsiitii obbo Addisuu Ewunatuutiin Godina Wallaggaa Bahaa keessatti geggeeffamuu irrattan odeeffannoo funaanaa jira kaayyoon qorannoo kanaas hawaaasni hangam kaffaluu danda'a kan jedhuu fi maaltu akka hawaasni hin kaffalle immo taasisaa jira kan jedhu addaan baasuu fi qaama dhimmi isaa illaallatu beeksisuudhaan furmaata akka argatu taasisuudha.

Qorannoo kana keessatti hirmaachuu keessaniif miidhaan isin irra ga'us ta'e kaffaltiin isiniif kaffalamu yoo hin jiraanne illee; bu'aa qorannoo kana irraa argamuu keessaa garuu hirmaattota ta'uu ni dandeessuu. Osoo qorannoo kana keessatti hirmaachaa jirtanii; yoo fedhii dhabdan saa'atii kamitti iyyuu rakkina tokko malee addaan kutuu ni dandeessu.. Odeeffannoon isin irraa argamuu dhimmoota hojiif, sagantaa kana ilaalchisee qaama dhimmi isaa ilaaluuf kallattii kennuudhaan nyaata deessuuf baajata karoofamu irratti fooyya'insa olaanaa fiduuf kan nu gargaaru ta'a. Odeeffannoon isin nuuf kennitanis hamma danda'ametti iccitiidhaan ni qabama

**Hirmaachuudhaaf fedhii keetii** Eeyyee [ ] **Lakki** [ ]

Maqaa nama odeeffannoo funaanuu \_\_\_\_\_ Guyyaa \_\_\_\_\_ Mallattoo \_\_\_\_\_

Odeeffanno dabalataa tiifi gaaffii waa'ee qorannoo kanaatiif yoo qabaattan, contact:

- 
- Qorataa jalqabaa: *Addisuu Iwunatu*
  - Lakk/bilbilaa: [Tel:+251917095166](tel:+251917095166) E-mail: [adisuewunetu2018@gmail.com](mailto:adisuewunetu2018@gmail.com)
- 

**Maqaa ganda:** \_\_\_\_\_

Maqaa Aanaa \_\_\_\_\_

Koodii hirmaataa \_\_\_\_\_ Lakkoofsa Manaa \_\_\_\_\_

<b>Kutaa-1 : Gaaffii hawaasa dinagdee</b>			
<b>Koodii</b>	<b>Gaaffiwwan</b>	<b>Deebiiwwan</b>	<b>Code/skip</b>
101	Saala hirmaataa	1. Dhiira          2. Dhalaa	
102	Umurii hirmaataa (Waggaadhaan)	_____	
103	Amantaa	(1) Ortodoksii    (2) Muusiliima (3) pirotistaantii (4) Kaatolikii    (5) kan biraa	
104	Qomoo	(1) Oromoo    (2) Amaaraa    (3) Tigiree (4) Guraagee (5) kan biraa	
105	Haala gaa'elaa	(1) Hin heerumne (2) Heerumeera/teetti (3) Gargar ba'ani    (4) abban manaa ykn haati manaa kan irraa du'e/te    (5) Bakka garaagaraa kan jiraatan	
106	Baayina maatii(mana sana keessaa)	_____	
107	Sadarkaa barnootaa	(1) kan homaayyuu hin baratne (2) Dubbisuuf barreessuu kan danda'u (3) Sadarkaa jalqabaa (1-8) (4) sadarkaa lammaffaa (9-12) (5) Kolleejjii fi isaa ol	
108	Hojii hirmaataa	(1) Qonnaan bulaa    (2) Barataa (3) mana keessa kan hojjetu (4) Hojjetaa/ttuu mootummaa (5) Daldalaa/tuu    (6) Dafqaan bulaa (99) kan biraa	

109	Tilmaamni galii ji'aa mana keessanii meeqa?	_____	
110	Mana keessaniif galii qarshii kan argamsiisu eenyu?	(1) Husband (2) Wife (3) Ijoollee (99) Kan biraa	
112	Mana kanaa eenyutu baasii maallaqaa irratti murteessaa?	(1) Abbaa manaa (2) Haadha manaa (99) Kan biraa	
<b>Kutaa 2: Gaaffii fayyaa wajjin wal qabatu</b>			
201	Manni keessan mana yaalaa isinitti dhihoo jiru irraa hagam fagaata?	(1) kiilomeetira 5 gadi (2) kiilomeetira 5-10 (3) kiilomeetira 10 oli	
202	Akkamitti mana keessan irraa gara mana yaalaa deemtu?	(1) Miilaan (2) Taaksiidhaan (3) Konkolaataadhaan (4) saayikiliidhaan (5) Gaariidhaan (6) kan biraan yoo jiraate ibsaa_____	
203	Akkaataa armaan olitii ittiin deemtaniin saa'atii meeqa deemtani mana yaalaa geessu?	(1) saa'atii tokkoo gadi (2) saa'atii tokkoo ol (3) saa'tii lamaa ol	
204	Mucaan keessan dhumarra dhalatte/te waggaa meeqa?	(1) Waggaa lamaa gadi (2) waggaa lama (99) Anoo hin beeku	
205	Mucaan keessan dhuma eessatti dhalatte/te?	(1) Manatti (2) Mana yaalaatti (99) kan biroo yoo jiraate_____	
206	Ciniinsuun hagam irra (yoo abbaa manaa ta'e /sirra ture (yoo haadha manaa taate)?	(1) saa'tii 6 gadi (2) saa'atii 12gadi (3) saa'atii 12 oli (99) hin yaadadhu	
207	Osoo hin da'in saa'atii meeqaaf mana yaalaa keessa turte ?	(1) Guyyaa lamaa gadi (2) Guyyaa 2-5(3) Guyyaa 6-14 (4) Guyyaa 14 ol (5) hin yaadadhu	
208	Yeroo mucaa isa/ ishee dhuma deesse rakkoo ishee mudate jiraa ?	(1) Eeyyee (2) Lakkii	

209	Yoo deebiin lakk.208 irraa eeyyeedha ta'e; rakkoon ishee mudate maal ture?	(1) Ciniinsuun irra turuu (2) Daa'imni dafee hodhuu dhiisuu (3) Da'umsa booda dhiigi baay'chuu (4) Ofkaltiin dafee ba'uu dhiisuu (5) kan biraa _____	
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### **Kutaa-3: Gaaffiiwwan hubannoo fi hawaasni hagam kaffaluu akka danda'u qoratan**

**Wantoota namootni odeeffannoo funaanan gochuu qaban:** Himootni armaan gadii kun tokkoo tokkoo hirmaataaf dubbifamuu qabu: Akka godina kanaatti hadholiin ulfaa da'umsa duraa torbee muraasaaf fi da'umsa booda torbee muraasaaf buufata fayyaa cina bakkaturtii haadholii keessa akka turan ni taasifama. Haaluma kanaan dubartii deessuun bakka turtii kana keessa turtu immoo marqaa fi buna ni argatti. Baajeti tajaajila kanaaf oolu immoo waggaa waggaatti abbaa hawaasa irraa funaanamee tajaajila kanaaf oolaa jira. Ammas gara fuulduraattis kan itti fufuu qabuufi caalaadhumatti immo fooyya'uu kan qabudha. Kanaafuu yoo mootummaan gara fuula duraatti tajaajila kana cimsuuf deeggarsa uummatni tajaajila kanaaf gochuu qabu dabaluu qaba jedhee yoo hanga isin irraa funnaanamaa ture dabale, hangam akka hawaasni dabala qarshii kanaan fedhii dhabuufi yoo qarshiin deessuuf uummata irraa funaanamu yoo dabale eenyutu kaffaluuf fedhii akka qabuufiii hagam kaffaluu akka danda'u addaan baasuu barbaadnagaaffii gaafatamtan kana yeroo deebifan sirriidha yookaan sirrii isiniin hin jedhamu. Kanaafuu amanamummaadhaan waan isiniif dhugaa akka nutti himtan barbaadna

Deessuun yeroo da'umsaaf dhuftee turtu bakka turtii gaarii ykn mijataa, marqaa fi buna ni argatti. Dabalataanis bakka ciisichaa ga'aa fi bakka nyaata iitii qopheeffatanis ni argatti. Kaffaltii kana yeroo kaffaltan

(1) Galiin keessan kanuma duraanii yoo ta'e ;

(2) Deessuun yeroo dhuftu immoo yoo xiqqaate hanga guyyaa 14 kan turtu yoo ta'e, garuu immoo hanga isheen turuu dandeessu isa sirrii isaa beekuun hindanda'amu; yeroon da'umsaa ishee yoo ga'uudhaa baate garuu kanaa olis kanaa gadis turuu ni dandeessi. Waggaa waggaadhaan tajaajila kanaaf ni kaffaltu;

(3) Bakka turtii kana keessa turuuf carraan isin ykn maatii keessan qaqqabuu danda'a.

301	Fageenya manni jireenyaa dubartii ulfaa mana yaalaa irraa qabu hagam rakkoodha jettanii yaadduu? (1) Rakkoo cimaadha. (2) Rakkoodha (3) Rakkoo salphaadha. (4) Rakkoo miti.	
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302	Dubartii ulfaa kutaa turtii haadholii keessaaf nyaata ( marqaa fi buna dhiheessuun hagam barbaachisaadha jettanii yaadduu? 1) Baay'ee barbaachisaadha (2) barbaachisaadha (3) Barbaachisaa miti (4) Anoo hin beeku	
303	Dubartii ulfaa kutaa turtii haadholii keessaaf nyaati dhiyaachuu isaa ni deeggartuu? (1) Eeyyee (2) Lakki	Yoo lakkii ta'e; gara Gaaffii lakk ..... <b>310</b>
304	Tajaajila nyaata haadholii kanaaf kaffaluu ni feetuu? (1) Eeyyee (2) Lakki	Yoo lakkii ta'e; gara Gaaffii lakkoofsa ..... <b>310</b> deemi.
305	Tajaajila nyaata deessuuf qarshiin abbaan warraa tokko kaffaluu qabu osoo qarshii ja'a ta'ee ( <b>6</b> ); kaffaluu ni feetuu? (1) Eeyyee (2) Lakki	Yoo lakkii ta'e; gara Gaaffii lakkoofsa ..... <b>311</b> deemi.
306	Tajaajila nyaata deessuuf qarshiin abbaan warraa tokko kaffaluu qabu osoo qarshii ja'a ta'ee ( <b>8</b> ); kaffaluu ni feetuu? (1) Eeyyee (2) Lakki	Yoo lakkii ta'e; gara Gaaffii lakkoofsa ..... <b>311</b> deemi.
307	Tajaajila nyaata deessuuf qarshiin abbaan warraa tokko kaffaluu qabu osoo qarshii ja'a ta'ee ( <b>10</b> ); kaffaluu ni feetuu? (1) Eeyyee (2) Lakki	Yoo lakkii ta'e; gara Gaaffii lakkoofsa ..... <b>311</b> deemi.
308	Tajaajila nyaata deessuuf qarshiin abbaan warraa tokko kaffaluu qabu osoo qarshii ja'a ta'ee ( <b>12</b> ); kaffaluu ni feetuu? (1) Eeyyee (2) Lakki	Yoo lakkii ta'e; gara Gaaffii lakkoofsa ..... <b>311</b> deemi.
309	Tajaajila nyaata deessuuf qarshiin abbaan warraa tokko kaffaluu qabu osoo qarshii ja'a ta'ee ( <b>14</b> ); kaffaluu ni feetuu? (1) Eeyyee (2) Lakki	Yoo lakkii ta'e; gara Gaaffii lakkoofsa ..... <b>311</b> deemi.
310	Sababasaa ibsaa _____	

311	Maaliif amma jedhame akka hin kaffalle ibsaa: sababiin isaas: 1) Kaffaluu hin danda'u. 2) Dirqama mootummaati. 3) Namoota itti fayyadaman qofaa illallata. 4) kan biraa (adda baasi): _____	
312	Nyaata deessuu kanaaf hagam kaffaluu dandeessuu? <b>Qarshii</b> _____	

<b>Kutaa -4: Gaaffiiwwan sababoota akka hawaasni nyaata deessuuf hin kaffalle taasisan ilaallatan</b>			
401	Dubartootni ulfaa yeroo bakka turtii haadholii keessa nama kan biraatti nisaaxilamu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
402	Kundhuguma rakkoodhaa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
403	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
404	Rakkoon tajaajila bakka shaaworii fi mana fincaanii dubartoota bakka turtii keessaaf ga'aa miti jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
405	Kun dhuguma rakkoodhaa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
406	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
407	Bakka turtii haadholii keessatti nyaata (marqaa fi buna) deessuuf dhihaataa jiru ilaalchisee rakkoon jira jettanii	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	

	yaadduu?		
408	Yoo gaaffiin lakk. <b>407</b> eeyyee ta'e ; Kun dhugumatti rakkoodhaa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
409	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
410	Haadholii bakka turtii keessaa turaniif rakkoon bishaanii ni jira jettanii yaadduu? (1) Eeyyee (2)Lakki	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
411	Yoo gaaffiin lakk. <b>410</b> eeyyee ta'e; Kun dhugumatti rakkoodhaa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
412	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
413	Hanqinni bakka ciisichaa bakka turtii haadholii keessa ni jira jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
414	Gaaffiin lakk. <b>413</b> eeyyee yoo ta'e; Kun dhugumatti rakkoodhaa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
415	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
416	Kutaa bakka turtii haadholii keessa rakkoon meeshaalee nyaata ittiin bilcheeffatanii fi iitti nyaatanii ni jira jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
417	Gaaffiin lakk. <b>416</b> eeyyee yoo ta'e ; Kun dhugumatti rakkoodhaa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
418	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	

	danda'aa?		
419	Namootni tokko kaffaluu diduun inni kaanis akka hin kaffalle ni taasisa jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
420	Gaaffiin lakk. <b>419</b> eeyyee yoo ta'e; Kun dhugumatti rakkoodhaa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
421	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
422	Nammootni sababa qarshiin nyaata haadhooliif kaffalamu humna isaanii ol ta'eef waan kaffaluu didan isinitti fakkaataa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
423	Gaaffiin lakk. <b>422</b> ; eeyyee yoo ta'e; Kun dhugumatti rakkoodhaa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
424	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
425	Ogeessa fayyaa fi haadhoolii ulfaa bakka turtii keessa jiran gidduu walitti dhufeenyi gaariin hin jiru jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
426	Deebiin lakk <b>425</b> ; eeyyee yoo ta'e; Kun dhugumatti rakkoodhaa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
427	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
428	Akka keessanitti rakkoon haadhooliin bakka turtii keessaa turan ogeessa fayyaatiin hordofamuu dhabuu ni jira jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
429	Deebiin lakk <b>428</b> ; eeyyee yoo ta'e; Kun dhugumatti		

	rakkoodhaa?		
430	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
431	Tajaajilli bakka turtii haadholii keessatti kennamu qulqullina hin qabu jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
432	Deebiin lakk <b>431</b> ; eeyyee yoo ta'e ; Kun dhugumatti rakkoodhaa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
433	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
434	Nyaatni(marqaaniifi bunny) deessuu bakka turtii keessatti dhiyaachaafii jiru quubsaa miti jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
435	Deebiin lakk <b>434</b> ; eeyyee yoo ta'e ; Kun dhugumatti rakkoodhaa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
436	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
437	Mana kana keessaa eenyutu baasii qarshii irratti murteessuu danda'a?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
438	Abbaan manaa ykn haati manaa baasii qarshii manaa irratti murteessuun kaffaltii isaan nyaata deessuuf kaffalan irratti rakkoo qaba jettanii yaadduu ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
439	Deebiin lakk <b>438</b> ; eeyyee yoo ta'e ; Kun dhugumatti rakkoodhaa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
440	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	

	danda'aa?		
441	Akka keessanitti; tajaajilla nyaata deessuuf kaffaluun ga'ee mootummaati jettanii ni yaadduu ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
442	Deebiin lakk <b>441</b> ; eeyyee yoo ta'e ; Kun dhugumatti rakkoodhaa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
443	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
444	Hanqinni ibsaa bakka turtii haadholii keessaa ni jira jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
445	Deebiin lakk <b>446</b> ; eeyyee yoo ta'e ; Kun dhugumatti rakkoodhaa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
446	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
447	Hanqinni bakka nyaata itti bilcheeffatanii kutaa turtii haadholii keessa ni jira jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
448	Deebiin lakk <b>449</b> ; eeyyee yoo ta'e ; Kun dhugumatti rakkoodhaa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
449	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
450	Hanqinni qoraanii naannoo kutaa turtii haadholii ni jira jettanii yaadduu?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
451	Deebiin lakk <b>452</b> ; eeyyee yoo ta'e ; Kun dhugumatti rakkoodhaa ?	(1) Eeyyee (2)Lakki (99) Anoo hin beeku	
452	Akka keessanitti, rakkoon kun jiraachuun kaka'umsa isin	(1) Eeyyee (2)Lakki	

tajaajila nyaata deessuuf kaffaluuf qabdan hir'isuu ni danda'aa?	(99) Anoo hin beeku	
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**Xumura irratti: Deeggarsa nuu taasiftanii fi waan yeroo keessan nuuf eeyyemtanii baay'ee galatoomaa.**

**Madaallii ykn gamaggama qorataa**

Qorataan : hanga danda'ametti erga gaaffii fi deebiin xumuramee qorataan wantoota armaan gadii kana guutuu qaba.

akka yaada keetti hirmaataan hagam gaaffii gaafatamaa ture/te hubateera?

- 1) Guutummaa guututti hubateera/tteetti.
- 2) Caalmaatti hubateera/teetti
- 3) Hanga tokko hubateera/teetti
- 4) xiqqoo hubateera/teetti
- 5) Baay'ee hin hubatne
- 6) waan tokko iyyuu hin hubatne
- 7) kan biraan yoo jiraate\_\_\_\_\_

Yaada waa'ee hirmaataa/ttuu: \_\_\_\_\_

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#### Annex 4: Map of the study area: East Wollega zone

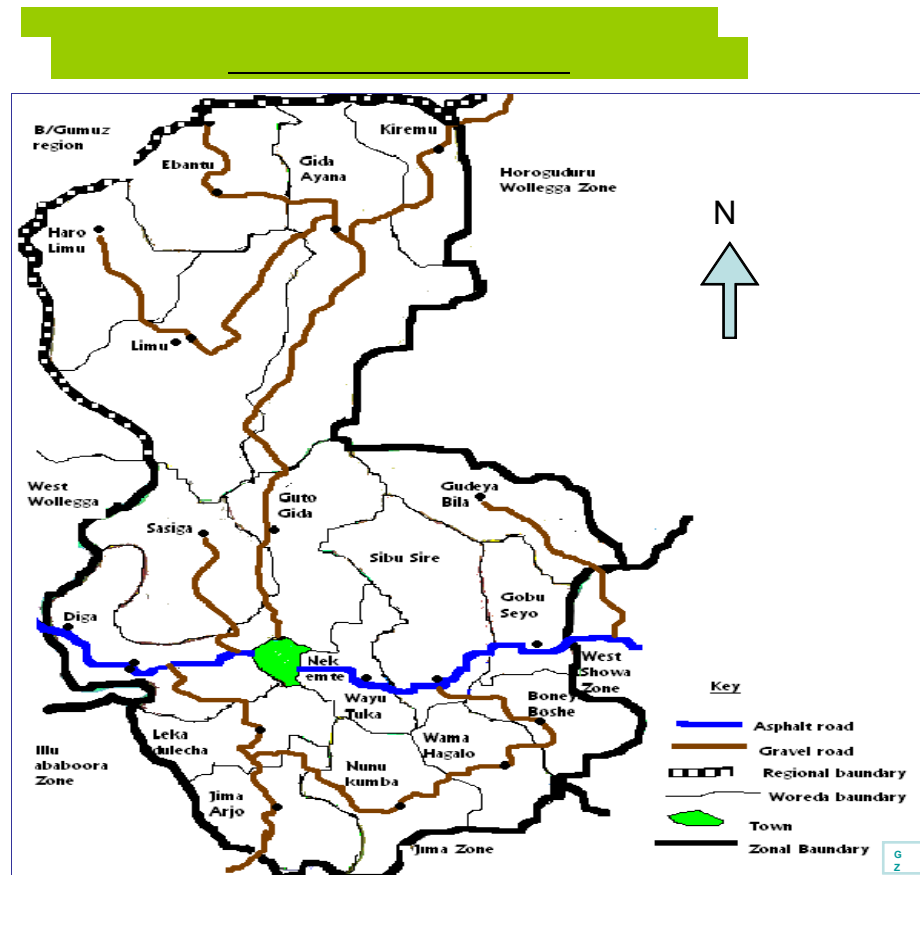


Figure 3: Map of East Wollega zone