

2020-07

# Maternal Satisfaction on Maternity Waiting Home Services and Associated factors in Health Centers of Dega Damot District, Northwest Ethiopia, 2020

Mulat, Yitayih

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**BAHIRDAR UNIVERSITY**  
**COLLEGE OF MEDICINE AND HEALTH SCIENCES**  
**SCHOOL OF PUBLIC HEALTH**  
**DEPARTMENT OF HEALTH SERVICE MANAGEMENT AND**  
**HEALTH ECONOMICS**  
**MATERNAL SATISFACTION ON MATERNITY WAITING HOME**  
**SERVICES AND ASSOCIATED FACTORS IN HEALTH CENTERS**  
**OF DEGA DAMOT DISTRICT, NORTHWEST ETHIOPIA, 2020**

**BY**  
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**A RESEARCH THESIS TO BE SUBMITTED TO DEPARTMENT OF HEALTH SERVICE MANAGEMENT AND HEALTH ECONOMICS, SCHOOL OF PUBLIC HEALTH, COLLEGE OF MEDICINE AND HEALTH SCIENCES; IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS IN GENERAL PUBLIC HEALTH.**

**JULY, 2020**

**BAHIRDAR UNIVERSITY, ETHIOPIA**

**BAHIRDAR UNIVERSITY**  
**COLLEGE OF MEDICINE AND HEALTH SCIENCES**  
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STUDY AREA	DEGA DAMOT WOREDA.
STUDY PERIOD	APRIL1/2020 –APRIL 20/2020.

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## **ACKNOWLEDGMENT**

First, I would also like to express my thanks for Bahirdar University, department of public health for giving me the opportunity to do this thesis work.

Second, I would like to give special thanks to my advisor Mr. Mulusew Anudalem and Mr. Zemenu Shiferaw for the politeness of responding when I asked unclear questions, gave constructive comments and beneficial advice on how to do this thesis starting from proposal development up to writing result.

Then, I would like to extend my deepest thanks to Amhara regional health bureau for their financial support for thesis work.

At last but not least, I would also extend my deepest gratefulness for Dega Damot Woreda Health Office for their support in providing the necessary data to develop this document.

Lastly, my thanks also go to data collectors, supervisors and all the study participants who took part in the study.

## ABSTRACT

**Background:** - Maternity waiting home is a temporary residence where pregnant women stayed. It contributes to the reduction of maternal death significantly. Besides on this, inadequate service might lead to dissatisfaction. Moreover, there were little studies on the level of satisfaction in relation to the maternity waiting home service packages.

**Objective:** - To assess maternal satisfaction on maternity waiting home services and associated factors in health centers of Dega Damot district, North West Ethiopia

**Method:** A facility-based cross-sectional quantitative study supported by qualitative method was conducted from April 1-20/2020. Quantitative data was collected from 363 women using interviewer administered questionnaire while 12 mothers were participated in qualitative part using in-depth interviews. Simple random sampling technique (Computer generation method) was employed to select study subjects. The collected data was entered into Epi-Data 3.1 and exported to SPSS version 23 for further data cleaning and analysis. Descriptive statistics were computed for selected variables. Binary logistic regression model with bivariate and multivariable analysis were applied to identify significantly associated factors. Odds ratio at 95% CI was computed and interpreted and statistical significance were considered at P-values <0.05. For qualitative part, themes and subthemes were derived from coded items and analyzed thematically. Concepts were extracted from themes and were presented in narratives to support quantitative results.

**Result:** The Overall maternal satisfaction with maternity waiting home services among users was found to be 225(62%) [95% CI: 57.3%-66.9%]. This study showed that age < 24 years [AOR = 6.18, 95% CI [1.96-19.50], return to their home using ambulance [AOR = 2.65, 95% CI [1.27-5.53], husband support [AOR = 3.34, 95% CI [1.75-6.38], family support [AOR = 3.54, 95% CI [1.73-7.27], servant support [AOR = 2.08, 95% CI [1.17-3.71] and interpersonal relationship and communication with health care workers [AOR = 2.57, 95% CI [1.34-4.94] were significantly positively associated with overall maternity waiting home service satisfaction.

**Conclusion and recommendation:** The level of maternity waiting home services satisfaction among users is still low compared to the health sector transformation plan in which at least 90% of the population could be satisfied with specific health services. Age, return to their home using ambulance, social supports and interpersonal relationship and communication with health workers predicted the overall service satisfaction. The Amhara regional health Bureau and Woreda health sector could design intervention strategies addressing the identified factors and lovely maternity waiting home services.

**Key words:** Maternal satisfaction, Maternity waiting home services, Maternity waiting home guideline, Factors, Dega Damot, Ethiopia

## **ACRONYMS**

ANC .....	Ante Natal Care
CHW .....	Community Health Worker
FMOH.....	Federal Minster of Health
HCWs.....	Health Care Workers
HEW .....	Health Extension Worker
IPC .....	Inter-Personal relationship and Communication
MWA .....	Maternity Waiting Admission
MWH .....	Maternity Waiting Home
PNC.....	Post Natal Care
PPH .....	Post-Partum Hemorrhage
SPSS.....	Statistical Package for Social Science
VIF .....	Variance Inflation Factor
WDAL.....	Women Development Army Leader

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# 1. INTRODUCTION

## 1.1. Background

In 2015, an estimated 303, 000 women worldwide died during pregnancy and childbirth. From this, 99% of maternal deaths occurred in low- and middle-income countries and almost two thirds (64%) occurred in Africa(1). By 2030, Ethiopia plans to reduce maternal mortality from 353 to less than 70 from 100,000 babies born alive. And neonatal mortality rate from 29 to less than 12 from 1,000 babies born alive(2, 3). To achieve this, the Ethiopian federal ministry of health designs strategies to decrease maternal and neonatal mortality rates by increasing health facility delivery with a skilled birth attendant(4-6). One of the strategies is availing maternity waiting home (MWH) in health facilities for women with a high-risk pregnancy or who have to travel far to get to a health facility(7).

Maternity waiting homes are residential facilities located near a health facility to accommodate women in their final weeks of pregnancy to bridge the geographical gap in obstetric care between rural and urban areas and areas with poor access to facilities(8, 9). It is an equity-based strategy and a low-cost solution to increase skilled birth attendance(5, 10-12).

The Ethiopian federal ministry of health (FMOH) sets a strategy to use MWH for mothers who are living inaccessible area and 15 days left before delivery to reduce pregnancy-related adverse complications by increasing health facility delivery. The FMOH established a MWH guideline and it considers when this guide line is implemented, it will satisfy the users and increases not only the MWH utilization but also health facility delivery. To mention some of MWH guideline concepts which may affect the satisfaction level of women in MWHs are essential facilities like electricity, running water, shower separated from toilet, kitchen. And bed rooms should be available and equipped with services like bedding, mattresses, pillows and blankets, etc. The size of the MWH should consider the number of users and comply with their interests. Mothers and their supporters should be provided with food, sleep, and sanitation facilities in MWHs. The MWH bathroom, latrine and kitchen should be cleaned daily. Each woman should have got regular services including laboratory check-up once a week in the maternity ward and stay from 24 to 48 hours after delivery in the MWH to get the necessary postnatal services. The guideline also specifies the women should get access to ambulance service at least on their way to MWH and when they back home if possible. Health education should be provided regularly in MWHs.

MWH users could be provided with entertainment services such as TV / radio / coffee making / Porridge preparation while staying at the MWH. They should be visited by HCWs daily(13, 14). According to the Ethiopian MWH guideline, the health extension workers (HEWs) trace pregnant women and refer them to MWH near the time of delivery by calling and availing ambulance services to the women. They also organize social supports (women's network, family/relative including husbands) to support the women on their way to MWH. And some women accessed the service through referrals from health workers during ante natal care (13, 15, 16). The health care workers (HCWs) are clinicians including midwives and other health workers who work in the health center where MWH is available and they have to take care of pregnant women once they arrived at MWH. They are expected to provide MWH services to women especially prenatal and postnatal services.

Studies report that client-provider relationship and communication as relevant elements of maternal satisfaction and service utilization(13, 17, 18). Providing educational sessions and a high-quality safe environment in MWH can be a means of women's more satisfied in staying and encouraging to come to the MWHs(11).

Donabedian postulated that client satisfaction may be considered as one of the desired outcomes of care. Patient satisfaction or dissatisfaction as the patient's judgment on the quality of care in all its aspects, particularly the interpersonal process(19). Allowing women to express their views about MWH service, the care provided by health workers gives richer information about the care they received. Their own words provide a more realistic picture of the care they received(20). Maternal satisfaction on MWH services is perceived as a multidimensional concept about the emotional experiences of mothers. It is expected to be constructed from women's perceptions of access to specific services, conditions and relationship compared to their expectations.

The services given as per guide line were not tested whether it satisfies users or not. In the study area, MWH service started from 2015. But still now, the number of users was low and no improvement. To combat this problem, the Woreda health office conduct supportive supervision and field visit to identify the problem. Based on this, the health center told us they give the services based on the guideline of MWH but users had complained on the MWH services as they are not comfortable with it(21).

## 1.2. Statement of the problem

In low and middle-income countries, being treated in a courteous and empathetic manner is the most commonly reported determinant of maternal satisfaction(22). Using MWH in health facilities was low like 31.5% and 31.3% in Zambia and Tanzania respectively and 7% -38.7% in different parts of Ethiopia (16, 23-28). From 49.4% to 70.2% of respondents in different parts of Ethiopia agreed that lack of food in MWH makes lower satisfaction of mothers which leads to difficult in staying MWH (26, 27, 29). Moreover, another study in Zambia shows that over half of mothers (53.5%) indicated dissatisfaction with crowdedness at the MWH. In addition, 27%-30% of women in MWH were dissatisfied with MWH cleanness, access to the cooking area and friendliness of staff which influences negatively for future use(24). In Jimma Zone Ethiopia 38.4% of the women stayed more than 15 days in MWH that contributed to greater dissatisfaction level to use MWH(29).

Studies revealed that the satisfaction of users on MWH services increases the use of MWHs that was linked to the use of maternal health services and indicated a lower risk of maternal and perinatal death(24, 30, 31). It contributes more than 80% of the reduction of maternal death among users in developing countries. In Ethiopia MWH contributes to the reduction of more than 70% of stillbirths(32). Maternal mortality in rural Ethiopia was 1333.1 per 100, 000 live births for non-maternal waiting admission (MWA) women compared to 89.9 per 100, 000 live births for MWA women. Stillbirth rates were 17.6 per 1000 births in MWA compared to 191.2 per 1000 births non-MWA(33). The incidence of adverse birth outcomes in Dangila District North West Ethiopia were 235 per 1000 in non-MWH users compared to 68 per 1000 in the MWH users(34).

Improving MWH spaces and features that women are satisfied may contribute to decreasing barriers to MWH use and increasing facility births(35). When women are satisfied with the care and services in MWH, they will encourage their family, friends, and neighbors to use the service (12, 14, 36). Mothers had benefits of staying in a MWH like having adequate time to rest, a peaceful mind as they were already in the health facility and could make new friends while in the MWH. Moreover, good accommodation and ventilation of the MWH, close observation by the HCWs and provision of food in MWHs were factors leading to satisfaction of users(37, 38). Despite MWH is one strategy to reduce maternal mortality, many studies reported that many women were not satisfied by the MWH services like lack of bathrooms, kitchen and toilets in the

MWHs, staying in a crowded room, problems related to quantity and quality of food and long duration of stay at the homes prior to giving birth(5, 16, 38, 39). In addition to this, utilization inequities exist; difficulties in husband support, low socioeconomic status, lack of privacy, poor sanitation, poor attitudes of midwives were factors affecting the satisfaction level of women using maternity waiting homes(38).

Maternity home admission depends on both a woman's risk perception and their satisfaction with care received(40). However, different literatures show that many MWH users claim that they did not plan to come and not recommend MWH to others for the future. Moreover, some women's leave from the MWH before giving birth(21, 29, 40). This might be the maternal satisfaction on MWH service is questionable. In addition to this, there were little studies on the level of satisfaction in relation to the packages recommended by the MWH guideline. Therefore, this study aims to assess maternal satisfaction on MWH services and associated factors among women stayed in MWH in health centers of Dega Damot district North West Ethiopia.

### 1.3. Significance of the study

This study will be used for regional health bureau as an input to evaluate how much mothers were satisfied with the recommended MWH services and also to improve further the strategy.

As far as the researcher knowledge, studies on maternal satisfaction and associated factors on MWH in health center were limited in Ethiopia. Therefore, it will serve as a baseline for further researchers.

It will be used for Woreda health office as an input to improve the service in all health centers. Moreover, for health centers, it will use by informing the quality of the service packages and to intervene on recommended gaps for women who have utilized maternity services.

It will help to raise awareness of the community on the existing problem for interventions in the future. For study subjects, after intervention, it will be used to maintain an ongoing relationship with HCWs, which will ultimately lead to improved health outcomes.

## **2. LITERATURE REVIEW**

### **2.1. Satisfaction level of mothers**

Different studies showed that 61% and 66% of women in Pakistan and Iran were satisfied with MWH services respectively which further influences MWH use(41, 42). Different studies assess the level of maternal satisfaction towards the MWH services. A study conducted in Africa showed that 60% of the respondents in two districts of Kasungu Malawi, 71% of Dowa and 87% Kasungu residents of Malawi, 55% of women in southern Malawi, 79.9% in 7 rural clinics of Zambia were satisfied with MWHs. They perceived the easy access to skilled attendance during delivery, receiving treatment during antenatal care and the development of new companionship were importantly satisfying them during MWH utilization(11, 17, 24, 35).

Studies in East Africa including Ethiopia showed that 52% of respondents in Samburu Kenya, 55.5% of respondents in Mettu district, South West Ethiopia, 46% of respondents Misrak Badewacho District Hadiya Zone, Southern Ethiopia, 68.8% in Jimma Zone Ethiopia were satisfied with using MWH services(26, 27, 29, 43). Specifically, they were more satisfied with social supports from servants working in MWH (88.9%) and husbands (87.3%) over the course of their stay in MWH. Eighty-three percent of women were comfortable by interpersonal relationship and communication(IPC) with the HCWs. From women's who stayed in MWH, 75.2%, 74.1%, 69.9% and 56.2% of them were comfortable with prenatal, post-natal, sanitation services and availability of essential utensils respectively. On the other hand, women were felt to be less comfortable with food and recreation services i.e. they were less satisfied with food (49.4%) and recreation services (38.5%)(29).

### **2.2. Factors associated with satisfaction of mothers in MWH services**

#### **2.2.1. Socio demographic factors**

A cross-sectional study showed that increasing age was negatively associated with maternal satisfaction in Malawi(35) but not significantly associated with satisfaction in Jimma Zone Ethiopia(29). Being married was positively predicting over all maternal satisfaction in Malawi(35). Level of education was significantly associated with maternal satisfaction in Pakistan and Malawi i.e. higher education was negatively associated with satisfaction (35, 41).

### 2.2.2. Factors related to obstetrics history

A cross-sectional studies showed that giving birth for the first time were positively predicted women's level of satisfaction in Pakistan(41). History of complication was not significant predictor of overall satisfaction in Jimma Zone Ethiopia(29).

### 2.2.3. MWH service related factors

A cross-sectional studies showed that stayed for  $\leq 14$  days in MWH was a positive predictor of MWH service satisfaction in Malawi and Jimma Zone Ethiopia(29, 35). Distance from MWH was not a significant predictor of overall satisfaction in Jimma Zone Ethiopia(29).

Studies showed that poor IPC with HCWs like lack of supervision by midwives, poor interaction of staff negatively affect the satisfaction level of users in Jimma Zone Ethiopia, Tanzania, Southern Malawi(14, 17, 24, 29, 39). Those who were satisfied with MWH servant support positively predicts the overall MWH service satisfaction in four regions of Ethiopia and Jimma Zone Ethiopia(14, 29). Good husband and family support were a positive predictor of overall satisfaction in Jimma Zone Ethiopia while IPC with HEWs was not significantly associated with MWH service satisfaction(29).

Qualitative studies showed that crowdedness or congestion of the MWH and uncomfortable sleeping area affects the satisfaction of MWH users in Zambia and Ethiopia(14, 24). Daily antenatal checkups(29, 39), health education given by the HCWs in MWH affects the satisfaction of women staying in MWH in Zambia(39). The low quantity and quality of food in the MWH were negatively affects the satisfaction in Thyolo district Malawi, Mulanje Malawi, Tanzania, Ethiopia and Jimma Zone Ethiopia. Women who were not provided food items by the MWHs were not happy. Even though the food is served, it is not adequate and the food is not well prepared, people are not receptive to the food(5, 14, 24, 29, 39, 44). Poor sanitation services like toilets and showers affected the satisfaction level of mothers stayed in MWH in Malawi, four regions of Ethiopia and Jimma Zone Ethiopia(5, 29, 35). The availability of essential utensils in MWH and recreational service like TV/radio affects the overall satisfaction of mothers stayed in MWH in Zambia, Malawi and Jimma Zone Ethiopia(24, 29, 35). Another study shows that lack of supervision by midwives negatively affects the satisfaction level of users in Southern Malawi (17). Poor interaction of staff or poor attitudes of midwives in the MWH negatively influences the satisfaction level of users in Thyolo district Malawi, Southern Malawi, Mulanje Malawi, Zambia, Tanzania and Ethiopia(5, 14, 17, 24, 39, 44). Additionally in

Thyolo district Malawi, Tanzania, Mulanje Malawi, in four regions of Ethiopia absence of curtains/screens, separate cooking area, lack of cooking utensils were factors leading to dissatisfactions of women's during staying in MWH(5, 39, 44).

### 3. CONCEPTUAL FRAME WORK

Fig 1 shows conceptual framework about maternal satisfaction on MWH services users. This includes socio-demographic and economic characteristics, obstetrics history and factors related to MWH services.

The socio-demographic factors like maternal age could influence parity. Factors related to MWH services like distance could influence obstetric history like health facility delivery. Distance and use of MWH could affect health facility delivery. All variables in the above would influence maternal satisfaction among MWH service users(14, 17, 24, 29, 39, 41).

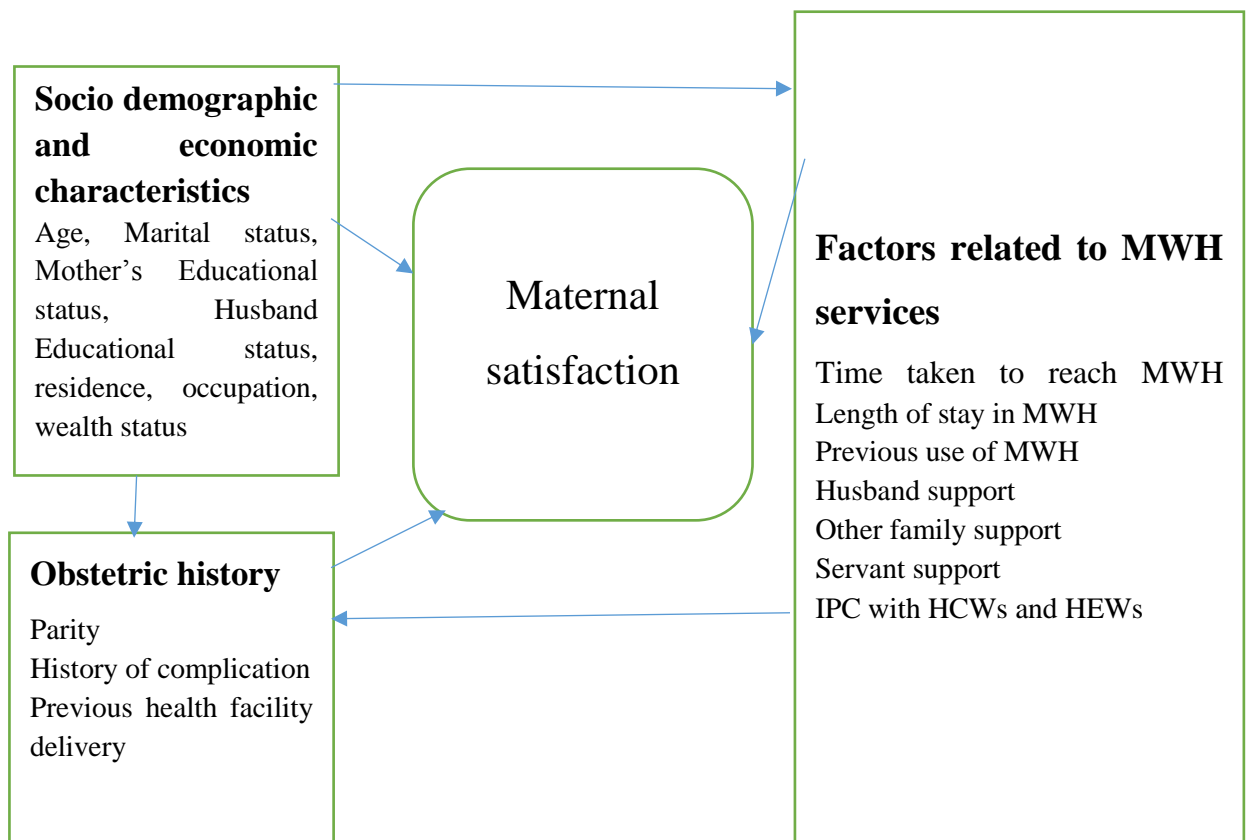


Figure 1:- shows conceptual framework to assess maternal satisfaction on MWH services and associated factors in health centers of Dega Damot District

## **4. OBJECTIVES**

### **4.1. General objectives**

To assess maternal satisfaction on MWH services and associated factors in health centers of Dega Damot district, North West Ethiopia, 2020

### **4.2. Specific objectives**

- To determine the level of maternal satisfaction among women using MWH services in health centers of Dega Damot district, North West Ethiopia, 2020
- To identify factors associated with maternal satisfaction on MWH services in health centers of Dega Damot district, North West Ethiopia, 2020

## **5. METHODS**

### **5.1. Study design and period**

A facility based cross-sectional quantitative study triangulated with qualitative methods was employed from April 1-20/ 2020.

The qualitative data was used to support the findings of quantitative results.

### **5.2. Study area and settings**

This study was conducted in Dega Damot district, which is found in the West Gojjam Zone. It is about 410 km to the North West of Addis Ababa, a capital city of Ethiopia and 275 KM from Bahir Dar City; a capital city of Amhara Regional State. The weather condition of the district was 41% Dega, 37% Woynadega and 22% Kola. Its population size was estimated to be 184,369 (91,263 males and 93,106 female) living in about 42,877 households in 2019. More than 99% were orthodox followers. It had two urban and 32 rural Keble's, seven health center, one primary hospital, two private clinics and one private drug store. There were six MWH among the seven health centers(21).

### **5.3. Source and study population**

#### **5.3.1. Source population**

The source population were all women who gave birth and used MWH in health centers of Dega Damot district.

#### **5.3.2. Study population**

All women who gave birth and used MWH in health centers of Dega Damot district were the study population.

### **5.4. Eligibility criteria**

#### **5.4.1. Inclusion criteria**

Mothers who gave birth in the last six months and used MWH were eligible to participate.

#### **5.4.2. Exclusion criteria**

Those mothers who had incomplete information in the MWH record book related to their address and those migrate from the study area were excluded from the study. The information for those mothers who were not present were obtained from HEWs before data collection.

## 5.5. Study variables

### 5.5.1. Dependent variable

- Overall maternal Satisfaction on MWH service (yes/no)

### 5.5.2. Independent variables

- ✓ **Socio-demographic and economic characteristics:** -Age, residence, marital status, occupation, wealth status, educational status of mothers and husbands.
- ✓ **Obstetrics history:** - Parity, previous health facility delivery, history of complication
- ✓ **Factors related to MWH services:** -Previous history of using MWH, time taken to reach MWH, Length of stay in MWH, Husband and other family support, Servant support, IPC with HCWs and HEWs.

## 5.6. Operational definitions

- **Satisfaction:** Attaining perceived needs and expectations of mothers in relation to MWH service as measured by 5 point Likert scale questions(18).
- **Satisfied:** individuals scored 75 % and more from twenty-seven items of the overall measure of women's satisfaction questionnaire were categorized as under "satisfied" for the overall MWH service satisfaction as well as for each specific satisfaction dimension. For each responses of 'very satisfied' and 'satisfied' were classified as satisfied(18).
- **Unsatisfied:** individuals scored below 75 % from twenty-seven items of the overall measure of women's satisfaction questionnaire were categorized as under "unsatisfied" and for each responses, 'very dissatisfied', 'dissatisfied' and 'neutral' were categorized as unsatisfied(18).

## 5.7. Sample size determination and procedure

### 5.7.1. Sample size determination

The sample size for the first objective was determined by using a single population proportion formula with the assumptions of 95% confidence interval, 5% margin of error, and taking the overall satisfaction rate of women's who used MWH 68.8% which is a Community based study done in Jimma zone(29).

$n = \frac{(Z_{\alpha/2})^2 (P) (1-P)}{d^2} = \frac{(1.96)^2 (0.688) (0.312)}{0.0025} = 330 \approx$  Adding 10 percent for non-response =33, therefore, the final sample will be 330 +33=363.

The sample size for the second objective was calculated using Epi info stat calc as shown below.

Table 1:- shows that sample size calculation using Epi info stat calc with associated factors of satisfaction among MWH users in Dega Damot district ,North West Ethiopia,2020(29).

S.N	Variables and Exposure status	CI	Power	Ratio	OR	% outcome in un exposed	N	N with non-response rate
1	Length of stay in MWH ≤ 14 days Ref >14 days	95%	80%	1:1	6.4	40.3	44	48
2	Future use of MWH Yes Ref No	95%	80%	1:1	2.5	20.8	206	227
3	Husband support Satisfied Ref not satisfied	95%	80%	1:1	4.7	37	68	75
4	IPC with HCWs Satisfied Ref not satisfied	95%	80%	1:1	4.78	38.3	68	75
5	Servant support Satisfied Ref not satisfied	95%	80%	1:1	5.01	35	62	68

From second objective, the larger sample size is 227 but with a single population formula, we had a total sample size of 363. Hence, our final sample size was 363.

The sample size for the qualitative study was determined by a saturation point. A total of 12 mothers who had used MWHs in the last 6 months were participated in the in-depth interview.

#### 5.7.2. Sampling procedure

In the study area, there were seven health centers. From which six of them had functional MWH. All health centers that had functional MWHs were selected and the sample population was those women who fulfils the eligibility criteria and used MWH for the last six months from all health centers in the Woreda. A sampling frame of those women who ever used MWH six months before data collection was established separately for each of the six health centers by using MWH record book. The sample size (n=363) was proportionally allocated to each health center based on their respective number of mothers who used MWH. Then, the study participants were selected by using simple random sampling technique/computer-generated random numbers/ from respective sampling frames of each health center. All selected participants were addressed by using their name, Kebele and gotte which was obtained from MWH record book with the help of HEWs and WDAL (women development army leaders).

For the in-depth interview, those mothers who would not include in the quantitative study were selected purposively. Participants were selected based on the length of staying in MWH (6 participants from stayed <15 days, 6 participants from stayed ≥15 days in MWH) for the in-depth interview in each health facility. They were selected from six health centers. 3 from

Feresbet health center, 2 from Tame health center, 2 from Arefa health center, 1 from Damot tsyon health center, 2 from Sekela health center and 2 from Dama markos health center.

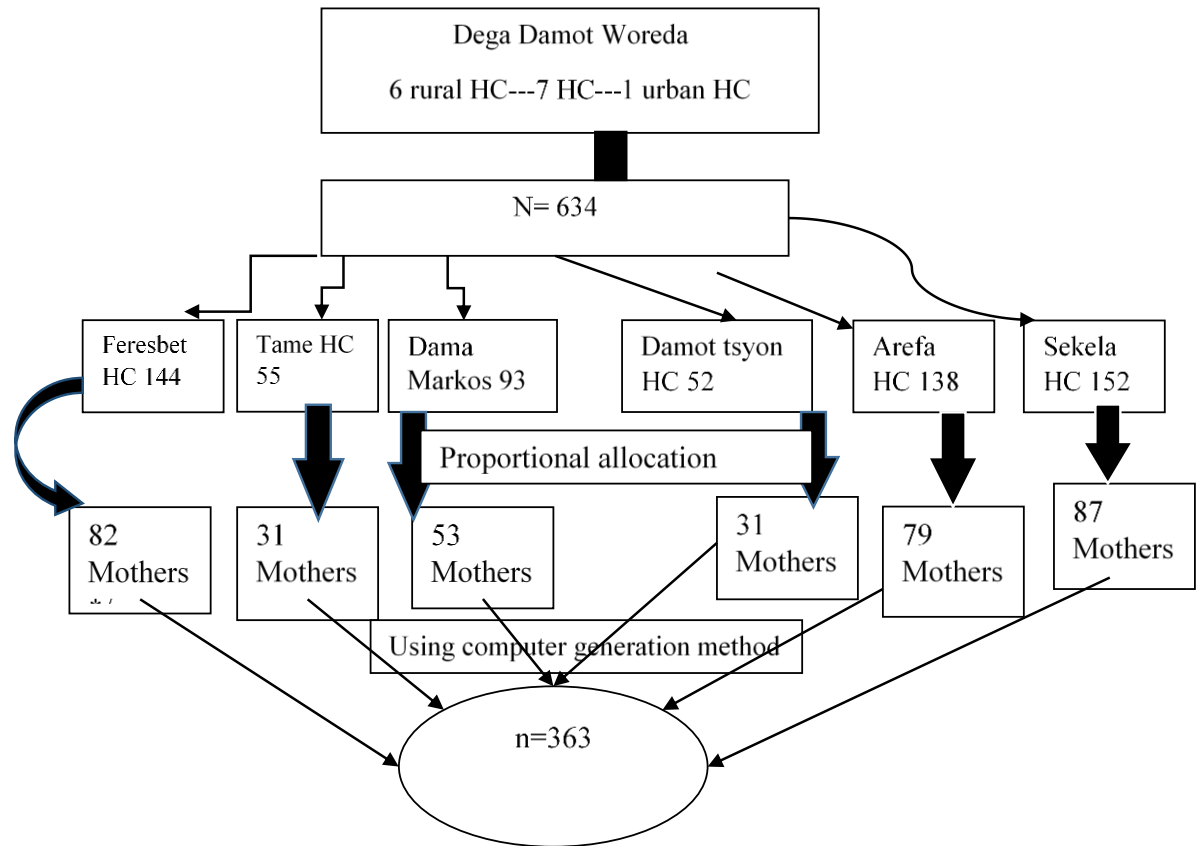


Figure 2:- shows that schematic presentation of sampling procedure to assess maternal satisfaction and associated factors among MWH users in health centers of Dega Damot Woreda, North West Ethiopia, 2020.

## 5.8. Data collection tools and procedures

### 5.8.1. Quantitative part

The instrument was developed after reviewing the Ethiopian national guideline for MWH and previous studies. The questionnaire was first developed in English then translated into Amharic and back translated to English to keep consistency. A structured pretested Amharic version questionnaire was used for data collection. The instrument consists of four parts. Part I: Socio-demographic and economic characteristics Part II: Obstetrics history, Part III: Factors related to

MWH services, Part IV: specific and overall satisfaction measures. Satisfaction was measured by using five-point Likert scale and was categorized as very dissatisfied as 1, dissatisfied as 2, neutral as 3, satisfied as 4, and very satisfied as 5. Reliability analysis was conducted for Likert scale questions and Cronbach's alpha ( $\alpha \geq 70\%$ ) was used to declare the scale items internally consistent in the domain they belong(45). Based on this, items which were reliable at Cronbach's alpha of ( $\alpha \geq 70\%$ ) were used for final data collection. For example, the overall satisfaction scale for MWH service was reliable at ( $\alpha=0.929$ ). And, service-related satisfaction scales (recreation=0.927, food=0.901, postnatal=0.879) and social support (servant=0.916 and family=0.924, husband=0.919) were highly reliable. Overall MWH service satisfactions were constructed from sub-dimensions including MWH standards (convenience of MWH, MWH utensils) and important services (prenatal, postnatal, sanitation, food and recreational service). Sensitive questions like wealth index indicator questions were asked at the end of the interview. Fifteen clinical nurses who fluently speak the local language collect the data through a face-to-face interview. One data collector collects data with a maximum of two adjacent Kebele. The selected women were interviewed at their homes using addresses on the MWH record book. HEWs and WDAL were data collectors guide by showing the residence of selected mothers. Four bachelor degree public health professionals supervise the data collection process.

### **5.8.2. Qualitative part**

Data was collected through in-depth interviews using the interview guide, tape recorder and field note. The in-depth interview guide had probing questions on areas of MWH service satisfaction (MWH service-related factors, social support related factors, IPC with HCWs and HEWs) to collect their suggestions regarding on satisfaction/dissatisfaction. The interview was facilitated and modulated by the principal investigator. Data was collected until the ideas reaches to saturation point.

## **5.9. Data processing and analysis**

### **5.9.1. Quantitative part**

The completed questionnaire was manually checked for completeness, coded and entered into Epi-Data version 3.1 and exported to SPSS version 23 for further data cleaning and analysis. Descriptive statistics (frequency, percentages, mean and standard deviation) were computed. Binary logistic regression model was applied to identify factors associated with MWH service satisfaction. Bivariate and multivariable logistic regression analysis was done. First, Bivariate

logistic regression analysis was executed to find independent variables at p-value less than 0.25. Then, candidate variables were inserted into multivariable analysis for final adjustment. Odds ratio with 95% CI was calculated and statistical significance was considered at P-values <0.05 in the multivariable binary logistic regression to determine predictors of satisfaction on MWH. Factor analysis was done to determine the wealth index and constructed using the principal component analysis method. Expected value less than 5 from the cross tab cell was excluded or merged. Variance Inflation Factor (VIF) was used to assess potential multi-co linearity between independent variables. Based on this, all variables had less than 10 VIF which implies no collinearity between independent variables. Model fitness was checked by using Hosmer and Lemeshow test ( $\alpha = 0.504$ , which shows good model). Tables, graphs and texts were used for data presentation.

### **5.9.2. Qualitative part**

For qualitative data, the in-depth interviews were transcribed to the local language (Amharic) through repeated listening of the records and reading the field notes. During the transcription, the types of recorded data were supported by the field notes. Finally, it was translated into English through several readings of the transcriptions. The data were coded as "P1" for the first interviewed mother, P2, P3....P12 for the final interviewed mother. Through several reading and rereading of the transcripts and translations, codes were given to concepts and ideas. Then, themes and subthemes were derived from coded items and analyzed thematically. Concepts were extracted from themes and were presented in narratives to support the quantitative results.

### **5.10. Quality assurance**

Prior to data collection, the pretest of the questionnaire was done on 5% of the sample size in one of the adjacent districts having MWH services to check the understandability and consistency of the tool. Based on the pretest finding, an instrument was modified to improve the clarity of responses (skipping patterns, vague questions like questions related to the convenience of MWH, food service). One-day training was given for data collectors and supervisors on the purpose of the study, study instrument, data collection procedure and the ethical principles of confidentiality. Thorough discussion with practical sessions was conducted on the tools during the training. Close supervision was done by principal investigators and supervisors throughout the data collection period. The collected data were checked for completeness and consistency of responses on a daily basis.

For the in-depth interview, as much as possible, limit the effect of the principal investigator to assure quality data.

#### 5.11. Ethical consideration

Ethical clearance was obtained from the institutional review board of the College of Medicine and Health Sciences, Bahir Dar University with the ref no:00118/2020. A supportive letter was obtained from Bahirdar university, Amhara Regional Health Bureau and Amhara public health institute. The district and each health facility were communicated through supporting letters supported with oral clarification about the study objectives and data collection procedures. Participation was voluntary based including the right to withdraw from the study at any time without any preconditions. Data was collected after getting informed consent from each sample mother. Data confidentiality and privacy was maintained through anonymity and restricting access to the collected data. The collected data was used only to answer the stated objectives.

## 6. RESULTS

### 6.1. Socio-demographic characteristics and obstetric history of mothers

A total of 363 mothers who used MWH for the last 6 months from 6 health centers were participated in this study with a 100% response rate. Most 354 (97.5%) were married and 360 (99%) were rural residents. Two-thirds, 243 (66.9%) of the mothers could not be able to read and write. Most 310(85%) of the respondents were farmers. From the multiparty women, 205(56.5%) of them gave birth in HFs previously. From total delivery,43(11.9%) faced delivery complication.

Table 2:-shows that socio demographic and economic characteristics and obstetric history of mothers who used MWH in the last 6 months in health centers of Dega Damot Woreda, North west Ethiopia, 2020.

Variable	Categories	Frequency	Percent
Residence	Rural	360	99.2
	Urban	3	0.8
Religion	Orthodox	363	100
Marital status	single	3	0.8
	married	354	97.5
Occupational status	divorced	6	1.7
	farmer	310	85.4
	house wife	29	8
	merchant	16	4.4
	Gov,t/NGO employee	4	1.1
	Student	4	1.1
Educational status of mothers	Unable to read and write	243	66.9
	Read and write	120	33.1
Husband Educational status	Unable to read and write	92	25.4
	Read and write	271	74.7
Wealth status	Poor	117	32.2
	Medium	127	35
	Rich	119	32.8
Parity	One Child	30	8.3
	2-4 Children	247	68
	>=5 Children	86	23.7
Health facility delivery	No	158	43.5
	yes	205	56.5
Type of delivery	spontaneous vaginal delivery	152	74.2
	vaginal supported with vacuum	46	22.4
	cesarean section	7	3.4
History of complication	no	320	88.1
	yes	43	11.9
Type of complication	PPH	27	62.8
	APH	4	9.3
	obstructed/prolonged labor	11	25.6

The mean age of the participants was (30.03 ± 5.01) years. One third, 121(33.3%) of the respondents live in the age group of 30-34 years.

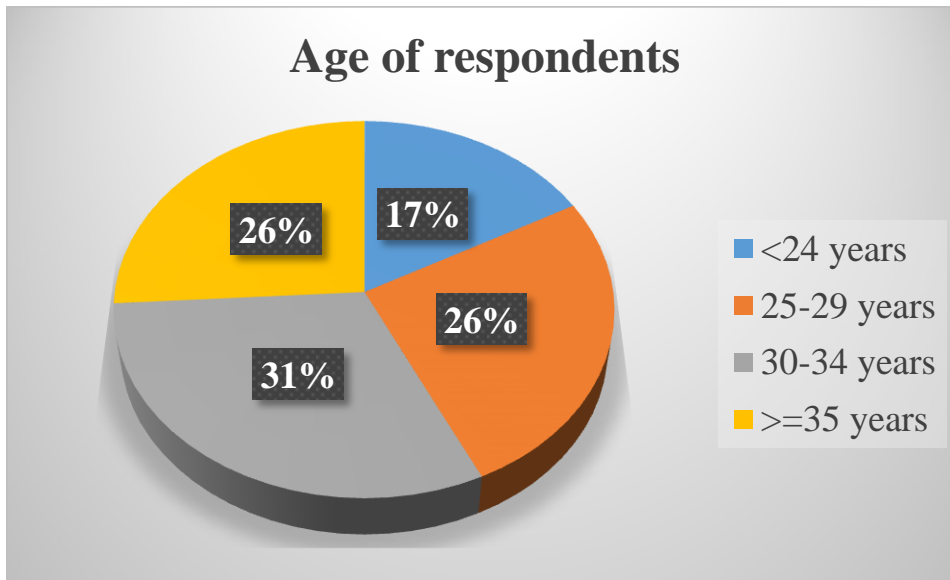


Figure 3:-Age of mothers to assess maternal satisfaction among mothers who used MWH in the last 6 months of data collection in health centers of Dega Damot Woreda North West Ethiopia,2020

## 6.2. Health facility access and use of MWH services

From total participants,158(43.5%) of respondents had used MWH previously. One hundred thirty-seven (37.7 %) of respondents were travelled in to MWH through a referral from health post(HP). Nearly half of the women were entered to MWH on foot, slightly less than two-fifth, 137 (37.7%) accessed free vehicle including ambulance on their way to MWH. But most of the respondents 280(77.1%) did not get ambulance services to return to their home. The in-depth interview participants pointed as they had not got ambulance service to return to their home after delivery. Most of them returned to their home by using traditional ambulances.

*“There was a problem with ambulance service. If I call to the ambulance, they recommend to go to MWH on foot. I was going to MWH on foot. I also go back to my home by using traditional ambulance [alega]” (P12,32 years old mother).*

Nearly one third, 110(30.3%) of the respondents walk more than 2 hours to reach the nearby health center MWH. Two hundred forty-five (67.5%) and 190(52.3%) of women were accompanied by their husbands. Most of 308(84.8%) of them stayed for less than 15 days in

MWH. More importantly, 103(28.4%) women did not intend to come again to MWH for giving birth in the future.

Table 3:- shows that health facility access and MWH use of respondents in health centers of Dega Damot Woreda ,North West Ethiopia,2020

Variable	Categories	frequency	percent
Previous MWH use	No	205	56.5
	Yes	158	43.5
Way of coming to MWH	Heard from other mothers	72	19.8
	Own choice	135	37.2
	Refer from HP	137	37.7
	Refer from public HC/hospital	18	5
	Refer from private HF	1	0.3
Transport accessibility	Yes	242	66.7
	No	121	33.3
Mode of transport to MWH	On foot	175	48.2
	Ambulance/non paid vehicle	137	37.7
	Other paid vehicle	22	6.1
	Traditional ambulance	29	8
Time taken to reach MWH	<30 minutes	31	8.6
	30-60 minutes	129	35.5
	1-2 hours	93	25.6
	>2 hours	110	30.3
Ambulance return	No	280	77.1
	Yes	83	22.9
Husband accompany	No	118	32.5
	Yes	245	67.5
Family accompany	No	173	47.7
	Yes	190	52.3
Duration of staying in MWH	<15 days	308	84.8
	>=15 days	55	15.2
MWH use future	No	103	28.4
	Yes	260	71.6
MWH recommend for others	No	102	28.1
	Yes	261	71.9

### 6.3. Level of mother's satisfaction on MWH services

Mothers satisfaction level was constructed from the summation of reliable satisfaction scale items using the Ethiopian MWH guideline. With respect to satisfaction,272(74.9%), 299(82.4%) and of the respondents were satisfied with their husband, other family member support respectively. Similarly, in qualitative result, most of the participants were happy with supports given by their family before and during stay in MWH including volunteer to enter in to MWH early, gave food and drinking supplies on time and daily visiting and asking.

*“When I was in the MWH, they allowed to me to stay in MWH and they give tea, soft drinks, bread, my husband and sisters visit me many times. Otherwise, my daughter starting from the beginning up to the end of staying in MWH gave advice and strong support to me” (P1,36 years old woman).*

Most, 254(70%) of mothers are satisfied with IPC of HCWs. The qualitative result also supports as they got routine follow-up. One participant said that:

*“HCPs ask me as to how was your health, they visit daily and they gave permission for cleaners to wash bedsheets. They gave the advice to feed additional food and to minimize workload. They measured my fetal heartbeat, Really, it was nice” (P4, P7, 32 and 43 years old woman).*

However, some of the participants felt to be less satisfied with IPC with HCWs. As they didn't get services with the HCWs initiation, no routine follow-up, insulted by HCWs.

One mother states her complain about HCWs as:

*“They (HCWs) didn't follow us. If I ask them to saw me, they insult me and say what happen from previous and were angry by my speaking. They were guilt for me. I hate my delivery; I hate also that midwife when I saw. I didn't want to call his name. After this time, I didn't want to use MWH for future” (P10, 27 years old woman).*

Whereas, 149(41%) and 109(30%) of them were dissatisfied with and IPC with the HCWs respectively. Among participants, 214(59%) of them are satisfied with servant support which was recruited for MWH. this is in line with qualitative result. They mention for the reason for being satisfied with MWH servant as gave food services on time as prescribed by the health center, clean the MWH rooms, gave motivation to us to be relax.

*“She (MWH servant) was nice. She gives us bread with tea in the morning, injera wott with fruits and vegetables at 6 o'clock. She gave food to us on time as prescribed by health center. She also gave advise us to be relaxed.” (P3, P9, 32 and 30 years old women).*

However, more than one-third of participants felt to be satisfied with MWH support like not getting favorable services, the servant takes any food supplies only for herself.

*“There was a problem with the servant, if you are active and educated, you would be provided with clean and spacious bed. if you are coming from rural and not ask your rights, you didn't get food service not only quality but also in quantity. If she saw me as active and ask questions, she give me what I want. if I don't ask, I didn't get any service as I saw. In my opinion, the servant got oils and onions for clients but she takes as for herself” (P1,36 years old woman).*

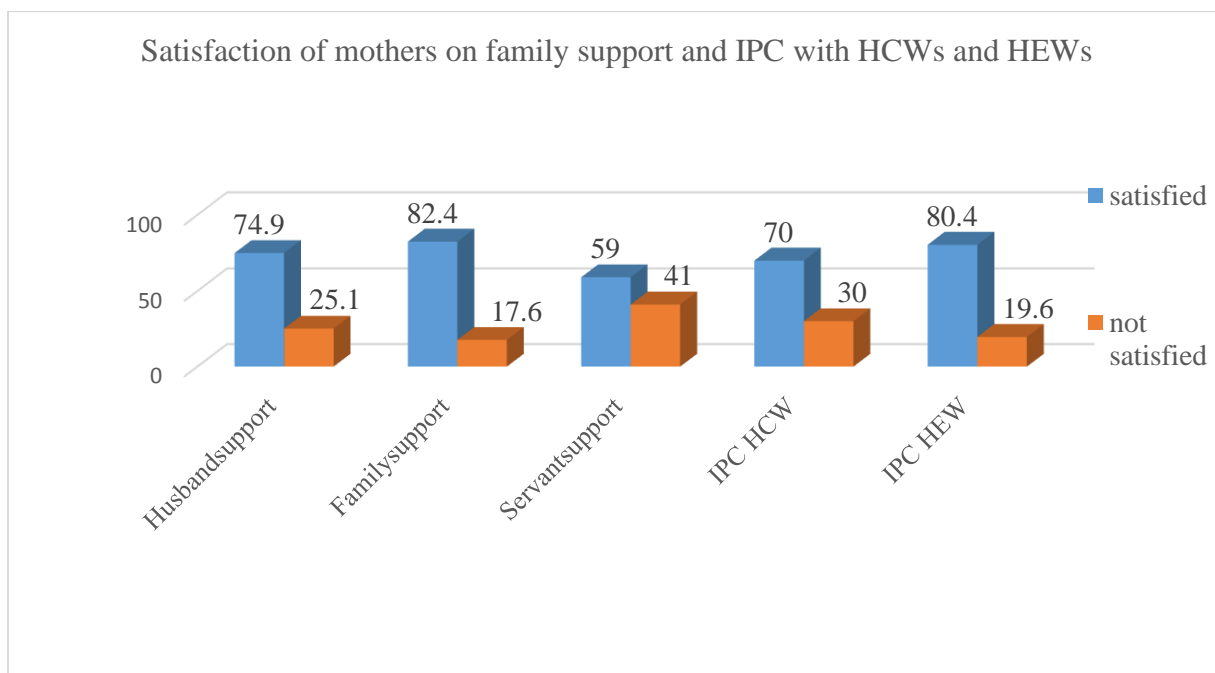


Figure 4:- shows that level of satisfaction with social support and IPC with HCWs and HEWs for MWH users in the last 6 months in health centers of Dega Damot Woreda, North West Ethiopia,2020

Mothers were highly satisfied with antenatal care 325(89.5%) throughout their stay in MWH. This result is in line with qualitative finding. They agreed as daily visiting and proper medication was focused on pregnancies and infants, regular anti-natal checkups by HCWs and health education about maternal health were the convenient services. One mother said that:

*“I was fine with regular anti-natal checkups by HCWs and health care providers gave education on food that we eat, personal hygiene, work load” (P3,32 years old woman).*

The women were acceptably comfortable with postnatal 272(74.9%). One third, 118(32.5%) of mothers are satisfied with sanitation services during enrollment and stay in MWH. The qualitative finding supports these as untidy latrine and room, absence of bath rooms, bad smell MWH compound, no prepared hand washing facility, suffocation of MWH because of overcrowdings and poor personal hygiene were the major problems reported by users.

*“The sanitation service was poor. The bedsheets didn’t wash until I leave from that (MWH), I didn’t have any shoes before that time but I bought shoes and wear to prevent the problem, I didn’t like to wear shoes before. It [latrine] was not tidy. I was not satisfied with latrine that is why I wear shoes” (P7, 43 years old woman).*

Another participant also said that:

*“She (MWH servant) didn’t clean the room before four days. We clean it by ourselves. I didn’t get bath rooms, the latrine was not clean and nobody couldn’t visit it. During the evening, the users fear and used near the compound, that smell was bad for us. The HCWs didn’t give attention to MWH sanitation. There was no prepared hand washing facility” (P8, 28 years old woman).*

Most 114(31.4%) respondents were felt to be less comfortable with recreational service. It is also supported by the qualitative finding like the absence of services, non-functionality of TV, bored at all times.

*“There was a television on the side of the MWH but as the providers said to us, it was not functional, the only option was sleeping or move to somewhere. The day was boring at all times and it was difficult to spend the day time” (P11, 30 years old woman).*

174(47.9%) of mothers were dissatisfied with MWH food service. This is in line with in-depth interview result as most mothers mention the reason for dissatisfaction as no food service in MWH, ate wott injera without oil and onion, no breakfast, no other substitutes like fruits and vegetables. They stated the situation as follows:

*“I didn’t get foods as described by the health center. I ate wott injera without oil, onion, it didn’t eatable for me. My feeding ability was stopped when I smell that wott. I didn’t get any tea/coffee with bread during my staying. As I had seen, oil and sugar were brought by our name for MWH services but we didn’t get the services instead the servant used for herself. We counseled to feed diversified food but we had got only pepper wott without oil and onion. So this was difficult to eat since we were patient at that time” (P1, 36 years old woman).*

Half of, 183(50.4%) of mothers are dissatisfied with MWH utensils. Of all interviewed, more than half of them complained about MWH utensils. They did not get adequate supplies, absence of material to put food that comes from their home, absence of washing materials, glass and tables, substituted bed sheets, irregularity of water supply during staying in MWH. One mother reported that:

*“I was not satisfied with MWH utensils. I got only one bed sheet with no substitution, no adequate chairs. I seat simply on my bed. There were no glass and tables. I didn’t get washing materials like soap, dishes for washing our cloth” (P8, 28 years old woman).*

Most of, 339(93.4%) of mothers are satisfied with MWH convenience. The qualitative results also in line with this finding as most mothers perceived as they were satisfied with getting conducive sleeping arrangement.

*“In my opinion, the area of the room was good and there was a conducive sleeping bed and all services were fulfilled” (P2,35 years old woman).*

However, few of the interviewed mothers reported that absence of light, dark room, no curtains to protect the privacy of one mother from others, crowded rooms which dissatisfies them. One participant states this as follows:

*“I didn’t saw any comfort around that area (MWH), there was no light during entry. We used food and other services with dark-rooms. There were no curtains between sleeping beds to protect the privacy of one mother from others” (P12, 32 years old woman).*

The overall MWH service satisfaction was constructed from MWH convenience, MWH utensils, ANC, sanitation, postnatal, food and recreational services using the Ethiopian MWH guideline. Based on this, The Overall maternal satisfaction with MWH services among women staying in MWH was found to be 225(62%) [95% CI: 57.3%-66.9%].

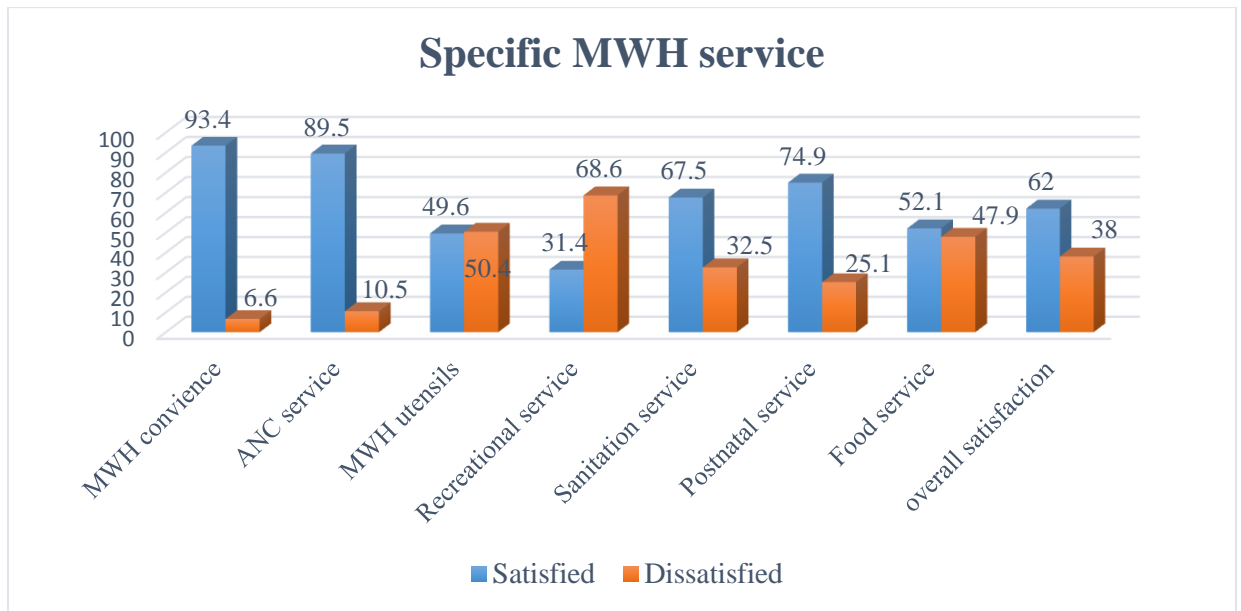


Figure 5:-shows that MWH service satisfaction among mothers who used MWH for the last 6 months in health centers of Dega Damot Woreda, North West Ethiopia,2020.

#### 6.4. Factors associated with overall maternity waiting home service satisfaction

In this study, a p-value less than 0.25 in the bivariable analysis was used as a cutoff value to select variables for the multivariable logistic regression analysis. Based on this, age, parity, history of maternal complication, return to their home by ambulance, supports like husband, family and servant and IPC with HCWs and HEWs were scored a p value less than 0.25. Then, these variables were included into multivariable binary logistic regression analysis for further adjustment at p-value <0.05. Among these, age, return to their home by ambulance, social supports like husband, other family, servant support and IPC with HCWs were significantly associated with overall MWH service satisfaction in multivariable binary logistic regression analysis.

The odds of mothers being satisfied with MWH service among less than 24 years old is 6 times higher than those who had 35 and above years old [AOR = 6.18, 95% CI [1.96-19.50]. Similarly, the odds of mothers being satisfied with MWH services among mothers who return to their home from MWH using ambulance is 2.7 times higher than their counterpart mothers [AOR = 2.65, 95% CI [1.27-5.53]. Furthermore, social supports had its own significant association with overall MWH service satisfaction. Those mothers who satisfied with their husbands' support were 3.3 times more likely to be overall satisfied with MWH services compared to their counterpart mothers [AOR = 3.34, 95% CI [1.75-6.38]. Similarly, mothers who satisfied with other family support and servant support were 3.5 and 2 times more likely to be overall satisfied with MWH services than their counterpart mothers [AOR = 3.54, 95% CI [1.73-7.27], [AOR = 2.08, 95% CI [1.17-3.71] respectively. In the same way, those mothers who satisfied with IPC with HCWs were 2.6 times more likely to be satisfied with the overall MWH services compared to their counterpart mothers [AOR = 2.57, 95% CI [1.34-4.94].

Table 4:- shows that Factors associated with overall MWH service satisfaction in health centers of Dega Damot Woreda, North West Ethiopia, 2020.

Variable	Categories	Overall satisfaction		COR(95% CI)	AOR(95% CI)	
		Yes	No		AOR	P value
age	<=24 years	51	15	3.89(1.87-8.09)	6.18 (1.96-19.50)	0.002*
	25-29 years	66	35	2.16(1.17-3.97)	1.96 (0.80-4.79)	0.141
	30-34 years	73	48	1.74(0.97-3.11)	1.25(0.55-2.85)	0.597
	>=35 years	35	40	1	1	

Parity	One Child	22	8	2.28(0.92-5.69)	0.47(0.12-1.86)	0.28
	2-4 Children	156	91	1.42(0.87-2.34)	0.70(0.33-1.49)	0.355
	>=5 Children	47	39	1	1	
History of complication	no	205	115	2.05(1.08-3.89)	1.62(0.69-3.80)	0.266
	yes	20	23	1	1	
Ambulance return	Yes	66	17	2.95(1.65-5.29)	2.65(1.27-5.53)	0.010*
	No	159	121	1	1	
Husband support	Satisfied	198	74	6.34(3.76-10.70)	3.34(1.75-6.38)	0.000**
	Not satisfied	27	64	1	1	
Family support	Satisfied	201	98	3.42(1.95-5.99)	3.54(1.73-7.27)	0.001**
	Not satisfied	24	40	1	1	
Servant support	Satisfied	160	54	3.83(2.45-5.99)	2.08(1.17-3.71)	0.013*
	Not satisfied	65	84	1	1	
HW IPC	Satisfied	191	63	6.69(4.08-10.97)	2.57(1.34-4.94)	0.005*
	Not satisfied	34	75	1	1	
HEW IPC	Satisfied	191	101	2.06(1.22-3.48)	1.26(0.63-2.52)	0.518
	Not satisfied	34	37	1	1	

\*Indicate significant at p value <0.05, \*\*indicate highly significant at p value <0.001

## 7. DISCUSSION

This mixed cross-sectional study aimed to assess the satisfaction level of women among MWH service users and associated factors. The in-depth interviews were conducted to support the quantitative result. To conduct the assessment, this study mainly used domains of MWH service as specified on the Ethiopian FMOH working guideline(13). These include the services expected to be provided to every woman available to MWH. So, the overall satisfaction was expected to be constructed from women's experiences of access to specific services and conditions compared to their expectations within a given limit of tolerance. The Overall maternal satisfaction with MWH services among women staying in MWH was found to be 62% [95% CI: 57.3%-66.9%]. This finding was in line with that of a community based cross-sectional study conducted in Iran (66%), Pakistan (61%) and two districts of Kasungu Malawi (60%). However, it was higher than a community-based cross-sectional studies done in Southern Malawi (55%), Samburu Kenya(52%), Mettu district South West Ethiopia(55.5%), Misrak Badewacho District Hadiya Zone Southern Ethiopia(46%) (17, 26, 27, 43). The difference may be due to the subjective nature of satisfaction, tool variation and study period difference. It also may be the focus of attention by availing convenient MWH services to increase MWH use and health facility delivery for further reduction of maternal mortality. On the other hand, this finding was lower than studies conducted in Dowa and Kasungu residents of Malawi(71-87%), rural clinics of Zambia(79.9%), Jimma Zone Ethiopia(68.8%)(24, 29). This may due the increased in expectation of mothers to the services. And it may also be a real difference in the quality of MWH service provided or type of health facilities in different settings.

When we saw the sub-dimensions of MWH service satisfaction, mothers were satisfied with postnatal services 74.9% [95% CI: 70.2%-79.3%], sanitation 67.5% [62.5%-71.9%] and food services 52.1% [95% CI: 46.8%-57.3%] that was provided to women when they were in MWH. This study was in line with studies conducted in Jimma zone Ethiopia. However, mothers were satisfied with MWH convenience 93.4% [95% CI: 90.6%-95.9%] and antenatal service 89.5% [95% CI: 86.2%-92.6%]. This finding was higher than studies conducted in Jimma zone. The

possible difference may be method of analysis, the studied health facilities may improve the anti-natal services and MWH convenience like comfortable sleeping arrangement. The higher satisfaction level in ANC also may be because mothers can have access to frequent visits by HCWs who give assurances and support across a few days of their stay in MWH. This finding was also supported by qualitative study as most of the in-depth interview participants got conducive sleeping arrangements, daily visiting and proper medication focused on pregnancies and infants, regular anti natal checkups and health education about maternal health. On the contrary, mothers were satisfied with recreational service 31.4% [95% CI: 26.7%-36.4%] and MWH utensils 49.6 % [95% CI: 44.9%-55.1%]. This finding was lower than study conducted in Jimma zone(29). The possible difference may be service quality, attention to MWH resource and supplies access. Additionally, the lower satisfaction may be challenges related to customization of the services as the women were not living in their own homes for the time being. The qualitative study also supports this finding such as entertainment services like absence of services, non-functionality of TV, bored at all times and difficult to spend the day time. In terms MWH utensils, they did not get adequate supplies, absence of any material to put food that comes from their home, absence of washing materials, glass and tables, substituted bed sheets and irregularity of water supply were reported from in-depth interview participants.

Regarding factors associated with MWH service satisfaction, this study also supports the previous studies. Mothers who had less than 24 years old were 6 times more likely to be satisfied with MWH services compared to those who had 35 and above years old. This was in line with the finding in Malawi(35). The possible reasons may be elder mothers may visit MWH facilities for more than one-time delivery, so may have exposure and know the problems present there better than the younger's who visited the services for the first time. Those who visited the facilities for the first time might perceive good since it is new and first time visit; so unable to see all the problems and gaps present there.

Mothers who return to their home after delivery using ambulance was 2.7 times more likely to be satisfied compared with their counterparts. This is in line with the finding of a community based cross-sectional study in Jimma Ethiopia (29). Ambulance services will help them and their infants to arrive with comfort to their home with free services than the public and traditional ambulance. This will increase their satisfaction at large. In addition, it might be because of poor access to health facilities where health facilities are located far from their home and no other

transportation option for mothers. Due to this, they will not visit health facilities and if they got ambulance services, they might be satisfied more. Mothers who satisfied with supports from husband, other families and servant were 3.4, 3.5 and 2 times more satisfied with MWH services than mothers who did not get satisfactory supports from those bodies respectively. This study was in line with Jimma zone and other parts of Ethiopia(14, 29). This may be the fact that strong social support may assure and increase the positive feelings of individuals for that service. In addition, it might also be related to the practice of health facilities to allow socials and relative to visit mothers. Those mothers who satisfied with IPC with HCWs were 2.6 times more likely to be satisfied with MWH services compared to their counterparts. This study was in line with study findings from Southern Malawi, Zambia, Tanzania and Jimma zone, Ethiopia (14, 17, 24, 29, 39). This could be related to difference in health workers approach, visit, and communication among mothers and across health facilities. Health workers from all health facilities might not have the same approach and communication to mothers. Mothers might be more satisfied if frequently visited by health workers working there. This might change the attitude of mothers towards MWH services in the future and develop positive attitude towards those health facilities.

## **8. LIMITATION OF THE STUDY**

This study has some limitations. Reports for most of the questions were based on the past history which is prone to recall bias. Variables like wealth related questions and age were sensitive issues which might cause social desirability bias. The qualitative study didn't capture health worker perspectives on MWH services.

## **9. CONCLUSION AND RECOMMENDATION**

### **9.1. Conclusion**

The level of maternity waiting home services satisfaction among users were still low compared to the health sector transformation plan in which at least 90% of the population could be satisfied with specific health services(46). Women's were less satisfied with not only recreational, sanitation and food services but also MWH utensils and servant support compared to the overall amount. Age less than 24 years, mothers return to their home using ambulance, satisfied with social supports like husband, family and servant support and IPC with HCWs in MWH positively predicts the overall MWH service satisfaction. The lower satisfaction dimensions and predictor variables altogether will be barriers to women who never used MWH and stopping return use.

### **9.2. Recommendation**

For Amhara regional health beauro: Strengthen ambulance service for mothers who gave birth in HF to return to their home after delivery. And also lovely MWH services could be searched for resource limited settings like Ethiopia.

For Woreda health office: - Avail resources for MWH services like food supply, MWH utensils, recreational service, accessing ambulances to travel mothers back to their home and lovely MWH services including strong social support for mothers stayed at MWH.

For health centers: - The presence of unsatisfied client can be a proxy indicator for the need for improvement. So, the health center could avail services recommended by the MWH guideline, strengthening social support and IPC with HCWs. Then, the pregnant women will use and advocate the innovation.

For researchers: - There were limited studies in our country, so further studies to address factors that affect overall MWH service satisfaction would be conducted. In addition, Qualitative studies on health care providers side on challenges related to IPC with clients, servant support, recreation, food service and MWH utensils could be explored.

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## 11. ANNEX

### 11.1. English version quantitative questionnaire

**Part I:** - Participant consent information sheet

**I.I: participant information sheet**

**Title:** Maternal satisfaction on maternity waiting home services and associated factors in health centers of Dega Damot Woreda, North West Ethiopia, 2020

**Dear Participants,**

The name of the investigator is Mulat Yitayih who is a student undertaking a Master's degree in General public health given by Bahirdar university. This letter serves to ask consent from you to take part in this research. The purpose of the research is to assess maternal satisfaction on maternity waiting home services and associated factors in health centers of Dega Damot Woreda. The aim of this study is by enhancing women's who enter in to maternity waiting home when their pregnancy nears to delivery date and increase skilled delivery in health facility to decrease maternal and neonatal morbidity and mortality. Your participation in this research is voluntary. If you decide not to participate, there will be no negative consequences for you. If you decide to participate, there will be no benefits for you. There is no any risk that will occur on you because of your participation in this study. All collected data from you will be kept confidential using coding system whereby no one will have access to your response. You have full right to refuse and with draw from participating in this study if you do not wish. The interview period will take about 20-30minutes. If you are willing to participate in this study, you need to understand and sign the agreement form, and then you will be asked to give your responses to data collectors. If you want more information, you can contact the principal investigator and advisors.

Principal Investigator: Mulat Yitayih, Tel: 0918572485

**Supervisor:** Mulusew Anidualem, Tel: 0913814608, Zemenu Shiferaw, Tel: 0910028125

Are you voluntary to participate in the interview? Yes  No

**Annex II: -Informed agreement consent form**

I hereby confirm that I understand the contents of this document and the nature of the research project, and I am voluntary to participate in the research project. I understand that I have autonomy to with draw from the project at any time.

Signature of Participant-----Date-----

Name and signature of supervisor----- Date-----

Name and signature of data collector-----Date-----

Name of witnesses	Signature	Date
1. -----	-----	-----
2. -----	-----	-----
3. -----	-----	-----

Name of data collector-----signature----- data collection date-----

Code of respondent/ID/----- Kebele-----Got----- --Name of facility attended-----

**Part I: - Socio-demographic and economic characteristics**

No.	Questionnaire and filters	Coding categories(Responses)	Skip
101	How old are you?	(_____)	
102	Residence	1.rural 2.Urban	
103	What is your religion	1. Orthodox Christian 2. Muslim 3. Protestant 4.Catholic 5.Others specify--	
104	What is your current Marital status?	1.Single 2.Married 3.Divorced 4.Widowed	
105	Your occupation	1. Farmer 2. House wife 3. merchant 4.Gov't/NGO employee 5.Other (specify)	
106	Mothers Level of education	1.Cannot read and write 2.Can read and write 3. Primary (1-4) 4. primary (5-8) 5.Secondary (9-10) 6. Secondary (11-12) 7. College and above	
107	Husband educational status/ if she was married/	1.Cannot read and write 2.Can read and write 3. Primary (1-4) 4. primary (5-8) 5.Secondary (9-10) 6. Secondary (11-12) 7. College and above	
<b>Wealth index Question(since, it is sensitive, it will be asked at the end of the interview)</b>			
108	Does the household own any Domestic animals, or poultry?	0.No 1.Yes	If '0' skip to Q 110
109	If yes for question 108, answer the following questions	Is there any cows/bulls?	0.No 1.Yes If yes, number of cows/bulls----
		Is there any other cattle?	0.No 1.Yes If yes, number of other cattle -----
		Is there any horses/donkeys/mules?	0.No 1.Yes If yes, number of horse/donkeys/mules----

		Is there any Sheep?	0.No 1.Yes	If yes, number of sheep- ---
		Is there any Goat?	0.No 1.Yes	If yes, number of goats- ---
		Is there any Hen?	0.No 1.Yes	If yes, number of hens-- ---
		Is there any Beehives?	0.No 1.Yes	If yes, number of beehives-----
110	Does any member of this household own any agricultural land?		0.No 1.Yes	-----hectares
111	Motor for irrigation/individual hand pipe		0.No 1.Yes	
112	Does your household have the following materials	Electricity/Solar	0.No 1.Yes	
		Watch	0.No 1.Yes	
		Radio	0.No 1.Yes	
		TV	0.No 1.Yes	
		Refrigerator	0.No 1.Yes	
		Bed with cotton/sponge	0.No 1.Yes	
		Table	0.No 1.Yes	
		Chair	0.No 1.Yes	
113	Does any member of the household had the following materials	Mobile	0.No 1.Yes	
		Bajaj	0.No 1.Yes	
		Cart	0.No 1.Yes	
		Car	0.No 1.Yes	
		Bicycle	0.No 1.Yes	
		Motorcycle	0.No 1.Yes	
		Generator	0.No 1.Yes	
114	Do you have a separate room which is used as kitchen?		0.No 1.Yes	
115	Is the roof of the dwelling made up of metal/corrugated iron/cement/cement fiber/asbestos		0.No 1.Yes	
116	Is the floor of the dwelling made up of ceramic/cement		0.No 1.Yes	
117	Is the main source of drinking water for members of your household is from protected water source (piped water/protected well /protected spring/ Public tap/standpipe)?		0.No 1.Yes	
118	Is your household family members usually use flush or pour flush toilet /ventilated improved pit latrine/ pit latrine with slab?		0.No 1.Yes	
119	Does any member of this household have a bank account?		0.No 1.Yes	

## Part II: - Obstetrics history

No.	Questionnaire	Coding categories	Skip
201	How many times you give birth	-----	If '1' skip to Q 302
202	Have you give birth in health facility previously?	0.no 1.Yes	If '0' skip to Q 204
203	Type of delivery	1.Spontaneous vaginal delivery 2.Vaginal supported with vacuum 3.Cesarean section	
204	Do you had history of complication before, during and after delivery?	0.no 1.Yes	If '0' skip to Q 301
205	If Q 204 is yes, what type of complication	1. Post-partum hemorrhage 2. Anti-partum hemorrhage 3. Prolonged/obstructed labor 4. Sepsis 5. Other-----	

## Part III: Maternity waiting home service related questions

Health facility access and use of MWH services			
No.	Questionnaire	Category(Response)	skip
301	Have you used MWH previously?	0.no 1.Yes	
302	How did you come to this health center MWH?	1. Heard from other mothers who had got services before 2. By my own choice 3. refer from HP 4. Refer from HC 5. Refer from private HF 6. others specify-----	
303	Is your area accessible for ambulance	1.yes 2. no	
304	What type of transport you use to come in to MWH?	1. On foot 2. Ambulance/non paid vehicle 3. Other paid vehicle 4. horse/mule 5. traditional ambulance 6. others-----	

305	Have you used ambulance/other vehicle/ to go back home after delivery until suitable road ends	1. Yes 2. No		
306	How much time take to reach to MWH in hours	-----		
307	Person accompany during your stay in maternity waiting home	1. husband 2. other family member 3. neighbors 4. others-----		
308	Length of stay in MWHs in days	-----		
309	Do you have planned to use MWH again for the next time? (will be asked at the end)	0.no 1.Yes		
310	Do you recommend your family and others to use MWH during their final weeks of pregnancy? (will be asked at the end)	0. No 1. Yes		
<b>Questions related with MWH service satisfaction</b>				
No.	Dimensions	Items/Questionnaire	Category( 1= strongly disagree, 2= disagree, 3= neutral, 4=agree, 5= strongly agree)	skip
311	Husband support	My husband allowed to me to stay in maternity waiting home.	1 2 3 4 5	
		My husband gave essential materials like money, food etc. during staying in maternity waiting home for me	1 2 3 4 5	
		My husband regularly visits me when I was in maternity waiting home	1 2 3 4 5	
312	Other Family/relative support	My family allowed to me to stay in maternity waiting home	1 2 3 4 5	
		My family gave essential materials like money, food etc. during staying in maternity waiting home for me	1 2 3 4 5	
		My family regularly visits me when I was in maternity waiting home	1 2 3 4 5	
313	Servant support	The maternity waiting home servant gives food, drinking water on time.	1 2 3 4 5	

		The servant gave services with respect and courtesy.	1	2	3	4	5	
		I was generally interested from servant support recruited for MWH	1	2	3	4	5	
314	Interpersonal relationship and communication with HCWs	I was satisfied with the health care worker welcome starting from the HF compound	1	2	3	4	5	
		The HCWs and supportive staff introduced themselves to me appropriately at the MWH	1	2	3	4	5	
		During staying in MWH, the interaction of staff with me was good	1	2	3	4	5	
		The HCWs communication with me were clear and easy for understanding	1	2	3	4	5	
		Health workers gave service with respect and courtesy during my stay at the MWH.	1	2	3	4	5	
		During my stay in MWH, the health care workers properly listened me what I want to ask and they provide information with adequate explanation	1	2	3	4	5	
		I got clarification on advantages and disadvantages of attending labor and delivery by health care workers after that I had got the services with respect to my choice and agreement.	1	2	3	4	5	
315	Interpersonal	I was interested with counseling and	1	2	3	4	5	

	relationship and communication with HEW	advice on how to go in to MWH by HEWs.					
		HEWs gave referral to enter in to MWH when near delivery time	1	2	3	4	5
		HEWs might call and availing ambulance services to enter in to MWH for me	1	2	3	4	5
		HEWs could organize husband or other family member to support me during staying in MWH	1	2	3	4	5
4. Measurement dimensions and items for the overall maternal satisfaction on MWH service							
401	Convenience of MWH	I was not stayed in crowded room during ANC or PNC?	1	2	3	4	5
		I was convenient with MWH sleeping arrangement	1	2	3	4	5
		I was satisfied with the security and noise free of the MWH	1	2	3	4	5
		I was satisfied with the location of MWH	1	2	3	4	5
402	Utensils in MWH	I was satisfied with the availability and adequacy of sleeping arrangements like foam, mattress sheet etc.	1	2	3	4	5
		I was satisfied with the availability of chairs for seating in the MWH	1	2	3	4	5
		I was satisfied with the availability of dinning supplies	1	2	3	4	5
		I was satisfied with the availability and adequacy of equipment's for storage of water for drinking and washing purposes.	1	2	3	4	5
		I was satisfied with the supply of hygiene products in the MWH like (soap, laundry, etc.)	1	2	3	4	5
		I was satisfied with the availability and adequacy of cooking equipment's in MWH including pots, spoon etc.	1	2	3	4	5
403	Recreation service	I was satisfied with television and other relaxation opportunities in MWH	1	2	3	4	5
		I was satisfied with the recreational	1	2	3	4	5

		service which was inherently educational					
404	Prenatal service	I was satisfied with getting regular anti natal checkups by health care workers.	1	2	3	4	5
		I was satisfied with getting health education about maternal health like nutrition, breast feeding, hygiene etc. during antenatal care.	1	2	3	4	5
		I was satisfied with the health care workers counseling on different issues related to my problem during antenatal care.	1	2	3	4	5
		I was satisfied with the daily supervision of health care workers to me (follow fetal heartbeat, taking vital signs etc.) during antenatal care.	1	2	3	4	5
405	Sanitation service	I was interested with the sanitation of maternity waiting home compound.	1	2	3	4	5
		I was interested with sanitation of the rooms inside the maternity waiting home.	1	2	3	4	5
		I was interested with the sanitation of bath room (shower).	1	2	3	4	5
		I was interested with the sanitation of latrine	1	2	3	4	5
		I was interested with the sanitation of kitchens	1	2	3	4	5
406	Postnatal service	I was satisfied with regular post-natal services (every 6 hour) given to me and neonate after delivery	1	2	3	4	5
		I was satisfied with the health education given by health care workers during postnatal period in maternity waiting home	1	2	3	4	5
		I was generally satisfied with the post-natal services given after delivery during staying at maternity waiting home	1	2	3	4	5
407	Food service	I was satisfied with meal frequency due to gotten at least 3 times a day	1	2	3	4	5
		In the maternity waiting home, the quantity of food in each meal time was enough for me	1	2	3	4	5
		I was interested with the quality of food service in maternity waiting	1	2	3	4	5

		home		
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**“Thank you”**

11.2. Qualitative in-depth interview guiding questionnaire

In-depth interview guiding questions for satisfaction level of mothers who used maternity waiting home in the last 6 months

**Instruction:** -please take a few minutes to tell us what you think about maternity waiting home service during your staying. There is no right or wrong responses. We are merely interested in your personal opinions. In response to the question below, please list the thoughts that come immediately to your mind.

Date-----Kebele-----Got-----Mother age in years-----

Religion-----Educational status-----

**MWH service-related questions**

How can you explain your satisfaction with service given in MWH?

- I. Convenience of MWH (probe like area of the room, convenience of sleeping area, location of MWH)
- II. Utensils in MWH (probe sleeping arrangements like foam, mattress sheet, chairs for seating, availability and adequacy of dinning supplies and equipment’s for storage of water and drinking purposes, hygiene products in the MWH like (soap, laundry, etc.), cooking equipment including pots, spoon etc.)
- III. Services given by Ambulance (probe immediate arrival, returns to home)
- IV. Recreation service (probe television and other relaxation opportunities, was it inherently educational)
- V. Prenatal service (probe regular anti natal checkups by HCWs, health education about maternal health like nutrition, breast feeding, hygiene etc., counseling on different issues related to your problem), daily supervision of HCWs (follow fetal heartbeat, taking vital signs etc.)
- VI. Postnatal service (probe expected services, health education)
- VII. Sanitation service (probe MWH compound, rooms inside the MWH, bath room (shower), latrine, hand washing, kitchens services)
- VIII. Food service (probe meal at least 3 times a day, quantity and quality)

### **Social support related questions**

- I. How can you explain support from your husband and other family members on staying in MWH (probe voluntariness to enter in to MWH, support essential materials like money, food etc. during staying in MWH, regularly visits)?
- II. How can you explain support from MWH servant (probe gives food, drinking water on time, gave services with respect and courtesy)?

### **Interpersonal relationship and communication with HC staffs and HEWs**

- I. How do you evaluate your interpersonal relationship with HCWs (probe welcoming and communication with HC staffs, daily supervision, gave service with respect and courtesy)?
- II. How do you evaluate your interpersonal relationship with HEW (probe counseling and advice on how to go in to MWH, link to MWH when near delivery time, availing ambulance services when near to delivery time, organize family member to support you)?

What component or additional service should be added to improve the maternity waiting home service?

“Thank you”



### 11.3. የአማርኛ አባሪ መጠይቅ ቅፅ

#### የተሳታፊዎች መረጃ መስጫ

የጥናቱ ርዕስ: - በደጋ ዳምት ወረዳ በእናቶች መቆያ ቤት አገልግሎት አግኝተው የወለዱ እናቶች እርካታና ተዛማጅ ጉዳዮችን መለየት

#### የተሳታፊው መረጃ ቅጽ እና የተሳትፎ ማረጋገጫ

##### ውድ ተሳታፊ

የጥናቱ ባለቤት አቶ ሙላት ይታይህ በባህርዳር ዩኒቨርሲቲ በሚሰጠው የሁለተኛ ዲግሪ ፕሮግራም የጠቅላላ ህብረተሰብ ጤና አጠባበቅ ትምህርታቸውን በመከታተል ላይ ይገኛሉ። ይህ ደብዳቤ በዚህ ምርምር ላይ ተሳታፊ እንዲሆኑ ለመጋበዝ ሲሆን የምርምሩ ዓላማ በደጋ ዳምት ወረዳ ባሉ ጤና ጣቢያዎች በእናቶች መቆያ ቤት አገልግሎት ያገኙ የወለዱ እናቶችን እርካታና ተዛማጅ ጉዳዮችን መመዘን ነው። ይህ ጥናት ነፍሰጡር እናቶች የመውለጃ ጊዜያቸው ሲደርስ በጤና ጣቢያ ደረጃ በተዘጋጀው የእናቶች መቆያ ቤት እንዲገቡ በማድረግ የወሊድ አገልግሎቱን በማሻሻል ከእርግዝና እና ከወሊድ ጋር ተያይዘው የሚመጡ ህመምና ስቃይን እንዲሁም ሞትን ለማስቀረት ወሳኝ ሚና ይጫወታል። በዚህ ጥናት ላይ የመሳተፍ ውሳኔው የእርስዎ ነው። አለመሳተፍ ቢፈልጉ የሚያመጣብዎት ምንም አይነት ችግር አይኖርም። ለመሳተፍም ከወሰኑ ምንም አይነት ጥቅም አይኖርዎትም። በጥናቱ ላይ በሚሳተፉበት ወቅት በእርስዎ ላይ የሚደርስ ምንም አይነት ጉዳት የለም። በዚህ ጥናት ላይ የሚሰጡት ማንኛውም አስተያየት እና መልስ በኮድ ስርዓት በሚሰጡበት የሚቀመጥ ሲሆን ለማንም ሰው አይሰጥም። ካለ እርስዎ ፍቃድ ለሰነድ ወገን መረጃው አይተላለፍም። ለእርስዎ ካልመለሰዎት ከዚህ ጥናት ተሳታፊነት ራስዎን የማግለል ሙሉ መብት አለዎት። ቃለ መጠይቁ ከ20-30 ደቂቃ የሚፈጅ ሲሆን በዚህ ጥናት ላይ ለመሳተፍ ከፈለጉ የስምዎን ፊርማዎ በቅፁ ላይ መፈረም ይኖርብዎታል። ከዚያም ለዳታ ሰብሳቢዎቹ ምላሽዎን እንዲሰጡ ይጠየቃሉ። በጥናቱ ላይ ማንኛውም ጥያቄ ቢኖርዎት በሚከተሉት አድራሻዎች መጠየቅ ይችላሉ ዋና ተመራማሪ፡- ሙላት ይታይህ ስልክ 0918572485

አማካሪዎች: 1. ፕሮፌሰር ሙሉሰው አንዲለም ስልክ:091381460 2. ዘመኑ ሽፌራው ስልክ: 0910028125

በቃለ መጠይቁ ላይ ለመሳተፍ ፍቃደኛ ነዎት?

#### የተሳትፎ ማረጋገጫ

የሰነዱን ይዘት የተረዳሁ ስሆን የምርምር ፕሮጀክቱንም አላማ ተረድቻለሁ። በዚህ ምርመር ፕሮጀክት ላይም ለመሳተፍ ፈቃደኛ ሆኛለሁ። በማንኛውም ሰዓትም ከጥናቱ ራሴን የማግለል ሙሉ መብት እንዳለኝ አውቃለሁ።

የተሳታፊ ፊርማ-----ቀን-----

የሱፐርቫይዘር ስም እና ፊርማ ቀን-----የዳታ ሰብሳቢ ስም እና ፊርማ-----

- የእማኝ ስም 1. -----ፊርማ-----ቀን-----
- 2. -----ፊርማ-----ቀን-----
- 3. -----ፊርማ-----ቀን-----

ባህርዳር ዩንቨርሲቲ

ህክምና እና ጤና ሳይንስ ኮሌጅ

ህብረተሰብ ጤና ትምህርት ክፍል

መጠይቁን የሞላው ስም ----- ፊርማ-----መረጃው የተሰበሰበት ቀን -----

የተሳታፊ መለያ ኮድ-----የሚኖሩበት ቀበሌ-----ጎጥ----- አገልግሎት ያገኙበት ጤና ጣቢያ-----

ክፍል 1: ማህበራዊ ፣ ዲሞክራሲያዊ እና ኢኮኖሚያዊ ሁኔታ

ተ.ቁ	መጠይቅ	መልስ	ይዘት
101	እድሜ በአመት	-----	
102	መኖሪያ አድራሻ	1. ገጠር 2. ከተማ	
103	ሃይማኖት	1. ኦርቶዶክስ ክርስቲያን 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ-----	
104	የጋብቻ ሁኔታ	1. ያላገባች 2. ያገባች 3. የፈታች 4. የሞተባት	
105	የስራ ሁኔታ	1. ገበሬ 2. የቤት እመቤት 3. ነጋዴ 4. መንግስታዊ የሆነ/ያልሆነ ተቋም ተቀጣሪ 5. ሌላ ይጠቀስ-----	
106	የእናት ትምህርት ደረጃ	1. መፍና ማንበብ የማትችል 2. መፍና ማንበብ የምትችል 3. ከ1-4 4. ከ5-8 5. ከ9-10 6. ከ11-12 7. ኮሌጅና በላይ	
107	የትዳር አጋር ትምህርት ደረጃ /ባለትዳር ክንበሩ/	1. መፍና ማንበብ የማይችል 2. መፍና ማንበብ የሚችል 3. ከ1-4 4. ከ5-8 5. ከ9-10 6. ከ11-12 7. ኮሌጅና በላይ	

የሐብት መጠን መለኪያ (ሌሎች መጠይቆችን ከጨረሱ በኋላ ይጠይቁ)

108	በቤት ውስጥ ማንኛውም አይነት የቤት እንስሳ አለ?	0. የለም 1. አለ	0 ከሆነ ወደ 110 ይሂዱ	
109	ጥያቄ ቁጥር 108 አዎ ከሆነ የሚከተሉትን ጥያቄዎች መልስ ስጡ	በቤት ውስጥ ላምና በሬ አለ?	0. የለም 1. አለ	ካለ ስንት ላሞችና በሬዎች አለ---
		በቤት ውስጥ ሌላ የቀንድ ከብት አለ?	0. የለም 1. አለ	ካለ ስንት የቀንድ ከብቶች አለ---
		በቤት ውስጥ ፈረስ/አህያ/በቅሎ አለ?	0. የለም 1. አለ	ካለ ስንት ፈረሶች/አህያ/በቅሎ አለ---
		በቤት ውስጥ በግ አለ?	0. የለም 1. አለ	ካለ ስንት በጎች አለ---
		በቤት ውስጥ ፍየል አለ?	0. የለም 1. አለ	ካለ ስንት ፍየሎች አለ---
		በቤት ውስጥ ዶሮ አለ?	0. የለም 1. አለ	ካለ ስንት ዶሮዎች አለ---
		በቤት ውስጥ የንብ ቀፎ አለ?	0. የለም 1. አለ	ካለ የንብ ቀፎዎች ብዛት---

110	ለቤተሰቡ የይዘታ መሬት አለ ወይ?	0.የለም 1.አለ	ካለ-----ሄክታር
111	ለመስኖ ልማት የሚውል ሞተር አለ ወይ	0.የለም 1.አለ	
112	በቤተሰብ ደረጃ የሚከተሉት ቁሳቁሶች መኖራቸውን መልስ ስጡ	የኤሌክትሪክ መብራት	0.የለም 1.አለ
		የግድግዳ ስዓት	0.የለም 1.አለ
		ራዲዮ	0.የለም 1.አለ
		ቴሌቪዥን	0.የለም 1.አለ
		ፍሪጅ/ማቀዝቀዣ	0.የለም 1.አለ
		ዘመናዊ አልጋ እስከ ፍራሹ	0.የለም 1.አለ
		ጠረጴዛ	0.የለም 1.አለ
113	በቤተሰቡ አባል ውስጥ የሚከተሉት ቁሳቁሶች አሉ ወይ	ሞባይል	0.የለም 1.አለ
		በጃጅ	0.የለም 1.አለ
		ጋሪ	0.የለም 1.አለ
		መኪና	0.የለም 1.አለ
		ባይስክል	0.የለም 1.አለ
		ሞተር ሳይክል	0.የለም 1.አለ
		ጀኔሬተር	0.የለም 1.አለ
114	ለማብሰያ ቤት የሚያገለግል ከመኖሪያ ቤቱ የተለየ ቤት አለ ወይ	0.የለም 1.አለ	
115	የቤቱ ጣሪያ ከቆርቆር/ከስሚንቶ/ከአስቤስቶ የተሰራ ነው ወይ	0.የለም 1.አለ	
116	የቤቱ ወለል ከስሚንቶ/ሴራሚክ የተሰራ ነው ወይ	0.የለም 1.አለ	
117	የቤተሰቡ አባላት ለመጠጥ የሚጠቀሙበት የውሃ መገኛ ከተጠበቀ ጉድጓድ/የግል ቧንቧ/የህዝብ ቧንቧ/ከተጠበቀ ምንጭ ነው ወይ	0.የለም 1.አለ	
118	የቤተሰቡ አባላት አብዛኛውን ጊዜ የሚጠቀሙበት የመፀዳጃ ቤት አይነት በውሃ የሚሰራ/የተሻሻለ/የተለምዶ መጸዳጃ ቤት ስላብ ያለው ነው ወይ	0.የለም 1.አለ	
119	ከቤተሰብ አባላት ውስጥ የባንክ አካውንት/ደብተር ያለው አለ	0.የለም 1.አለ	

**ክፍል 2: - የወሊድ ታሪክ**

ተ.ቁ	መጠየቅ	መልስ	ይዘላል
201	የአሁኑን ጨምሮ እስከ አሁን ስንት ጊዜ ወልደዋል	-----	1 ከሆነ ወደ 302 ይሂዱ
202	ከዚህ በፊት በጤና ተቋም የወሊድ አገልግሎት አግኝተው ያውቃሉ	0. የለም 1. አዎ	0 ከሆነ ወደ 204
203	በየትኛው መንገድ ነው ልጅዎን የተገለገሉት	1.በተፈጥሮዓዊ መንገድ 2.በመሳሪያ የተደገፈ ተፈጥሮዓዊ መንገድ 3. በቀዶ ህክምና	
204	ከዚህ በፊት ከወሊድ በፊት፣ በወሊድ ጊዜ እና በኋላ የተወሳሰበ የጤና ችግር አጋጥመዎት ያውቃሉ	0. የለም 1. አዎ	0 ከሆነ ወደ 301
205	የተወሳሰበ የጤና ችግር አጋጥመዎት የሚያውቅ ከሆነ ምን አይነት ነበር	1. ከወሊድ በኋላ ከፍተኛ ደም መፍሰስ 2. ከወሊድ በፊት ደም መፍሰስ 3. የተራዘመ/የተሰናከለ ምጥ 4. መመረዝ/መበክል	

		5. ሌላ-----	
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ክፍል 3- ከእናቶች መቆያ ቤት አገልግሎቶች ጋር የተዛመዱ ጉዳዮች

A) የጤና ተቋማት ተደራሽነትና ከእናቶች መቆያ ታሪክ ጋር የተገናኘ መጠይቅ

ተ.ቁ	መጠይቅ	ምድብ	ይዘት
301	ከዚህ በፊት በእናቶች መቆያ ክፍል አገልግሎት አግኝተው ያውቃሉ	0. የለም 1. አዎ	
302	ወደ እዚህ ጤና ተቋም እናቶች መቆያ ቤት እንዴት መጡ	1.ከዚህ በፊት በዚህ ተቋም አገልግሎት ካገኙ እናቶች በመስማት 2. በራሴ ምርጫ 3.ከጤና ኬላ ሪፈር ተደርጎ 4.ከመንግስት ጤና ጣቢያ/ሆስፒታል ሪፈር ተደርጎ 5.ከግል የህክምና ተቋም ሪፈር ተደርጎ 6. ሌላ-----	
303	የሚኖሩበት አካባቢ አምቡላንስ ያስገባል ወይ	1. አዎ 2. የለም	
304	ወደ ዚህ ጤና ተቋም በምን አይነት ትራንስፖርት መጡ	1.በእግር 2. በአምቡላንስ 3.በግል ትራንስፖርት 4. በፈረስ /በቅሎ 5. በባህላዊ አምቡላንስ 6 ሌላ-----	
305	በጤና ተቋም ከወለዱ በኋላ ወደ ቤትዎ መንገድ እስከሚያስገባበት ድረስ በአምቡላንስ ወይም በሌላ መኪና የትራንስፖርት አገልግሎት በነፃ አግኝተዋል	1. አዎ 2. የለም	
306	በእግር እናቶች መቆያ ለመድረስ ስንት ሰዓት ወሰደብዎት	-----ስዓት	
307	በእናቶች ቤት ሲቆዩ አብረዎት የነበረ ማን ነበር	1.ባለቤቱ/የትዳር አጋር 2.ሌላ የቤተሰብ አባል (ልጅ/ወላጅ/አማት/እህት/ወንድም/ 3.ጎረቤት 4.ሌላ---	
308	በእናቶች መቆያ ቤት ምን ያህል ቀን ቆዩ	-----	
309	ከዚህ በኋላ እንደገና በእናቶች መቆያ ክፍል እጠቀማለሁ ብለው ያስባሉ (መጨረሻ ላይ የሚጠየቅ)	0. የለም 1. አዎ	
310	ቤተሰቤን ወይም ጓደኞቹን በእናቶች መቆያ ቤቱ እና በተቋሙ የወሊድ አገ/ት እንዲያገኙ እመክራለሁ ብለው ያስባሉ (መጨረሻ ላይ የሚጠየቅ)	0. የለም 1. አዎ	

**በእናቶች መቆያ ቤት ያለውን አገልግሎት እርካታ ደረጃ ለመለካት የተዘጋጁ ተዛማጅ የሆኑ መጠይቆች**

ከዚህ በታች በሰንጠረዥ የተቀመጡትን ነጥቦች ተጠቃሚዎች በአገልግሎቱ ላይ ያላቸውን የተለያዩ እርካታ ደረጃዎችን ያሳያሉ፡፡ ተጠቃሚዎች በሚቀርብላቸው ሀሳብ እርካታ ካላገኙ በጣም አልሰማማም እና አልሰማማም፣ እረክቻለሁ አረካሁም ለማለት የሚቸገሩ ከሆነ ገለልተኛ/ተግቅቦ/ እና እረክተው ከሆነ እስማማለሁ እና በጣም እስማማለሁ የሚሉትን የመልስ አማራጮችን ይስጡ፡፡

ተ.ቁ	መጠይቅ	ምድብ				ይ	
		1 =በጣም አልሰማማም	2	3 =ገለልተኛ	4		
311	የትዳር አጋር ድጋፍ	ባለቤቱ በመቆያ ቤት እንድቆይ ፍቃደኛ ነበር	1 5	2	3	4	II ለ ል
		ባለቤቱ እናቶች መቆያ ቤት በቆየሁበት ጊዜ አስፈላጊ ቁሳቁሶችን እንደ ገንዘብ፣ምግብ ወዘተ ነገሮችን ያቀርብልኝ ነበር	1 5	2	3	4	
		መቆያ ቤት እንደነበርኩኝ ባለቤቱ በቅርብ ክትትል ያደርግልኝ ነበር	1 5	2	3	4	
312	ሌላ የቤተሰብ/ዘመድ ድጋፍ	የኔ ቤተሰብ/ዘመድ በመቆያ ቤት እንድቆይ ፍቃደኛ ነበሩ	1 5	2	3	4	
		ቤተሰቦቼ/ዘመዶቼ እናቶች መቆያ ቤት በቆየሁበት ጊዜ አስፈላጊ ቁሳቁሶችን እንደ ገንዘብ፣ምግብ ወዘተ ነገሮችን ያቀርቡልኝ ነበር	1 5	2	3	4	
		መቆያ ቤት እንደነበርኩኝ ቤተሰቦቼ/ዘመዶቼ በቅርብ ክትትል ያደርጉልኝ ነበር	1 5	2	3	4	
313	የምግብ ሰራተኛ ድጋፍ	ሰራተኛዎ የምግብና የውሀ ወዘተ አገልግሎት በተገቢው ስዓት ታቀርባለች.	1 5	2	3	4	
		ሰራተኛዎ ርህራሄ እና አክብሮት በተሞላበት መልኩ አገልግሎት ትሰጣለች	1 5	2	3	4	
		ለእናቶች አብሳይ ተብላ በተመደባቸው ሰራተኛ አጠቃላይ የሚሰጠው አገልግሎት አስደሳች ነበር	1 5	2	3	4	
314	ከጤና ባለሙያዎች ጋር የነበረው ግንኙነት	ወደ እናቶች መቆያ ቤት በምገባበት ስዓት የጤና ተቋሙ የአቀባበል ስርዓት ከመገቢያው ጀምሮ መልካም ነበር	1 5	2	3	4	
		በመቆያ ቤቱ አገልግሎት የሚሰጡ ጤና ባለሙያዎችና ድጋፍ ሰጭ ሰራተኞች እራሳቸውን በአግባቡ አስተዋውቀውኛል	1 5	2	3	4	
		በቆየሁበት ጊዜ ከእኔ ጋር የነበረው የጤና ባለሙያዎች መስተጋብር ወይም ግንኙነት ጥሩ ነበር	1 5	2	3	4	
		ከጤና ባለሙያዎች ጋር የነበረኝ ተግባራት ግልጽና በቀላሉ መረዳት የምችለው ነበር	1 5	2	3	4	

		በማቆያ ቤቱ ቆይታዮ ወቅት ባለሙያዎቹ በአክብሮት አስተናግደውኛል	1 5	2	3	4
		በማቆያ ቤቱ ቆይታዮ ወቅት በነበሩኝ ጥያቄዎች ባለሙያዎቹ አዳምጠው በቂ ማብራሪያ ሰጥተውኛል	1 5	2	3	4
		በምጥና በወሊድ ወቅት ለሚደረግልኝ ህክምና ጥቅምና ጉዳት የጤና ባለሙያዎቹ ማብራሪያ ሰጥተውኝ ፈቅጆና ተስማምቼ ግልጋሎቱን አግኝቻለሁ	1 5	2	3	4
315	ከጤና ኤክስቴንሽኖች ስራተኞች ጋር የነበረው ግንኙነት	ጤና ኤክስቴንሽኖች ወደ እናቶች መቆያ ቤት ለመግባት የሚረዳ ምክር ይሰጣሉ	1 5	2	3	4
		ጤና ኤክስቴንሽኖች የመውለጃ ስዓት ሲቃረብ ወደ እናቶች መቆያ ቤት በሪፈራል ወረቀት በመላክ በኩል ጥሩ ነበር	1 5	2	3	4
		ጤና ኤክስቴንሽኖች ወደ መቆያ ክፍል በሚገባበት ስዓት አምቦላንስ ላይ በመደወል አገልግሎት እንድናገኝ በማድረግ በኩል ጥሩ ነበር	1 5	2	3	4
		ጤና ኤክስቴንሽኖች ባለቤቱን ወይም የቤተሰቤን አባላት በማስተባበር በእናቶች መቆያ ክፍል እንድቆይ ያላቸው ድጋፍ አስደሳች ነበር	1 5	2	3	4
<b>ክፍል 4: በእናቶች መቆያ ክፍል ለሚሰጡ አገልግሎቶች አጠቃላይ እርካታን ለመለካት የተዘጋጁ መጠይቆች</b>						
401	የእናቶች መቆያ ቤት ተስማሚነት	በቅድመ ወይም በድህረ ወሊድ ወቅት በተጨናነቀ ክፍል ውስጥ አልቆየሁም	1 5	2	3	4
		በእናቶች ክፍል የነበረው የምኝታ አገልግሎት ለእኔ ተስማምቶኛል				
		በቆይታዮ ወቅት መቆያ ቤቱ ከጫጫታ የራቀና ጸጥታ የተሞላበት ስለበረር ተደስቻለሁኝ	1 5	2	3	4
		መቆያ ቤቱ የተገነባበት ቦታ ለእኔ አስደሳች ነበር	1 5	2	3	4
402	የመቆያ ቤት ውስጥ ያሉ ቁሳቁሶች	በመቆያ ክፍሉ እንደ አልጋ፣ ፍራሽ፣ ትራስ፣ ብርድ ልብስ፣ አንሶላ እስክቅያሩ በማግኘቱ ተደስቻለሁ	1 5	2	3	4
		በመቆያ ቤቱ በቂ መቀመጫ ወንበሮች በመኖራቸው ደስተኛ ነበርኩ	1 5	2	3	4
		በመቆያ ክፍል በነበሩ መመገቢያ እቃዎች አገልግሎት ደስተኛ ነበርኩ	1 5	2	3	4
		በመቆያ ቤቱ በነበሩ በዉሃ ማጠራቀሚያና መጠጫ እቃዎች ደስተኛ ነበርኩ	1 5	2	3	4
		በመቆያ ቤቱ የንፅህና መጠበቂያ እንደ ሳሙና፣ የልብስ ማጠቢያ እቃ ወዘተ የነበረው አቅርቦት አስደሳች ነበር	1 5	2	3	4
		በቂ ለምግብ ማብሰያ የሚያገለግሉ እቃዎች በመኖራቸው ደስተኛ ነበርኩኝ	1 5	2	3	4

403	የመዘናኛ አገልግሎት	በእናቶች መቆያ ክፍል በቴሌቪዥን እና በሌሎች የመዘናኛ አገልግሎቶች ረክቻለሁኝ	1 5	2	3	4
		የመዘናኛ አገልግሎቶች ትምህርት አዘል ነበሩ	1 5	2	3	4
404	ቅድመ ወሊድ አገልግሎት	በእናቶች መቆያ ቤት እያለሁ በዋናው መመርመሪያ ክፍል በተሰጠኝ መደበኛ የቅድመ ወሊድ አገልግሎት እረክቻለሁኝ	1 5	2	3	4
		ከመውለዴ በፊት በእናቶች መቆያ ቤት በተሰጠው ጤና ትምህርት(ስለእርጉዝነት፣ ስለጡት ማጥባት፣ ስለ ግልና አካባቢ ንፅህና ወዘተ) ደስተኛ ነበርኩ።	1 5	2	3	4
		ችግርን መሰረት ባደረገ መልኩ በተለያዩ ጉዳዮች በባለሙያዎች የሚሰጠው የምክር አገልግሎት አስደሳች ነበር	1 5	2	3	4
		በባለሙያ የቀን ተቀን ጉብኝት(የጽንሰ እንቅስቃሴ ክትትል፣ ወሳኝ ምልክቶችን መለካት) ላይ ደስተኛ ነበርኩ	1 5	2	3	4
405	የዕዳት አገልግሎት	የእናቶች መቆያ ቤት ግቢ ንፅህና ማራኪ ነበር	1 5	2	3	4
		የእናቶች መቆያ ቤት የውስጥ ክፍል ንጽህና አስደሳች ነበር	1 5	2	3	4
		የእናቶች ገላ መታቢያ (ሻወር ቤት) በንጽህና የተያዘ ነበር	1 5	2	3	4
		የመፀዳጃ ቤቱ ንጽህና የተጠበቀ ነበር	1 5	2	3	4
		የኩሽና ቤቱን ንጽህና የተጠበቀ ነበር	1 5	2	3	4
406	የድህረ ወሊድ አገልግሎት	ለእኔና ለልጄ በየ6 ስዓት ልዩነት የተሰጠው የድህረ ወሊድ አገልግሎት አስደሳች ነበር	1 5	2	3	4
		ከወሊድ በኋላ የተሰጠኝ የጤና ትምህርት ለእኔ አመርቂ ነበር				
		በአጠቃላይ ከወሊድ በኋላ የነበረው አገልግሎት አሰጣጥ አስደሳች ነበር	1 5	2	3	4
407	የምግብ አገልግሎት	ቢያንስ በቀን 3 ጊዜ የምግብ አገልግሎት በማግኘቴ ተደስቻለሁኝ	1 5	2	3	4
		በእያንዳንዱ የምግብ ስዓት የሚሰጠው የምግብ መጠን በቂ ነበር	1 5	2	3	4
		በእናቶች መቆያ ቤት በሚሰጠው የምግብ ጥራት ደስተኛ ነበርኩኝ	1 5	2	3	4

**አመሰግናለሁ:**

**ባህርዳር ዩንቨርሲቲ**

**ህክምና እና ጤና ሳይንስ ኮሌጅ**

**ህብተሰብ ጤና ትምህርት ክፍል**

በእናቶች መቆያ ቤት ቆይተው አገልግሎት ያገኙ እናቶችን የአገልግሎቱን ምቹነት ለማወቅ የተዘጋጀ መምሪያ መጠይቅ

መመሪያ:-አባቶች ትንሽ ደቂቃ ወስደው በእናቶች መቆያ ቤት አገልግሎት አሰጣጥ ዙሪያ እርሶዎ የቆዩበትን ጊዜ አስታውሰው ይንገሩኝ። በውይይታችን ላይ ትክክለኛም ሆነ ስህተት መልስ የለም። በእርሶዎ የግል አስተያየት ብቻ ደስተኛ ነን። ከዚህ በታች ባሉት ጥያቄዎች እርሶዎ የሚያውቁትንና በጭንቅላትዎ የሚማጣልዎትን አስታውሰው እንዲነግሩኝ በአክብሮት እጠይቃለሁ።

ቀን-----ቀበሌ-----ጎጥ-----አድሜ በአመት-----

ሀይማኖት-----የትምህርት ደረጃ-----በእናቶች መቆያ ቤት የቆዩበት ቀን ብዛት----

**1. ከእናቶች መቆያ ቤት አገልግሎት እና ተዘማጅ ጉዳዮችን በተመለከተ**

**1. በእናቶች መቆያ ቤት ያለውን የአገልግሎት ምቹነት እንዴት ይገልጹታል**

- የመቆያ ቤቱ ተስማሚነት (የክፍሉ ስፋት፣ የምኝታው ምቹነት፣ መቆያ ቤቱ ያለበት ቦታ)
- በእናቶች መቆያ ቤት ያሉ ቁሳቁሶች (የምኝታ አገልግሎት እንደ ፍራሽ፣ የአልጋ ልብስ፣ ትራስ)፣ መቀመጫ ወንበሮች፣ በቂ መመገቢያና መጠጫ እቃዎች፣ የውሃ ማጠራቀሚያ እቃ፣ የንጽህና መጠበቂያ ግብዓቶች(ሳሙና፣ ሳፋ ወዘተ)፣ የምግብ መስሪያ እንደ ድሰት፣ ማንኪያ ወዘተ
- የአምቡላንስ አገልግሎት (በፍጥነት በመድረስ፣ ወደ ቤት በመመለስ በኩል)
- የመዝናኛ አገልግሎት (ቴሌቪዥን እና ሌሎች መዝናኛዎች፣ አስተማሪነታቸውስ)
- ቅድመ ወሊድ አገልግሎት (በጤና ባለሙያዎች መደበኛ ክትትል፣ ጤና ትምህርት በስርዓተ ምግብ በጡት ማጥባት ወዘተ)
- ድህረ ወሊድ አገልግሎት (የሚጠበቁ አገልግሎቶች፣ ጤና ትምህርት)
- የጽዳት አገልግሎት (የግቢ ንጽህና፣ የክፍሉ ንጽህና፣ መታጠቢያ ወይም ሻወር ቤት፣ መጻጻጃ ቤት፣ ኩሽና፣ እጅ መታጠቢያ ወዘተ)
- የምግብ አገልግሎት (በቀን ቢያንስ 3 ጊዜ፣ መጠኑና ጥራቱ ምን ይመስላል)

**2. ማህበራዊ ድጋፍና ተዘማጅ ጉዳዮች**

- ከባለቤትዎ ወይም ከሌላ የቤተሰብ አባል በእናቶች መቆያ ቤት በቆዩበት ጊዜ ያለውን ድጋፍ እንዴት ይገልጹታል(መቆያ ቤቱ እንዲቆይ ፍቃደኝነትን በማሳየት፣ አስፈላጊ ቁሳቁሶችን(ገንዘብ፣ ምግብ ወዘተ) በመስጠት፣ በየጊዜው በመጎብኘት)
- የእናቶች መቆያ ቤት ሰራተኛን ድጋፍ እንዴት ይገልጹታል(ምግብና ውሃ በስዓቱ በማቅረብ፣ በማክበርና በቅንነት አገልግሎት በመስጠት በኩል)

**3. ከጤና ጣቢያ ሰራተኞች እና ከጤና ኤክስቴንሽን ሰራተኞች ጋር የነበረው ግንኙነት**

- ከጤና ጣቢያ ባለሙያዎች ጋር የነበረውን ግንኙነት እንዴት ይገመግሙታል(አቀባባላቸውን በተመለከተ፣ የቀን ተቀን ጉብኝት፣ በቅንነትና አክብሮት በተሞላበት መልኩ ማገልገል)
- ከጤና ኤክስቴንሽን ሰራተኞች ጋር የነበረውን ግንኙነት እንዴት ይገመግሙታል(መቼና ለምን ወደ እናቶች መቆያ ቤት መግባት እንዳለብዎት ምክክር በማፈ፣ ድረግ፣ የሪፈር ወረቀት

በመስጠትና በመላክ፣ የእርስዎ የቤተሰብ አባላት ድጋፍ እንዲያደርጉ የማስተባበር ስራ በመስራት በኩል)

4. በእናቶች መቆያ ቤት ምን ምን አይነት ተጨማሪ አገልግሎት ቢሰጥ አገልግሎቱን ያሻሽለዋል ብለው ያስባሉ ለምን “እናመሰግናለን”

11.4. Satisfaction domains in the context of MWH: Reliability analysis

S.N	MWH satisfaction dimensions	Cronbach's alpha (α score) for 18 participants during Pre test	Cronbach's alpha (α score) for 363 participants after all data collection	Number of Items
1. MWH standard: guideline oriented physical arrangement of the home				
	MWH convenience	0.828	0.843	4
	Utensils	0.801	0.819	6
2. services: guideline oriented maternal, food, sanitation and recreational services				
	ambulance	0.326	-	
	Recreational service	0.927	0.930	2
	ANC service	0.908	0.913	4
	Sanitation service	0.793	0.700	5
	PNC service	0.879	0.934	3
	Food service	0.901	0.926	3
3. social support				
	Husband support	0.919	0.947	3
	Family support	0.924	0.960	3
	Servant support	0.916	0.929	3
4. Interpersonal relationship and communication (IPC)				
	With HW	0.832	0.849	7
	With HEW	0.772	0.845	4
	Overall satisfaction	0.929	0.901	27

