

## Intention to Use Maternity Waiting Homes and Associated Factors among Pregnant Women in Asella Public Health Facilities, Arsi Zone, Ethiopia, 2023

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### Abstract

**Background:** Maternal waiting homes are residential facilities located within hospitals or health centers to accommodate women in their final weeks of pregnancy and a strategy to “bridge the geographical gap” in obstetric care between rural areas with poor access to functioning facilities and urban areas where maternity services are available.

**Objective:** The purpose of this study was to assess the intention to use maternity waiting homes and associated factors among eligible pregnant women in Asella public health facility, southeast Ethiopia, 2023.

**Method:** An institutional-based cross-sectional study was conducted among pregnant mothers in Asella public health facility. Single population proportion formula was used to calculate sample size of 414 pregnant women. Data were collected using semi-structured interviewer-administered questionnaire and entered to Epi data version 4.6 then exported to SPSS version 25 for analysis. Bi-variate and multi-variate logistic regression analysis were done using odds ratio with 95% confidence interval. P-value < 0.05 was considered as significant in multi-variate analysis.

**Results:** In this study, the overall prevalence of intention to use maternity waiting home among pregnant women was 55.3%. Variables like; history of maternity waiting home utilization (AOR 4.912, 95% CI: 2.66 - 9.07), Attending pregnant women conference (AOR 2.026, 95% CI: 1.144 - 3.588), History for obstetric complications (AOR 2.536, 95% CI: 1.619 - 3.973), Maternity waiting home near respondents residence (AOR 2.019, 95% CI: 1.168 - 3.488) and history of child birth (AOR 1.759, 95% CI: 0.989 - 3.127) Were the independent factors associated with intention to use maternity waiting home.

**Conclusion and Recommendation:** The findings of this study revealed that the intention to use maternal waiting homes was moderate as compared to the previous study. Attending pregnant women’s conference, history for obstetric complications, maternity waiting home near the respondent’s residence and history of childbirth were the determinant factors of the intention to use a maternity waiting home.

**Keywords:** Intention; Maternity Waiting Homes; Pregnant Women

## Abbreviations

ANC: Antenatal Care; AOR: Adjusted Odd Ratio; BSC: Bachelor Science; CI: Confidence of Interval; COR: Crude Odd Ratio; EDHS: Ethiopian Demographic Health Survey; FMOH: Federal Ministry of Health; HMIS: Health Management Information System; MMR: Maternal Mortality Ratio; MSC: Masters of Science; MWH: Maternity Waiting Home; SDG: Sustainable Development Goal; SNNPR: Southern Nations, Nationalities and Peoples Region; SPSS: Statistical Package for the Social Science; UN SDG: United Nation Sustainable Development Goal; WHO: World Health Organizations

## Introduction

Homes constructed close to one offering emergency obstetric care and general medical services are called maternity waiting homes. An MWH is a facility within easy reach of a hospital or health center that provides emergency obstetric care (EmOC). Women go to the hospital when labor begins so a trained birth attendant can help them [1]. Avoiding the second delay is the most straightforward way to lower the risk of difficulties associated with labor. It eliminates barriers to service access, including location, travel time, expense, and communication between sources of referral [2]. It is also a very successful and economical strategy to reduce maternal mortality and morbidity and to provide qualified birth attendants in rural regions. One of the three institutional innovations-the other two being the creation of maternity waiting homes and community-based health insurance-this game-changing strategy was developed to improve health facilities [3].

Maternal causes accounted for 10.7 million of the annual deaths of women worldwide between 1990 and 2015. 2015 saw 99 percent of projected maternal fatalities worldwide take place in underdeveloped nations. Sixty-six percent of maternal deaths occurred in Sub-Saharan Africa alone, with Southern Asia following [4]. In Ethiopia, MMR remains high, at 412 per 100,000 live births, as per the 2016 EDHS report [5]. The 2019 EDHS report on the mini EDHS survey found that just 48% of births are institutionalized, indicating that home births are still common. Additionally, health facilities are not easily accessible in rural areas due to factors like distance, inaccessibility, and a lack of suitable facilities. In rural Ethiopia, only 43% of women are delivered by skilled birth attendants and 40% [6]. The SNNPR has a high MMR and 78.6% of women gave birth there without the assistance of a trained birth attendant. Mother-waiting homes can be built and used as a solution, even if increasing institutional deliveries is essential to lowering mother and newborn mortality [7].

In Ethiopia, the first MWH was built in 1976 [8] and currently, the Amhara region is at the top of MWH coverage with 72%, followed by SNNPR (57%), the Oromia region (56%), and the Gambella region (8%) [9]. The worldwide maternal mortality ratio (MMR) will be fewer than 70 per 100,000 live births by 2030, according to the UN SDG 3-target-one plan. To reach this goal, every nation must cut MMR by at least 7.5% annually between 2016 and 2030 [10]. Ethiopians have limited access to comprehensive emergency obstetric care, and in the absence of modern transportation, laboring mothers are transported to medical facilities using locally manufactured stretchers. In the developing world, MWH users had an 80% lower chance of dying than non-users, 73% fewer stillbirths occur among users, and 98.8% of MWH users deliver babies with a lower percentage of unfavorable obstetric outcomes than non-users [11].

An estimated 42% of maternal deaths are thought to be associated to the intrapartum period, and the global MMR is unacceptable [12]. About 800 women die from pregnancy- or childbirth-related complications around the world every day [13]. In 2015, developing regions accounted for approximately 302,000 maternal deaths. Sub-Saharan Africa and southern Asia accounted for the majority of these deaths. Delays in emergency obstetric care, often due to distance and delayed treatment, contribute to high maternal mortality rates in these regions. Some countries are addressing this issue by transferring at-risk women to Maternity Waiting Homes near hospitals before their due date [14,15].

The World Health Organization has advised competent treatment at every birth, including the availability of facilities equipped to provide emergency obstetric care [16]. The WHO recommended MWH for women who live far from a health facility and are impoverished when labor problems arise to lower maternal mortality in rural regions. Due to an increase in institutional delivery, significantly lowers maternal and perinatal death [17]. Women with high-risk pregnancies should be admitted to MWH at 36 weeks of pregnancy if access to care is problematic [18].

Ethiopia has a low institutional delivery rate of 26% and a high maternal mortality rate, estimated at 412 per 100,000 live births, according to the EDHS 2016 [19]. The FMOH of Ethiopia has acknowledged that one of the main causes of the high rates of mother and newborn death during pregnancy and delivery is a lack of skilled birth attendance [20]. Studies in Ethiopia illustrate that maternal mortality is high, particularly in areas where access to hospitals is difficult. One way of tackling this problem is to establish MWH [1].

Furthermore, just 13.3% of moms in the Oromia area give birth at a medical facility, and 21.3% of women said they couldn't go to a medical facility because they were too far away or didn't have access to transportation [2,21].

In addition, the evidence from Jimma District revealed that only 38.7% had past experiences with MWH, and about 57.3% intended to use MWH, a proxy indicator of institutional delivery [22]. A study from the Horro district implied institutional delivery was very low (8%); this shows us that MWH utilization is also very low. It identified that geographic access to health centers plays a major role in the utilization of institutional delivery care [23]. So, one way of tackling this problem is by establishing MWH, which breaks the gap of geographic inaccessibility [13,15,20].

MWH is considered an important element of maternity care by the WHO. The ability to recognize and refer women at risk and the utilization of MWH by such women determines the effectiveness of MWH [25]. With established evidence of the benefits of MWHs, Ethiopia has plans to expand the MWHs to avert postpartum complications that could occur during the first 24 hours after delivery, as recommended by WHO, and it is a tested and proven strategy [13,26].

As per my knowledge, despite studies showing that utilization of MWH reduces maternal and neonatal mortality, there is limited information in the study area about utilization of MWH and its predictors. So, this study aims to assess the intention to use maternity waiting homes and associated factors among pregnant women in Asella town public health facilities.

## **Materials and Methods**

### **Study area and period**

This study was done in Asella public health facilities in Arsi Zone, Oromia Regional State, from August to September 2023. Asella is situated 175 kilometers from Addis Ababa city. The town covers an area of 29.3 square kilometers. According to the 2007 Ethiopian census report and based on the annual population growth rate, Asella town's total population is 108,307. The town has one governmental hospital and two health centers. The dominant languages are Afan Oromo, followed by Amharic. There are three public health facilities in Asella: one referral and teaching hospital and two health centers.

### **Study design**

An institutional-based cross-sectional study was conducted.

### **Source population**

The source populations of this study were all eligible pregnant women who came for ANC follow-up in Asella public health facilities.

### **Study population**

All selected eligible pregnant women who were on ANC follow-up in Asella public health facilities during the study period.

### **The study unit**

A randomly selected individual eligible pregnant woman in a health facility.

### **Inclusion criteria**

Randomly selected eligible pregnant women in selected public health facilities.

### **Exclusion criteria**

Pregnant women who were not for maternity waiting homes.

### **Sample size and sampling procedure**

#### **Sample size determination**

In the Jimma district study [24],  $P = 57.3\%$  was the proportion of the mother's intention to use MWH. The assumption of 95% confidence level and 5% marginal error was considered. The sample size was determined by using a single population proportion based on the following assumptions.

Where;  $n$  the desirable calculated sample size

$Z (\alpha/2) = 1.96$  (95% confidence level for two sides)

$P = 57.3\%$

$d$  = degree of accuracy desired setting at (5%)

$$n = \frac{(1.96)^2 0.573(1-0.573)}{(0.05)^2} = 376$$

$n = 376$ , by adding 10% non-response rate, the final sample size was 414.

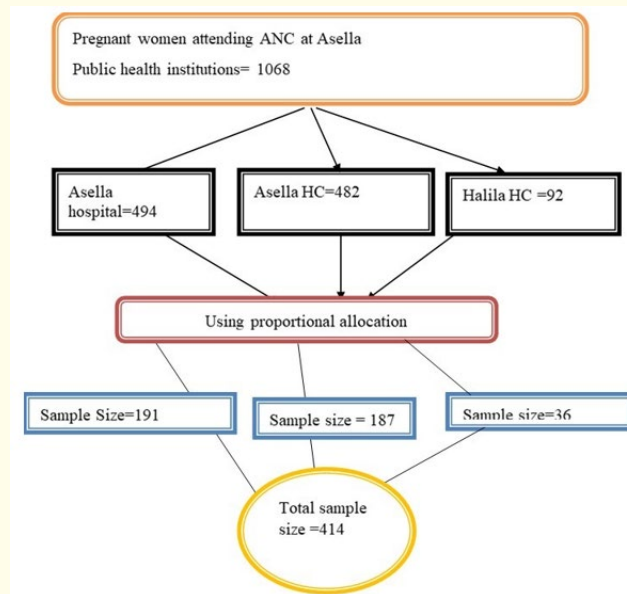
#### **Sampling procedure**

One hospital and two health centers were the three public health institutions that were included. The final sample size was distributed proportionally to the selected health facilities based on the number of pregnant women from the registration book and HMIS report before data collection period. A simple random sampling technique was used to select study participants. Study units were selected every  $K$  value,  $K = 1068/414 (k=3)$ .

### **Variables of the study**

#### **Dependent variable**

Intention of pregnant women to use maternity waiting home.



**Figure 1:** Schematic presentation of the sampling procedure for the study on intention to use maternity waiting home and associated factors among women attending ANC at Asella public health facilities.

### Independent variables

- Socio-demographic variables: Educational status of mother, maternal occupation, income.
- Knowledge of maternity waiting home.
- Attitude on maternity waiting home.
- Obstetric history-related factors: Previous history of childbirth, Birth preparedness plan.

### Operational definitions and definition of terms

- **Intention to use a maternity waiting home:** It was measured by a question containing five points on a Likert scale. Response options have 5 like-rt scales (from strongly agree to strongly disagree) then it was dichotomized into two (strongly agree and agree labeled as 1 and neutral to strongly disagree labeled as 0). Finally, respondents who scored 1 on one of the five questions were considered as having an intention to use MWH others had no intention to use MWH [24].
- **Maternity waiting homes:** Are homes built near facilities with essential health services that allow pregnant women to wait until the onset of labor for safe delivery [24].
- **Attitude:** It was measured by five questions containing five points. On a Like-rt scale, those who scored 15 and above were considered to have a good attitude and intended to use MWH; otherwise, they had a poor attitude not intend to use MWH [24].
- **Knowledge:** It was measured based on questions that focused on the advantages of using maternity waiting home utilization. The total maximum score was 8, while the minimum possible score was 0. Those respondents who scored 5 and above were considered to have good knowledge and intended to use MWH; otherwise, they had poor knowledge [25].

### **Data collection procedures**

Data was collected through face-to-face interviews with a pre-tested structured questionnaire, which was adapted from different literature. Five data collectors with BSC in midwifery who can speak Afan Oromo and two supervisors with BSC in midwifery were deployed for data collection. The principal investigator provided two days of orientation on the study instrument, consent form, and data collection process.

### **Data quality assurance**

To maintain data quality, the questionnaire (English version) was translated into Afan Oromo and translated back to English by two different language experts with the help of a health professional. Two days of training were given to the data collectors and supervisors on the objective, relevance of the study, confidentiality of information, respondent's rights, pretest, informed consent, and interview techniques. A week before data collection, a pretest was done at Eteya Health Center on 5% of the sample size. The purpose of the pre-testing was to ensure that respondents were able to understand the questions or not and to check the wording, logic, and skip patterns of the questions rationally.

### **Data processing and analysis**

The data was entered using Epi Data version 4.6.0 statistical software and analyzed using SPSS version 25. Data cleaning was performed to check for frequencies, accuracy, consistency, and variables. Incomplete and inconsistent data was excluded from the analysis. A binary logistic regression analysis was performed to assess the association between socio-demographic character, obstetric characteristics, attitude, knowledge, and past experiences with maternity waiting homes. Finally, variables with a P value less than 0.05 were considered significant.

### **Ethical considerations**

Ethical approval was obtained from the IRB of Arsi University. An official letter of cooperation was written to Asella town public health facilities from the Department of Midwifery. Then a letter of cooperation was also written to each public facility administrator. Following an explanation of the purpose of the study, consent was obtained from participants. Also, they are free to withdraw consent and discontinue participation without any form of prejudice. Confidentiality of information and privacy of participants were assured for all the information provided. To preserve confidentiality, the data was not exposed to third parties except the principal investigator, data collector.

## **Result**

### **Socio-demographic characteristics of the respondents**

Four hundred fourteen pregnant women participated, with a response rate of 100%. The larger groups (58.7%) of respondents were found in the age range of 25 - 34 years. One hundred seventy-one (41.3%) were Muslim religious followers. One hundred eighty-five (44.7%) respondents attended primary education. Three hundred sixty-eight (88.9%) were married. One hundred thirty-four (32.4%) were housewives. Two hundred fifty-four (61.4%) were Oromo in ethnicity, and two hundred forty (58.0%) of them earn a monthly income of above 1000 birr (Table 1).

### **Knowledge of maternity waiting homes**

Among 414 participants, 353 (85.3%) knew the importance of a maternity waiting home, and they also revealed that a maternity waiting home is important in reducing the risk of obstetric complications. Almost all respondents, 394 (95.2%), have knowledge, 317 (76.6%) have a maternity waiting home near their residence, and 355 (85.7%) know their expected date of delivery (Table 2).

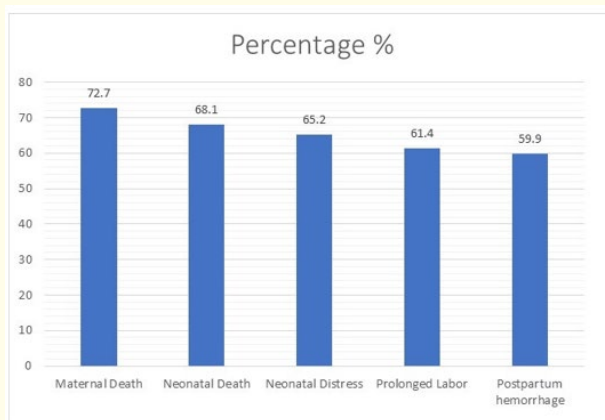
Variables	Frequency	Percentage (%)
<b>Age of the mother</b>		
15-24	139	33.6
25-34	243	58.7
35 and more	32	7.7
<b>Religion</b>		
Orthodox	129	31.2
Muslim	171	41.3
Protestant	94	22.7
Catholic	19	4.6
Other	1	.2
<b>Educational Status</b>		
Unable to read and write	73	17.6
Primary	185	44.7
Secondary and above	156	37.7
<b>Ethnicity</b>		
Oromo	254	61.4
Amhara	111	26.8
Gurage	37	8.9
Tigre	12	2.9
<b>Occupation</b>		
Housewife	134	32.4
Farmer	66	15.9
Merchant	109	26.3
Students	12	2.9
Gov't employee	93	22.5
<b>Marital Status</b>		
Married	368	88.9
Single	16	3.9
Widowed	15	3.6
Divorced	15	3.6
<b>Monthly Income</b>		
<500	57	13.8
501-999	117	28.3
>1000	240	58.0

**Table 1:** Socio-demographic characteristics of pregnant women in Asella public health facilities, Arsi zone, Ethiopia, 2023 (n = 414).

Variables	Frequency	Percentage (%)
<b>Knowledge About the Importance of MWH</b>		
Good	353	85.3
Poor	61	14.7
<b>MWH is Important for Immediate Obstetric Emergency?</b>		
Yes	354	85.5
No	60	14.5
<b>Importance of Maternity Waiting Home</b>		
Reduce the risk of maternal death	264	63.8
Reduce the risk of newborn death	295	71.3
Reduce the risk of obstetric complication	353	85.3
<b>Maternity Waiting Home Near Residence</b>		
Yes	317	76.6
No	97	23.4
<b>Expected Date of Delivery</b>		
Yes	355	85.7
No	59	14.3
<b>Maternal and Newborn Complications of Home Delivery</b>		
Yes	391	94.4
No	23	5.6
<b>Staying Place Before Onset of the Labor</b>		
At Health Institution	394	95.2
At Home	20	4.8

**Table 2:** Assessment of knowledge of pregnant women towards maternity waiting home in Asella public health facilities, Arsi zone, Oromia regional state, Ethiopia, 2023 (n = 414).

From health problems related to delaying reaching health institutions before the onset of labor, around 72.7% of respondents revealed maternal death, 68.1% neonatal death, and 65.2% revealed neonatal distress (Figure 2).



**Figure 2:** Possible health problems related to delaying reaching health institutions before the onset of labor among pregnant women in Asella town public institutions, Ethiopia, 2023.



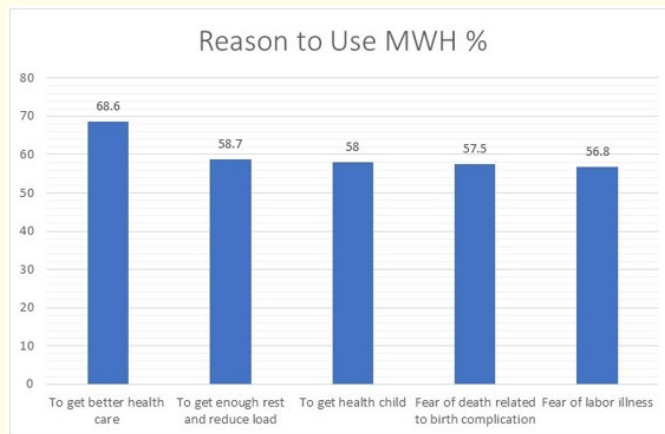
### Obstetrics and previous experience with maternity waiting home

Almost all respondents have had at least one ANC contact (97.8%). Of the study participants, 356 (86%) had given birth previously, and 192 (46.4%) of the respondents claimed that they were used to maternity waiting at home during their last pregnancy (Table 3).

Variables	Frequency	Percentage (%)
<b>ANC contact</b>		
Yes	405	97.8
No	9	2.2
<b>Number of ANC contact</b>		
Once	87	21.0
Twice	81	19.6
Three times	134	32.4
Four times	112	27.0
<b>Giving Birth Before</b>		
Yes	356	86.0
No	58	14.0
<b>Place of Delivery</b>		
Home	73	17.6
Health Institutions	341	82.4
<b>Obstetrics Complication</b>		
Yes	194	46.9
No	220	53.1
<b>History of MWH Utilization</b>		
Yes	192	46.4
No	222	53.6
<b>Attending Pregnant Women Conference</b>		
Yes	232	56.0
No	182	44.0

**Table 3:** Obstetric and previous experience on maternity waiting of pregnant women in Asella public health facilities, Arsi zone, Oromia regional state, Ethiopia, 2023 (n = 414).

From the total study participants who were asked for reasons to use maternity waiting homes, 284 (68.6%) revealed that to get better health care from health care providers, 243 (58.7%) to get enough rest and reduce load, and 240 (58%) to get a health child respectively (Figure 3).



**Figure 3:** Reason to use maternity waiting home by pregnant women in Asella public health facilities, Arsi zone, Oromia regional state, Ethiopia, 2023.

### Intention to use maternity waiting home

The overall magnitude of intention to use maternity waiting home by study participants of this study was 229 (55.3%). And most of the study participants, 341 (82.4%) prefer to stay at health facility for less than 15 days before onset of labor.

### Factors associated with Intention to use maternity waiting home

In order to determine the association between Intension to use MWH and its determinant factors both bivariate and multivariate analysis were done. Those variables that showed association with the outcome variables (P-value < 0.25) in the bivariate analysis were selected for multivariate analysis.

In bivariate analysis variables like occupation (Merchant) of the mother (COR 2.293, 95% CI: 1.164 - 4.517), monthly income (COR 1.928, 95% CI: 1.044 - 3.580), Maternity waiting home near residence of the mother (COR 2.225, 95% CI 1.399 - 3.538), Women who know their EDD (COR 1.993, 95% CI 1.138 - 3.491), ANC second visit (COR 2.192, 95% CI: 1.231 - 3.905), Previously give birth (COR 1.923, 95% CI: 1.093 - 3.378), History for obstetric complication (COR 2.816, CI: 1.881 - 4.216), History for maternity waiting utilization (COR 5.577, CI: 3.624 - 8.582), and Attending pregnant women conference (COR 4.751, CI: 3.128 - 7.215) were significant at bivariate level.

Those variables which show association at bivariate level with P-Value < 0.25 were included in multivariate logistic regression.

Multivariate logistic regression analysis revealed that variables like history of maternity waiting home utilization (AOR 4.912, 95% CI: 2.660 - 9.072), Those mothers who had attending pregnant women conference were 2 times more likely utilize MWH compared to their counterparts (AOR 2.026, 95% CI: 1.144 - 3.588). Similarly, mothers who had history of Obstetric complication were more than 2 times utilize MWH compared to their counter parts (AOR 2.536, 95% CI: 1.619 - 3.973), Maternity waiting home near respondents residence (AOR 2.019, 95% CI: 1.168 - 3.488) and History of child birth (AOR 1.759, 95% CI: 0.989 - 3.127) were the independent predictors of intention to use maternity waiting home after controlling the potential confounders (Table 4).

Variables	Intention to Use MWH		COR	AOR	P-value
	Have intention	Have no intention			
<b>History of MWH Utilization</b>					
Yes	140	82	5.577 (3.624-8.582)	4.912 (2.660-9.072)	0.001*
No	45	147	1	1	
<b>Attending Pregnant Women conference</b>					
Yes	166	63	4.751 (3.128-7.215)	2.026 (1.144-3.588)	0.015*
No	66	119	1	1	
<b>History of Obstetric Complication</b>					
Yes	124	96	2.816 (1.881-4.216)	2.536 (1.619-3.973)	0.001*
No	61	133	1	1	
<b>MWH near Residence</b>					
Yes	190	127	2.019 (1.168-3.488)	2.019 (1.168-3.488)	0.012*
No	39	58	1	1	
<b>History of Child Birth</b>					
Yes	205	151	1.923 (1.095-3.378)	1.759 (1.095-3.378)	0.034
No	24	34	1	1	
<b>The respondents who know their EDD</b>					
Yes	205	150	1.993 (1.138-3.491)	0.988 (0.478-2.044)	0.975
No	24	35	1	1	
<b>Monthly Income</b>					
<500	39	18	1	1	
501-999	63	54	1.928 (1.044-3.580)	1.190 (0.701-2.022)	0.520
>=1000	127	113	1.038 (0.666-1.617)	0.476 (0.235-0.964)	0.590
<b>Occupation</b>					
Housewife	73	61	1	1	
Farmer	48	18	1.029 (0.605-1.750)	0.753 (0.403-1.407)	0.374
Merchant	52	57	2.293 (1.164-4.517)	0.911 (0.471-1.763)	0.783

**Table 4:** Factors associated with Intention to use maternity waiting home by multivariate logistic regression analyses among pregnant women in Asella Public Health Institutions, Ethiopia, 2023.

NB:  $p < 0.05$ = \*Predictors for Intention to use maternity waiting home.

## Discussion

This study aimed to assess the intention to use a maternity waiting home and associated factors among eligible pregnant women in Asella public health facilities. Based on this, the magnitude of the intention to use a maternity waiting home was 55.3%.

This finding was greater than a previous study conducted in the Mettu district, Illubabor zone, Ethiopia, which was 48.80% [24], Gamo Gofa zone 42.5% [26], Misrak Badewacho Hadiya zone 44.91%, and a study conducted in rural Kenya, which revealed 45% of women

intended to use maternity waiting homes [5]. The difference might be due to women in our study area having better transportation access to health facilities. Moreover, there is a difference in time.

However, this finding was lower than other previous studies conducted in Jimma district, Ethiopia, which was 57.3% [24], Benchi Maji 61.4%, and a study conducted in Kenya, which was 61.1% [6], but similar to the study conducted in Butajira, southern Ethiopia, which was 55.1% [27]. The difference may be the availability of MWH in all health centers and the nature of the study.

In this study, women who had previously utilized maternity waiting homes were almost five times more likely to use maternity waiting homes as compared to those who didn't utilize maternity waiting homes. Women who previously utilized maternity waiting homes had higher odds of intentions to use MWHs than participants who did not. This finding is supported by studies in Jimma District, Tsegedie, North Gondar, Bahir Dar town, and Tigray region, Ethiopia [8,9,12,28]. The possible explanation may be that those women who have utilized MWH in the past might have better insight into the benefits of staying in MWHs as compared with women who have never utilized it and fear complications during childbirth as a result of education by midwives using MWHs during last childbirth. Even women who were childbirth admitted to health facilities without MWHs were advised to go and wait for birth in district hospitals or health centers with MWHs. Women who had previously utilized maternity waiting homes have the chance to familiarize themselves with the health facilities' environments. This may reduce unnecessary fear and stress related to institutional birth. Moreover, women may also be better informed about danger signs and obstetric complications that may occur during pregnancy and childbirth [29].

This study showed that a woman who had maternity waiting homes near their residence were 2 times more likely to utilize the maternity waiting homes, when compared to a woman who had no maternity waiting homes near their residences. This result also agrees with the study done at Arsi zone Digalu Tijo, Jinka (Ethiopia), Tanzania, and Zambia [14,15,17,30]. This result is different to the study done in Kenya [5]. The differences might be different socio-cultural issues, geographical backgrounds, and fear of distance to travel to the health facility during an emergency in this study.

Intention to use MWH was significantly associated with previous childbirth history. The study participants who had previous childbirth history were 2 times more to utilize a maternity waiting home than those who had no history of previous childbirth. This finding is supported by the study conducted in the Arsi zone; Digalu Tijo District [14]. The possible reason could be those women who had a history of previous childbirth might have better information about the availability and importance of MWH services during previous health facility visits than those women who had not ever given birth.

This study finding indicates that those who suffered complications in previous childbirths were three times more likely to use MWH during the following pregnancy. This is in line with the study conducted in southern Ethiopia and other mostly qualitative studies, which found that complications during previous births may make women aware of the dangers of childbirth and the benefits of a skilled birth attendant [18,20,31]. Many Ethiopians argue that birth is a natural life event that is supposed to take place at home. In their view, a health facility should only come into play when labor is complicated. Since in 20% of low-risk pregnancies, complications occur that require treatment, MWHs also target women from remote areas [1].

This study indicated that attending pregnant women's conferences was significantly associated with women's intention to use maternity waiting homes. Such that attending pregnant women's conferences increases women's intention to use maternity waiting homes by 2.03 times as compared to its counterpart. The possible explanation might be women who attend pregnant women's conferences can discuss with healthcare providers about different health care activities and will have better information regarding danger signs and obstetrics complications that may occur during pregnancy and childbirth and also have awareness regarding birth preparedness and complication readiness [29]. Nowadays, maternity waiting home utilization is one part of the birth preparedness and complication readiness plan and pregnant mothers can get information on how they visit maternity waiting homes [32]. In addition, women who attend pregnant

women's conferences could receive information regarding the benefits and means of accessing maternity waiting homes from trusted sources, become more likely to use the service and develop increased health literacy regarding maternity waiting homes [33].

### **Limitation of the Study**

The limitation of this study may be the recall bias of respondents and the study design being cross-sectional. These limitations may affect the result negatively because mothers fail to remember what happened during their previous pregnancy, and the study design also cannot show a real cause-and-effect association. This study was also at risk of social desirability bias as mothers may not report what they practiced.

### **Strength of the Study**

- A high response rate was obtained.
- An appropriate statistical test was used.
- The study findings can be generalized to the target population.

### **Conclusion**

The findings of this study revealed that the intention to use maternal waiting homes was low. Attending a pregnant women's conference, history of obstetric complications, maternity waiting home near the respondent's residence, and history of childbirth were the determinant factors in the intention to use a maternity waiting home.

### **Recommendation**

#### **For Asella town health office**

- The health office shall encourage each health center to sustain pregnant women Conferences.
- To increase MWH utilization information promotion activity has to be given to pregnant women during pregnant women's conferences.

#### **For health care professionals**

- Health care professionals need to advice and counsel the mothers on MWH service at ANC visiting to increase their intention.

### **Ethical Approval and Informed Consent**

Ethical clearance was obtained from an institutional Research Ethics Review Board (IRB) of Arsi University College of health sciences (with project code A/CHS/22/2023). Informed, voluntary, verbal consent was obtained from the mothers. We were also given permission from the Arsi University College of Health Sciences Research Board (IRB) to permit participants to give information in order to achieve the research purpose.

### **Data Sharing Statement**

Data will be available from the corresponding author on reasonable request.

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## Disclosure

The authors have no conflicts of interest to declare.

## Authors' Contribution

All authors made a significant contribution to the work reported, that is in the conception, study design, acquisition of data, analysis, and interpretation, or all these areas; took part in drafting, revising, or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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