

Predictors of Intention to use maternity waiting home among pregnant women in Gomma Woreda of Jimma Zone, South West Ethiopia: Application of Theory of Planned Behavior (TPB) model.

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Abstract

Introduction: Maternity waiting homes are temporary shelters for pregnant women located near to health institutions and it has been endorsed by WHO since 1996 as one component of a comprehensive package to reduce maternal morbidity and mortality. Maternal health is one of the major worldwide health challenges. In Ethiopia access to comprehensive emergency obstetric care is limited. Despite long years of existence of this maternity waiting home service in Ethiopia, the practice has not been adequately assessed so far.

Objective: To assess predictors of intention to use maternity waiting home among pregnant women in Gomma woreda of Jimma Zone, South West Ethiopia March 2016.

Method: Facility based cross sectional study design triangulated with qualitative study method was conducted from March 06-30/2016. Pregnant women attending ANC clinics were taken by using consecutive sampling technique. Single population proportion formula was used to calculate 387 pregnant women. Face to face exit interview was used to collect data by trained data collectors using structured and pretested questionnaire. Data was checked for completeness and entered in epi data 3.1 versions and exported to SPSS version 20.0 for analysis. Descriptive statistics were calculated. Simple linear regression analysis was done to assess association b/n dependent and independent variables. Multiple linear regression analysis was done to identify predictors of intention at p-value less 0.05 with 95% confidence interval. In-depth interview was conducted for pregnant women and HEWs to collect the qualitative data. The qualitative data was transcribed manually and triangulated with quantitative data.

Result: The mean age of respondents was 26.45 ± 4.762 SD years. One hundred forty eight (38.7%) respondents had past MWH experiences. Majority of the respondents 232(77.1%) gave their last child birth in health institution. Direct attitude, subjective norm and perceived behavioral control had mean score of 16.78 (SD=2.868), 15.61(SD=1.918) and 12.86 (SD=4.854) respectively. Intention has mean score of 14.52 (SD= 4.012). Attitude, subjective norm, perceived behavioral control, giving child birth in health institutions and past MWH experiences were associated with intention to use MWH.

Conclusion & recommendation: Attitude, subjective norm, perceived behavioral control, giving child birth in health institutions & having past experience on MWH were predictors of Intention. Intervention programs targeted to increase perceived control belief on shortage of food and caring of pregnant women family should be designed & implemented.

Key words- MWH, Intention, TPB, Ethiopia

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List of Abbreviations

ANC	Ante natal care
BB	Behavioral beliefs
CB	Control beliefs
DaAtt	Direct attitude
DaPBC	Direct perceived behavioral control
DaSN	Direct subjective norm
EBBO	Evaluation of behavioral beliefs outcome
EDHS	Ethiopian Demographic and Health Survey
EFY	Ethiopian fiscal year
EMDHS	Ethiopian mini Demographic and Health Survey
ETB	Ethiopian birr
JSI	John Snow International
FMoH	Federal Ministry of Health
HSDP	Health Sector development program
JU	Jimma University
MDG	Millennium Development Goal
MHS	Maternal health services
MMR	Maternal mortality ratio
MWH	Maternity waiting home
NB	Normative beliefs
PBC	Perceived behavioral control
PNC	Postnatal care
SBA	Skilled birth attendant
TBA	Traditional Birth Attendants
TPB	Theory of planned behavior
UNICEF	United nation international children emergency fund
WHO	World Health Organization

Chapter one: Introduction

1.1 Background

Maternity waiting homes (MWHs) are temporary shelters for pregnant women located near a hospital or health centre. It has been endorsed by WHO since 1996 as one component of a comprehensive package to reduce maternal morbidity and mortality (1). MWH provides skilled delivery and postnatal care, referrals in case of complications, counseling for maternal and newborn care including nutrition and early initiation of breastfeeding, family planning and social services including community awareness of existing maternity waiting homes, income generation activities, gender awareness and support for domestic and gender-based violence. It also increases institutional deliveries and consequently decrease maternal mortality caused by the delay in reaching obstetric care (2).

Globally an estimated total of 13.6 million women have died with pregnancy and related complications in 1990-2015. Developing regions account for approximately 302,000 of the global maternal deaths in 2015, with sub-Saharan Africa alone accounting for roughly 201,000 followed by Southern Asia 66, 000. At the country level, Nigeria and India are estimated to account for over one third of all maternal deaths worldwide in 2015, with approximate 58,000 & 45,000 maternal deaths respectively (3).

Maternal delays in utilization of emergency obstetric care are the contributing factors for high maternal mortality in developing countries. They are described as delay in making decision to seek care, delay in arrival at a health facility, and delay in receiving adequate treatment. Different strategies are designed and employed to reduce those maternal delays. Among the strategies employed by low resource countries to overcome geographic access barriers are the uses of maternity waiting homes. Those homes allow pregnant women to access hospital care as soon after labor or complications arise enabling them to avoid morbidity outcome (4).

Theory of planned behavior /TPB/ model was developed by Fishbein & Ajzen in 1970's. The model assumed that the best predictor of a behavior is behavioral intention, which in turn determined by attitude toward the behavior, social normative perceptions regarding it and perceived behavioral control of performing the behavior. TPB has been used successfully to predict and explain a wide range of health behaviors and intentions, including health services utilization like maternity waiting home and institutional delivery (5).

Ethiopia has a high maternal mortality with an estimated ratio of 353 per 100,000 live births (3). The country is far from the Millennium Development Goal (MDG) targeted of 267 set for 2015. The major causes of maternal mortality are direct obstetric complications including obstructed labor, obstetric hemorrhage, abortion complications, sepsis and preeclampsia/eclampsia. Death due to these common complications is preventable with appropriate management instituted at health facilities with adequate equipment and qualified staff. Timely access to facilities providing essential services is considered vital to reduce mortality due to direct obstetric complications. (6)

1.2 Statement of the problem

The World Health Organization (WHO) considered maternity waiting homes (MWH) as an essential element of maternity care. It has been suggested that in rural areas, where women live far from a health facility and transport is poor and often impossible when complications of labor occur, maternity waiting homes can play an important role in reducing maternal and prenatal mortality. When access to care is difficult, women with high risk pregnancies should be admitted to a waiting home at 36 weeks of pregnancy (7).

Currently, the unacceptably high levels of maternal mortality are a common subject in global health and development discussions. Although some countries have made remarkable progress, half of the maternal deaths in the world still take place in Sub Saharan Africa where little or no progress has been made. The establishment of maternity waiting home is an effective strategy to increase the use of skilled birth attendant which improved linkage b/n SBAs and Traditional midwives that resulted in reduction of maternal and neonatal mortality (8,9).

Maternal and newborn mortality including complications like a ruptured uterus, fetal death, uterine rupture and still birth rate can be substantially reduced when women are admitted to MWHs. The use of MWHs has the potential to reduce prenatal mortality in rural areas with low geographic access to hospitals. Example in Nigeria MWH reduced maternal mortality ratio from 10 per 1000 deliveries to less than one per 1000 deliveries & stillbirth rate from 116 per 1000 deliveries to 20 per 1000 deliveries. In Malawi it reduced maternal mortality in the area to be zero. In Eritrea also 49% increased in health center births after the introduction of a maternity waiting home (10, 11, 12,).

Maternity waiting home is introduced in Ethiopia to increase institutional delivery and reduce maternal & neonatal mortality starting from 1985. Attat hospital in Gurrage zone, the oldest hospital in Ethiopia to introduce the implementation of maternity waiting home and it serves for admission of 642 mothers utilizing MWA during 2010. The major indication for admission was a previous caesarean section history 166 (25.9%), twins/mal presentations 95 (14.8%), preeclampsia/medical reasons 86(13.4%) and previous stillbirths 84 (13.1%) accounted for the admission. Transportation to hospitals, disparity in food supplies among differing levels of family and social support, medical care including delivery, lack of facility at the MWH where visiting relatives can stay were the major challenges that women faced in WMH. In addition lack of transport, inaccessibility of transport, long distance from functioning health facility, non

functioning health facilities between home and functioning health facility are major challenges after pregnant women decided to use institutional delivery services (13, 14).

Reducing maternal morbidity and mortality is a global priority which is particularly relevant to developing countries like Ethiopia. In Ethiopia delivery attended by skilled health professionals was targeted 18% to 62% to reduce maternal mortality ratio to be 267/100,000 (15). But 16% of women have got their delivery by skilled health professionals. Around 22% of rural women reported that health institutions are too far & no transportation and 32% of rural women think that it is not necessary (16). Currently deliveries attended by skilled health professionals is targeted to be 90% and to reduce institutional maternal mortality rate to be less than one percent in 2020 (17).

Intention of pregnant women for place of delivery is important predictors of institutional delivery service utilization (18). Behavioral intention is also determined by attitude towards the behavior; subjective norms associated with behavior and perceived behavioral control over the behavior. The more favorable the attitude and subjective norm, the greater the perceived control resulted in the stronger person's intention to perform the behavior (5).

In Oromiya region 32.7% of pregnant mothers received antenatal care from a skilled provider and 13.3% of pregnant mothers getting their delivery at health facility. Problems related to delivery at health facility were identified and 47.5% of women stated that delivery at health facility was not necessary, 31% of women stated that delivery at health facility is not customary and 21.3% of women stated that health institutions are too far/ did not have transportation to reach health facility. Geographic access to health centers plays a major role in institutional delivery care use among rural mothers. Tackling the geographical dimension of access is pivotal in elevating institutional delivery care utilization. (16, 19)

According to the 2007 EFY official report of Jimma zonal health department, institutional delivery coverage was 75%, however 66% of the health centers have maternity waiting home for institutional delivery services. At the same time in Gomma district 100% of health centers have maternity waiting home and institutional delivery coverage was 69.3% (20).

There is scarcity of well documented data on utilization of maternity waiting home among pregnant mothers in Gomma woreda. Therefore this study assessed and investigated predictors of intention to use maternity waiting home. It will also fill the gap of well documented data in the study area.

1.3 Significance of the study

Maternity waiting home is a successful & cost effective strategy in reducing maternal and prenatal mortality rates. It introduced as a strategy to improve access for better ANC services and skilled care by bringing mothers close to a delivery facility.

This finding will give supportive evidences for health professionals in addressing problems related to behavioral, normative and control beliefs of pregnant women to use maternity waiting home. The research findings also help for policy makers, program managers and political leaders to plan, monitor and evaluation of the program. It also helps for researcher as a reference for further investigation.

Chapter two: Literature Review

2.1 Literature review

Maternity waiting homes have demonstrated such benefits as an increased proportion of facility-based deliveries, improved maternal health, a lower risk of prenatal death, decreased incidence of obstructed labor, improved access to essential and emergency obstetric care, good access to health care and potential to decrease rates of stillbirths. There are also recognized barriers to accessing healthcare within developing countries that apply to maternal waiting home. These include such variables as cost, location, lack of knowledge about the maternal waiting home and cultural barriers (1).

A study on maternity waiting home utilization and institutional delivery in Nicaragua showed that 2%, 63% & 13% of the women were getting child birth in private health sector, public hospital and public health care center respectively. The study also showed that 26% of women in the study reported that their husbands make all major household decision inclining the use of maternity waiting home and institutional delivery (21)

Limited provision of culturally appropriate care and a lack of sustainable funding were the most important problems identified in a study done Guatemala. While the strategy of MWHs has the potential to contribute to the prevention of maternal as well as newborn deaths in rural Guatemala, they can only function effectively if they are planned and implemented with community involvement and support (22).

In Kenya MWH was used by less than 10% of women who delivered in hospital and 95% reported that they would require their husband's permission to use it. Most (89%) perceived pregnancy to be risky, with bleeding (65%), retained placenta (25%), and obstructed labor (16%) reported as the main reason to use maternity waiting home. . Only 147 (45%) women intended to deliver in health facilities, citing prompt management of complications (49%) as the main reason for doing (23).

Another study done in Merti district of Kenya showed that 128 (33.4%) of pregnant women attended ANC at least four times during their pregnancy. Half of the mothers 194 (50.5%) had delivered their last child at home. Majority of the mothers 255 (66.4%) were not aware of the presence of a maternal waiting home. Most 231(61.1%) said they would use the facility, though 74 (19.3%) cited high cost of financing as reason of not using the maternal waiting home. Among the mothers interviewed 234 (61%) had willingness to use maternity waiting home (24)

A study on MWH utilization difficulties & barriers in Mozambique showed that 71.7 % of women indicated that difficulties taking care of children and carrying out household tasks was an important factor; 47.05% of women also referred to reluctance on behalf of the husband or mother in law to using MWHs and 25.88% of women referred to lack of awareness of being at risk. On the other hand referral services to maternity waiting home were assessed: 71.93% of those were referred by a health facility, 12.28% were attended the MWHs of their own initiative, 7.02% were referred by the traditional birth attendance and 6.68 % by relatives (25).

A study conducted in rural Zambia revealed that 27.3 % of respondents utilized a MWH and 72.7 % did not. Husbands, women's mother, relatives, traditional birth attendants (TBA) were involved in the decision making process to stay in MWH at the last time of pregnancy. .

Physical accessibility, travel time from home to MWH, the availability & cost of transportation food for pregnant women, the condition of roads , distance from the health facility (accessibility), financial and opportunity costs (affordability), previous experiences and perceived quality of care also mentioned as barriers to use it (26).

Reason for poor utilization of maternity waiting home in Ghana indicated that prefer home delivery because it is much less expensive, far from the maternity waiting home, MWH is too quiet and lonely at night, no nurses or doctors at MWH, husband does not want woman to go to MWH, absence of woman from home leaves no one to care family and previous childbirth had been easier were identified as major barriers (27).

A study done on institutional delivery utilization in Awie zone of Banja districts showed that 15.7% of pregnant mothers have delivered their children in health institutions. The reasons for not utilizing the institutional delivery services as mentioned by mothers were; 26% mothers due to health institutions were too far, 15% of mother due to short labor time, 14% of mothers reported health providers do not understand mothers pain and they were not culturally sensitive, 8% of mothers due to cultural prohibition and 7% of mothers mentioned that their husbands were not willing to attend institutional delivery services (28).

A research result showed that 292 (74.3%) of the pregnant women intended to deliver in health institutions. The study revealed that 93.2% of the respondents knew advantage of institutional delivery. But only 198 (50.4%) have good attitudes towards institutional delivery. From the respondents 204(73.1%) of women agreed that skilled delivery is beneficial to their health and

their newborns. Regarding on women's decision making power, 291(74.0%) can make this decision by themselves, 47 (12.0%) by their husbands and 43 (10.9%) by relatives (18).

A study on maternal health services utilization in Holeta town showed that 7.4% of respondents did not use ANC services because of their husband disapproval, 3.4% of respondents because of ANC clinics too far from home and 31.5% of respondents did not use ANC because of busy to attend ANC clinics. At the same time reasons for home delivery also mentioned by the respondents as the presence of relatives near 60.2%, dislike the mistrust of health workers 20.5%, more trust on TBA 19.3 %, transport problem 18.6% and cost 3.1% of respondents mentioned as reasons to use home delivery (29).

A study done on MWH utilization in Ethiopia showed the commonest factors that challenged to use MWH were no one to care for children at home 32 (68 %), husband did not allow 18 (32 %), women did not perceive the need to stay at the MWHs 13(28 %), and problems with transportation to and from the MWHs 5(10.78). The families were also not able to bring the woman with food items (19 %) and could not continuously supply with food from far areas; however, they had concerns that the woman might not have the necessary meals every day (30).

In Ethiopia pregnant women expected to stay in maternity waiting home before 15 days of expected date of delivery. In maternity waiting home health information on the important of antenatal care, birth attended by skilled health professionals, postnatal care, neonatal health care, breastfeeding, immunization, nutrition, family planning, personal hygiene and environmental sanitation activities. In addition focused antenatal care and medical treatment services are provided for pregnant women during their staying in maternity waiting home (31).

A community based study in Jimma Horro district showed that out of 528 interviewed mothers, 42 (8%) delivered in health institutions (37 mothers in health center and 5 in hospitals)

During delivery, three-fourth (74.2%) and 16.5% of the mothers were assisted by relatives and/or neighbors and Traditional Birth Attendants (TBAs), respectively. Skilled health workers and Health Extension Workers (HEWs) assisted only 8.1% and 0.8% mothers respectively (19).

2.2 Conceptual framework

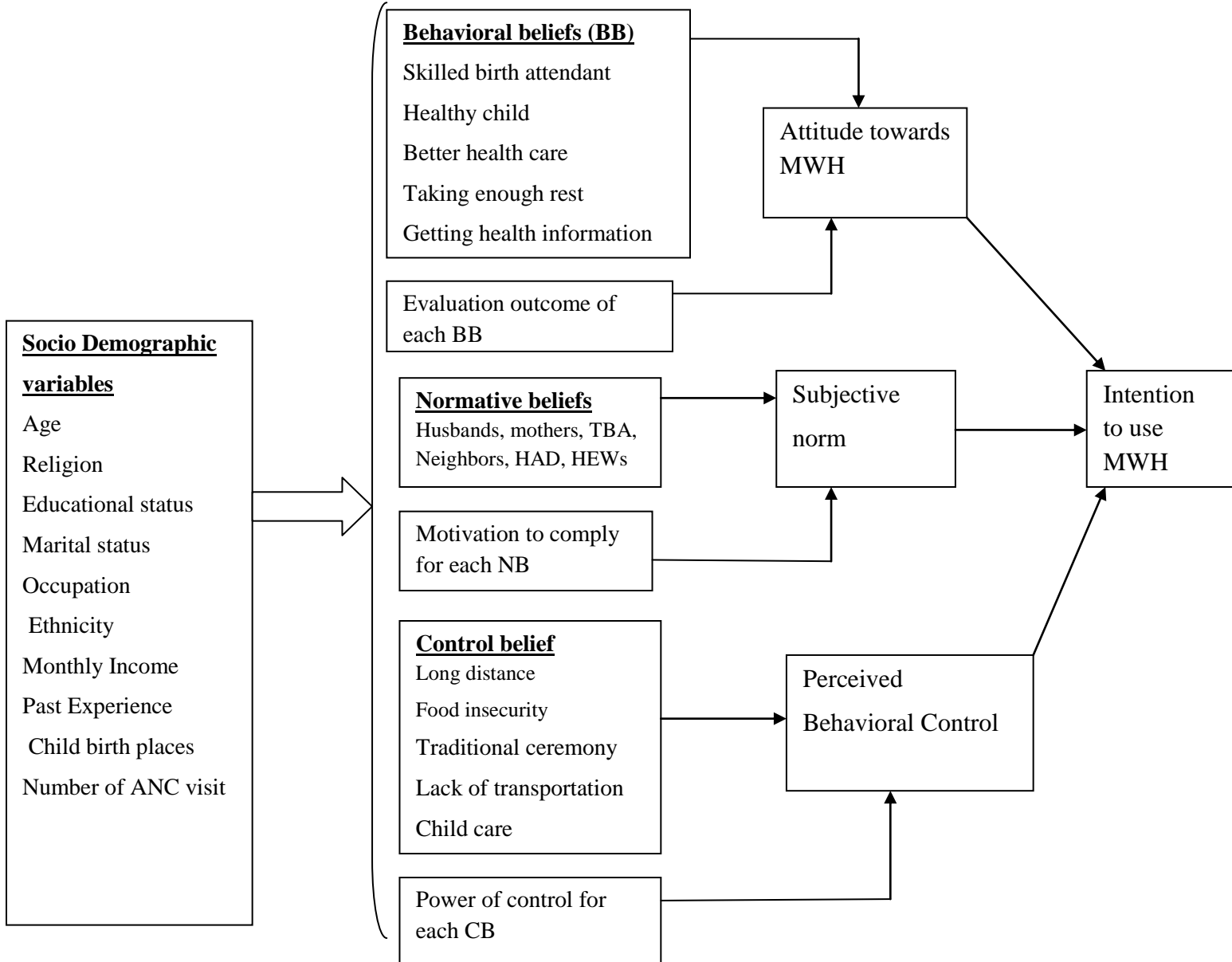


Figure 1: Conceptual framework Adapted from TPB model of Ajzen & Fishben 1970's including maternal health services

Chapter three: Objective

3.1 General objective

- To assess predictors of intention to use maternity waiting home among pregnant women in Gomma woreda of Jimma Zone, South West Ethiopia 2016

3.2 Specific Objectives

- To assess intention of pregnant women to use maternity waiting home
- To assess attitude of currently pregnant women to use maternity waiting home
- To assess subjective norm to use maternity waiting home among pregnant women home
- To assess perceived behavioral control of pregnant women to use maternity waiting home
- To assess factors associated with intention to use maternity waiting home among pregnant women

Chapter Four: Method and Materials

4.1 Study Area and period

The study was conducted in Gomma woreda of Jimma zone. Gomma woreda is one of the 18 woredas found in Jimma zone. Agaro town is the capital of Gomma woreda which is 402 Km & 45 Km far from Addis Ababa & Jimma town respectively. Accordingly the 2008 Gomma woreda data, the woreda has a total population of 272,375, 41 kebeles and 9451 expected pregnant women. There were 10 health centers and all health center have maternity waiting home. The study was conducted from March 06-30/2016.

4.2 Study Design

Facility based cross sectional study design triangulated with qualitative method was conducted.

4.3 Population

4.3.1 Source population

All pregnant women who were attending ANC clinics in selected health centers during data collection period

4.3.2 Study population

All selected pregnant women attending ANC clinics that full filled the inclusion criteria. Pregnant women and health extension workers were taken for qualitative study.

4.4 Inclusion and exclusion criteria

All currently pregnant women attending ANC clinics at the time of data collection in selected health centers were eligible in the study

Those pregnant women who were severely ill during data collection period were not included in the study.

4.5 Sample size determination

The sample size was determined by using single population formula by considering the following assumptions.

Z: 95% confidence interval

P: Proportion of mother's intention to use MWH (50%)

D: margin of error (5%)

None response rate (5%)

n: sample size

$$n = \frac{Z^2 P (1-P)}{D^2} = 384$$

D2

Since source population is less than 10,000 corrective formulas was used to calculate the final sample size

$N = n (1 + n/\text{source population}) = 369$ and considering non response rate (5%)

$N_f = 387$

The final sample size was 387 pregnant women

For qualitative study seven pregnant women who are not participated in the quantitative study and five health extension workers were taken.

4.6 Sampling technique

Simple random sampling technique was used to select health centers. From the total 10 health centers having maternity waiting home, five health centers which are Gembe, Yachi, Omo Gurude, Choche and Beshasha health centers were selected by lottery methods (50% of total health center). The total sample size was proportionally allocated for the selected health centers based on their catchment number of pregnant women. Consecutive sampling technique was used to select pregnant women till proportionally allocated sample size achieved.

Criteria based purposive sampling technique (role of individuals) was used to select key informants for qualitative study.

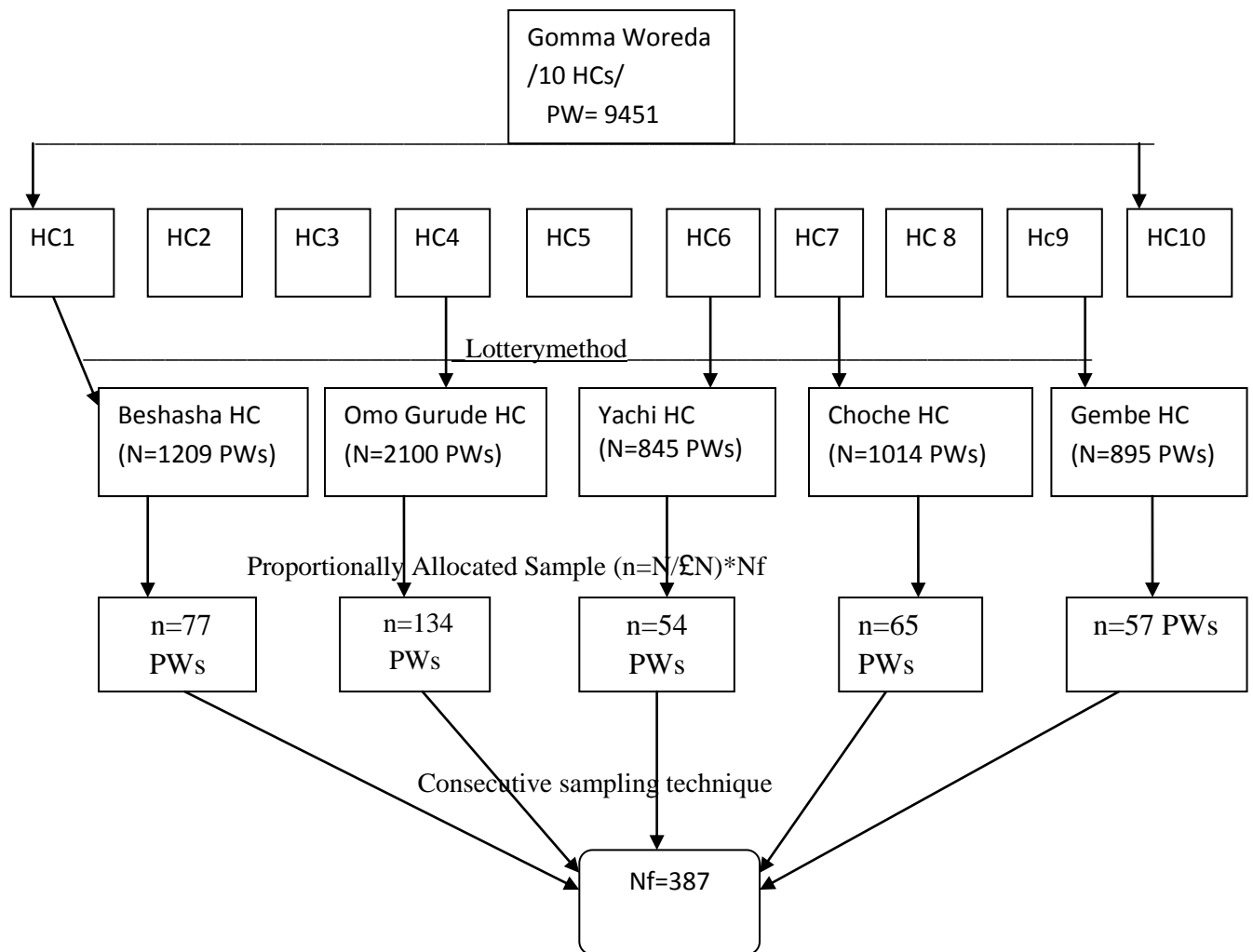


Figure 2: Sampling procedure

4.7 Data collection instrument

Elicitation study was done on 11 selected pregnant women in Gembe health center and Omo Kunche health post of Gomma woreda to identify behavioral, normative and control beliefs. The participants were required to indicate their beliefs regarding advantages and disadvantages using MWH, people/groups that would approve/disapprove to use MWH and environmental/situational factors that would either hinder or facilitate their use of maternity waiting home services. Collected beliefs were used in questionnaire development.

Structured questionnaire was prepared with socio demographic, attitude, subjective norm, perceived behavioral control, intention and past experiences of using maternity waiting home.

Direct attitude was measured by using four items of semantic differential scales with five points of each item. The four direct attitude items were summed up and used as a continuous variable for further analysis. Indirect attitude was measured by using eight behavioral belief items and eight respective evaluation outcome items with five points likert scale. The weight of eight behavioral beliefs with respective evaluation outcome items were summed up and used as continuous variable for further analysis.

Direct subjective norm was measured by using four items with five point's likert scale. The four direct subjective norm items were summed up and used as a continuous variable for further analysis. Indirect subject norm was measured by using six normative beliefs items with five points of likert scale and six items of respective motivation to comply. The weight of those six normative beliefs with respective motivation to comply items were summed up and used as continuous variable for further analysis.

Direct perceived behavioral control was measured using four items with five points of semantic differential scale. The four items were summed up and used as continues variable for further analysis. Indirect perceived behavioral control was measured using six control belief items with five points of likert scale and six respective powers of control items with five points of likert scale. The weight of six control belief item with respective power of control were summed up and used as continuous variable for further analysis.

Intention was directly measured using four items with five points of likert scale. The four items were summed up and used as continues variable for analysis.

For qualitative data collection interview guides was prepared in English by the principal investigator.

4.8 Data collection technique

Face to face interview with structured questionnaire through trained data collectors was conducted. Five data collectors and two supervisors with Bsc in public health officer who spoke Afan Oromo were deployed for data collection. Daily supervision and follow up was conducted by the supervisors and principal investigator.

The qualitative data was collected through in-depth interview technique by the principal investigator. Health extension workers were supported the interview for those pregnant mothers who can speak only local language. The investigators recorded interviews by tape recorder from each respondent in addition to note taking.

4.9 Data quality control

The questionnaire was prepared in English and translated to Affan Oromo. Finally it was back translated to English by other person to ensure consistency. Pretest was done on 5% of the questionnaire found outside of the study area (Mana woreda, Milinda HC).

One day training was given for data collectors and supervisors on the questionnaire and data collection process. Close supervision was done by the principal investigators and supervisors throughout the data collection period. Collected data was checked for completeness and consistency. Reliability test was done to ensure the internal consistency of items using cronbach alpha. The value of direct items was in the range of 0.538-0.947.

4.10 Study Variables

4.10.1 Dependent variables

- Intention to use MWH

4.10.2 Independent variables

- Socio-demographic characteristics (age, religion, educational status, occupational status, monthly income, Ethnicity, Marital status, number of ANC visits, birth experiences, child birth place, past MWH experiences, parity, Direct Attitude, Indirect attitude, direct subjective norm, indirect subjective norm, direct perceived behavioral control, indirect perceived behavioral control)

4.11 Data analysis

Data was checked for completeness and consistency. Data was entered to epi data version 3.1 and exported to SPSS version 20 for analysis by the principal investigator. Descriptive analysis like percentage, means and standard deviations was calculated.

The correlation b/n respective direct and indirect components were assessed using Pearson's correlation coefficient. There was positive and strong correlation b/n direct component with its respective indirect components.

Simple linear regression analysis was done to assess the association b/n all independent variables with intention after checking of normality test using histogram. All variables at p-value less than 0.25 in simple linear regression analysis were entered to multiple linear regressions to identify the independent predictors of intention. Un standardized B coefficients and R2 values were used to interpret effects and variability in the dependent variable respectively. Significant

independent predictor was declared at 95% confidence interval and P-value of less than 0.05 as cut off point.

All the collected qualitative data was transcribed into meaning full statement form manually. Four themes were formed based on the qualitative findings. The Statements were triangulated with quantitative findings.

4.12 Definition of terms

Maternity waiting home: Facilities where pregnant women stay for institutional delivery 15 days before giving birth. (FMoH, 2013)

Intention: Pregnant women report of the probability to use MWH before 15 days of expected date of delivery.

Attitude: It is the beliefs of pregnant women on the advantages, important and usefulness of using MWH before 15 days of expected delivery.

Subjective norm: important individuals or groups that approve/disapprove pregnant women to use MWH 15 days before giving birth.

Perceived behavioral control: Any environmental or situational factors that inhibit or facilitate pregnant women to use MWH 15 days before giving birth.

4.13 Operational definition

1. **Direct attitude:** summed score of four items of semantic differential scale approaching to maximum sum score considered as high behavioral beliefs.

3. **Direct subjective norm:** summed score of four items of likert scale approaching to maximum sum score considered as high influences of important others.

4. **Direct Perceived behavioral control:** summed score of four items of semantic differential scale approaching to maximum sum score considered as high self efficacy.

5. **Intention:** Summed score of four items of likert scale approaching to maximum sum score considered as high report of probability to use MWH.

4.14 Ethical consideration

A formal letter was taken from Institutional Review Board (IRB) of Jimma University College of health science to Oromiya health bureau. Official letter was taken from Oromiya health bureau to Jimma health department to get official permission. From Jimma zone health department official letter was written to Gomma woreda to get permission and also for each selected health center

letter was written from woreda health office. Individual oral consent was taken during the data collection period after clarifying the purpose of the study. Confidentiality and anonymity were assured for study participants during data collection.

4.15 Dissemination plan

The final research findings will be presented and disseminated for Jimma University, Health Education and Behavioral Sciences department, Jimma zone health department, Gomma woreda health offices and other nongovernmental organizations supporting maternal health services. Efforts will be made to publish in International Journal of Gynecology & Obstetrics journal.

Chapter Five: Results

5.1 Socio demographic characteristics

A total of 382 currently pregnant women were interviewed from five selected health centers with response rate of 98.7%. The mean age of the respondents was 26.45 years with 4.762 SD. One hundred forty two (37.2%) were found in the age group of 25-29 years. Large number of respondents 267(69.9%) were Muslim followed by orthodox 88(23%). One hundred eighty (47.1%) respondents were in primary school level. Most respondents 370(96.9%) were married. Majority of the respondents 306(80.1%) were Oromo in their Ethnicity. (Table 1)

Qualitative study was done among seven currently pregnant women participants that are not included in quantitative study and five health extension workers as key informants were conducted by using in-depth interview technique. In-depth interview with participants took minimum of 40 minutes and maximum of 55 minutes. Half of the respondents were found in the age groups of 25-29 years. Most of the respondents were married. Majority of the pregnant women participants did not have past experiences of maternity waiting home. Most of the respondents were attended ANC services more than one visits. Most of the pregnant women participants have more than one live birth experiences. Two health extension workers participant had eight years work experiences.

Table 1: Socio demographic characteristics result of pregnant women in Gomma woreda, Jimma zone, South West Ethiopia, March, 2016 (n=382)

Variable	category	Frequency	Percent
Age in years	15-19	25	6.5
	20-24	101	26.4
	25-29	142	37.2
	30-34	94	24.6
	35 and above	20	5.2
Religion	Muslim	267	69.9
	Orthodox	88	23.0
	Protestant	12	3.1
	Wakefeta	10	2.6
	Catholic	5	1.3
Educational status	Unable to read & write	95	24.9
	Able to read & write	11	2.9
	Primary education	180	47.1
	Secondary and above	96	25.1
Marital status	Currently married	370	96.9
	Unmarried	12	3.1
current occupation	Housewife	143	37.4
	Farmer	113	29.6
	Merchant	65	17.0
	Government employee	46	12.0
	Students	10	2.6
	Daily workers	5	1.3
Ethnicity	Oromo	306	80.1
	Amhara	36	9.4
	Gurage	29	7.6
	Yem	6	1.6
	Others*	5	1.3
Monthly income	≤100 ETB	12	3.1
	100-170 ETB	1	.3
	171-300 ETB	58	15.2
	301-566 ETB	53	13.9
	Above 566 ETB	258	67.5

Note: *keffa =3, Tigray= 1, Wolayita=1

5.2 Health services utilization

Regarding on maternal health services 215(56.3%) had two-four pregnancy experiences. One hundred forty eight 148(38.7%) respondents had past experiences on MWH. The most frequently mentioned reason why respondents use MWH were to get better health services 147(99.3%) and to get healthy child 146(98.6%). From those respondents that used MWH before, 131(88.5%) stayed less than 15 days (Table 2 & Figure 5).

Qualitative study finding showed that all pregnant women had received health information from health extension workers on the important of using maternity waiting home. Two pregnant women were used maternity waiting home before. Both health extension workers and pregnant women participants reported that pregnant women did not get health information while staying in maternity waiting home. Health professionals visited pregnant women in maternity waiting home but they did not give health information regularly. Most pregnant women stated that using maternity waiting home is important to get better health and healthy child.

A pregnant woman with 37 years old who had past experience MWH explained that *“I stayed in maternity waiting home for seven days. Health professionals simply visited and checked our health status daily bases but they did not give health information during my stay. After coming back to my home health extension workers visited and told me about exclusive breastfeeding, immunization, complementary feeding, family planning and personal hygiene and sanitation.”*

A HEW with seven years work experience also told that *“During their staying in maternity waiting home there was no health information delivered to pregnant mothers using maternity waiting home. Health professionals in health center assumed that pregnant women have awareness on all package of health extension programs including MWH because of the presences of HEWs in our kebele”*

Current antenatal care follow up status also assessed from the respondents. The result showed that 141 (36.9%) were attending their second ANC visits. Large proportion of respondents 302(79.1%) had birth experiences before, 174(57.8%) respondents were giving their previous child birth in government health center (Figure 3 & 4).

Table 2: Maternal health services utilization result of pregnant women in Gomma woreda, Jimma zone, south west Ethiopia, March, 2016. (n=382)

Variable	category	Frequency	Percent
Parity	One	85	22.3
	Two -four	215	56.3
	Five & above	82	21.5
Previous birth experience	Yes	302	79.1
	No	80	20.9
Past experience of using MWH	No	234	61.3
	Yes	148	38.7
Number of days stayed in MWH (n=148)	Less than15 days	131	88.5
	Only 15 days	8	5.4
	More than 15 days	9	6.1

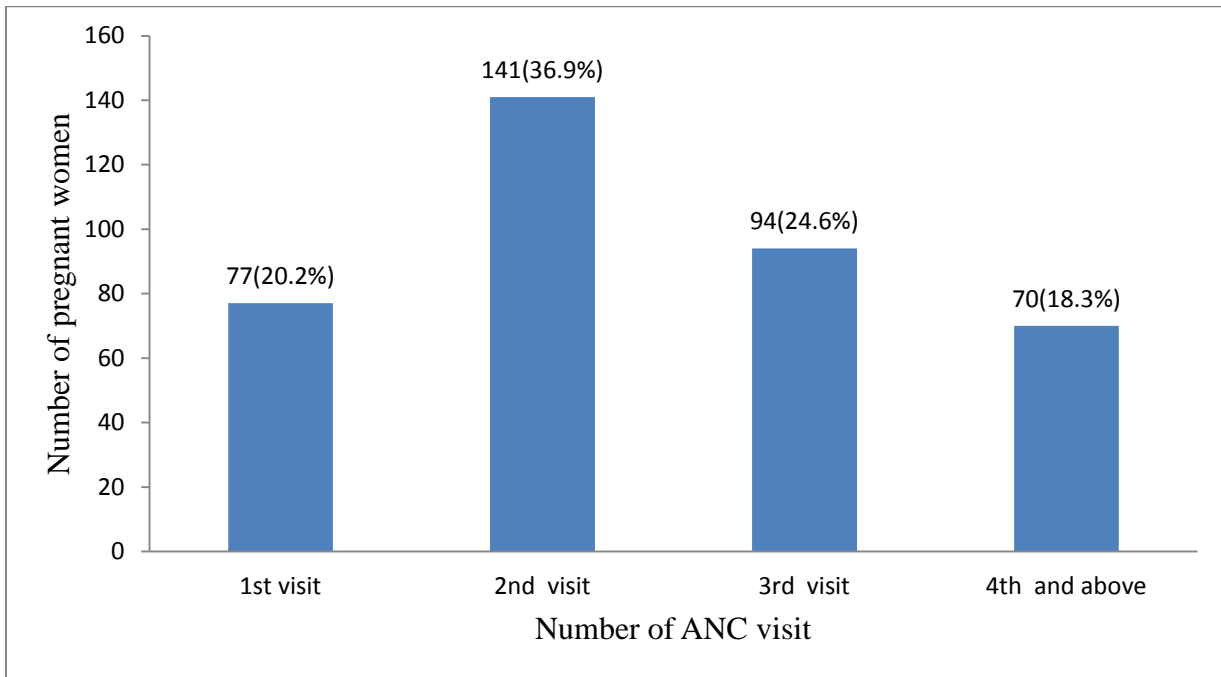


Figure 3: Current ANC status of respondents, March, 2016. (n=382)

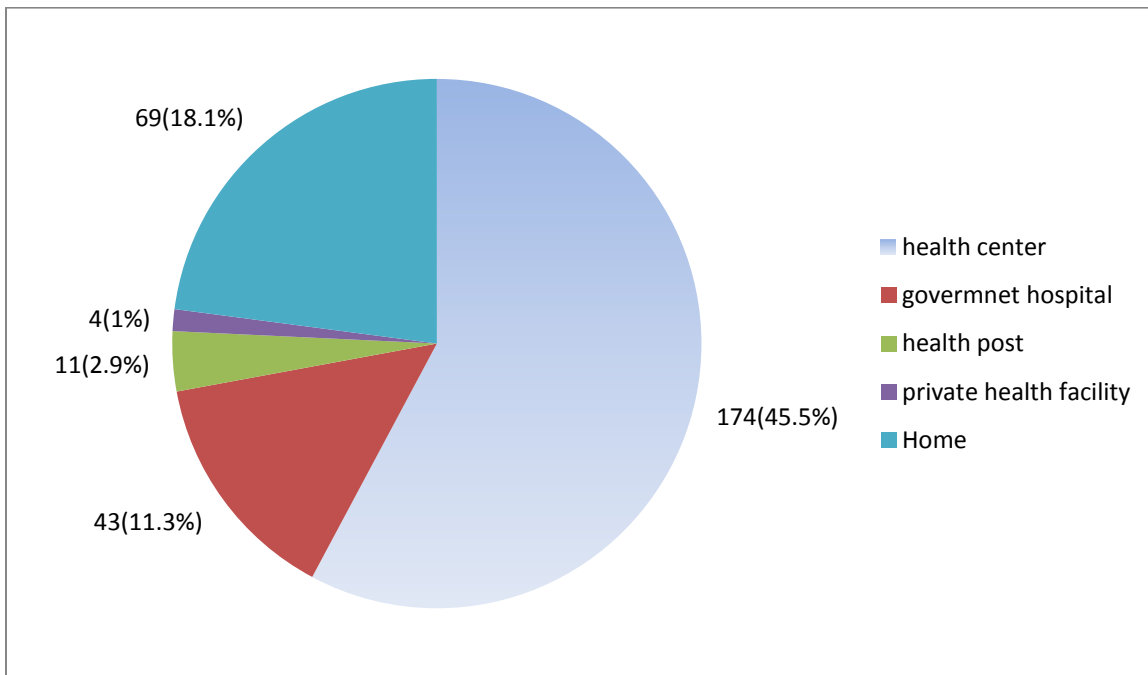


Figure 4: Respondents last place of delivery, March, 2016 (n=302)

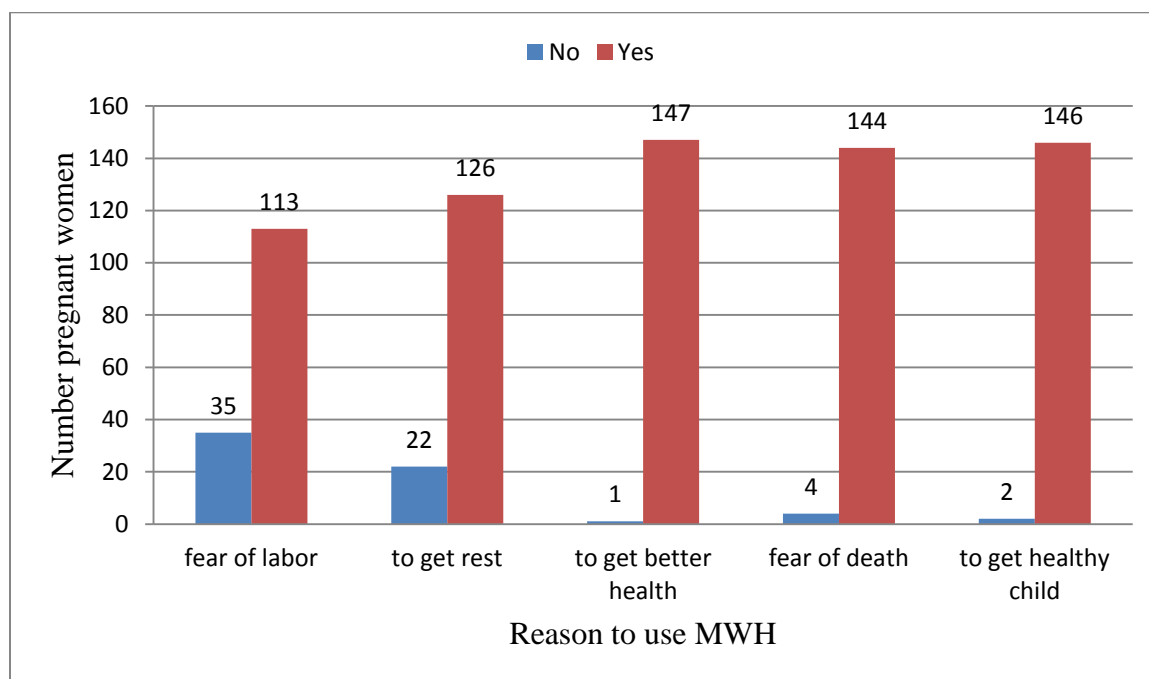


Figure 5: Respondents reason for using MWH, March, 2016 (n=148)

5.3 Frequency of Direct TPB model components

Concerning on frequency of the direct components, 177 (46.3%) and 9(2.4%) respondents reported that using maternity waiting home was good and bad respectively. Similarly 183(47.9%) respondents reported that using maternity waiting home is very useful.

Majority of the respondents 309(80.1%) agreed that most people who are important to them will think to use maternity waiting home. One hundred sixty eight (44%) respondents reported that using maternity waiting home was planned. On the other hand 133(34.8%) of the respondents also reported that using maternity waiting home was difficult. Majority of the respondents 219(57.3%) were intended to use maternity waiting home. (Table 3)

Qualitative study findings showed that most of the study participants stated that using maternity waiting home was useful and important. HEWs and pregnant women believed that if pregnant women used maternity waiting home it will be good for getting birth attended by skilled health professionals. Some participants also explained that using maternity waiting help to reduce fear related to labor. Pregnant women also explained that using

maternity waiting home helped to reduce workload once stayed in maternity waiting until child delivery.

A pregnant woman with 27 years old reported that *“As I got health information from health extension workers it is important to get birth attended by skilled health professionals. This helps me to get health child and prevent myself from death related to pregnancy and child birth.”*

Another Pregnant woman with 26 years old stated that *“MWH is very useful especially to get better health care by health professionals for myself & new born child.”*

HEW with 23 years old who had 5 years work experience stated that *“Bleeding is common during child delivery and this will be managed properly through skilled health professionals. Therefore staying in maternity waiting home is very important in terms of getting better ANC follow up, skilled birth attendant and to become free from workload. This all makes great contribution in reducing maternal and child mortality reduction.”*

There were different challenges reported by participants that hindered in using maternity waiting home. Most of the participants stated that lack of persons that give care for their families, shortage of food availability in MWH, fear of live alone and transportation problems were reported as major challenges to use maternity waiting home. Pregnant women participant explained that it is difficult to get individuals that can give care for their family once pregnant women left to maternity waiting home. Pregnant women thought that their children cannot get enough care, food and support if their mothers are not near to them. Majority of the respondents stated that their husbands, mothers and neighbors decision were important to use MWH.

A pregnant woman with 25 years old reported that *“ I stayed in maternity waiting home for 9 days and I returned back to my home because my children did not get persons that give care for my children. My children cried when I came to maternity waiting home. Finally I got my birth in home.”*

Another woman with 29 years old reported *“In my village one pregnant woman used MWH for 8 days but there was no traditional food ceremony as the mother expected (no pourage and coffee ceremony). As the women said there are no enough food provision as health extension told to pregnant women during pregnant women conference discussion and ANC visits.”*

HEW with 8 years old reported that *“During house to house visit we told to use MWH but pregnant women rose that if health extension will cover my cost of staying in unless she cannot use the home. Those pregnant women that used MWH reported that health professionals did not give enough care for us. They did not give good welcome while they arrived in maternity waiting home. One pregnant woman*

that used MWH told that I covered all costs by myself and my husband faced problem during my staying. The main problem that mother reported is food shortage problem in MWH.”

Another HEW with 6 years work experience also stated *“shortage of Food is still existed in MWH. HEWs are responsible to collect any necessary logistics for MWH from the community. But the community refused to give money and other material. We reported to health center many times to collect any necessary materials for MWH.”*

Participants raised different future recommendation that can improve the utilization of maternity waiting home. Most of the respondents recommended that budget should be allocated by the government to ensure the necessary logistics in MWH.

A health extension worker with 9 years working experiences *“The community refused to give money and other materials for MWH. They told us that the government should avail all necessary materials. Budget should be allocated by the woreda health office unless the community always refused to give money for MWH.”*

Table 3: Direct components of theory of planned behavior model results among pregnant women in Gomma woreda, Jimma zone, South West Ethiopia, March, 2016 (n=382).

Components	Variables	Category	Frequency	Percentage
Direct Attitude	Using MWH 1	Very bad	1	0.3
		Bad	9	2.4
		Neutral	22	5.8
		Good	177	46.3
		Very good	173	45.3
	Using MWH 2	Very useless	0	0
		Useless	10	2.6
		Neutral	22	5.8
		Useful	167	43.7
		Very useful	183	47.9
	Using MWH 3	Very unpleasant	5	1.3
		Unpleasant	20	5.2
		Neutral	47	12.3
		Pleasant	173	45.3
		Very pleasant	137	35.9
	Using MWH 4	Very boring	8	2.1
		Boring	24	6.3
		Neutral	58	15.2
		Interesting	171	44.8
		Very interesting	121	31.7
Direct Subjective norm	Most people approved for me to use MWH	Strongly disagree	0	0
		Disagree	7	1.8
		Neutral	12	3.1
		Agree	287	75.1
		Strongly agree	76	19.9
	Most people think for me to stay in MWH	Strongly disagree	1	.3
		Disagree	12	3.1

		Neutral	11	2.9	
		Agree	309	80.9	
		Strongly agree	49	12.8	
	most people want to me for staying in MWH	Strongly disagree	1	0.3	
		Disagree	14	3.7	
		Neutral	8	2.1	
		Agree	291	76.2	
		Strongly agree	68	17.8	
	The decision is up to me to use MWH	Strongly disagree	11	2.9	
		Disagree	116	30.4	
		Neutral	17	4.5	
		Agree	196	51.3	
		Strongly agree	42	11.0	
	Direct perceived behavioral control	Using MWH 1	Very difficult	33	8.6
			Difficult	133	34.8
Neutral			8	2.1	
Easy			153	40.1	
Very easy			55	14.4	
Using MWH 2		Extremely not under my control	57	14.9	
		not under my control	117	30.6	
		Neutral	8	2.1	
		Under my control	143	37.4	
		Extremely under my control	57	14.9	
Using MWH 3		Very sudden	42	11.0	
		Sudden	117	30.6	
		Neutral	7	1.8	
		Planned	168	44.0	
		Very planned	48	12.6	
Using MWH 4		Very conditional	62	16.2	
		Conditional	100	26.2	
		Neutral	9	2.4	
		Unconditional	161	42.1	
		Very unconditional	50	13.1	
Intention	I am intended to use MWH	Strongly disagree	4	1.0	
		Disagree	100	26.2	
		Neutral	13	3.4	
		Agree	219	57.3	
		Strongly agree	46	12.0	
	I will use MWH	Strongly disagree	9	2.4	
		Disagree	93	24.3	
		Neutral	21	5.5	
		Agree	211	55.2	
		Strongly agree	48	12.6	
	I want to use MWH	Strongly disagree	11	2.9	
		Disagree	78	20.4	
		Neutral	11	2.9	
		Agree	200	52.4	
		Strongly agree	82	21.5	
	I like to use MWH	Strongly disagree	15	3.9	
		Disagree	65	17.0	
		Neutral	5	1.3	
		Agree	200	52.4	
		Strongly agree	97	25.4	

5.4 Frequency of Indirect TPB model components

5.4.1 Indirect attitude

Behavioral beliefs & its respective evaluations of each behavioral belief were assessed using 16 likert scale measurements. Based on this measurement, 251(65.7%) respondents agreed that using MWH help to get better ANC services. The evaluation outcome result showed that 287(75.1%) respondents agreed that using MWH important to get rest and being free from workloads (Table 4).

Table 4: Indirect attitude assessment result among pregnant women in Gomma Woreda, Jimma zone, South West Ethiopia, March, 2016. (n=382)

Indirect attitude component	Variables	Category	Frequency	Percentage
Behavioral belief	MWH is used to get skilled birth attendant	Disagree	2	.5
		Neutral	4	1.0
		Agree	247	64.7
		Strongly agree	129	33.8
	MWH helps to get healthy child	Neutral	3	.8
		Agree	169	44.2
		Strongly agree	210	55.0
	MWH helps to reduce fear of labor	Disagree	6	1.6
		Neutral	12	3.1
		Agree	190	49.7
		Strongly agree	174	45.5
	MWH helps to get cloth	Strongly disagree	10	2.6
		Disagree	100	26.2
		Neutral	139	36.4
		Agree	90	23.6
	MWH helps to get better ANC service	Strongly agree	43	11.3
		Strongly disagree	1	.3
		Disagree	6	1.6
		Neutral	21	5.5
	MWH helps to get better PNC	Agree	251	65.7
		Strongly agree	103	27.0
		Strongly disagree	1	.3
		Disagree	5	1.3
	MWH helps to get better health information	Neutral	26	6.8
Agree		236	61.8	
Strongly agree		114	29.8	
Disagree		66	17.3	
	Neutral	18	4.7	
	Agree	201	52.6	
	Strongly agree	97	25.4	
	Disagree	66	17.3	

	MWH helps to get rest & free from workload	Strongly disagree	1	.3
		Disagree	17	4.5
		Neutral	22	5.8
		Agree	230	60.2
		Strongly agree	112	29.3
Evaluation outcome	Getting skilled birth attendant is important	Bad	2	.5
		Neutral	4	1.0
		Good	210	55.0
		Very good	166	43.5
	Getting healthy child is important	Bad	1	.3
		Neutral	1	.3
		Good	153	40.1
		Very good	227	59.4
	Reducing fear of labor is important	Bad	6	1.6
		Neutral	7	1.8
		Good	219	57.3
		Very good	150	39.3
	Getting cloth is important	Very bad	3	.8
		Bad	74	19.4
		Neutral	186	48.7
		Good	97	25.4
		Very good	22	5.8
	Getting better ANC services is important	Bad	5	1.3
		Neutral	12	3.1
		Good	242	63.4
		Very good	123	32.2
	Getting better PNC is important	Bad	6	1.6
		Neutral	15	3.9
		Good	238	62.3
		Very good	123	32.2
	Getting better health information is important	Very bad	2	.5
		Bad	46	12.0
		Neutral	16	4.2
		Good	195	51.0
	Being free from workload is important	Very good	123	32.2
		Bad	12	3.1
		Neutral	20	5.2
Good		287	75.1	
		Very good	63	16.5

5.4.2 Indirect subjective norm

Indirect subjective norm was assessed by using 12 likert scale measurements. The result showed that 202(52.9%) respondents strongly agreed that HEWs think that pregnant women should use MWH. Three hundred two (79.1%) respondents agreed that their neighbors think pregnant women should stay in maternity waiting home. The strength of normative belief evaluated using motivation to comply of each normative belief. The motivation to comply for each normative belief showed that 272(71.2%) respondents reported that their neighbor approval for using maternity waiting home was much important. In addition 208(54.5%) respondents were reported that their husband's approval was very much important to use MWH. (Table 5)

Table 5: Indirect subjective norm result among pregnant women in Gomma woreda, Jimma zone, South West Ethiopia, March, 2016 (n=382)

Indirect subjective norm component	Variables	Category	Frequency	Percentage
Normative beliefs	My mother thinks I should use MWH	Strongly disagree	5	1.3
		Disagree	64	16.8
		Neutral	16	4.2
		Agree	194	50.8
		Strongly agree	103	27.0
	My husband thinks that I should use MWH	Strongly disagree	1	.3
		Disagree	17	4.5
		Neutral	12	3.1
		Agree	187	49.0
		Strongly agree	165	43.2
	HDA leader think that I should use MWH	Strongly disagree	1	.3
		Disagree	55	14.4
		Neutral	46	12.0
		Agree	257	67.3
		Strongly agree	23	6.0
	my neighbors think that I should Use MWH	Strongly disagree	1	.3
		Disagree	25	6.5
		Neutral	25	6.5
		Agree	302	79.1
		Strongly agree	29	7.6
	TBAs think that I should use MWH	Strongly disagree	8	2.1
		Disagree	125	32.7
		Neutral	72	18.8
		Agree	150	39.3
		Strongly agree	27	7.1
HEWs think that I should use MWH	Strongly disagree	3	.8	
	Disagree	5	1.3	
	Neutral	4	1.0	
	Agree	168	44.0	
	Strongly agree	202	52.9	

Motivation to comply	My mother approval to use MWH	Not very much	52	13.6
		Not much	17	4.5
		Neutral	10	2.6
		Much	176	46.1
		Very much	127	33.2
	My husband approval to use MWH	Not very much	4	1.0
		Not much	6	1.6
		Neutral	13	3.4
		Much	151	39.5
		Very much	208	54.5
	HDA leader approval to use MWH	Not very much	1	.3
		Not much	54	14.1
		Neutral	65	17.0
		Much	214	56.0
		Very much	48	12.6
	My neighbor approval to use MWH	Not very much	2	.5
		Not much	29	7.6
		Neutral	38	9.9
		Much	272	71.2
		Very much	41	10.7
	TBA approval to use MWH	Not very much	25	6.5
		Not much	132	34.6
		Neutral	59	15.4
		Much	140	36.6
		Very much	26	6.8
HEW's approval to use MWH	Not very much	1	.3	
	Not much	4	1.0	
	Neutral	6	1.6	
	Much	185	48.4	
	Very much	186	48.7	

5.4.3 Indirect perceived behavioral control

Indirect perceived behavioral control was assessed by using 12 likerts scale measurements. The result showed that 230(60.2%) of the respondents reported that it was unlikely to get persons that give care for their children to use MWH. Two hundred eighteen (57.1%) respondents reported that it was unlikely to get enough food availability in maternity waiting home. The power of control beliefs result also showed 279(73%) and 272(71.2%) respondents agreed that presences of persons that can give care for children and availability of enough food made easy to use MWH respectively.(Table 6)

Table 6: Indirect perceived behavioral control result among pregnant women in Gomma woreda, Jimma zone, South West Ethiopia, March, 2016, (n=382)

Indirect perceived behavior control component	Variables	Category	Frequency	Percentage
Control beliefs	I can get transportation to use MWH	Strongly disagree	14	3.7
		Disagree	115	30.1
		Neutral	4	1.0
		Agree	218	57.1
		Strongly agree	31	8.1
	I can get enough food in MWH	Strongly disagree	20	5.2
		Disagree	218	57.1
		Neutral	4	1.0
		Agree	110	28.8
		Strongly agree	30	7.9
	I can walk long distance to use MWH	Strongly disagree	3	.8
		Disagree	143	37.4
		Neutral	11	2.9
		Agree	208	54.5
		Strongly agree	17	4.5
	I can get other PWs in MWH	Strongly disagree	13	3.4
		Disagree	209	54.7
		Neutral	6	1.6
		Agree	135	35.3
		Strongly agree	19	5.0
	I can get traditional ceremony in MWH	Strongly disagree	5	1.3
		Disagree	149	39.0
		Neutral	10	2.6
		Agree	191	50.0
Strongly agree		27	7.1	
I can get persons that can give care for my children	Strongly disagree	26	6.8	
	Disagree	230	60.2	
	Neutral	5	1.3	
	Agree	98	25.7	
	Strongly agree	23	6.0	

Power of control	Availability of transportation makes easy to use MWH	Strongly disagree	16	4.2
		Disagree	196	51.3
		Neutral	3	.8
		Agree	156	40.8
		Strongly agree	11	2.9
	Presence of enough food makes easy for me to use MWH	Strongly disagree	7	1.8
		Disagree	68	17.8
		Neutral	3	.8
		Agree	272	71.2
		Strongly agree	32	8.4
	walking long distance makes easy for me to use MWH	Strongly disagree	5	1.3
		Disagree	141	36.9
		Neutral	3	.8
		Agree	219	57.3
		Strongly agree	14	3.7
	Getting other PWs in MWH makes easy to use MWH	Strongly disagree	2	.5
		Disagree	114	29.8
		Neutral	7	1.8
		Agree	243	63.6
		Strongly agree	16	4.2
	Presence of traditional ceremony makes easy for me to use MWH	Strongly disagree	5	1.3
		Disagree	171	44.8
		Neutral	6	1.6
		Agree	177	46.3
		Strongly agree	23	6.0
Presence of persons giving care for my children makes easy for me to use MWH	Strongly disagree	14	3.7	
	Disagree	46	12.0	
	Neutral	279	73.0	
	Agree	43	11.3	
	Strongly agree	382	100.0	

5.5 Mean scores of Direct and Indirect component of TPB

Descriptive statistics analysis was done to measure the mean score of TPB components. Direct attitude, subjective norm and perceived behavioral control had mean score of 16.7(SD=2.868), 12.24 (SD=1.41) and 13.57 (SD=4.018) respectively. The mean score of intention was 14.52 (SD= 4.012) which approached to the maximum value of intention sum score. Indirect attitude had higher mean score 138.88 (SD= 25.56). Indirect subjective norm had medium mean score of 94.96 (19.097). Indirect perceived behavioral control had low mean score of 61.71(SD=21.756). (Table 7)

Table 7: Descriptive statistics for the components of the theory of planned behavior model among pregnant women in Gomma woreda Jimma zone South West Ethiopia, March, 2016.

Components	N	No of items	Min. value	Max. value	Mean	SD
Direct attitude	382	4	6	20	16.78	2.868
Direct subjective norm	382	4	8	20	15.61	1.918
Direct perceived behavioral control	382	4	4	20	12.86	4.854
Intention	382	4	4	20	14.52	4.012
Behavioral beliefs (BB)	382	8	15	40	32.77	3.710
Evaluation of behavioral belief outcome (EBB)	382	8	16	40	33.09	3.477
Indirect attitude(<i>InAtt</i>) = Σ (BB*EBB)	382	8	30	200	138.88	25.560
Normative belief(NB)	382	6	7	30	23.31	2.910
Motivation to comply (MTC)	382	6	9	30	23.23	3.116
Indirect subjective norm (InSN)= Σ (NB*MTC)	382	6	10	150	94.96	19.097
Control belief (CB)	382	6	8	30	18.07	4.320
Power of control belief (PCB)	382	6	8	29	20.07	3.405
Indirect perceived behavioral control (InPBC)= = Σ (CB*PCB)	382	6	11	136	61.71	21.756
Valid N (list wise)	382					

5.6 Correlation analysis

There was positive and strong correlation b/n direct attitude with indirect attitude ($r=0.564$, $p<0.001$), direct subjective norm with indirect subjective norm ($r=0.585$, $p<0.001$) and direct perceived behavioral control with indirect perceived behavioral ($r= 0.618$, $p<0.001$) There was also positive and strong correlation ship b/n intention with attitude and perceived behavioral control. (Table 9)

Table 8: Bivariate correlation (Pearson's r) b/n direct and indirect measures of TPB model among pregnant women in Gomma woreda , Jimma Zone, South West Ethiopia, March, 2016.

		Correlations						
		DAtt	InAtt	DSN	InSN	DPBC	InDPBC	Intention
DAtt	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	382						
InAtt	Pearson Correlation	.564**	1					
	Sig. (2-tailed)	.000						
	N	382	382					
DSN	Pearson Correlation	.353**	.482**	1				
	Sig. (2-tailed)	.000	.000					
	N	382	382	382				
InSN	Pearson Correlation	.297**	.562**	.585**	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	382	382	382	382			
DPBC	Pearson Correlation	.311**	.309**	.148**	.172**	1		
	Sig. (2-tailed)	.000	.000	.004	.001			
	N	382	382	382	382	382		
InDPBC	Pearson Correlation	.284**	.268**	.153**	.183**	.618**	1	
	Sig. (2-tailed)	.000	.000	.003	.000	.000		
	N	382	382	382	382	382	382	
Intention	Pearson Correlation	.557**	.502**	.365**	.352**	.492**	.397**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	382	382	382	382	382	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

5.7 Linear regression analysis

Simple linear regression analysis was conducted to assess the association b/n intention and other independent variables after checking of normality using histogram. Candidate variables from simple linear regression analysis were entered to multiple linear regressions analysis.

From multiple linear regression analysis direct attitude (B=0.452, p<0.001), Direct subjective norm (B=0.449, p<0.001), direct perceived behavioral control (B=0.207, p<0.001), giving child birth in health institutions (B=1.151, p=0.008) and past experience of MWH (B= 0.837, p=0.024) were statistically significant with intention. This means a positive unit change in the attitude towards the advantage of using maternity wafting home; intention to use MWH will be increased by 0.452 units provided that other variables kept constant. For a positive unit change in individuals that approve in using MWH, intention to use MWH will be increased by 0.449 units provided that other variables kept constant. For a positive unite change in perceived controlling of beliefs on environmental/situational facilitators to use MWH, intention will be increased by 0.207 units provided that other variables are kept constant.

Those pregnant women who were giving their last child in health institutions were 1.151 units more intended to use MWH than those who gave birth in home. Pregnant women having previous experiences on MWH were 0.837 unit more intended to use MWH than those who did not have experiences. (Table 9)

Table 9: Multiple linear regression analysis result among pregnant women in Gomma woreda of Jimma zone, South West Ethiopia, March 2016.

Model		Coefficients ^a						
		Un standardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
	(Constant)	-1.771	3.164		-.560	.576	-8.000	4.457
	Direct attitude	.452	.071	.319	6.367	.000**	.312	.591
	Direct subjective norm	.449	.095	.215	4.730	.000**	.262	.635
	Direct PBC	.207	.037	.263	5.607	.000**	.134	.279
	Age of respondents	.004	.042	.004	.096	.924	-.079	.087

Unable to read & write	RC	RC	RC	RC			
Able to read & write	-.862	.861	-.043	-1.001	.318	-2.556	.832
Secondary & above	-.589	.552	-.065	-1.066	.288	-1.676	.499
Being married in marital status	RC	RC	RC	RC			
Being not married in marital status	-2.458	1.144	-.091	-2.149	.320	-4.709	-.207
Having parity one	RC	RC	RC	RC			
Having parity more than four	-.135	.409	-.016	-.329	.742	-.939	.670
One times ANC visit	RC	RC	RC	RC			
Three times ANC visits	.412	.383	.049	1.075	.283	-.342	1.167
Four times ANC visit	.700	.456	.073	1.536	.126	-.197	1.597
Having child birth in home	RC	RC	RC	RC			
Having child birth in health institutions	1.151	.434	.128	2.653	.008*	.297	2.006
No past experiences on MWH	RC	RC	RC	RC			
Having past experience on MWH	.837	.368	.110	2.275	.024*	.113	1.561
Being housewife in occupation	RC	RC	RC	RC			
Being government employee in occupation	.706	.658	.065	1.073	.284	-.589	2.000
15 days stayed in MWH	RC	RC	RC	RC			
only 15 days stayed	.675	1.036	.029	.652	.515	-1.364	2.715
more than 15 stayed	.040	1.005	.002	.040	.968	-1.938	2.019
Have past child birth experiences	RC	RC	RC	RC			
Have no past child birth experiences	-.931	1.146	-.034	-.813	.417	-3.186	1.324

a. Dependent Variable: Intention, RC-reference category *Significant at $p < 0.05$ **Significant at $p < 0.001$

❖ 52.7% of variation of intention was explained by all candidate variables. (with R2)

Chapter Six: Discussion

Different studies were conducted on MWH services availability, utilization and associated factors. This study mainly focused on the intention of pregnant women to use MWH using Theory of planned behavior triangulated with qualitative study. Attitude, direct subjective norm, perceived behavioral control, past experiences and giving child birth in health institutions were identified as predictors of intention.

In this study 38.7% of respondents had past experiences in MWH. This result was higher than the study in Kenya and Zambia which were less than 10% and 27.3% respectively (23, 26). The difference may be the availability of MWH in all health center of Gomma woreda and presences of health extension workers working in kebeles. From the qualitative study findings all pregnant women got health information from health extension workers about the important of using MWH. The study also revealed that 77.1% respondents had got their last child birth in health institutions. This result was much higher than study in Jimma Horro District which was 8 % (19). The possible reason may be due to difference in study setting the current study conducted in facility based whereas the previous was community based. At the same time this result was higher than a community based study finding in Awi zone Banja woreda (28).

Intention to use maternity waiting home was explained by 55.4% with all candidate variables. Direct attitude was very highly statistically significant with intention. In this study 46.3% of respondents reported that using MWH is good. Similarly 47.9% of the respondents were reported that using MWH is very useful. In qualitative study also most respondents believed that using MWH is important for pregnant women and new born child. In this study there was favorable attitude towards using MWH because both the mean score of direct and indirect attitude mean scores were approaching to the maximum score of behavioral beliefs.

The study also showed that 64.7% of the respondents agreed that using MWH helped to get child birth attended by skilled health professionals. The result was slightly lower as compared to the study in Debreworkose town. The possible reason may be those pregnant women living in town have better access to health information that easily understands the important of SBA. In this study also 65% respondents reported that using MWH helped to get better ANC services. All qualitative study participants also stated that using MWH helped to get better health access on ANC, PNC & SBA. In this study findings 52.6% respondents agreed that using maternity

waiting home helped to get better health information. In contrast to this most of the qualitative study participants reported that health information is not delivered by health professionals while staying in MWH. The qualitative study finding was in contrast to the national MWH implementation standard which stated that health information on the importance of ANC, SBA, PNC, neonatal health care, breastfeeding, immunization, family planning and other health services are expected to be delivered for pregnant women while staying in MWH (31).

Subjective norm was also another highly statistically significant predictor of intention to use MWH. In this study 80.9% of the respondents agreed that most important people approved them to use MWH. The study revealed that 49.0% & 43.2% of respondents agreed & strongly agreed that their husbands' approval was important to use MWH. This result was higher than the national study in Ethiopia (30). The reason may be the previous study was conducted nationally. In qualitative study findings also majority of the respondents stated that their husbands were the decision makers to use MWH because husbands will be the responsible person for the care of children while pregnant women stay in MWH. In this study 39.3% of the respondents agreed that the approval of traditional birth attendants was important to use MWH. Pregnant women, mothers, neighbors and one to five networking leaders were also other important people that approve the use of MWH. This result was similar with the study in rural Zambia where husbands, women's mothers, relatives, traditional birth attendants (TBA) were involved in the decision making process (26).

The result also showed that 48.8% of the respondents reported that HEWs were very much important people to use MWH. This was because HEWs work closely with communities and they become familiar to pregnant women. The mean score of indirect subjective norm was close to the maximum score of weight normative beliefs and motivations combined provided that positive subjective norm to use MWH.

Direct perceived behavioral control was also another predictor of intention. In this study 31.9% and 27.7% of respondents were reported that using MWH was difficult and not under their control respectively. This may be due to pregnant women thought they may not get individuals that can give care for their family. In this study 57.1% of the respondents reported that it was unlikely to get enough food in MWH. This result was higher as compared to the study done in Ethiopia (30). This difference may be due to geographical coverage of the study setting.

There was a similar finding in Zambia that enough food was not provided to the pregnant women who stayed in the MWHs. From the qualitative study finding also most participants stated that in addition to shortage of food in WHM water supply also became a challenge for pregnant women when using MWH. Participants explained that it was expected to avail from the community but community refused to avail food in MWH. Some participants explained no food variety were provided (shiro wote with enjera only) during pregnant women staying in MWH. Participants highly recommended that the availability of food in MWH should be budgeted by the government rather than community.

In this study 71.2% of the respondents agreed that enough food availability in MWH made it easy to them to use MWH. In addition 60.2% of the respondents reported that it was unlikely to get persons that give care for their children while staying MWH. This result was lower as compared the study done in Mozambique. The reason may be due to the presence of one to five net workings in this study area that may give care for children's of pregnant women. In qualitative study findings most of the participants stated that using MWH made difficult because of caring of families especially children. Participants explained that their children did not get enough care from other persons. In this study also 73% of the respondents agreed that presence of individuals that can give care for families made easy to use MWH. In this study also 63.6% of respondents agreed that presences of other pregnant women in MWH made easy to use MWH.

Chapter Seven: Conclusion and recommendation

7.1 Conclusions

Direct attitude, subjective norm and perceived behavioral control were predictors of intention to use maternity waiting home. Having past experience of using MWH and giving child birth in health institutions were also other predictors of intention. Socio demographic variables were not the predictors of intention.

7.2 Recommendations

1. Jimma zone health department and Gomma Woreda health office
 - Intervention on the availability of enough food in maternity waiting home should be done.
 - Regular and Close supervision & monitoring activities should be done to ensure MWH services provision as per the standards.
2. Health centers
 - Integration with health extension workers, community and HDA leaders should be strengthened to avail food shortage problem as well to reduce the influences of important others.
 - Regular health information for pregnant women during their staying in WMH should be provided on the important of ANC, SBA, PNC, Immunization, Child feeding and others as per the MWH standards.
3. Health Extension workers
 - Advocating of kebele leaders and HDA leaders should be done to mobilize resource in availing of food shortage and others problem like water supply.
 - Experience sharing of women that were used MWH with that of nonusers should be done to share the experiences of children care while staying in MWH
 - Health information should be strengthened to improve behavioral beliefs of pregnant women on the important using MWH during pregnant women conference.
4. Health Development Army leader and community
 - Activities on giving care of pregnant women children while staying in MWH should be done.
 - Resource should mobilized in availing of food shortage and provision of variety of food in MWH

5. Researchers

- Further research should be done to investigate control belief problems in health centers that have maternity waiting home.
- Researchers can use Theory of Planned Behavior (TPB) model for other study areas to assess predictors of intention to use maternity waiting home.

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Annexes:

Annex I: Elicitation study tool

Jimma University, College of Health Sciences
Department of Health Education and Behavioral Sciences
Maternity Waiting Home (MWH) Elicitation study tool

Instructions: Please take a few minutes to tell us what you think about the staying in health center for institutional delivery 15 days before giving birth (Maternity waiting home). There is no right or wrong responses; we are merely interested in your personal opinions. In response to the questions below, please list the thoughts that come immediately to mind.

1. Behavioral beliefs

- 1.1 How do you feel about the idea of staying in health center for institutional delivery 15 days before giving birth (MWH)?
- 1.2 What do you like staying in health center for institutional delivery 15 days before giving birth?
- 1.3 What do you dislike staying in health center for institutional delivery 15 days before giving birth?
- 1.4 What are the advantages of staying in health center for institutional delivery 15 days before giving birth?
- 1.5 What are the disadvantages of staying in health center for institutional delivery 15 days before giving birth?

2. Normative beliefs

- 2.1 Please list the individuals or groups who would approve or think you should stay in health center for institutional delivery 15 days before giving birth?
- 2.2 Please list the individuals or groups who would disapprove or think you should not stay in health center for institutional delivery 15 days before giving birth?
- 2.3 Sometimes, when we are not sure what to do, we look to see what others are doing. Please list individuals or groups who after getting pregnancy are most likely to stay in health center for institutional delivery 15 days before giving birth following pregnancy?
- 2.4 Please list the individuals or groups who, after getting pregnancy are least likely to stay in health center for institutional delivery 15 days before giving birth following pregnancy?

3 Control beliefs

- 3.1 Please list any factors or circumstances that would make it easy or enable you to stay in health center for institutional delivery 15 days before giving birth
- 3.2 Please list any factors or circumstances that would make it difficult or prevent you from staying in health center for institutional delivery 15 days before giving birth

Annex II: Questionnaire

Jimma University
College of Health Sciences

Department of Health Education and Behavioral Sciences

Dear Participant: My name is _____ and I am here to collect data on utilization of maternity waiting home among pregnant women for the purpose of research. I would like to ask questions related to maternity waiting home utilization in health center 15 days before giving birth among pregnant women.

I assure you that whatever information you provide will only be used for the purpose of this research and will not be made available to anyone. I appreciate you too much for your willingness and support to respond the interview. I also assure that the interview process will not bring any harm to you and your family. Your participation is voluntary. If you choose not to answer a particular question, that is your right. You are also permitted to withdraw any time from the study when you feel uncomfortable with it.

Therefore to participate in this studies you:

- Agree
- Not agree

1. Socio demographic questionnaire

1.1 What is your current age in years? -----

1.2 What is your religion? -----

1.3 What is your educational status? -----

1.4 What is your current marital status? -----

1.5 What is your current occupation? -----

1.6 What is your ethnicity? -----

1.7 How many pregnancy do you have experiences? (Party)

1.8 What is your average monthly income in birr? -----

1.9 What is your current ANC follow up? -----

1.10 Have you ever give birth before? 1. Yes 2. No

1.11 If your answer for question no 1.10 is yes, where did you give your last child birth?

2. Attitude measurement

2.1 Direct Attitude measurement

1. For me staying in health center for institutional delivery 15 days before giving birth is:

Bad-----1-----2-----3-----4-----5-----Good

Useless-----1-----2-----3-----4-----5-----Useful

Unpleasant-----1-----2-----3-----4-----5-----Pleasant

Boring-----1-----2-----3-----4-----5-----Interesting

2.2 Indirect attitude measurement

A. Behavioral beliefs measurement

1. Staying in health center for institutional delivery 15 days before giving birth will help me to be get delivery by health professionals & prevent myself from death related to delivery:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

2. Staying in health center for institutional delivery 15 days before giving birth will help me to get healthy child:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

3. Staying in health center for institutional delivery 15 days before giving birth will help be to be happy & reduce fear of labor:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

4. Staying in health center for institutional delivery 15 days before giving birth will help me to get clothes for me & my child:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

5. Staying in health center for institutional delivery 15 days before giving birth will help me to get better ANC services:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

6. Staying in health center for institutional delivery 15 days before giving birth will help me to get better PNC services from health professionals:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

7. Staying in health center for institutional delivery 15 days before giving birth will help me to get better health information on child immunization, family planning & personal hygiene:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

8. Staying in health center for institutional delivery 15 days before giving birth will help me to get enough time to take rest and free of workload:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

B. Evaluation of outcomes

1. For me getting delivery by health professionals & prevent myself from death related to delivery is:

1. Very Bad 2. Bad 3. Neutral 4. Good 5. Very good

2. For me getting healthy child is:

1. Very Bad 2. Bad 3. Neutral 4. Good 5. Very good

3. For me being happy & reduce fear of labor is:

1. Very Bad 2. Bad 3. Neutral 4. Good 5. Very good

4. For me getting clothes for me & my child are:

1. Very Bad 2. Bad 3. Neutral 4. Good 5. Very good

5. For me getting better ANC services is:

1. Very Bad 2. Bad 3. Neutral 4. Good 5. Very good

6. For me getting better Post natal care from health professionals is:

1. Very Bad 2. Bad 3. Neutral 4. Good 5. Very good

7. For me getting health information on immunization, family planning & other health service is:

1. Very Bad 2. Bad 3. Neutral 4. Good 5. Very good

8. For me getting enough time to take rest and free of workload is:

1. Very Bad 2. Bad 3. Neutral 4. Good 5. Very good

3. Subjective norm measurement

3.1. Direct Subjective norm measurement

1. Most people who are important to me will approve of my staying in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

2. Most people who are important to me will think that I should stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

3. Most people who like me want my staying in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

4. It is expected of me that I have to stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

3.2. Indirect Subjective norm measurement

A. Normative beliefs

1. My mother thinks that I should stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

2. My husband thinks that I should stay in health center for institutional delivery 15 days before giving birth

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

3. One to five HDA leader thinks that I should stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

4. My neighbor thinks that I should stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

5. Traditional birth attendants approve my staying in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

6. Health extension workers approve my staying in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

B. Motivation to comply

1. My mother's approval of staying in health center for institutional delivery 15 days before giving birth is important to me:

1. Not very much 2. Not Much 3. Neutral 4. Much 5. Very much

2. My husband's approval of staying in health center for institutional delivery 15 days before giving birth is important to me

1. Not very much 2. Not Much 3. Neutral 4. Much 5. Very much

3. One to five HDA leader approval of staying in health center for institutional delivery 15 days before giving birth is important to me:

1. Not very much 2. Not Much 3. Neutral 4. Much 5. Very much

4. My neighbors' approval of staying in health center for institutional delivery 15 days before giving birth is important to me:

1. Not very much 2. Not Much 3. Neutral 4. Much 5. Very much

5. Traditional birth attendant's approval of staying in health center for institutional delivery 15 days before giving birth is important to me

1. Not very much 2. Not Much 3. Neutral 4. Much 5. Very much

6. Health extension workers approval of staying in health center for institutional delivery 15 days before giving birth is important to me:

1. Not very much 2. Not Much 3. Neutral 4. Much 5. Very much

4. Perceived Behavioral control measurement

4.1 Direct Perceived behavioral control measurement

1. For me staying in health center for institutional delivery 15 days before giving birth is:

Difficult -----1-----2-----3-----4-----5-----Easy

Not under my control---1-----2-----3-----4-----5-----under my control

Sudden -----1-----2-----3-----4-----5-----planned

Conditional -----1-----2-----3-----4-----5-----unconditional

4.2 Indirect Perceived Behavioral control measurement

A. Control beliefs measurement

1. If my gestational age advances (increases), I can get transportation to go & stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. disagree 3. Neutral 4. Agree 5. strongly agree

2. If I stay in maternity waiting home 15 days before giving birth I can get enough food:

1. Strongly disagree 2. disagree 3. Neutral 4. Agree 5. strongly agree

3. If my gestation age increases, I can walk long distance to use maternity waiting home 15 days before giving birth:

1. Strongly disagree 2. disagree 3. Neutral 4. Agree 5. strongly agree

4. If I use maternity waiting home 15 days before giving birth, I can stay alone in maternity waiting home.

1. Strongly disagree 2. disagree 3. Neutral 4. Agree 5. strongly agree

5. If I use maternity waiting home 15 days before giving birth, I can get traditional ceremony during my delivery in the health center as my homes.

1. Strongly disagree 2. disagree 3. Neutral 4. Agree 5. strongly agree

6. If I use maternity waiting home 15 days before giving birth, there are persons that can give care for my family/ children.

1. Strongly disagree 2. disagree 3. Neutral 4. Agree 5. strongly agree

A. Power of control measurement

1. Availability of transportation makes it easy for me to use maternity waiting home 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

2. Presence of food security in maternity waiting home makes it easy for me to use it 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

3. Walking long distance makes it easy to use maternity waiting home 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

4. Living alone in maternity waiting home makes it easy to use it 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

5. Presence of traditional ceremony (poupage, coffee) during delivery makes it easy for me to use maternity waiting home 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

6. Presence of persons to give care for my children makes it easy to use maternity waiting home 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

5. Intention measurements

5.1. I am intended to stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

5.2. I will stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

5.3. I want to stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

5.4. I like to stay in health center for institutional delivery 15 days before giving birth:

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

6. Past experiences

6.1 Have you ever been used maternity waiting home before? 1. Yes 2. No

6.2 If your answer for question no 5.1 is yes, what is your reason to use MWH?

- Fear of labor illness during delivery
- To get enough rest and free from workload
- To get better health care from health professionals
- Fear of death related to deliver
- To get healthy child
- Others specify-----

6.3 If your answer for question no 6.1 is yes, how many days have you stayed in MWH?

- Only 15 days
- Less than 15 days
- More than 15 days

Thank you

Gaafilee Varshinii Afaan Oromoo

Yunivarsitii Jimmaattii kooleejii Fayyaa

Waligaltee/Haayyama Hirmaatota Qu'aannoo irrattii hirmaatan

Kabajamoo hirmaatota ,Maqaan koo-----jedhama, barataa MPH yoo ta`u kan assiti argamef amma wa`e fayyadama haadhole bakka tursisu yeroo ulfaa hang da`umsa. Ani ammaa gaffilee wa`ee hadholin da`umsan dura guyya 15 dhabbata fayya turuun fayyada inni qabu fi ilaalch hadhole gafata .Yaadni isin na kennitan kun waan biratif osso hin taane researchidhaf qofaf akka ooluufi Yaada kana na qoodu kessanin rakon takka illee akka isiniifi fi warra kessan irra hin genyee wadaisiniif gala. Hirmaannan kessan ille fedhii kessan irrati hunda`a.Gaffille issinti hin tolle ille birra dabru dandessu yoo isint hin tolle immoo addaan kutuu ni dandeessu.

Isiin Qu'aannoo kana irrattii hirmachuf feedhii qabdu?

➤ Eyyeen

➤ lakki

Kutaa 1; Gaafilee hawaasummaa fi dinagdee ilaala

1. Yeroo amma umrin keesan wagaa meqaa?
2. Amantaan keesan maalii?
3. Sadarkaa barumsa keesan?
4. Haalli fudha fi heruma keesan osoo naf ibsitan?
5. Yeroo amma Hojiin keesan?
6. Sabaani kessan maali?
7. Hanga amma yeroo meqaaf ulfootee?
8. Galii ji'aa keesan qarshii meeqa?
9. Qorannoo ulfa kun yeroo meqaaf ?
10. Deesee jirta? 1)Eyyen 2)Hindenyye
11. Yo debbin lakkofsa 10 eyyen ta.e essati?

Kutaa 2: gaafille waa'ee safari ilaalcha

2.1 Madaallii Ilaalch kallattii

1 siif da.umsan dura guyya 15 dhaba fayya turun

Baroo miti -----1-----2-----3-----4-----5-----baroodha

Hin fayyadu-----1-----2-----3-----4-----5-----ni fayyada

hi tllu-----1-----2-----3-----4-----5-----ni tolla

Ni nufisisa-----1-----2-----3-----4-----5-----hin nufisisu

2.2 Madaallii ilaalcha Alkallattii

A.Madaallii ilaalcha AMALAAN walqabatu

1. Guyya 15 daumsa dura dhaba fayya turun kiyya akka hojata fayyatin dauu fi duaa daumsa wajiin dhufan irra na ittissa

1. bayye walli hin galu 2. Walli hin galu 3.yada hin qabu 4.Walli gale 5.bayye walli gale

2. Guyya 15 daumsa dura dhaba fayya turun kiyya akka daimma fayya argadhu natasisaa

1.bayye walli hin galu 2. Walli hin galu 3.yada hin qabu 4. Walli gale 5.bayye walli gale

3, Guyya 15 daumsa dura dhaba fayya turun kiyya akka gamadu fi soda ciniinsu narraa ittisee

1. bayye walli hin galu 2.Walli hin galu 3.yada hin qabu 4.Walli gale 5.bayye walli gale

4, guyya 15 daumsa dura dhaba fayya turun kiyya akka uffata ana fi daimma kiyaaf argadhu nagargaare

1. bayye walli hin galu 2. Walli hin galu 3.yada hin qabu 4. Walli gale 5.bayye walli gale

5. Guyya 15 daumsa dura dhaba fayya turun kiyya akka qoranoo daumsa duartif tajajila baroo argadhu na tasisse

1.bayye walli hin galu 2.Walli hin galu 3.yada hin qabu 4.Walli gale 5. bayye walli gale

6. guyya 15 daumsa dura dhaba fayya turun kiyya akka qoranoo daumsa bodatif tajajila baroo argadhu na tasisse

1. bayye walli hin galu 2. Walli hin galu 3.yada hin qabu 4. Walli gale 5.bayye walli gale

7. Guyya 15 daumsa dura dhaba fayya turun kiyya akka oddeffaano fayya,kattabi daimma ,qussano matti fi qulqulina ofii egu irrati gaha tae argadhu na gargare

1. bayye walli hin galu 2. Walli hin galu 3.yada hin qabu 4. Walli gale 5. bayye walli gale

8 guyya 15 daumsa dura dhaba fayya turun kiyya akka yeroo gaha tae boqadhu fi bayina hojii na irra hirisse

1. bayye walli hin galu 2. Walli hin galu 3.yada hin qabu 4. Walli gale 5.bayye walli gale

B Firii madaalli ilaalcha amalaan walqabatu

1 tajajila daumsa hojata fayyatin argachu fi dua daumsa wajin dhufu irra hafun kiyya

1 bayye Baroo miti 2 Baroo miti 3.yada hin qabu 4 baroodha 5 bayye baroodha

2 siif daimma fayya argachun kee

1 bayye Baroo miti 2 Baroo miti 3.yada hin qabu 4 baroodha 5 bayye —baroodha

3 siif gamadu fi sodaa cininsu hirisu kee

1 bayye Baroo miti 2 Baroo miti 3.yada hin qabu 4 baroodha 5 bayye baroodha

4 siif fi daimma ketifii waya argachun kee

1 bayye Baroo miti 2 Baroo miti 3.yada hin qabu 4 baroodha 5 bayye baroodha

1. siif qorano daumsa dura argachun kee

1 bayye Baroo miti 2 Baroo miti 3.yada hin qabu 4-baroodha 5 bayye baroodha

6 siif qorano daumsa bodaa argachun kee

1 bayye Baroo miti 2 Baroo miti 3.yada hin qabu 4-baroodha 5 bayye baroodha

7 siif oddeffaano fayya,kattabi daimma ,qussano matti fi qulqulina ofii egu argachun kee

1 bayye Baroo miti 2 Baroo miti 3.yada hin qabu 4-baroodha 5 bayye baroodha

8 siif yeroo gaha tae boqachu fi bayina hojii sirra hirissu argachun kee

1 bayye Baroo miti 2 Baroo miti 3.yada hin qabu 4 -baroodha

5 bayye —baroodha

3. Madaallii duudhaalee dhuunfaa

3.1 Madaallii duudhaa kallattii

1. Namoonni baayyee natti dhiyaatan(maatii ykn ogeessi fayyaa) da'umsa dura

Dhaabbata fayyaatti da'uf guyyaa kudha shaniif akkan dhaabbata fayyaa turuuf na jajjabeessu

1. bayyeen itti walii hin galu 2. Walii hin galu 3.yada hin qabu 4. Ittin Walii gala

5. baayyeen itti walii gala

2. Namoonni baayyee natti dhiyaatan(maatii ykn ogeessi fayyaa) da'umsa dura

Dhaabbata fayyaatti da'uf guyyaa kudha shaniif dhaabbata fayyaa turuu akkan qabu yaadu.

1. bayyeen itti walii hin galu 2. Walii hin galu 3.yada hin qabu 4.Ittin Walii gala
5. baayyeen itti walii gala

3. Namonni akka kootii bayyeen dhaabbata fayyaatti da'uuf guyyaa 15 dursee akkan buufata fayyaa keessa turu ni barbaadu.

1. bayyeen itti walii hin galu 2. Walii hin gal 3.yada hin qabu 4. Ittin Walii gala
5. baayyeen itti walii gala

4. Dhaabbata fayyaatti dauuf guyyaa 15 dursee buufata fayyaa keessa turuun qaba(anarraa eegama)

1. bayyeen itti walii hin galu 2.Walii hin galu 3.yada hin qabu 4.Ittin Walii gala
5. baayyeen itti walii gala

3.2 Madaallii duudhaa alkallattii

A. Ilaalcha duudhaalee

1. Harmeen koo akkan dhaabbata fayyatti da'uuf da'umsa dura guyyaa kudha shan dursee buufata fayyaa turuu akkan qabu yaaddi.

1. bayyeen itti walii hin galu 2.Walii hin galu 3.yada hin qabu 4.Ittin Walii gala
5. baayyeen itti walii gala

2. Abban warraa koo akka ani dhaabbata fayyatti da'uuf da'umsa dura guyyaa kudha shaniif buufata fayyaa turuu akkan qabu yaada.

1. bayyeen itti walii hin galu 2. Walii hin galu 3.yada hin qabu 4. Ittin Walii gala
5. baayyeen itti walii gala

3. Dursiituun 1-5(tokko shanee) raayyaa fayyaa kooti da'umsa dura guyyaa kudha shaniif buufata fayyaa keessa akkan turu qabu yaaddi.

1. bayyeen itti walii hin galu 2.Walii hin galu 3.yada hin qabu 4.Ittin Walii gala
5. baayyeen itti walii gala

4. Ollonni koo buufata fayyaatti da'uuf da'umsa dura guyyaa kudha shaniif buufata fayyaa keessa akkan turu qabu yaadu.

1. bayyeen itti walii hin galu 2. Walii hin galu 3.yada hin qabu 4. Ittin Walii gala
5. baayyeen itti walii gala

5. Deessistuun Aadaa buufata fayyaatti da'uuf da'umsa dura guyyaa kudha shaniif buufata fayyaa keessa akkan turu qabu nii deggarti.

1. bayyeen itti walii hin galu 2. Walii hin galu 3.yada hin qabu 4. Ittin Walii gala

5. baayyeen itti walii gala

6. Hojjetuun Ekstenshinii fayyaa (HEF) buufata fayyaatti da'uuf da'umsa dura guyyaa kudha shaniif buufata fayyaa keessa akkan turu qabu nii deggarti.

1. bayyeen itti walii hin galu 2. Walii hin galu 3.yada hin qabu 4. Ittin Walii gala

5. baayyeen itti walii gala

B. Kaka'umsa (qophii) raawwachiisummaaf

1. Harmeen koo da'umsa kootiin dura guyyaa 15f akkan buufata fayyaa turu naa heyyamuun ishee na fayyada.

1. Baayyee hin barbaachisu 2. Hinbarbaachisu 3. Giddugaleessa 4.barbaachisaadha 5. Baayyisee barbaachisaadha

2. Abbaan warraa koo da'umsa kootiin dura guyyaa 15f akkan buufata fayyaa turu na heyyamuun isaa:

1. Baayyee hin barbaachisu 2. Hinbarbaachisu 3. Giddugaleessa 4.barbaachisaadha 5. Baayyisee barbaachisaadha

3. Dursituun 1-5 (tokko-shanee) raayyaa fayyaa da'umsa kootiin dura guyyaa 15f akkan buufata fayyaa turu na heyyamuun ishee anaaf :

1. Baayyee hin barbaachisu 2. Hinbarbaachisu 3. Giddugaleessa 4.barbaachisaadha 5. Baayyisee barbaachisaadha

4. Olloni (Ollaan) koo da'umsa kootiin dura guyyaa 15f akkan buufata fayyaa turu na deggeruun isaanii anaaf :

1. Baayyee hin barbaachisu 2. Hinbarbaachisu 3. Giddugaleessa 4.barbaachisaadha 5. Baayyisee barbaachisaadha

5. Deessistuun Aadaa da'umsa kootiin dura guyyaa 15f akkan buufata fayyaa turu na deggeruun ishee anaaf :

1. Baayyee hin barbaachisu 2. Hinbarbaachisu 3. Giddugaleessa 4.barbaachisaadha 5. Baayyisee barbaachisaadha

6. Hojjetuun eksteenshinii fayyaa (HEF) da'umsa kootiin dura guyyaa 15f akkan buufata fayyaa turu na deggeruun ishee anaaf :

1. Baayyee hin barbaachisu 2. Hinbarbaachisu 3. Giddugaleessa 4.barbaachisaadha 5. Baayyisee barbaachisaadha

4. Madaalli amaloota baratamoo to'atan

4.1 Safartuulee Amaloota baramoo toatan Kallattiin

1. Anaaf guyyaa da'umsa koo dursee bultii kudha shaniif buufata fayyaa keessa turuun:

Ulfaataa-----1-----2-----3-----4-----5-----salphaa

Anatu murteessa miti-----1-----2-----3-----4-----5-----Anatu murteeffata

Akka tasaa-----1-----2-----3-----4-----5-----karoorraani

Haala irratti hunda'a-----1-----2-----3-----4-----5-----haala irratti hin hunda'u

4.2 Madaalli Amaloota baramoo toatan al-Kallattiin

A. madaalli to'annoo ilaalchaa

1. Yeroo guyyaan da'umsa koo natti dhiyaatutti guyyaa 15f buufata fayyaa keessa ture achitti da'uuf tajaajila geejjibaa nan argadhaa

1. Tasuma sirrii miti 2. Sirrii miti 3. Giddu galeessa 4. Sirriidha 5. Baayyisee sirriidha

2. Buufata fayyaatti D'uuf guyyaa 15 dursee deeme yoon buufata fayyaa keessa ture nyaata ga'aa nan argadhaa.

1. Tasuma sirrii miti 2. Sirrii miti 3. Giddu galeessa 4. Sirriidha 5. Baayyisee sirriidha

3. Yeroo ulfikoo guddachaa adeemutti guyyaa 15 dursee deeme buufata fayyaatti da'uuf karaa fagoo deemu nan dandaa:

1. Tasuma sirrii miti 2. Sirrii miti 3. Giddu galeessa 4. Sirriidha 5. Baayyisee sirriidha

4. Yoo ulfikoo guddacha adeemuu namni guyyaa 15 dursee akkan buufata fayyaatti da'uuf na geessu nan argadhaa:

1. Tasuma sirrii miti 2. Sirrii miti 3. Giddu galeessa 4. Sirriidha 5. Baayyisee sirriidha

5. Yoo Ani daumsa kootiin dura guyyaa 15f buufata fayyaa ture achitti dahe akka Aadaatti wanti raawwatamu qaban akka mana kootii naaf ta'u:

1. Tasuma sirrii miti 2. Sirrii miti 3. Giddu galeessa 4. Sirriidha 5. Baayyisee sirriidha

6. Yoon daumsa dura guyyaa 15 buufata fayyaa ture nama maatee koo fi ijolee ko gargaru nan argadhaa

1. Tasuma sirrii miti 2. Sirrii miti 3. Giddu galeessa 4. Sirriidha 5. Baayyisee sirriidha

B. Madaallii to'annoo Aangoo

1. Daumsa dura Guyyaa 15 dursee buufata fayyaa keessa turee achitti dauuf geejjiiba jirachun isa naf salpha ta'era:

1. bayyeen itti walii hin galu
2. Walii hin galu
3. yada hin qabu
4. Ittin Walii gala
5. baayyeen itti walii gala

2. Nyaati ga'aan buufata fayyaa jiraachuu isaa guyyaa 15 dursanii demanii achitti dauuf salpha godha:

1. bayyeen itti walii hin galu
2. Walii hin galu
3. yada hin qabu
4. Ittin Walii gala
5. baayyeen itti walii gala

3. Buufatni fayyaa mana koo irraa fagoo you ta'eef guyyaa kudha shan dursee deemee achitti dauf nan danda'a

1. bayyeen itti walii hin galu
2. Walii hin galu
3. yada hin qabu
4. Ittin Walii gala
5. baayyeen itti walii gala

4. Namoota irra adda ba'anii buufata fayyaa keessaa guyyaa 15f turanii achitti dahuun haalli isaa namatti ni tolaa:

1. bayyeen itti walii hin galu
2. Walii hin galu
3. yada hin qabu
4. Ittin Walii gala
5. baayyeen itti walii gala

5. Ayyaanefannan akka aadaattis ta'e akka amantiitti jiraachun isaa buufata fayyaa keessatti akkan da'u ni godha geggeefamneef guyyaa 15 dursanii deemanii buufata fayyaatti da'uun ni tola

1. bayyeen itti walii hin galu
2. Walii hin galu
3. yada hin qabu
4. Ittin Walii gala
5. baayyeen itti walii gala

6. Namni maatii ko fi ijollee gargaaru jiraachuun isaa guyyaa 15 dursee buufata fayyaa akka deemu na gargaara:

1. bayyeen itti walii hin galu
2. Walii hin galu
3. yada hin qabu
4. Ittin Walii gala
5. baayyeen itti walii gala

5. Madaallii (Safartuu) kaayyoo

5.1 Buufata fayyaatti da'uuf guyyaa 15 dursee buufata fayyaa keessa turuun karoora(kaayyoo) kooti

1. bayyeen itti walii hin galu
2. Walii hin galu
3. yada hin qabu
4. Ittin Walii gala
5. baayyeen itti walii gala

5.2 Dhaabbata fayyaatti da'uuf guyyaa 15 dursee buufata fayyaa keessa nan tura.

1. bayyeen itti walii hin galu 2. Walii hin galu 3.yada hin qabu 4. Ittin Walii gala
5. baayyeen itti walii gala

5.3 .Dhaabbata fayyaatti da'uuf guyyaa 15 dursee buufata fayyaa keessa turuu nan barbaada.

1. bayyeen itti walii hin galu 2.Walii hin galu 3.yada hin qabu 4. Ittin Walii gala
5. baayyeen itti walii gala

5.4. Dhaabbata fayyaatti da'uuf guyyaa 15 dursee buufata fayyaa keessautuun turee natti tola.

1. bayyeen itti walii hin galu 2.Walii hin galu 3.yada hin qabu 4.Ittin Walii gala
5. baayyeen itti walii gala

6. Muuxannoo yeroo darbee

6.1 Kanaan dura bakka turtiiqophii daumsa kan buufata fayyaa fayyadamtanii beektu?

1. Eeyyee 2. lakki

6.2 Yoo deebiin keessan kan 6.1 eeyyee ta'e sababni isaa maalii?

- Sodaa dhukkuba yeroo da'umsaatii
- Hojii irraa fagaattani boqonnaa ga'aa argachuufi
- Tajaajila ga'aa hojjettota fayya irra argachuufi
- Sodaa Du'a da'umsaan walqabatuufi
- Daima fayyaa qabu argachuuf (godhachuufi)
- Kan biraan yoo jiraate-----

6.3 Yoo deebiin keessan kan 6.1 eeyyee ta'e yeroo ykn guyyaa hagamii achi turtan?

- Guyyaa 15 qofa
- Guyyaa 15 gadi
- Guyyaa 15 oli

Galatoomaa!!!!

Annex III: Pregnant women interview Guide

Jimma University

College of Health sciences

Department of Health education and Behavioral Sciences

In-depth interview guiding questions for pregnant women on maternity waiting home utilization

Instructions: Please take a few minutes to tell us what you think about the staying in health center for institutional delivery 15 days before giving birth (Maternity waiting home). There is no right or wrong responses; we are merely interested in your personal opinions. In response to the questions below, please list the thoughts that come immediately to mind.

Date: -----

- Age in years----- Marital status-----
- Current Occupation-----Educational status-----
- Parity-----Past experiences of MWH -----
- Number of ANC visit-----

1. Have you heard about maternity waiting home? Where did you get the information? How did you understand the importance of using maternity waiting home by pregnant women in health center?

2. How did you perceived the advantages and disadvantage of using maternity waiting home?

3. What are the main challenges to use maternity waiting home? How did you feel about individuals or groups who would approve/disapprove to stay in health center for institutional delivery 15 days before giving birth?

4. How did you perceive the impacts of using and not using of maternity waiting home because of those individuals/groups?

5. How did you think about the situation/environments that may become your inhibitors/facilitators to stay in health center for institutional delivery 15 days before giving birth?

6. What are the possible solutions to solve those problems?

Annex IV: HEWs interview Guide

In-depth interview guiding questions for health extension workers on maternity waiting home utilization

Instructions: Please take a few minutes to tell us what you think about the staying in health center for institutional delivery 15 days before giving birth (Maternity waiting home). There is no right or wrong responses; we are merely interested in your personal opinions. In response to the questions below, please list the thoughts that come immediately to mind.

Date: -----

- Age in years ----- Marital status-----
- Educational status -----
- Work experiences-----

1. How did you understand the important of pregnant women staying in health center for institutional delivery 15 days before giving birth (MWH)? How pregnant women perceived about the use of this maternity waiting home?

2. How did you perceived the advantages and disadvantage of staying in health center for institutional delivery 15 days before giving birth?

3. How did you feel about individuals or groups who would approve/disapprove to stay in health center for institutional delivery 15 days before giving birth?

4. How did you perceive the impacts of using and not using of maternity waiting home because of those individuals/groups?

5. How did you think about the situation/environments that may become your inhibitors/facilitators to stay in health center for institutional delivery 15 days before giving birth? How did it solve to improve the utilization of maternity waiting home for pregnant women?

Thank you