

Husbands' Knowledge of Obstetric Danger Signs, and Level of Birth Preparedness and Complication Readiness and Associated Factors in Wara Jarso, north Shewa, Oromia, Ethiopia.

By

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A Thesis to be Submitted to Jimma University, Institute of Health, Faculty of Health Science, School of Nursing and Midwifery in Partial Fulfillment of the Requirement for Master of Science Degree in Maternity Nursing.

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Jimma, Ethiopia

JIMMA UNIVERSITY
INSTITUTE OF HEALTH
FACULTY OF HEALTH SCIENCE
SCHOOL OF NURSING AND MIDWIFERY

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ABSTRACT

Background: Most women have uneventful pregnancies and childbirth, sudden and unpredictable complications may happen at any time to any woman. Birth preparedness and complication readiness is needed to handle the problems. Globally, 830 women die every day from preventable causes related to pregnancy and childbirth. Ethiopia is one of developing country with 412 maternal mortality rate. However different intervention was made still mothers preparation for birth is low while the husbands are decision makers and control resources.

Objectives: To assess husbands' knowledge of obstetric danger signs, level of birth preparedness and complication readiness and associated factors in Wara Jarso, Ethiopia, 2019

Methods: Community based cross sectional study was conducted in Wara Jarso from April 8 to 28 2019. Using simple random sampling 593 study participants were interviewed The collected data were coded, cleaned and entered to Epidata version 3.1, exported to SPSS 23. Bivariate and multivariate logistic regression was used to identify association of independent variables with husbands' level of birth preparedness and complication readiness at $p < 0.05$, 95% CI. The results were presented by descriptive, tables and diagrams.

Result: The data were collected from 593 participants, and 574 were completed the interview giving the response rate of 96.8%. The mean age of respondents was 36.5 ± 7.8 years. Knowledge of obstetric danger signs of the respondents was 32.06% while level of birth preparedness and complication readiness was 22.30%. Merchant husbands (AOR = 2.272 (95%CI 1.153, 4.478), $p = .018$), living in urban (AOR = 5.550 (95%CI 2.211, 13.933), $p = .001$) escorting their wives to health institution (AOR = 2.217 (95%CI 1.095, 4.487), $p = .027$) accept buying material and clothes for baby before delivery (AOR = 3.599 (95%CI 1.995, 6.490), $p = .001$), knowledgeable about obstetric danger sign (AOR = 4.957 (95%CI 2.726, 9.016), $p = .001$) were variables associated with husbands' birth preparedness and complication readiness.

Conclusion and recommendation: The husbands' knowledge of obstetric dangers signs were low and their level of preparation for delivery and complication was also low. Occupation, residence, escort wife, accepting buying materials and knowledge were variables that were associated with preparation. Therefore, district health office, policy makers and planners and HEW have to work on awareness creation about obstetric danger signs among husbands and how to increase level of preparation among husbands.

Key words: Knowledge of Danger Signs, Birth Preparedness, Complication Readiness, Wara Jarso, Jimma University

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ACRONYMS

ANC	Ante Natal Care
AOR	Adjusted Odd Ratio
BPCR	Birth Preparedness and Complication Readiness
CI	Confidence Interval
COR	Crude Odds Ratio
EDHS	Ethiopian Demographic Health Survey
HC	Health Center
HP	Health Posts
MMR	Maternal Mortality Ratio
PNC	Post-natal Care
SDG	Sustainable Developmental Goal
SPSS	Statistical Package for Social Science
SRS	Simple Random Sampling

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CHAPTER ONE: INTRODUCTION

1.1 Background

Most women have uneventful pregnancies and childbirth. Complications and problems can happen quickly and unexpectedly during pregnancy, birth or in the postpartum period. These are severe bleeding, severe headache, blurred vision, convulsions, swollen hands/face, high fever, loss of consciousness, difficulty of breathing, severe weakness, severe abdominal pain, accelerated /reduced fetal movement, water breaks without labor, labor lasting >12 hrs, placenta not delivered 30 min after baby and malodorous vaginal discharge. These leads to complication during pregnancy, labor and delivery and postpartum(1, 2).

Hemorrhage, hypertensive disorders, and sepsis are responsible for more than half of maternal deaths worldwide(3). Most of maternal death occurred because of direct obstetric causes in postpartum period. Hemorrhage is the leading cause of maternal death causing more than half deaths, and pregnancy induced hypertension and anemia are the other major causes of maternal death(4).

These problems are tackled through planning in advance for what to do in an emergency to save time and lives. Through awareness creation among community about danger signs and what to do when they occur the problems can be managed. This can be by organizing finance, developing a plan and an important source of support(5).

Birth Preparedness and Complication Readiness (BPCR) is an essential element of the antenatal care package. It includes the desired place of birth, the preferred birth attendant, funds for any expenses and supplies and materials necessary to bring to the facility, transportation to a facility for birth or in the case of a complication, and identification of compatible blood donors in case of complications(6).

BPCR needs the participation of both couple in planning which enables mothers to give birth in the presence of a skilled attendant and this effect is magnified when is carried out by the couple. This indicates that male participation can increase the BPCR practices and so should not focus on women only, as involving the couple is most likely lead to positive care-seeking practices(7).

1.2 Statement of the Problem

An estimated global total of 10.7 million women have died in the past 25 years between 1990 and 2015 due to maternal causes(8). It is also evidenced that 830 women die every day from preventable causes related to pregnancy and childbirth. Almost all maternal deaths (99%) occur in developing countries more than half occur in sub-Saharan Africa. Maternal mortality between 1990 and 2015 shows that 12 deaths per 100,000 livebirths for high-income regions, but 546 for sub-Saharan Africa. This indicates that there is high variation between high income countries and sub Saharan countries(9). In Ethiopia report from EDHS, 2016 indicate that still the maternal mortality ratio related to pregnancy is high, 412 per 100,000 live births(10). Sub Saharan region has maternal deaths that occur at high rates in all three risky periods(11). By 2030 Sustainable Development Goal 3 target to reduce the global maternal mortality ratio to less than 70 per 100,000 live births(12).

But the death is mainly caused by direct causes that are due to pregnancy and its complication. Study from Eastern Ethiopia showed that only less than half of pregnant women were prepared for birth(13). Most common causes of maternal mortality are obstructed labor, hemorrhage and hypertension related complication(14). Men reported that issues related to pregnancy and childbirth are the domain of women according to study done in Uganda. But women were interested in receiving more support from their husbands(15). Around half women are not prepared from findings of study from Mizan Tepi, even though 77.6% have information about birth preparedness and complication. This indicates that even though 77.6% of them know preparedness only half were prepared(16).

Husbands control over household and large purchase decision making affects the preparation of women for delivery. Women's decision making on core household and personal issues are very low(17). Their involvement in making independent decisions on large purchase is almost none (0.1%)(18). Therefore, the aim of this study was to assess knowledge of husbands about obstetric danger signs and their participation in birth preparedness and complication readiness among husbands in Wara Jarso District.

CHAPTER TWO: LITERATURE REVIEW

2.1 Obstetric danger signs knowledge

Study conducted in south west Nigeria among men indicated that 60.6% of respondents had poor knowledge about danger signs in pregnancy(19). Finding from Tanzania among identified that 53%, 43.9% and 34.6% of men could mention at least one danger sign during pregnancy, delivery and postpartum period respectively. Excessive vaginal bleeding, fever, prolonged labour, fever were the mentioned ones(20).

According to study conducted in Rural Kenyan to assess husbands awareness of danger signs of obstetric complications 92.2% of participants recognize severe abdominal pain, 91.6% (n=153) recognizing absence of fetal movement, and 90.4% (n=151) recognizing long labour as obstetric danger signs(21).

Study conducted in southern Ethiopia among husbands showed that 336(42.2%) of the men have knowledge of danger sign of obstetric complications. Vaginal bleeding during pregnancy (34%), delivery (60.4%) and postpartum period (32.2%). Severe abdominal pain during pregnancy (87%) and severe vaginal bleeding during labour (32.2%), after delivery (60.4%), loss of consciousness during labour (13%) and after child birth (2.8%), prolonged labor (21.4%) and retained placenta (19.7%) were the mentioned danger signs(22).

2.2 Birth Preparedness and Complication Readiness

Cross-sectional survey conducted in Nigeria among men indicated that (24.2%) identified transportation, 23.1% delivery and (22.6%) baby/mother's clothes. 19.5% of respondents made savings for obstetric emergencies and a mere 10.5% identified a decision-making process in case of obstetric emergency, decision on place of delivery (9.0%), arrangement for skilled assistance at delivery (6.2%) and preparations for blood donation (0.8%) of respondents(23).

Community based study conducted in Wolaita Sodo, southern Ethiopia to assess the level of husbands' participation in BPCR and associated factors showed that 45% of husbands had poor participation in BPCR. (24). Finding from community based cross-sectional study conducted in Ambo Town male involvement in ANC was 59.9%. BPCR practice among married males was 50.8% while decisions of health care facility was made alone by males (60.7%) and 53.7%(25).

2.3 Factors associated with birth preparedness and complication readiness

Study done in Kathmandu, Nepal and Nigeria identified that education and age were the associated factors. Formal education determines participation in maternity care. (24, 26). Finding from rural Tanzania indicated that men who knew at least one danger sign during pregnancy were more likely to be prepared, and living in a rural area was a negative predictor for being well prepared(20).

Community based cross sectional study conducted in southern Ethiopia among men identified that awareness of obstetric danger signs are associated(22), and study from wolayita sodo also identified that husbands who shared information were associated with their participation. Respondent having awareness of danger signs of obstetric complication is two times more likely to be involved in birth preparedness practice than who has no awareness(24).

Community based survey conducted in Northwest Ethiopia among identified completing college education have a significant positive association with the steps taken for birth preparation and complication readiness. It is also evidenced that escorting wife to antenatal care and urban residence was also found to be significantly associated with the steps taken for birth preparation and complication readiness(27).

According to community based study conducted in Ambo Town Oromia, Ethiopia knowledge of male partner who had good knowledge towards general danger signs of pregnancy, labour and delivery were 5.74times more likely to practice birth preparedness and complication readiness as compared to those had poor knowledge(25).

Conceptual frame work

The frame work was developed through review of literatures. The diagram indicated that both obstetrics characteristics and sociodemographic characteristics were the variables associated with both knowledge of obstetric danger signs, and level of birth preparedness and complication readiness. The knowledge of obstetric danger sign was also factor associated with level of birth preparedness and complication readiness(22, 19, 25, 27, 20).

Conceptual framework diagram

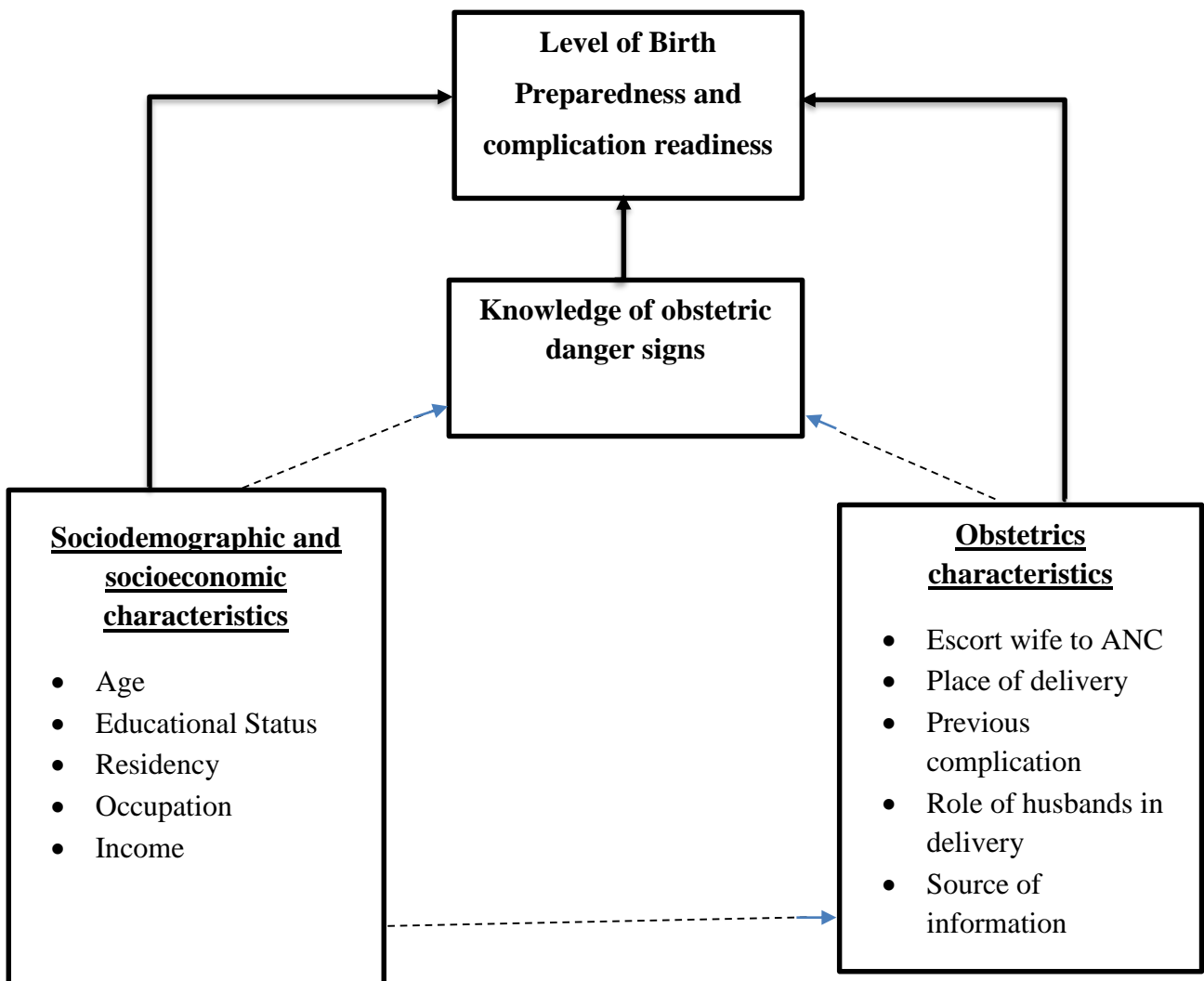


Figure 1: Conceptual Frame Work developed after review of literatures for knowledge of obstetric danger signs, and level of birth preparedness, 2019.

2.5 Significance of the study

Pregnancy and pregnancy related issues are mostly seen as the concern of mothers in the community. Mothers are burden bearer and most of them even not treated in case of complication which leads to loss of their life. Studies on wives' knowledge and preparation varies indicating that even though they have knowledge their preparation is low. This indicates that there is something that hinder them from preparing themselves.

The finding of this study help mothers in identifying their husbands' knowledge, and preparation and then intervening to make husbands share the burden of this problem. Studying husbands itself initiates them as they have also responsibility which may give mothers opportunity to share the responsibility.

Knowing the problems and early preparation helps the husbands in living with healthy family. Awareness creation could be given for them and this reduces the cost of health service that could be utilized after complication is developed. It also minimizes the time they spend at hospital by preventing complication.

Communities are benefited from the study as these participants are from the community they transfer the message to them. Healthy community can lead their way of life and so it minimizes the cost and creates healthy community.

The researchers can utilize this study to conduct further study on husbands and also initiates them for further study as it was studied from perspective of wives and still there is problem. The planners can also use the finding to conduct further assessment of the community health care service and their plan.

CHAPTER THREE: OBJECTIVE

3.1. General Objectives

To assess husbands' knowledge of obstetric danger signs, and BPCR and associated factors in Wara Jarso, north Shewa, Oromia, Ethiopia, April 2019.

3.2. Specific objectives

1. To assess husbands' knowledge of obstetric danger signs in Wara Jarso
2. To assess level of husbands' birth preparedness and complication readiness in Wara Jarso
3. To identify factors associated with level of husbands BPCR in Wara Jarso

CHAPTER FOUR: METHODOLOGY AND MATERIALS

4.1. Study Area and Periods

The study was conducted in Wara Jarso Wereda/district, North Shewa, Oromia regional state which is located at 186km to the north of Addis Ababa. According to Wereda health office data the Wereda has 31 kebeles/villages of which 6 are urban and 25 are rural. And its climatic conditions are dega 7.13%, woyna dega 43.73% and kola 49.5%. The Wereda had a total of 40944 households with total population of 191237. Among these population 95535 were females while 95702 were males. The number of female in reproductive age group was 6820. The data also indicated that institutional delivery of the Wereda during the past year was 24%. The Wereda had 57 health extension workers, 7 HC and 25 HP during study period with health service coverage of 92%, ANC follow up 65%, institutional delivery 24% and PNC 24%. The data indicated that ANC utilization is high but with low institutional delivery. The study was conducted from April 8 –28 /2019

4.2. Study Design

Community based cross-sectional study design was used

4.3. Population

4.3.1. Source population

The source of population was all men whose wives were pregnant or had given birth within the past one year from study period.

4.3.2. Study population: All sampled men was included in the study

4.3.3. Study unit: An individual

4.3.4. Inclusion and Exclusion Criteria.

- **Inclusion Criteria:**

Husbands whose wives were third trimester pregnancy during study or had given birth within the past one year from study period.

- **Exclusion criteria:**

Husbands who were critically ill and unable to respond to the interview during data collection period.

4.4. Sample Size Determination

The sample size required for the study was calculated based on a single population proportions statistical formula. Then the sample size was calculated for higher sample size.

$n = \frac{(Z_{\alpha/2})^2 p(1-p)}{d^2}$ where n = minimum sample size, $\frac{Z_{\alpha}}{2}$ = level of confidence interval at 95%(1.96), d = margin of sample error tolerated (at 0.05), p = 50.8%, birth preparedness and complication readiness practice among married males of Ambo town (25). This p was used because it was the one which gives the maximum sample size as it was nearest to 50%.

$n = \frac{(1.96)^2 \times 0.508(1 - 0.508)}{(0.05)^2} = 384$, taking design effect of 1.5 the sample size was 576. By adding 3% non-response rate the total sample size was 593.

4.5. Sampling Techniques

Wara Jarso Wereda has 31 kebeles. Using rule of thumb, 30% of the kebeles were selected randomly by lottery method which were 10. Data of husbands with third trimester pregnant women or husbands whose wives were given birth within the past one year were identified by health extension workers. Totally within these ten kebeles there were 891 husbands whose wives were pregnant (528) or given birth within the past one year (368). Having their number then for each kebele the samples were allocated proportionally. Then the study participants were identified by taking their lists using simple random sampling (SRS). After the participants were identified the data collectors used their list and the data was collected. Selected study participants who were not available during data collection were interviewed the next day.

Sampling Technique Diagram

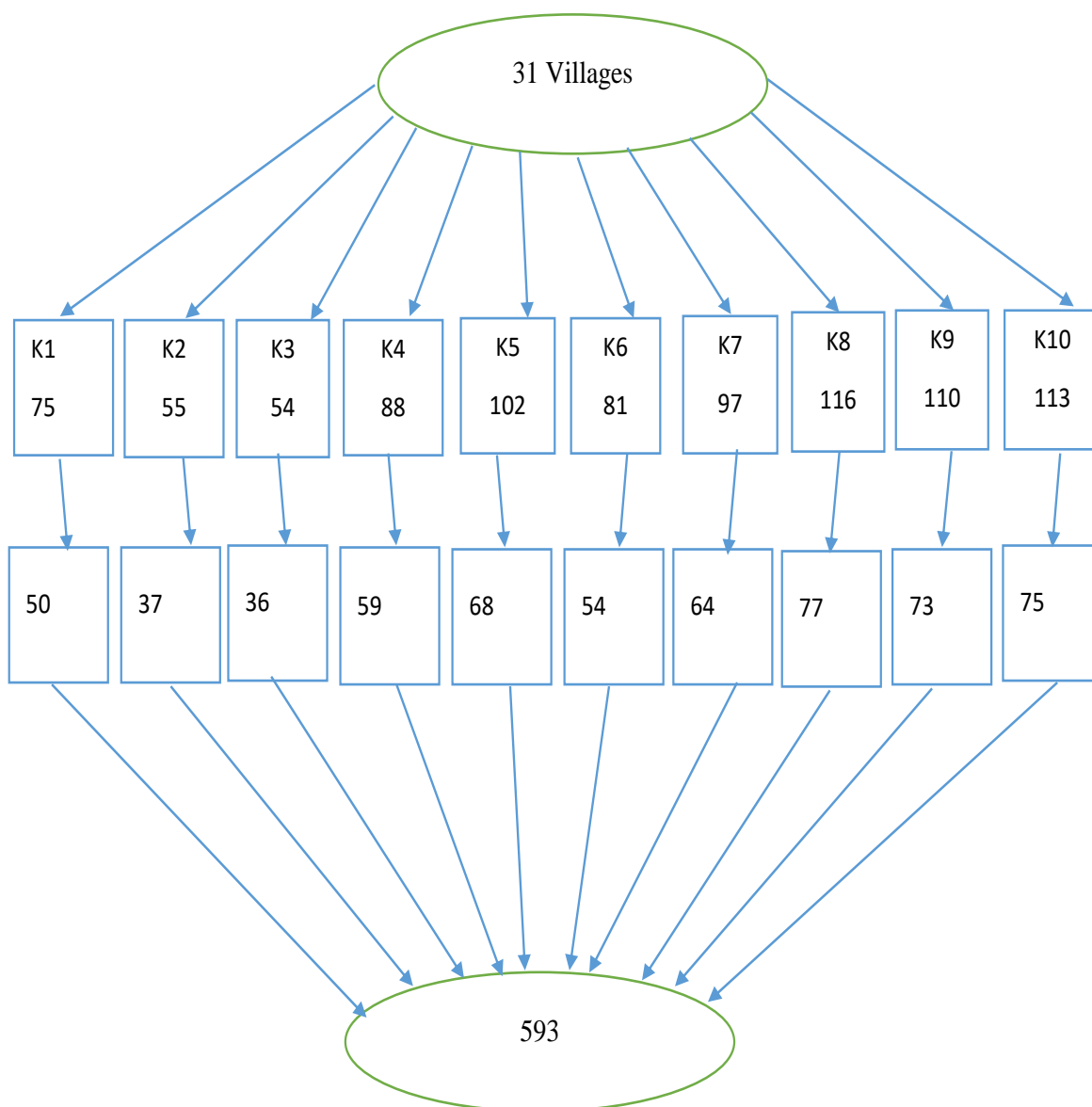


Figure 2: Sampling procedure for husbands' knowledge of obstetric danger signs, BPCR, April 2019, Wara Jarso

K1-10 is codes given to selected villages.

4.6. Study Variables

4.6.1. Dependent Variable

- Knowledge of obstetric danger signs
- Level of birth preparedness and complication readiness

4.6.2. Independent Variables

- **Socio-demographic and socio economic characteristics:** (age, educational status, residence, occupation, income)
- **Obstetrics characteristics** (escort wife to ANC, acceptance of buying materials for baby before delivery, place of delivery, previous complication, role of husbands in delivery, source of information about obstetric danger signs and BPCR, distance from health facility in min, mode of transportation).

4.7. Operational definition

- **Knowledge of danger sign:** Knowledgeable: if husbands knew obstetric danger signs more than mean average score during any of the three phases (pregnancy, childbirth, or post-partum period). Not knowledgeable: if husbands knew obstetric danger signs less than mean average score during the three phases. (19, 24).
- **Birth preparedness and complication readiness:** Level of birth preparedness and complication readiness was categorized as: prepared: for respondents responded yes for 3 or more of the birth preparedness and complication readiness components. Not prepared for respondents responded yes to less than three of the components of birth preparedness and complication(20, 27).
- **Vaginal bleeding:** any vaginal bleeding irrespective of the amount during pregnancy or severe vaginal bleeding or not the same as previous deliveries during labor and delivery(22)
- **Severe headache:** progressive in nature and failure to respond to over-the-counter remedies leading to visual changes such as blurred vision.

4.8. Data Collection Method and Instruments

The data was collected by face to face interviewer administered semi structured questionnaire. The questionnaire was composed of 3 components. These were sociodemographic and socio economic characteristics with 12 items. Among these items the average income was removed from analysis

because of missing values (64.5%), questions related with obstetric characteristics with 13 items, questions on knowledge of obstetric danger signs, and BPCR. The knowledge of danger sign had components at each 3 stage. The possible danger signs during pregnancy were: vaginal bleeding, severe headache, blurred vision, convulsions, swollen hands/face, high fever, loss of consciousness, difficulty of breathing, severe abdominal pain, severe weakness, reduced fetal movement and water breaks without labour. Possible danger signs during labour were: severe bleeding, severe headache, convulsion, high fever, loss of consciousness, labour lasting greater than 12hrs, and placenta not delivered 30min after baby. Possible danger signs during post-partum period were: severe bleeding, severe headache, convulsion, blurred vision, swollen hand/face, high fever, malodorous vaginal discharge, loss of consciousness, difficulty of breathing, and severe weakness during postpartum. The participants were asked to mention any dangers signs that can occur during the three periods. Questions on birth preparedness and complication readiness includes 6 components such as: saved money for delivery, identified blood donor, identified skilled birth attendant, identified health facility, saved money for emergency, and identified transportation. The tool was adapted from Johns Hopkins Program for International Education in Gynecology and Obstetrics (JHPIEGO)(2). It was prepared in English. The English version questionnaire was translated into ‘Afaan Oromoo’ then back to English by language experts. Then the data collection was run accordingly. The data was collected using 5 diploma Nurses after one-day training on the objective of the study and tools. Data collection was supervised by two supervisors.

4.9. Data Quality Control

To ensure the quality data collection, pre-test was done by taking 5% of total sample size of husbands. It was done by taking 30 husbands from Gohatsion 02 kebele. Then necessary modification was made before being applied on the actual study participation. Interviewers were trained before starting data collection properly. On each day the filled format was checked for completeness of the data. The data collection was made by study participant consent and by their own understandable language.

4.10. Data analysis and Processing

After data collection the data was checked for completeness before entry to computer. Then the collected data was entered to computer using software, Epidata 3.1 and then exported to SPSS version 23. Husbands knowledge was computed using above average mean score at each phase. After the mean was computed then using this mean the it was as knowledgeable for those who

score above average mean score, and not knowledgeable for those who score below average mean score knowledge items. Level of BPCR was categorized as prepared for respondents responded yes to 3 or more of BPCR components, otherwise it was coded as not prepared. Bivariate logistic regression was conducted to explore association of each variable with outcome variables to check which variables had association with the dependent variable individually and multivariate logistic regression (stepwise backward likelihood ratio method) was conducted to analyze factors that were associated with husbands' knowledge of danger signs, and birth plans and complication readiness. All associated variables with the main outcome variables by having odds ratio that reach statistical significance in the bi-variate model < 0.05 was candidate for the multivariate model at 95% C.I (p-value < 0.05). The data was summarized and the adjusted odds ratios (AORs) estimated; and their corresponding 95% confidence intervals (95% CI) was computed. The result was presented using tables, figures and narratives.

4.11. Ethical Considerations

The ethical approval letter was obtained from Jimma university, Institutional Review Board by Ref No IHRPGD/466/2019 on the date of 03/04/2019. During data collection all selected study participants were asked their permission and verbal consent was obtained prior to the interview from selected respondents. In addition, confidentiality of information was assured and moreover, to ensure confidentiality the name of respondents was not written on the questionnaire.

4.12. Dissemination Plan

After writing the report, the result will be submitted to school of Nursing and Midwifery, Institute of Health, faculty of Health Science, Jimma University, and also presented for school through defense. The result will be also submitted to Wereda Health office. Finally, the finding of the study will be disseminated to public through publication.

CHAPTER FIVE: RESULT

The data were collected from 593 participants, and 574 were completed the interview giving the response rate of 96.8%. The 19 questionnaires were incomplete and excluded from the analysis. The result was presented as descriptive and table for each components.

5.1 Sociodemographic and Socio Economic Characteristics

The mean age of respondents was 36.5 ± 7.8 years. Among the study participants 246(42.9%) were non educated while only 70(12.2%) were attended college and above. Regarding the ethnicity of the respondents, 563(98.1%) were Oromo, and concerning religion 539(93.9%) were orthodox. Regarding occupation, 390(67.9%) were farmers and 94(16.4%) were merchants. Most of them were from rural 484(84.3%) while 90(15.7%) were living in urban. Regarding husbands' involvement in health developmental army, 368(64.1%) of them were not participated (Table 2).

Table 1: Distribution husbands sociodemographic and economic characteristic in Wara Jarso, Ethiopia, April 2019

Variable	Characteristics	Frequency	Percent
Age of husbands	≤ 29	136	23.7
	30-34	116	20.2
	35-39	115	20.0
	40-44	90	15.7
	≥45	117	20.4
Age of wives	≤ 24	105	18.3
	25-29	144	25.1
	30-34	134	23.3
	≥ 35	191	33.3
Ethnicity of husbands	Oromo	563	98.1
	Others*	11	1.9
Religion of husbands	Orthodox	539	93.9
	Protestant	27	4.7
	Others**	8	1.4
Educational status of husband	Non educated	246	42.9
	Non formal education	77	13.4
	Primary education	97	16.9
	Secondary education	84	14.6
	College and above	70	12.2
Educational status of wife	Non educated	290	50.5
	Non formal education	23	4.0
	Primary education	109	19.0
	Secondary education	92	16.0
	College and above	60	10.5
Occupation of husbands	Farmer	390	67.9
	Merchant	94	16.4
	Employee	67	11.7
	Other***	23	4.0
Occupation of wives	House wife	421	73.3
	Merchant	97	16.9
	Employee	41	7.1
	Daily laborer	15	2.6
Place of residence of the husbands	Urban	90	15.7
	Rural	484	84.3
Involvement of husbands in developmental army	Leader	68	11.8
	Member	214	37.3
	Neither of the two	292	50.9
Involvement of wife in developmental army	Leader	25	4.4
	Member	181	31.5
	Neither	368	64.1

Others* = Amhara, Gurage, Silte

Others** = Wakefata, Muslim

Other*** = daily laborer and driver

5.2 Obstetrics Characteristics of the Respondents

The obstetric characteristic of the respondents was identified based on their wives' condition by asking the husbands. Among the respondents' wives of 327(57.0%) were breastfeeding during data collection. Regarding number of pregnancy wives of 544(94.8%) respondents were being pregnant more than one, and 252(43.9%) husbands were escorted their wife to health institution in their recent pregnancy. Concerning cultural acceptance of buying clothes and materials for baby before delivery only 107(18.6%) were responded as it was accepted. Regarding place of delivery of their wives 349(64.2%) were delivered their last recent pregnancy at home, and 122(21.3%) were developed obstetric complication. As to number of children 199(36.6%) of respondents were in the category of 0 to 2 children while 170(31.3%) were in the category of 3 to 4 children. About 284(49.5%) of the respondents were heard information of obstetrics danger sings and birth preparedness and complication readiness, and 106(37.3%) were heard from health professionals. 403(70.2%) of the respondents mentioned that there was no health facility in their kebele, and 168(29.3%) need to walk distances of 90 minutes and above. Among the respondents 404(70.4%) were responded that ambulance were used as transportation in the community (Table 3).

Table 2: Distribution of respondents by their and their wife’s obstetrics characteristics in Wara Jarso, Ethiopia, April 2019

Variable	Characteristics	Frequency	Percent
Current status of their wife	Pregnant	247	43.0
	Breastfeeding	327	57.0
Escorted wife to health institution	Yes	252	43.9
	No	322	56.1
Number of pregnancy including the current	One	30	5.2
	More than one	544	94.8
Place of delivery of last recent pregnancy (n =544)	Home	349	64.2
	Health facility	195	35.8
Obstetric complication in previous pregnancy (n =544)	Yes	116	21.3
	No	428	78.7
Number of children(n =544)	0-2	199	36.6
	3-4	170	31.3
	≥5	175	32.2
Cultural acceptance of buying materials for baby before delivery	Yes	107	18.6
	No	467	81.4
Heard about obstetric danger signs, BPCR	Yes	284	49.5
	No	290	50.5
Source of information(n = 284)	Radio	21	7.4
	TV	18	6.3
	From wife	100	35.2
	HEW	39	13.7
	Health professionals	106	37.3
Presence of health facility in kebele	Yes	171	29.8
	No	403	70.2
Time it take from health facility in minutes	<30	162	28.2
	30-60	163	28.4
	60-90	81	14.1
	>90	168	29.3
Mode of transportation to health facility	Ambulance	404	70.4
	Private car	16	2.8
	Cart	54	9.4
	On foot	100	17.4
Giving birth is women matter and husband has little contribution	Yes	35	6.1
	No	539	93.9

5.3 Knowledge of Obstetrics Danger Signs

During each period the respondents were asked to mention danger signs they knew. And severe vaginal bleeding was mentioned by 193(33.6%) during pregnancy, 294(51.2%) during delivery and 195(34.0%) during postpartum. Severe headache was mentioned by 160(27.9%) during pregnancy, 151(26.3%) during delivery and 186(32.4%) during postnatal. During pregnancy most of them, 255(44.4%) and 242(42.2%) mentioned problems with fetal movement and severe abdominal pain respectively. More than half 335(58.4%) were mentioned prolonged labour as obstetric danger sign during delivery. Among the respondents 201(35.0%) and 188(32.8%) were mentioned severe weakness and swollen hands/faces as danger signs during postpartum period respectively. Problems with fetal movement and water breaks without labour were mentioned as obstetric danger sign by 255(44.4%) and 200(34.8%) during pregnancy, while prolonged labour 335(58.4%) and not delivering placenta 136(23.7%) were mentioned during delivery. The respondents also mentioned swollen hands 188(32.8%), fever 176(30.7%) and severe weakness 201(35.0%) during post-partum (Table 4).

Knowledge of obstetric danger signs were measured at three periods. There were components used to measure at each period. The knowledge of obstetric danger sign of the respondents were computed at each period using average mean score and categorized as knowledgeable or not for each. The knowledgeable respondents about obstetric danger signs during pregnancy, delivery and postpartum period was 178(31.0%), 186(32.4%) and 170(29.6%) respectively. Then for the three again average mean score was computed to categorize the overall knowledge of respondents. After computing average mean score the overall knowledge of respondents was 184(32.06%) which was categorized as knowledgeable about obstetric danger signs for those above average mean score or not for less than average mean score (Figure 2).

Table 3: Knowledge of obstetric danger signs of among husbands of Wara Jarso, Ethiopia, April 2019

Variables	Frequency	Percent
During pregnancy		
Vaginal bleeding	193	33.6
Severe headache	160	27.9
Blurred vision	159	27.7
Convulsion	57	9.9
Swollen hands or face	180	31.4
High fever	77	13.4
Loss of consciousness	45	7.8
Difficulty of breathing	65	11.3
Severe weakness	129	22.5
Severe abdominal pain	242	42.2
Problems with fetal movement	255	44.4
Water breaks without labour	200	34.8
Delivery		
Severe bleeding	294	51.2
Severe headache	151	26.3
Convulsion	88	15.3
High fever	131	22.8
Loss of consciousness	90	15.7
Labour lasting more than 12 hrs	335	58.4
Placenta not delivered 30 min after baby	136	23.7
Postpartum		
Severe bleeding	195	34.0
Severe headache	186	32.4
Blurred vision	111	19.3
Convulsion	65	11.3
Swollen hands or face	188	32.8
High fever	176	30.7
Malodourous vaginal discharge	79	13.8
Loss of consciousness	107	18.6
Difficulty of breathing	150	26.1
Severe weakness	201	35.0

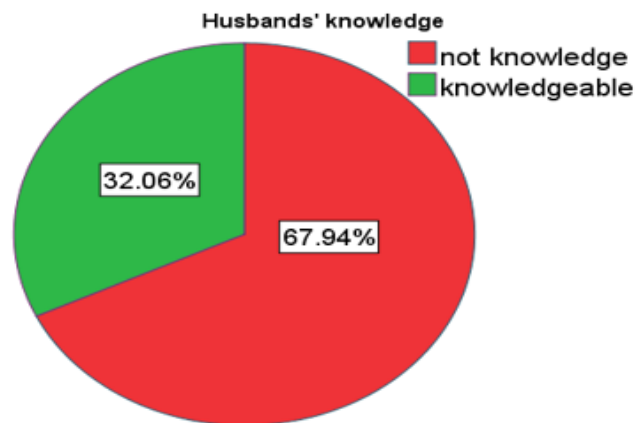


Figure 3: Knowledge of obstetric danger signs among husbands of Wara Jarso, April 2019

5.4 Birth Preparedness and Complication Readiness

The respondents were asked to mention the steps they have made during the current pregnancy if their wives were pregnant during study or during the last recent delivery if their wives were given birth within the past one year. Birth preparedness and complication readiness components that were prepared by the respondents were saving money 344(59.9%), identified skilled birth attendant 61(10.6%), identified health facility 141(24.6%) and identified transportation 132(23.0%). Only 51(8.9%) were identified the blood donor while only 93(16.2%) were saved money for emergency cases (Table 5). Level of birth preparedness and complication readiness was categorized as prepared or not prepared. And those who prepared three of BPCR item was categorized as prepared while those less than three were not prepared. Among the respondents 128(22.30%) were prepared while the rest were not (Figure 3).

Table 4: Respondents BPCR among husbands of Wara Jarso, Ethiopia, April 2019

Variable	Frequency	Percent
Saved money for delivery	344	59.9
Identified blood donor	51	8.9
Identified skilled birth attendant	61	10.6
Identified health facility	141	24.6
Saved money for emergency	93	16.2
Identified transportation	132	23.0

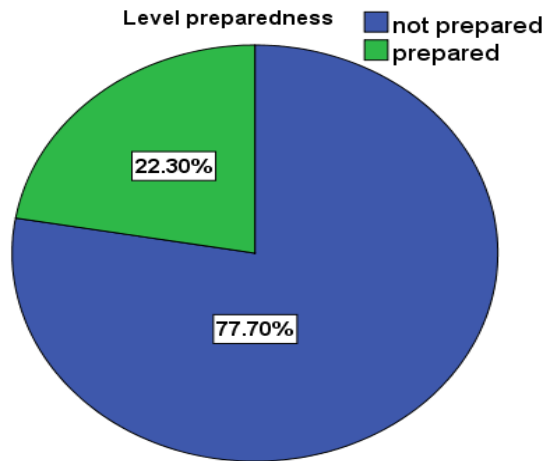


Figure 4: Level of birth preparedness and complication readiness of husbands of Wara Jarso, April 2019

5.5 Factors Associated with husbands' level of BPCR

5.5.1 Factors Associated with level BPCR in Bivariate Logistic Analysis

In Bivariate logistic analysis: age of husband, age of wife, educational status of husband, educational status of wife, occupation of husband, occupation of wife, place of residence, number of pregnancy, escort wife to health facility, cultural acceptability of buying materials for unborn baby, obstetric complication on the last recent pregnancy, source of information, presence of health facility, number of children, mode of transportation in community and time it take to health facility were found to be significantly associated at ($p\text{-value} \leq 0.05$) with level of BPCR.

Husbands in age category of 45 and above (COR =.177(95%CI .085, .370), $p=.001$), having wives in age category of 30-34 (COR =2.494(95%CI 1.416, 4.393), $p=.002$), attended college and above (COR =24.532(95%CI 11.616, 51.812), $p=.001$), husbands having wives attended college and above(COR =18.306(95%CI 8.960, 37.402), $p=.001$), employed (COR=13.333(95%CI 7.393, 24.046), $p=.001$), having employed wives (COR=9.221(95%CI 4.655, 18.269), $p=.001$), living in urban (COR=5.125(95%CI 3.182, 8.255), $p=.001$), being a leader of health developmental army (COR=.481(95%CI.303, .764), $p=.002$) were significantly associated with husbands' level of BPCR (Table 6)

In bivariate logistic analysis among the variables in obstetric characteristic: husbands with wives being pregnant once (COR =6.893(95%CI 3.186, 14.913), $p=.001$), escorted wife to health institution (COR =12.156(95%CI 7.182, 20.575), $p=.001$), acceptance of buying materials and clothes for baby before delivery (COR =7.090(95%CI 4.481, 11.217), $p=.001$), having history of

obstetric complication (COR = 3.058(95%CI (95%CI 1.931, 4.843)), p=.001), having information of obstetric danger signs complication (COR =8.284(95%CI 4.957, 13.844), p=.001), having children in category of ≥ 5 (COR =.239(95%CI .131, .434), p=.001) having health institution in villages (COR =2.338(95%CI 1.554, 3.517), p=.001), and living relatively nearby health facility (COR =4.613(95%CI 2.598, 8.191), p=.001), transportation on foot to health institution (COR =2.307(95%CI 1.380, 3.857), p=.001), having knowledge of obstetric danger sign (COR =10.936 (95%CI 6.936, 17.243), p=.001) were more likely prepared in bivariate logistic analysis (Table 7).

Table 5: Comparison of sociodemographic variable with husbands' level of BPCR in bivariate logistic regression analysis in Wara Jarso, Ethiopia, April 2019

Variable	Prepared		P	COR 95%CI	
	Yes	No			
Age of husband	≤ 29	47(34.6%)	89(65.4%)	1	1
	30-34	31(26.7%)	85(73.3%)	.181	.691(.402, 1.188)
	35-39	25(21.7%)	90(78.3%)	.026	.526(.298, .927)
	40-44	15(16.7%)	75(83.3%)	.004	.379(.196, .731)
	≥ 45	10(8.5%)	107(91.5%)	.001	.177(.085, .370)
Age of wife	≤ 29	39(37.1%)	66(62.9%)	.001	4.112(2.296, 7.365)
	30-34	38(26.4%)	106(73.6%)	.002	2.494(1.416, 4.393)
	35-39	27(20.1%)	107(79.9%)	.066	1.756(.963, 3.203)
	40-44	24(12.6%)	167(87.4%)	1	1
Educational status of husbands	Non educated	12(4.9%)	234(95.1%)	1	1
	Non formal	8(10.4%)	69(89.6%)	.087	2.261(.888, 5.753)
	Primary	34(35.1%)	63(64.9%)	.001	10.524(5.151, 21.502)
	Secondary	35(41.7%)	49(58.3%)	.001	13.929(6.750, 28.740)
	College+	39(55.7%)	31(44.3%)	.001	24.532(11.616, 51.812)
Educational status of wife	Non educated	16(5.5%)	274(94.5%)	1	1
	Non formal	2(8.7%)	21(91.3%)	.532	1.631(.351, 7.574)
	Primary	36(33.0%)	73(67.0%)	.001	8.445(4.440, 16.064)
	Secondary	43(46.7%)	49(53.3%)	.001	15.028(7.849, 28.772)
	College+	31(51.7%)	29(48.3%)	.001	18.306(8.960, 37.402)
Occupation of husband	Farmer	39(10.0%)	351, 90.0%)	1	1
	Merchant	43(45.7%)	51(54.3%)	.001	7.588(4.495, 12.809)
	Employee	40(59.7%)	27(40.3%)	.001	13.333(7.393, 24.046)
	Other	6(26.1%)	17(73.9%)	.022	3.176(1.183, 8.529)
Occupation of wife	Housewife	14(5%)	360(85.5%)	1	1
	Merchant	40(41.2%)	57(58.8%)	.001	4.142(2.545, 6.739)
	Employee	25(61.0%)	16(39.0%)	.001	9.221(4.655, 18.269)
	Daily laborer	2(13.3%)	13(86.7%)	.900	.908(.200, 4.123)
Place of residence	Urban	46(51.1%)	44(48.9%)	.001	5.125(3.182, 8.255)
	Rural	82(16.9%)	402(83.1%)	1	1
Husband involvement in DA	Leader	21(30.9%)	47(69.1%)	.417	1.270(.713, 2.261)
	Member	31(14.5%)	183(85.5%)	.002	.481(.303, .764)
	Neither	76(26.0%)	216(74.0%)	1	1

*= p<0.05

DA= developmental army

Table 6: Comparison of obstetric characteristic variable with husbands' level of BPCR in bivariate logistic regression analysis in Wara Jarso, Ethiopia, April 2019

Variable		Prepared		P	COR 95%CI
		Yes	No		
Escorted wife to health institution	Yes	109(43.3%)	143(56.7%)	.001	12.156 (7.182, 20.575)
	No	19(5.9%)	303(94.1%)	1	1
Number of pregnancy	One	19(63.3%)	11(36.7%)	.001	6.893(3.186, 14.913)
	> one	109(20.0%)	435(80.0%)	1	1
Obstetric complication	Yes	42(36.2%)	74(63.8%)	.001	3.058 (1.931, 4.843)
	No	67(15.7%)	361(84.3%)	1	1
Number of children	0-2	59(29.6%)	140(70.4%)	1	1
	3-4	34(20.0%)	136(80.0%)	.034	.593(.366, .962)
	≥ 5	16(9.1%)	159(90.9%)	.001	.239(.131, .434)
Acceptance of buying materials	Yes	59(55.1%)	48(44.9%)	.001	7.090(4.481, 11.217)
	No	69(14.8%)	398(85.2%)	1	1
Heard information	Yes	108(38.0%)	176(62.0%)	.001	8.284(4.957, 13.844)
	No	20(6.9%)	270(93.1%)	1	1
Presence of HI in kebele	Yes	57(33.3%)	114(66.7%)	.001	2.338(1.554, 3.517)
	No	71(17.6%)	332(82.4%)	1	1
Mode of transportation to health facility	Ambulance	73(18.1%)	331(81.9%)	1	1
	Private car	7(43.8%)	9(56.3%)	.015	3.527(1.272, 9.777)
	Cart	18(33.3%)	36(66.7%)	.010	2.267(1.220, 4.214)
	On foot	30(30.0%)	70(70%)	.009	1.943(1.182, 3.195)
Time it takes from health facility to home	<30	60(37.0%)	102(63.0%)	.001	4.613(2.598, 8.191)
	30-60	35(21.5%)	128(78.5%)	.014	2.144(1.169, 3.932)
	60-90	14(17.3%)	67(82.7%)	.196	1.639(.775, 3.463)
	>90	19(11.3%)	149(88.7%)	1	1
Knowledge of danger sign	Yes	94(51.1%)	90(48.9%)	.001	10.936(6.936, 17.243)
	No	34(8.7%)	356(91.3%)	1	1

5.5.2 Factors Associated with level of BPCR in Multivariable Logistic Analysis

After controlling confounding factors in multivariable logistic analysis of sociodemographic and obstetric characteristics with husbands' level of preparedness among variables significantly associated in bivariate logistic regression analysis using backward LR the following variables were left in the final model.

The variables were occupation of husband, place of residence, escort to health institution, cultural acceptance of buying materials before delivery and knowledge of obstetric danger signs. Merchant husbands were 2.272 times (AOR = 2.272 (95%CI 1.153, 4.478), p=.018) more prepared compared to farmers. Husbands living in urban were 5.550 times (AOR = 5.550 (95%CI 2.211, 13.933), p=.001) more likely to be prepared than those living in rural. And also husbands who escort their wives to health institution were 2.217 times (AOR = 2.217(95%CI 1.095, 4.487), p=.027) more likely prepared compared to did not escort. Those husbands who accepts buying material and clothes for baby before delivery were 3.599 times (AOR = 3.599 (95%CI 1.995, 6.490), p=.001) more likely to be prepared than those who think that buying materials for un delivered baby was not good. Knowledgeable husbands about obstetric danger sign were 4.957 times (AOR = 4.957 (95%CI 2.726, 9.016), p=.001) more likely to be prepared compared to not knowledgeable husbands (Table 8).

Table 7: Comparison of sociodemographic and obstetric characteristic variables with husbands' level of BPCR in multivariable logistic regression analysis in Wara Jarso, Ethiopia, April 2019

Variable	Prepared		COR 95%CI	AOR 95%CI	P
	Yes	No			
Occupation of husband	Farmer	39(10.0%)	351, 90.0%)	1	
	Merchant	43(45.7%)	51(54.3%)	7.588(4.495, 12.809)	2.272 (1.153, 4.478) .018
	Employee	40(59.7%)	27(40.3%)	13.333(7.393, 24.046)	2.220 (1.015, 4.854) .001
	Other	6(26.1%)	17(73.9%)	3.176(1.183, 8.529)	.930 (.234, 3.706)
Place of residence	Urban	46(51.1%)	44(48.9%)	5.125(3.182, 8.255)	5.550 (2.211, 13.933) .001
	Rural	82(16.9%)	402(83.1%)	1	
Escorted wife to HI	Yes	109(43.3%)	143(56.7%)	12.156 (7.182, 20.575)	2.217 (1.095, 4.487) .027
	No	19(5.9%)	303(94.1%)	1	
Buying materials	Yes	59(55.1%)	48(44.9%)	7.090(4.481, 11.217)	3.599 (1.995, 6.490) .001
	No	69(14.8%)	398(85.2%)	1	
Knowledge of danger sign	Yes	94(51.1%)	90(48.9%)	10.936(6.936, 17.243)	4.957 (2.726, 9.016) .001
	No	34(8.7%)	356(91.3%)	1	

CHAPTER SIX: DISCUSSION

However, husbands are the decision makers and heads of the households in this community their knowledge of obstetric danger sign was about one third while their preparedness was less than a quarter. There were variables associated with husbands' birth preparedness. Occupation of both husbands and wives, acceptance of buying materials and clothes before delivery and source of information were factors associated with knowledge, while occupation of husband, place of residence, number of pregnancy, acceptance of buying materials and clothes for baby before delivery and knowledge of obstetric danger sign were associated with birth preparedness.

This study shown that husbands preparedness for delivery and complication was low even though around one third have had knowledge of obstetric danger sign. This finding was higher than finding from southern Ethiopia, Tanzania, northwest Ethiopia(20, 22, 27). This difference could be explained as time gap and the wives' utilization of maternal care may be improved and initiated the husbands for preparation. study in Kenya was conducted on one factory and participants were selected purposefully. Study from north west Ethiopia were self-administered and this could lead to under scoring may be due to omission of questions.

However level of husbands' preparedness was lower compared to findings from Wolaita Sodo southern Ethiopia and Ambo town Ethiopia((24, 25). The difference could be explained as study conducted in Ambo, Ethiopia was conducted in urban. There may be exposure to information as they were from urban and probability of wives ANC follow up leads to good preparation. And the finding from southern Ethiopia indicated that the data were collected by reading the options for the respondents while in this study data was collected by asking respondents to mention the steps they have made in preparing themselves.

Bivariate logistic analysis indicated that there were variables significantly associated with preparedness of husbands. Among those variables the following were significantly associated in multi variate logistic analysis. With preparation of husbands: occupation of husbands, place of residence, escort wife to health institution, cultural acceptance of buying materials before delivery, and knowledge of obstetric danger signs.

Place of residence were significantly associated with preparation and husbands living in urban were four times more likely to be prepared than those living in rural. This may be due to accessibility to information and health institution as they may contact with different persons. But the study conducted in southern Ethiopia indicated that place of residence was negatively

associated with preparedness of husbands(22). Study from Tanzania shown that place of residence was significantly associated in bivariate logistic analysis, while not in multivariable logistic analyses(20).

Culture has also its effect on husbands' preparation, husbands who think that preparing material for baby before delivery as good were three times more likely to be prepared than those who think that buying materials for un delivered baby was not good. Those accepting buying clothes and other materials as good could prepare themselves as they have no bad perception while those with bad perception could not. Those who escorted their wives to health institution were two times more likely to be prepared compared to those who were not. This could be due to the fact that those who escorted have education from health care providers and initiated to for preparation. Knowledge of obstetric danger sign is significantly associated with preparation.

Knowledgeable husbands about obstetric danger sign were three times more likely to be prepared than not knowledgeable. This may be due to their knowledge of the impact of pregnancy related complications. The finding from Tanzania, ambo, Ethiopia and southern Ethiopia indicated that knowledge of obstetric danger sign were significantly associated with husbands' birth preparedness and complication readiness. Husbands with good knowledge were participated than those with poor knowledge(22, 20, 25). Husbands' awareness of obstetric danger sign made them participate in preparing necessary materials for complication prevention and early management of the complication. But those husbands having poor knowledge were less likely to be prepared for prevention of the complication. Husbands who interacts with others were knowledgeable about obstetric danger signs and prepared for birth and complication.

Strength and limitations of the study

Strength of the study

The study was conducted using standardized tool. The data collection was conducted at community level and husbands were studied. This study presents evaluating it from the husbands' perspective. Data collectors were trained to teach those who did not prepared for delivery and also about the complications.

Limitations of the study

This study was done using a cross-sectional design, which may result in difficulty of providing causal relationship between husbands' knowledge of obstetric danger signs and other variables and husbands BPCR and other variable. And also there could be a problem of recall bias even though reduced to one year, as the husbands were expected to remember events that occurred up to one year before the study and data were collected by asking husbands to mention the obstetric danger sign they know and activity they made without reading the options for them. To minimize his one year was used. Additionally, there could be social desirability bias especially when husbands were asked regarding cares they given. The husbands could respond as they were done without performing the activities.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION

7.1 Conclusion

More than three fourth of husbands in study area were not prepared for delivery and complication. Their level of preparation for delivery and complication was determined by occupation of husbands, escorting wives to health institution, cultural acceptance of buying materials and clothes before delivery of baby, place of residence and husbands knowledge of obstetric danger sign.

7.2 Recommendations

The finding of the study indicated knowledge of participants and their level of preparation was low and they were affected by different factors. Based on this finding the following recommendation were forwarded to concerned bodies for better maternal health service.

District health office: they have access to the community and to address the information for communities it is better if they create awareness about obstetric danger signs, and preparations to be made through different community meetings with husbands.

Media: the media has high coverage to transmit messages and better if they work on behavioral change on the communities' perception towards role of husbands in maternal care service. Culturally buying materials for un delivered baby is not supported and this needs the media to create awareness and preparing materials prevent complications.

Health extension workers: they are serving mothers in giving education and cares during pregnancy and follow if there are complications. It is better if they give health education for husbands about obstetric danger sign, and birth preparedness and complication readiness at community level.

Researchers: as only limited studies are conducted on husbands it is recommended to conduct qualitative study using focused group discussion including both husbands and wives. Since maternal care needs the participation of both should be studied to make appropriate intervention.

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ANNEXES

Annex I: English Version Questionnaire

JIMMA UNIVERSITY
INSTITUTE OF HEALTH
FACULTY OF HEALTH SCIENCE
SCHOOL OF NURSING AND MIDWIFERY

Information Sheet

You are invited to participate in research study to be conducted by Girma Teferi student of Jimma University. Please be patient while the interviewer read the following statement to you and ask any unclear question before you agree to participate.

Title: Knowledge of Obstetric Danger Signs, Birth Preparedness and Complication Readiness and Associated Factors among Husbands in Were Jarso Wereda, Ethiopia.

Objective: To assess knowledge of obstetric danger signs, level of BPCR and associated factors among husbands in Wara Jarso, Oromia, Ethiopia, 2019.

Participation Procedures and Guidelines

1. The information you provide will be kept completely anonymous, that is, your name will not be on any of the form
2. Your information will be kept confidentially
3. The interview will take about 20 minutes to complete; however, if you don't want to participate in the study you have full right.

Participation Benefits and Risks.

- ❖ Your participation in this study does not involve any risks.
- ❖ You also might experience some benefit from participating in this study. These benefits might be positive feeling from helping with an important research study.
- ❖ No incentive will be given for participants in the study

Rights to Refuse or Withdraw

- Your participation is voluntary and there is no penalty for you not wanting to participate.
- This means that you are free to stop at any point or to choose not to answer any particular question or all the questions.

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JIMMA UNIVERSITY
INSTITUTE OF HEALTH
FACULTY OF HEALTH SCIENCE
SCHOOL OF NURSING AND MIDWIFERY

Verbal Consent Form

Good morning/afternoon. My name is _____ (Interviewer) I represent Girma Teferi. He is attending Master's Degree in Maternity Nursing at Jimma University. For his graduation he is conducting research on knowledge of obstetric danger signs, birth preparedness and complication readiness and associated factors among husbands whose wives are pregnant and nursing. The results of this study will be used in improving health programs for women.

You have been selected for the interview by means of a random or chance selection process, much like picking an orange out of a basket without looking. I would like to ask you a few questions if I may, but you can refuse to answer any question I ask. You may end the interview at any time. You can also refuse to participate in the study entirely. The interview will last approximately 20min. The information we collect from you will not be shown to anyone outside of this project.

May I proceed with the questions? a. Yes b. No

Name of interviewer _____ Date _____ sign _____

Questionnaire Code _____

Result of the interview: A. Completed B. Partially completed

Supervisor's name & Sign _____

Instructions

This questionnaire is designed for the study on Knowledge of Obstetric Danger Signs, Birth Preparedness and Complication Readiness and Associated Factors among Husbands in Were Jarso Wereda, Ethiopia. The questionnaire is divided into four parts (sociodemographic and socioeconomic characteristics, obstetric characteristics, knowledge of obstetric danger signs, and birth preparedness and complication readiness). You are expected to explain every question clearly and completely. Record the answers appropriately.

A. Socio-demographic and socio economic characteristics

Q. #	Question	Response	Skip
101	How old are you?	_____ (in years)	
102	Your wife's age in years	_____ (in years)	
103	Ethnicity	1. Oromo 2. Amhara 3. Others _____ (specify)	
104	Religion	1. Orthodox 2. Protestant 3. Muslim 4. Others(specify).....	
105	What is your educational status?	1. No education 2. Non formal education 3. Primary education 4. Secondary education 5. College diploma or degree	
106	What is your wife's educational status?	1. No education 2. Non formal education 3. Primary education 4. Secondary education 5. College diploma or degree	
Socio economic characteristics			
107	What is your Occupation?	1. Farmer 2. Merchant 3. Government employee	

		4. Daily laborer 5. Others (specify) _____	
108	What is your wife's occupation?	1. House wife 2. Merchant 3. Daily laborer 4. Others (specify) _____	
109	Where do you live?	1. Urban 2. Rural	
110	Your involvement in health development army	1. Leader 2. Member 3. Neither of the two	
111	Your wife's involvement in health development army	1. Leader 2. Member 3. Neither of the two	
112	What is your family average income?	_____	

B. Obstetrics characteristics of the respondents

Q. #	Question	Reponses	Skip
201	Does your wife pregnant or breast feeding now?	Pregnant Breastfeeding	
202	Do you escorted your wife to ANC?	1. Yes 2. No	
203	How many times she became pregnant including the current?	One More than one	
Question # 204 to 206 is only for those whose wife has history of at least one delivery.			
204	Where was your wife's place of delivery of last recent pregnancy?	1. Home 2. Health facility	
205	Is there Obstetric complication in previous pregnancy?	1. Yes 2. No	
206	How many children do you have?	_____	

207	In your community, is that culturally acceptable to by materials for baby before delivery?	1. Yes 2. No	
208	Have you ever heard about danger signs, and BPCR	1. Yes 2. No	210
209	If yes for Q# 208, what was your source of information?	1. Radio 2. Television 3. Discussion with wives 4. HEW 5. Health workers 6. Others (specify) _____	
210	Is there health facility in your kebele?	1. Yes 2. No	
211	How long would it take to reach health facility?	_____ By hrs/min	
212	In your community, how would a woman go to health facility?	1. Ambulance 2. Private Car 3. Cart 4. On Foot 5. Other _____ (Specify)	
213	Do you think that giving birth is mostly a woman's matter and husbands have little to contribute?	1. Yes 2. No	

C. Questions of obstetric danger signs knowledge, and level of BPCR of respondents

Questions of knowledge of obstetric danger signs.

S. No	Questions	Response	Skip
301	What are some serious health problems that can occur during pregnancy that could endanger the life of a pregnant woman?	<ol style="list-style-type: none"> 1. Bleeding 2. Severe Headache 3. Blurred Vision 4. Convulsions 5. Swollen Hands/Face 6. High Fever 7. Loss Of Consciousness 8. Difficulty Breathing 9. Severe Weakness 10. Severe Abdominal Pain 11. Accelerated/ Reduced Fetal Movement 12. Water Breaks Without Labor 13. Other _____ (Specify) 	
302	What are some serious health problems that can occur during labor and child birth that could endanger the life of a pregnant woman?	<ol style="list-style-type: none"> 1. Severe Bleeding 2. Severe Headache 3. Convulsions 4. High Fever 5. Loss Of Consciousness 6. Labor Lasting >12 Hours 7. Placenta Not Delivered 30 Min After Baby 8. Other _____ (Specify) 	
303	Which of the following health problems may occur during postpartum period?	<ol style="list-style-type: none"> 1. Severe Bleeding 2. Severe Headache 3. Blurred Vision 4. Convulsions 5. Swollen Hands/Face 6. High Fever 	

		<ul style="list-style-type: none"> 7. Malodorous Vaginal Discharge 8. Loss Of Consciousness 9. Difficulty Breathing 10. Severe Weakness 11. Other _____ (Specify) 	
Activities of birth preparedness and complication readiness			
304	Which of the following were prepared in the last recent pregnancy /during the current pregnancy of your wife?	<ul style="list-style-type: none"> 1. Saved money for delivery 2. Identified blood donor 3. Identified skilled birth attendant 4. Identified health facility 5. Saved money for emergency 6. Identified transportation 7. Other _____ 97(Specify) 	

The end, thank you for your participation

Annex II Afaan Oromoo Version Questionnaire

YUUNIVARSIITII JIMMAA

INISTITIYUUTII FAYYAA

FAAKAALTII SAAYINSII FAYYAA

MANA BARNOOTAA NARSIINGII FI MIIDWAAYIFERII

Odeeffannoo

Qorannoo barataa Yuunivarsiitii Jimmaan taasifamu kanarratti akka hirmaattuuf filatamteetta. Wayta gaafataan himoota armaan gadii siif dubbisan obsaan akka hordoftanii fi waan ifa hin taane gaafattan isin beeksisa.

Mata duree: “Beekumsa abbootii warraa mallattoolee balaafamoo ulfaa fi dahumsaan walqabataniif fi qophiilee dahumsaaf taasisaniif qophaawummaa rakkinoota walxaxoo fi wantoota hidhata waliin qaban irratti, Aanaa Warra Jaarsoo, Itoophiyaa keessatti”

Kaayyoo: Aanaa Warra Jaarsoo keessatti Beekumsa abbootiin warraa mallattoolee ulfaa fi dahumsaan walqabataniif akkasumas qophiilee dahumsaaf taasisaniif qophaawummaa rakkinoota walxaxoo fi wantoota hidhata waliin qaban, adda baasuuf,

Qajeelfamaa fi adeemsa hirmaannaa

- ✓ Odeeffannoon ati nuu laattu iccitiinsaa kan eegameedha
- ✓ Maqaan kee hin barreeffamu
- ✓ Gaaffiif deebii kana xumuruuf naannoo daqqiqa 20 fudhata. Yoo hirmaachuu hin feene mirga qabda.

Faayidaa fi Miidhaa Hirmaannaa.

- ❖ Miidhaa tokkoyyuu sirraan hin gahu
- ❖ Qorannoo kana keessatti hirmaachuun kee miira gammachuu siif kennuu qaba.
- ❖ Kennaan addaa siif kennamu hin jiru

Mirga Diduu fi Adda Kutuu

- Hirmaannaa fedhiirratti hundaa’e waan ta’eef yoo hin hirmaatiin adabbii tokkoyyuu hin qabu.
- Adda kutuufis mirga qabda.
- Teessoo: imeelii: girmateferi56@gmail.com, lakka bilb.: +251918799452

YUUNIVARSIITII JIMMAA

INISTITIYUUTII FAYYAA

FAAKAALTII SAAYINSII FAYYAA

MANA BARNOOTAA NURSIINGII FI MIIDWAAYIFERII

Foormii Waliigaltee Afaanii

Akkam bultan/ooltan? Maqaan koo _____ jedhama(gaafataa) Girmaa Tafariin bakka bu'a. Inni barnoota digrii lammataasaa fayyaa haadholiitiirratti Yuunivarsiitii Jimmaatti hordofaa jira. Eebbasaaf waraqaa qorannoo beekumsa abbaan warraa mallattoolee balaafamoo ulfaan walqabatanii dhufan, qophiilee dahumsaaf taasisanii fi qophii rakkoo walxaxaaf taasisifamuu fi wantoota kanaan wal qabatanirratti abbaa warraa haadha manaa ulfa qabanii fi akkasumas abbaa warraa haadha manaa daa'ima waggaa tokkoo gadii qaban irratti. hojjetaa jira. Bu'aan qorannoo kanaa sagantaa kenniinsa tajaajila fayyaa haadholii fooyyessuuf gargaaruu danda'a.

Gaaffiifi deebii kanaaf mala carraa jedhamuun filatamtee jirta. Innis mala osoo ijaan hin ilaaliin burtukaan saanduqa keessaa kaasuuti. Yoo eeyyamamaa taate gaaffilee muraasa sigaafachuun barbaada. Gaaffilee kamiyyuu deebisuu dhiisuu ni dandeessa. Yoo hin barbaanne yeroo kamiyyuu gaaffiif deebii adda kutuu dandeessa. Guutummaa gaaffiif deebii kanaas hirmaachuu dhiisuu ni dandeessa. Gaaffiif deebiin kun tilmaamaan daqiiqaa 20 kan fudhatu yoo ta'u odeeffannoon isininirraa funaanamu kun iccitiidhaan kan qabamu ta'a.

Itti fufuu nan danda'aa? a. Eeyyee b. Lakkii

Maqaa gaafataa _____ Guyyaa _____ mallattoo_____

Koodii Gaafannoo _____

Deebii gaaffiif deebii: A. Hundi guutame B. Walakkaan guutame

Maqaa fi Mallattoo too'ataa -----

Qajeelfamoota

Gaafannoon kun Beekumsa abbootii warraa mallattoolee ulfaa fi dahumsaan walqabataniif fi qophiilee dahumsaaf taasisaniif qophaawummaa rakkinoota walxaxoo fi wantoota hidhata waliin qaban, Aanaa Warra Jaarsoo, Itoophiyaa keessatti taasifamuuf qophaa'e. Gaafannoon kunis kutaa 3 kan qabu yoo ta'u inni jalaqabaa gaaffilee hawaas dinagdeeti. Kutaan lammataa gaaffilee uflaa fi dahumsaan walqabataniidha. Kutaan dhumaa gaaffilee beekumsa mallattoolee balaafamoo fi qophiilee dahumsaaf fi rakkinoota walxaxoof taasifamaniidha.

A. Gaaffilee Hawaasummaa fi hawaas dinagdee Hirmaattotaa

# Gaafa.	Gaaffilee	Koodii	Deemi gara
101	Umuriin kee meeqa?	_____ (waggaadhaan)	
102	Umurii haadha manaa	_____ (waggaadhan)	
103	Saba	1. Oromoo 2. Amaaraa 3. Kan biro _____ (caqasi)	
104	Aantaa	1. Ortodoksii 2. Pirootestaantii 3. Musliima 4. Kan biro (caqasi).....	
105	Sadarkaan barnootaa kee maali?	1. Hin baranne 2. Barnoota idilee alaa 3. Sadarkaa tokkofaa kan barate 4. Sadarkaa lammaffaa 5. Dippiloomaa kolleejjii fi Sanaa ol	
106	Sadarkaa barnootaa haadha manaa keetii mail?	1. Hin baranne 2. Barnoota idilee alaa 3. Sadarkaa tokkofaa kan barate 4. Sadarkaa lammaffaa 5. Dippiloomaa kolleejjii fi Sanaa ol	
107	Hojiin kee maali?	1. Qotee bulaa 2. Daldalaa 3. Hojjetaa mootummaa 4. Hojjetaa guyyaa 5. Kan biro (caqasi) _____	

108	Hojiin haadha manaa keetii maali?	1. Giiftii manaa 2. Daldaltuu 3. Hojjetuu mootummaa 4. Hojjetuu guyyaa 5. Kan biroo (caqasi) _____	
109	Eessa jiraatta?	1. Magaalaa 2. Baadiyyaa	
110	Hirmaannaa kee raayyaa misooma fayyaa keessatti	1. Dura taa'aa 2. Miseensa 3. Lamaanuu miti	
111	Hirmaannaa haadha manaa kee raayyaa misooma fayyaa keessatti	1. Dura teessuu 2. Miseensa 3. Lamaanuu miti	
112	Galii ji'aa/waggaa	_____ ETB	

B. Gaaffilee Ulfaa fi Dahumsaan walqabatan

Lakk. Gaaffii	Gaaffilee	Deebii	Darbi
201	Amma haadhi manaa kee ulfa moo hoosisaa jirtii?	1. Ulfa 2. Hoosisaa jirti	
202	Ulfa kana duraarratti haadha manaa kee hordoffii ulfaaf gara dhaabbata fayyaa geessitee turtee?	1. Eeyyee 2. Lakkii	
203	Isa ammaa kana waliin wayita meeqa ulfoofte?	1. Al Tokko 2. Tokkoo ol	
Gaaffileen # 204 hanga 206 namoota haadhi manaasaanii yoo xiqqaate yeroo tokko deesse qofaafi.			
204	Haati manaa kee ulfa boodanaa eessatti deesse?	1. Mana 2. Dhaabbata fayyaa	
205	Ulfa kana duraa irratti rakkinootni walxaxaan turanii?	1. Eeyyee 2. Lakkii	

206	Ijoollee meeqa qabdu?	_____	
207	Akka aadaa hawaasa keessaniitti daa'ima dhalatuuf jiruuf meeshaalee bituun fudhatama qabaa?	1. Eeyyee 2. Lakkii	
208	Waayee Mallattoo balaafamoo fi qophiilee dahumsaa fi rakkoolee wal xaxoo dhageessee beektaa?	1. Eeyyee 2. Lakkii	210
209	Gaaffii # 208 eeyyee yoo jette, maddi odeeffannoo kee maa ture?	1. Raadiyoo 2. Teelevizhini 3. Marii haadha manaa waliin 4. Hojjettuu exteenshini fayyaa 5. Hojjettoota fayyaa 6. Kan biroo (caqasi)_____	
210	Dhaabbanni fayyaa ganda keessan keessa ni jiraa?	1. Eeyyee 2. Lakkii	
211	Dhaabbata fayyaa gahuuf sa'aa hagam fudhata?	_____ Sa'aatii/daqiiqaan	
212	Hawaasa keessan keessatti dubartiin akkamiin gara dhaabbata fayyaa deemti?	1. Ambulaansiin 2. Konkolaataa dhuunfaan 3. Gaariin 4. Miilaan Kan biroo _____ (caqasi)	
213	Dahumsi irra caalaan isa dhimma dubartootaa fi dhiirri hirmaannaa xiqqoo qofa qabaata jettee yaaddaa?	1. Eeyyee 2. Lakkii	

C. Gaaffilee Beekumsaa Mallattoolee Balaafamoo Ulfaa fi Dahumsaa, Qophii

Dahumsaa fi Rakkinoota Walxaxoof taasisifaman

Gaaffilee beekumsaa mallattoolee balaafamoo ulfaa fi dahumsaan wal qabatan

# Gaaffii	Gaaffilee	Deebii	Darbi
301	Rakkinoota cimoo yeroo ulfaa mudachuun lubbuu haadha miidhuu danda'an maal faa beekta?	<ol style="list-style-type: none"> 1. Dhiiguu karaa qaama hormaataa 2. Mataa dhukkubbii cimaa 3. Ija duraa hurrrii maruu 4. Hurgufuu ykn bubutuu 5. Dhiituu harkaa/ fuulaa 6. Ho'ina qaamaa olka'aa 7. Of wallaalu 8. Hanrganuu dadhabuu 9. Dadhabbii cimaa 10. Dhukkubbii garaa cimaa 11. Dabaluu/hir'suu sochii daa'imaa 12. Dhangala'uu bishaan gubbee <p>Kan biroo _____ (caqasi)</p>	
302	Rakkinoota yeroo ciniinsuu fi dahumsa mudachuun lubbuu haadha miidhuu danda'an maal faa beekta?	<ol style="list-style-type: none"> 1. Baay'ee dhiiguu 2. Mataa bowoo cimaa 3. Hurgufuu ykn bubutuu 4. Ho'inni qaamaa olka'uu 5. Of wallaalu 6. Ciniinsuu sa'aa 12 ol ture 7. Obbaatiin dhalchuu mucaa booda daqiiqaa 30 ol turuu <p>Kan biroo _____ (caqasi)</p>	
303	Rakkinoota fayyaa gadii keessaa kamtu wayta dahumsa boodaa mudachuu danda'a?	<ol style="list-style-type: none"> 1. Baay'ee dhiiguu 2. Mataa bowoo cimaa 3. Ija duraa hurrrii maruu 4. Hurgufuu ykn bubutuu 5. Dhiito harkaa/fuulaa 6. Ho'a qaamaa cimaa/High Fever 	

		<p>7. Dhangala'aa foolii badaa qaama hormaataarraa bahu</p> <p>8. Of wallaaluu</p> <p>9. Afuura baafachuu dadhabuu</p> <p>10. Dadhabbii cimaa</p> <p>Kan biroo _____ (caqasi)</p>	
Qophilee dahumsaaf fi of qophaawummaa rakkinoota walxaxoof taasifaman			
304	<p>Kanneen gadii keessaa ulfa haadha manaa kee isa dhiyoo fi boodanaarratti/ulfa ammaarratti kam qopheessite?</p>	<p>1. Dahumsaaf maallaqa kuusera</p> <p>2. Nama dhiiga arjoomu adda baasera</p> <p>3. Ogeessa muuxannoo qabu adda baasera</p> <p>4. Dhaabata fayyaa adda baasera</p> <p>5. Maallaqa yeroo ariifachiisaaf kuusera</p> <p>6. Geejjiba adda baasera</p> <p>Kan biroo(caqasi) _____</p>	

Xumura, Hirmaannaa keessaniif Galatoomaa