Study of determinant factors and magnitude of birth preparedness / complication readiness practice among rural women of Bench Maji Zone, SNNPR, Ethiopia

A Thesis submitted to School of Graduate Studies of Addis Ababa University , Health Sciences college, School of Public Health in Partial fulfillment of the requirement for the Degree of Master in Public Health

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List of abbreviations and acronyms

ANC	Antenatal Care
AOR	Adjusted Odds Ratio
BP/CR	Birth Preparedness/Complication Readiness
CI	Confidence Interval
C/n	Complication
COR	Crude Odds Ratio
CSA	Central Statistics Agency
ETB	Ethiopian Birr
FANC	Focused Antenatal Care
HDAs	Health Development Armies
HEWs	Health Extension Workers
HF	Health Facility
LB	Live Birth
NGOs	Non Governmental Organizations
OR	Odds Ratio
SBA	Skilled Birth Attendant
SNNPR	Southern Nations Nationalities Peoples Region
SVD	Spontaneous Vaginal Delivery
TBAs	Traditional Birth Attendants
UNFPA	United Nation Fund for Population Affairs
WHO	World Health Organization

Abstract

Background

Birth preparedness and complication readiness have been considered as comprehensive strategy aimed at promoting the timely utilization of skilled maternal health care. However, its status and affecting factors have not been well studied at different levels in the study area. Thus, this study was aimed to fill this gap by conducting community based study in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia

Method

Community-based cross-sectional study was conducted among 581 recently delivered women in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia. Interviewer administered questionnaire was used for data collection . The study employed multistage sampling techniques . Descriptive, binary and multiple logistic regression analyses were conducted to assess the association between determinant factors and birth preparedness and complication readiness practices..

Results

We obtained data from 530 mothers, yielding a response rate 91.2%. Considering place of delivery identification, means of transportation, skilled birth attendants and saving money, about 62.2% of the respondents were prepared for birth and its complications. Preparation for birth and its complication was higher among educated husbands (AOR = 1.695, 95% CI = 1.109, 2.590). previous delivery (AOR = 0.493, 95% CI = 0.305, 0.799) and knowledge of obstetric complications (AOR = 1.710, 95% CI = 1.092, 2.680) were also significantly associated with birth preparedness and complication readiness.

Conclusion

Based on the findings of the research we conclude that the magnitude of birth preparedness and complication readiness in the study area was relatively high (62.2%). The principal factors affecting birth preparedness and complication readiness were age of respondents at interview, husband's educational status, birth order and women who have knowledge of obstetric complications. The study has also clearly evidenced that the respondents' knowledge of key danger signs was low and large proportion of clients were not prepared for obstetric emergencies.

Recommendations

Thus, community-based education about preparation for birth and its complication and expanding husbands educational opportunities are important factors in enhancing knowledge of danger signs and hence reducing the effect of pregnancy related complications.

1-INTRODUCTION

1.1-Background

Globally, 293,000 women die due to pregnancy-related causes (1), and almost all (99 %) of those maternal deaths occur in developing nations. Sub-Saharan Africa and Southern Asia account for 85% (2)

The United Nations' Millennium Development $Goal_5$ is to reduce maternal mortality by three-fourth by the year 2015(3). A woman dies every minute due to factors associated with labour and delivery. The highest maternal mortality rates are in Africa with life time risk of 1 in 16 compared to the lowest rates in Western Nations with life time risk of 1 in 2800(4).

Ethiopia is one of five countries that together account for 50 percent of the world's maternal deaths(5).

Ethiopia has made progress in lowering maternal mortality rates, but due to individuals commitment involved in the system, many women are still succumbing to preventable complications during pregnancy ,child birth and post delivery periods(6). There have been interventions, but the impact these have made has not been as significant.

The country recorded 676 maternal deaths for every 100,000 live births in 2011[420/100000LB in 2013(2)], which is up from 673 in 2005, and mothers who delivered with the help of a skilled attendant rose from 10 percent in 2011 to 15 percent in 2014.Ethiopia intends to bring maternal mortality down to 267 by 2015(7).

The five major causes of maternal deaths in Ethiopia are abortion complications, ruptured uterus, puerperal sepsis, postpartum hemorrhage and preeclampsia/eclamsia (8). Most of maternal deaths arise during delivery and post-natal period(9). This indicates that there are still significant obstacles in terms of access to and provision of antenatal and obstetric health care services, especially in rural areas.

A ground-breaking strategy should be formulated in rural areas, where 83 percent of the country's (87.1 million) people reside. Forty five percent of births in urban areas of Ethiopia are attended by skilled health personnel, compared to only three percent births in rural areas(6).

Birth preparedness is not easy to achieve. Many people in developing countries live on less than US $1 a day, which is hardly for themselves to put aside money for the possibility of an obstetric emergency. In rural areas, the situation is even more complex: even if transportation (and the money to pay for it) is available in the case of an obstetric emergency, distance and lack of maintained roads may still cause delays sufficient to threaten the life women in danger (10).

Women knowledge of obstetric danger signs and improved birth preparedness practices are of the best approaches for skilled service utilization in low-income countries(11).

1.2-Significance of the study

Although women's awareness about obstetric danger signs and birth preparedness have considerable importance for improving maternal and child health, little is known about the current knowledge and influencing factors in rural Ethiopia in general and in the SNNPR in particular(12). This study therefore, aims to fill the gap by assessing the current level of birth preparedness/complication readiness practice with determinant factors among rural women who gave birth in the past one year prior to this survey in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia.

The findings may help to improve maternal health service utilization and used as a base line data for further studies in the study area as well as among other western Zones of SNNPR.

2-LITRATURE REVIEW

2.1-Over view of /maternal health

There is no mystery about why so many women are dying while giving birth. They are dying because they have no access or have limited access to health care, or because the quality of care is poor(13).

Maternal deaths can be defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes (14).

Causes of maternal deaths are direct and indirect . Around eighty percent of maternal deaths worldwide are due to direct obstetric complications such as hemorrhage, infection, obstructed and prolonged labor, unsafe abortion and hypertensive disorders of pregnancy(4). Indirect causes which are aggravated by pregnancy, such as malaria, diabetes, hepatitis, anemia and other cardiovascular disorders can also lead to maternal death(4).

Most (62 percent) maternal deaths occurred in sub-Saharan Africa (179 000 deaths) (15). Nearly a third of maternal deaths worldwide occurred in two countries: 17 percent in India (50,000 deaths in 2013), and 14 percent in Nigeria (40,000 deaths)(15).

Maternal mortality in Ethiopia is among the highest in the World (676/100 00 LB) (7).About 85% of maternal deaths in Ethiopia were direct obstetric complication which include abortion 32%, obstructed labor 22%, sepsis 12%, hemorrhage 10% and hypertension 9%, associated with adolescent pregnancy and neglected prolonged labor (16).

The Federal Ministry of Health National Reproductive Health Strategy, focuses on empowering women, men, family and communities for their understanding of pregnancy risks and complications(17). One of the targets in the strategies is to ensure that 80% of all families recognize at least three danger signs associated with pregnancy related complications by 2010 in areas where health extension program is fully implemented .

2.2 Service utilization

Globally ,one third (45 million) of the deliveries are at home, lacking skilled birth attendants(18). Facility delivery in developing countries were low(40%) compared to developed countries which is more than 99% (19).

Only a third of Ethiopian women received antenatal care and majority of the deliveries in Ethiopia were home delivery (90 percent), Urban birth is more in facilities than rural birth(50 percent vs 4 percent), It also had great disparity among regions (less than 10 percent in SNNPR Vs 82 percent in Addis Ababa)(7).

A study done in Gonder, Amhara Region, Ethiopia shows that only 25% of rural women gave birth at health facility , while 76.4% were at home attended by TBAs and their relatives (20).

2.3 Birth preparedness and complication readiness

"Birth-preparedness and complication readiness (BP/CR) is a comprehensive strategy aimed at promoting the timely utilization of skilled maternal and neonatal health care"(21).

The key elements of BP/CR are : knowledge of danger signs, plan for place of birth; plan for a skilled birth attendant, plan for transportation and plan for saving money and plan for blood donor(10). This is because every pregnant woman faces the risk of sudden, unpredictable complications that could end in death or injury to herself or to her infant.

BP/CR encourages women, households, and communities making swift decision-making, reduce delays in reaching care once a problem arises and reduces delays in receiving appropriate care(22) . It also calls for providers and facilities to be prepared to attend births and get ready to treat complications.

Most maternal deaths in resource poor countries like Ethiopia are attributed to the three delays (23).

First delay: Lack of information and adequate knowledge about danger signals during pregnancy and labor; cultural/ traditional practices that restrict women from seeking health care; lack of money

Second delay: Out of reach of health facilities; poor road, communication network, community support mechanisms

Third delay: Inadequate skilled attendants; poorly motivated staff; inadequate equipment and supplies; weak referral system, procedural guides.

Previous studies show that Birth preparedness and complication readiness is less common in many developing countries, including Ethiopia : like in north Ethiopia, 22.0%(24) , Northern Nigeria 27.5%(25), Southern Ethiopia 17% (26), Kenya 15% (27), and Burkina Faso 18% (28)

2.4 Obstetric danger signs

With the assumption of focused antenatal care(FANC) every pregnancy is at risks(29) . Evidence suggests that raising awareness of women about obstetric danger signs would improve early detection of problems and reduces the delay in deciding to seek obstetric care(30) .

The danger signs are not the actual obstetric complications, but symptoms that are easily identified by non-clinical personnel. They are mainly classified into three(31):

I-***Danger sign during pregnancy***: vaginal bleeding ,swollen hand and face ,blurred vision

II-***Danger sign at child birth***: severe vaginal bleeding, prolonged labor(>12 hour), convulsion, retained placenta(>1 hour)

III-***Danger sign after birth(postpartum)*** : severe vaginal bleeding, offensive vaginal bleeding high fever

Studies done in Ethiopia (24), Burkina Faso (28) and Tanzania (30) indicate that there were low levels of awareness of women on obstetric danger signs during pregnancy, delivery and postpartum. The little awareness of danger signs together with lack of preparedness leads to delay in seeking skilled care that results in high levels of maternal mortality and morbidity.

2.5 Associated factors of birth preparedness and complication readiness practices

2.5.1 Socio demographic factors

The common socio demographic factors affecting BP/CR practice in Ethiopia are maternal economic and decision making status , residence, education, occupation , and age (7, 18, 24). Among those factors, education is the most important determinant to make decision on obstetric care utilization. A Study done in Bangladesh(32) and Arsi Zone, Oromiya(33) show that maternal education is significantly associated with birth preparedness that favors the decrement of home delivery.

2.5.2 Obstetric Factors

Studies indicated that women having ANC service, Previous facility delivery and birth order more than one are significantly associated with BP/CP practice (34). A study conducted in Cambodia indicated that women who were previously attended by skilled attendants used the same service in their subsequent births(35).

Studies in Bangladesh (32) and Arsi Zone, Oromya, Ethiopia(33) also signify that ANC utilization had strong association with BP/CR practice, like women using ANC service have higher facility delivery utilization than those who did not have .Women who are pregnant for the first time are more likely practice BP/CR (36-38), because of fear of complication during child birth.

A study conducted in rural Uganda suggests that attendance of antenatal care of four or more times was not associated with birth preparedness and complication readiness practices(39).

2.5.3 Explanation of the conceptual framework

The diagram below is the conceptual framework of the study. BPCR is a strategy designed to help reduce the delays that result in maternal deaths. Socio demographic factors such as level of education, age, marital status, occupation, husband education and family size have an association with the level of birth preparedness.

The above factors, family and community support, knowledge and experience on BP/CR affect the first delay which is deciding to seek care. A woman's level of knowledge on obstetric factors as well as her ability to recognize danger signs early enough could also influence her preparedness towards birth.

Socio-economic factors such as availability of funds(to save money) have a direct effect on the second delay which is timely arrival at the health facility. A good social / family support system is an important way in which pregnant women can receive tangible and non tangible support. A contingency plan such as the ability to make decisions on place of delivery, arranging for blood donation and having prior transport arrangements do have a positive effect on birth preparedness and complication readiness as well as the second delay(40)

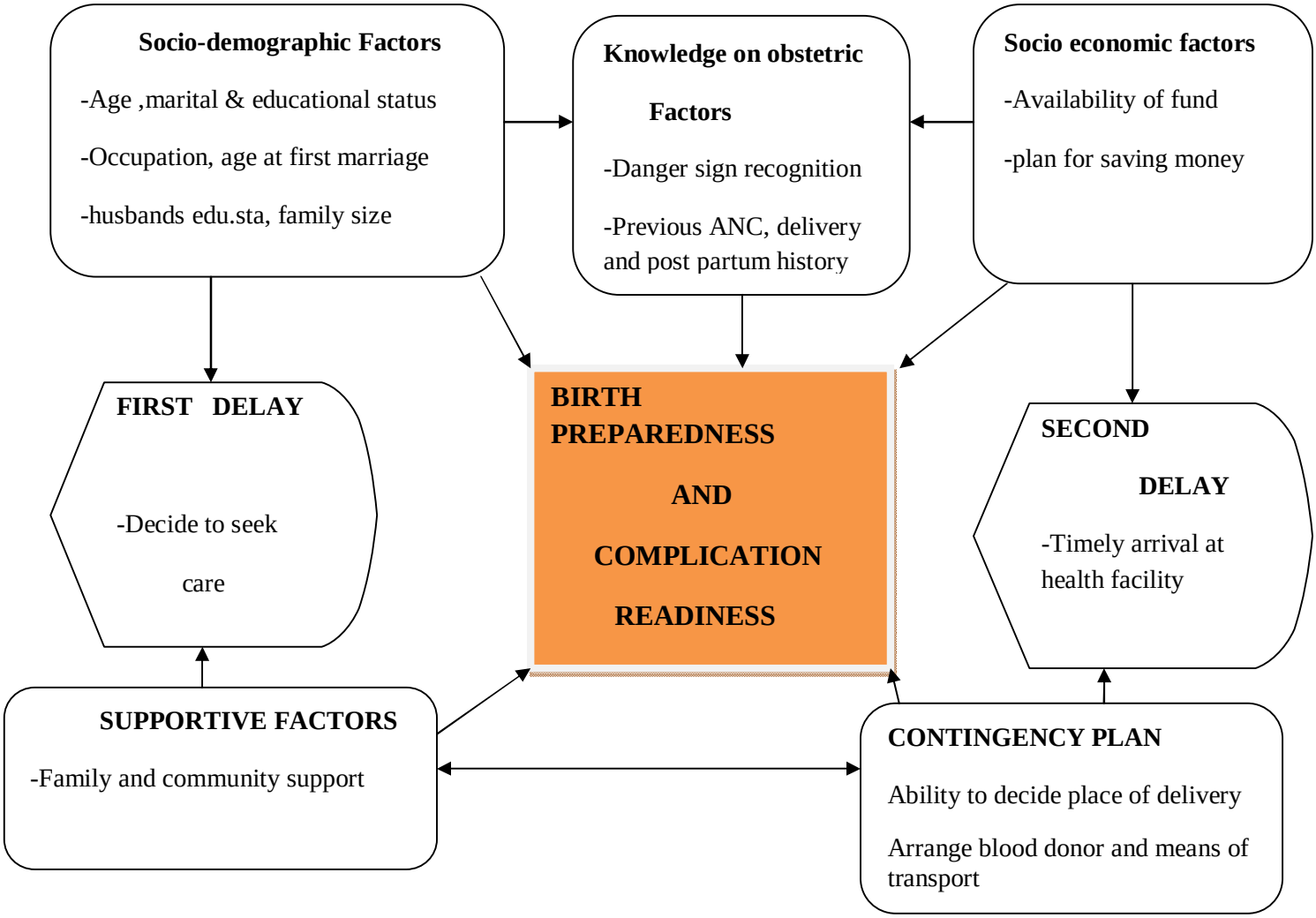


Figure 1 Conceptual frame work of determinant factors of BP/CR

Source: Dzifa Adzoa Agbodohu, UNIVERSITY OF GHANA

3-OBJECTIVE

3.1 General objective:

To assess determinant factors and magnitude of birth preparedness/complication readiness practice among recently delivered rural women in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia.

3.2 Specific objectives

- To determine the magnitude of BP/CR practice among women who gave birth in the last 12 months prior to the study
- Determine socio demographic/economic and cultural factors associated with BP/CR practice in women who gave birth in the last 12 months prior to the survey.
- Determine obstetric factors associated with BP/CR practice in women who gave birth in the last 12 months prior to the survey.
- Assess the knowledge of obstetric danger signs among women who gave birth in the last 12 months preceding the survey..

4-METHODS

4.1 Study period and area

The study was conducted from January to May 2015 in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia.

Semien Bench is one of the woredas in Bench Maji Zone of the Southern Nations, Nationalities and Peoples' Region of Ethiopia. It is located 18 km from the Zone Capital City, Mizan Aman 822 km from SNNPR Town, Hwassa, and 547 km from Addis Ababa. It is named after the Bench People. Semien Bench is bordered on the southwest by Debub Bench, on the west by Sheko, on the northwest by the Sheka Zone, on the east by the Keffa Zone, and on the southeast by She Bench. Semien Bench is part of the former Bench Woreda.

Based on the 2007 Census conducted by the CSA, this Woreda has a total population of 106,490, of whom 51,993 are men and 54,497 women; 5,331 ,only 5.01% of its population are urban dwellers. The majority of the inhabitants are Protestants, with 64.3% of the population following that belief, 19.3% practice traditional beliefs, and 6.6% practice Ethiopian Orthodox Christianity (41).

Since most of the deliveries in the Woreda are at home ,safe delivery utilization of the Woreda is below zonal performance. There are four health centers (3 public and 1 NGO),and 30 health posts. Mizan Aman General Hospital is the only referral hospital found in the Zone (42).

4.2 Study design

Community-based cross-sectional study was carried out among rural women who gave birth within the last 12 months prior to data collection.

4.3 Source population

All women in reproductive age who have at least one child

4.4 Study population

It includes recently delivered mothers (within 12 months) prior to the data collection period

Inclusion criteria

- Mothers who reside in the study area for the last one year prior to the study.
- Women who gave birth within the last 12 months.
- Mothers who are free from mental problem and not severely ill.

Exclusion criteria

Those who do not full fill the inclusion criteria

4.5 Sample size determination

The formula for calculating the sample size was:

$$n = \frac{(Z\alpha/2)^2 \; P(1-P)}{d^2}$$

Where

n …….. the desired sample size

p ……proportion of women who are prepared for birth (23)

$Z\alpha/2$……. Critical value at 95% CI(1.96)

d……the margin of error b/n the sample and the proportion

Calculation of the sample size

(i) $n = \frac{(1.96)^2 * 0.22(1-0.22)}{(0.05)^2} \rightarrow \frac{3.84*0.1716}{0.0025} \rightarrow 264$

(ii) Using design effect of 2 , n= 264*2=528

(iii) Considering non-response rate of ,10% , 528*10%= 53

(iv) The final sample size of the study will be 528+ 53=**581**

The sample size was calculated using the formula for single population proportion. As a result, a total of ***581*** women were included based on the assumption of 95% confidence interval , margin of error 5%, 22% proportion of birth preparedness and complication readiness among women in Adigrat town , Tigray region, Ethiopia (24), considering a design effect of 2 and a non-response rate of 10%

4.6 Sampling procedure

Multistage cluster sampling was employed to select study subjects. Semen Bench Woreda constitutes 30 rural and 1 urban kebeles that makes up a total of 31 kebeles. The existed governmental structure groupe these 31 kebeles under five clusters.

To determine representative sample of kebeles from the Woreda and get adequate sample, 1/3rd of the kebeles were selected. Based on the above calculation, 10 kebeles were chosen using simple random sampling from the total 30 rural kebeles. According to the existed structure two kebeles from each cluster a total of 10 kebeles from the 30 rural kebeles were selected using simple random sampling technique. Then, the total sample size (n =581) was allocated proportionally to the size of the selected kebeles. Finally, systematic sampling was employed to select the study subjects in each kebele until the desired numbers of sample was obtained.

To select the first house hold in each kebele, first a land mark which was common for almost all kebeles that is health post was identified. A pen was span and the direction pointed by the tip of the pen was followed. To select the first house hold, one of the houses which was included under the initial sampling interval of each kebele was selected by simple random sampling; lottery method. Then, the next house hold was selected through systematic sampling technique that is every K^{th} interval household which was calculated for each kebele because the numbers of households vary from one kebele to another kebele. In a case when the study participants were not be able to be interviewed for some reason (e.g. absenteeism), attempt was made for three times to interview the respondent and after that, they were considered as non respondents.

On the other hand, if the household did not include women who meet the inclusion criteria, the next household was substituted. Moreover, if the household contained more than one candidate, one of them was taken randomly by employing lottery method.

4.7 Data collection method

The structured questionnaire mainly adapted from monitoring birth preparedness and complication readiness, tools and indicators for maternal and newborn health was used.

It contains four sections namely; socio-demographic information, Obstetric information, information on birth preparedness/CR and Knowledge on key obstetric danger signs.

The English version of the questionnaire was translated to Amharic. Again it was translated to English by another individual who had very good command of both English and Amharic language.

The questionnaire, was pre-tested on kebele's with similar characteristics and the study population other than the sampled cluster in the study area. One kebele was selected randomly for this purpose. A total of 28 respondents (5% of sample size) were interviewed. Findings were discussed among data collectors and supervisors for better understanding of the data collection process. Based on the pretest, the questions were revised, edited, and modified. Thereafter, structured closed ended Amharic version questionnaire was used for data collection.

Four diploma female clinical nurses who are fluent in Amharic and local language, Benchgna collected the data. One supervisor with BSc nurse background supervised the data collectors. They were trained for two days on the study instrument and data collection procedures. Data were collected through face-to-face interview with the study subjects.

4.8 Variables

4.8.1 Dependent variables

Variables of birth preparedness: knowledge of obstetric danger sign, plan on place of delivery and plan for skilled attendant at birth, plan for transport during emergency, saving money for obstetric emergency and preparing blood donor, designated decision maker.

4.8.2 Independent variables

Demographic variables : age ,education ,income ,occupation, family size, paternal education& occupation, age at first marriage.

Obstetric variables : ANC follow up, previous health facility delivery, previous obstetric complication.

4.9 Operational definitions

Knowledge of danger signs : women of child bearing age having knowledge of danger sign during pregnancy, delivery and after delivery.

***Knowledgeable on key danger signs of pregnancy*:** if she can mention at least two of the three

key danger signs for pregnancy spontaneously

Knowledgeable on danger signs of labour/childbirth: if she can mention at least three of the key four danger signs for labour/childbirth spontaneously.

Knowledgeable on key danger signs of postpartum: if she can mention at least two of the three key danger signs for postpartum spontaneously.

Prepared for birth and its complication(well birth prepared): if she reported that she identified place of delivery, saved money, identify skilled provider at birth and identified a means of transport to place of childbirth or for the time of obstetric emergencies ahead of childbirth.

Safe delivery service: a delivery which took place at health center or hospital with qualified health professionals(midwives, Nurses and doctors).

Birth preparedness and complication readiness: are those behaviors and actions undertaken for the survival of mothers and new bornes during pregnancy, delivery and post delivery period.

Skilled birth attendant: according to UNFPA the term 'skilled attendant' refers exclusively to people with midwifery skills (for example, doctors, midwives, and nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage, or refer obstetric complications

4.10 Data processing and analysis

First data were checked manually for completeness and then coded, a template was prepared and entered into Epi-Info version 3.5.1statistical software and cleaned thoroughly before exported to SPSS version 21 for further analysis. The data were further cleaned by visualizing, double entry on 10% of questionnaires, calculating frequencies and sorting out outliers. Corrections were made according to the original data and cleaned data were exported from Epi Info version 3.5.1 to SPSS version 21 for analysis.

Univariate analysis were conducted using frequency, percentage and presented in the form of texts and tables and charts. Logistic regression analysis was used to identify factors associated with BP/CR. Binary analysis was used to determine the association between different factors and the outcome variable. Multiple logistic regression analysis was used to control for possible confounding variables. Those variables which show significant association on bivariate analysis (P-value < 0.05) were adjusted to each other to identify independently associated variables.

P-value and 95% confidence interval (CI) for OR was used in judging the significance of the associations. P-value less than 0.05 was taken as a cutoff point to declare significant association.

4.11 Data quality assurance

A structured pre-tested questionnaire and check list were used to collect information to assure data quality .There were monitoring and daily meeting with data collectors and supervisors for the daily activity. A supportive feedback was given at the end.

Codes had been given to the questionnaires and households during data collection. Filled questionnaires were checked daily for completeness, legibility and consistency. Incomplete and unclear questionnaires were returned back to the interviewers to get its completeness. Consequently, any problem encountered was discussed among the survey team and solved immediately.

4.12 Ethical consideration

The study was conducted after getting an approval from the Institutional Review Board of the School of Public Health, Addis Ababa University. Official letter was obtained from the School of Public Health of Addis Ababa University to the respective Woreda/study settings. Permission from the Woreda Health Bureau was secured to carry out the study.

Informed verbal consent from each individual respondent was obtained by explaining the objective and procedures of the study. The information was kept confidential.

4.13 Dissemination of results

Findings of this study were first submitted to the School of Public Health Addis Ababa University for partial fulfillment of Masters of Public Health, then it shall be disseminated to relevant organizations concerned on maternal health and those who support the study .Finally, I plan to publish my study in national as well as in regional journals.

5. Results

5-1 Socio demographic information of the respondents

A total of 530 women out of 581, who gave birth in the past twelve months prior to this study were interviewed making a response rate of 91.22%.

Respondents in the age group 25-31 were the most 251 (47.4%) (Table 1). The mean age was 28 ± 5.04 years.

About 47 % of the respondents had primary education(Table 1).

Majority of the women in the study were housewives 417 (78.7%) (Table 1)

Concerning marital status of respondents: most of 496 (93.6%) of the respondents were married

Four hundred and three (75.8%) of women were within age of 15-19 years at their first marriage with the mean age of 17 ± 2.4 years(Table 1).

Regarding respondents family size , respondents with a family size of 2-5 were, 380 (71.7%), those with 6-9 were, 145 (27.4%) and with 10-15 were 5 (0.9%).

With respect to husbands' education the findings were : 138 (26.0%) illiterate, 329 (24.5%) had primary education and 63 (11.9%) had secondary and above (Table 1).

Table 1 Selected Socio-demographic characteristics of the respondents, in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia Feb, 2015 (n= 530)

Variables	Categories	Frequency	percentage
Age at interview(yrs)	18-24	137	25.8
	25-31	251	47.4
	32-40	142	26.8
Educational status	Illiterate	212	40.0
	1-8	248	46.8
	Secondary and above	70	13.2
Occupation	House wife	417	78.7
	Farmer	88	16.6
	House maids	8	1.5
	Gov. employees	6	1.1
	Private employees	11	2.0
Marital status	Married	496	93.6
	Single	11	2.0
	Divorced	14	2.6
	Widowed	9	1.8
Age at first marriage	15-19	402	75.8
	20-24	128	24.2
Family size	2-5	380	71.7
	6-9	145	27.4
	10-15	5	0.9
Husbands education	Illiterate	138	26.0
	1-8	329	62.1
	Secondary and above	63	11.9

5-2 Obstetric characteristics of respondents

Three hundred and eight (58.1%) of the women had ANC follow up. Among those women, 299 (56.3%) started their ANC at 2-4 months of gestational age and 305 (57.4%) had four and above visits(Table 2).

A total of 507(95 %) of women had 1-5 pregnancies (Table 2)

Majority of, 382 (72.1%) of the women became pregnant in the age of 15-19 years for the first time with the mean age at first pregnancy of 19 ± 1.6 years(Table 2).

Women delivered at health facility, 355 (67.0%) were more than delivered at home (Table 2)

Out of five hundred thirty respondents, women with obstetric complications were 185 (34.9%) (Table 2).

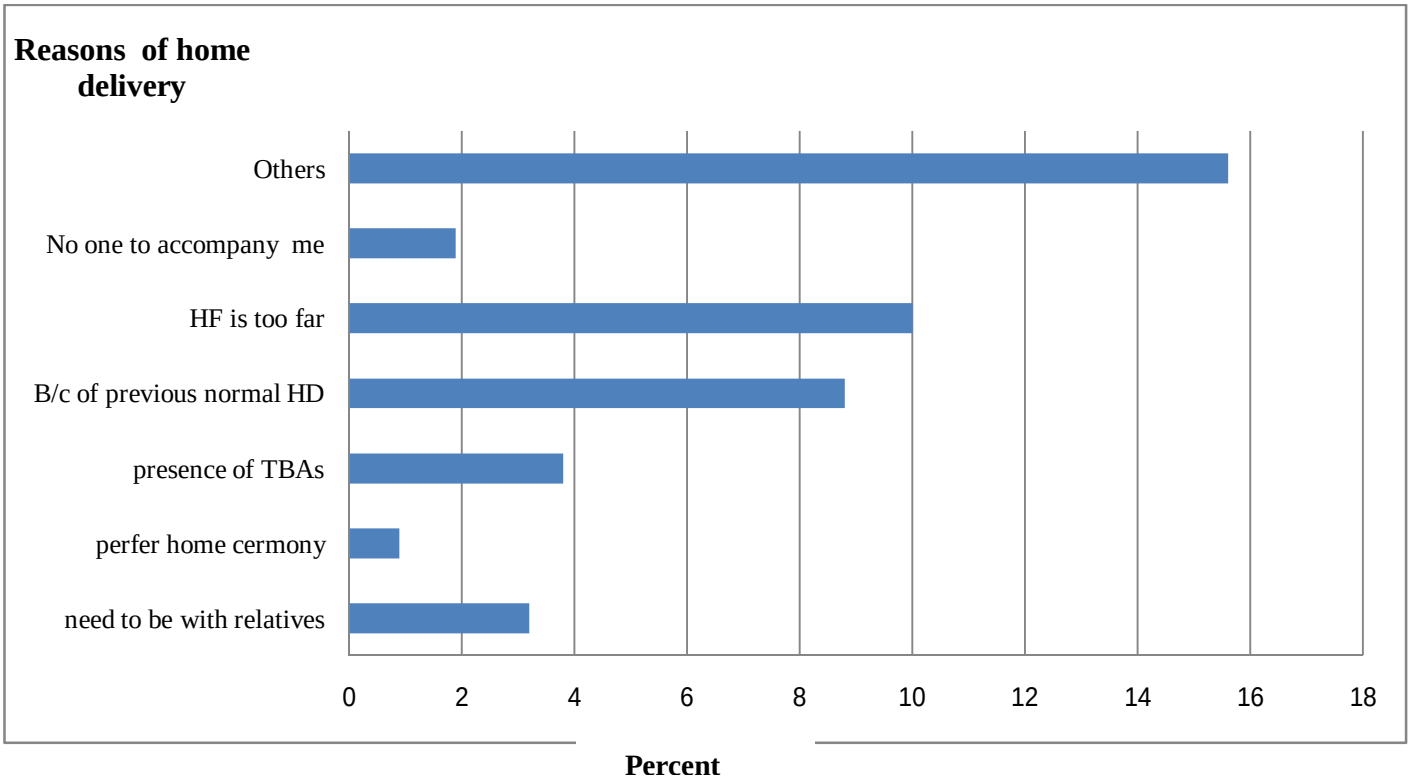
Table 2 Obstetric information of the respondents Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia Feb,2015 (n= 530)

Variables	Categories	Frequency	percentage
Attended ANC	Yes	308	58.1
	No	222	41.9
Gestational age at first ANC	2-4	299	56.3
	5+	231	43.5
Frequency of ANC visit	1-3	203	38.6
	4+	305	57.4
Previous deliveries	1-5	507	95.5
	6+	23	4.3
Decision maker	Self	29	5.5
	Husband	200	37.6
	Both	301	56.7
Age at first pregnancy	15-19	382	72.1
	20-25	148	27.9
Place of delivery	Home	175	33.0
	Health facility	355	67.0
Delivery assisted	Doctor	5	0.9
	Nurse	376	70.9
	HEW	30	5.7
	*Others	119	22.5
Mode of delivery	SVD	424	80.0
	Instrumental	96	18.1
	C/S	10	1.9
Birth out come			
	Live birth	474	89.4
	Died soon	45	8.5
	Still birth	11	2.1
Obstetric complications	Yes	185	34.9
	No	345	65.1

*Others-TBAs and Relatives

5-2-1 Reasons for home deliveries

Delivery in the home was a common feature in the study community, 175(33.0%) of respondents were delivered at home. Respondents had reasons for their home deliveries, among those the most 83(15.6%) mentioned by the respondents were others, which includes facility not open, suddenly labour coming, Delay of the ambulance , not knowing my expected date of delivery(EDD) (Fig 2).



Others= facility not open, suddenly labour coming, Delay of the ambulance , not knowing my expected date of delivery(EDD)

Figure 2 Reason mentioned by respondents about home delivery in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia Feb,2015 (n= 530)

5-2-2 Obstetric complications

Women faced obstetric complications during their pregnancy, child birth and postpartum periods. Some of the complications mentioned by the respondents were : excessive bleeding 68(12.8%), prolonged labour 87(16.4%) ,retained placenta 26(4.9%), obstetric fistula 5(0.9%),mal presentation 9(1.7%),fetal deaths 6(1.1%), early rupture of the membrane 15(2.8%), fever and offensive vaginal discharge 6(1.1%) and loss of consciousness 4(0.8%) (fig 3).

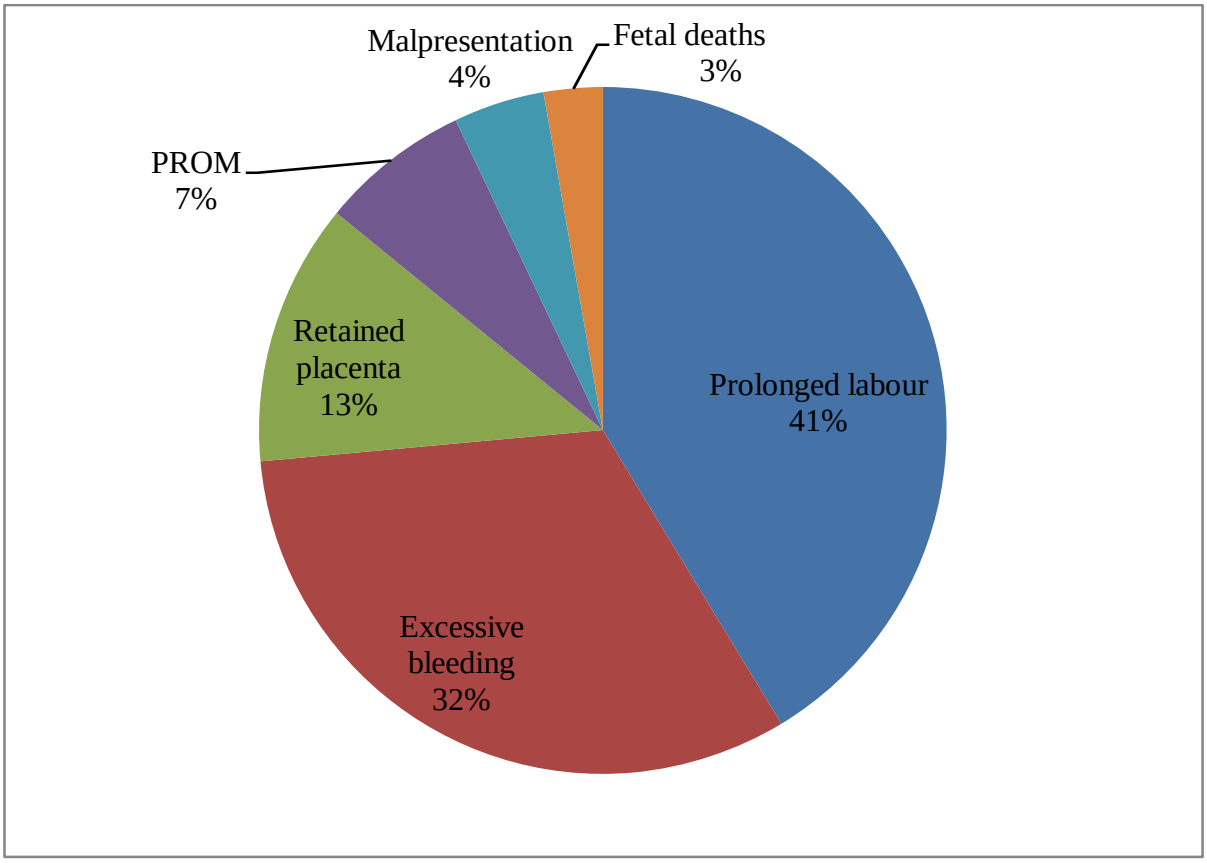


Figure 3 Selected obstetric complications of respondents in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia Feb,2015 . (n= 530)

5-3 Birth preparedness and complication readiness characteristics of respondents

Overall 62.2% of the respondents were found to have birth preparedness practices and its complications.

Among the total respondents , women who planned for place of delivery were 411 (77.5%), women who planned for skilled health professional were 505 (95.3%), women planned for emergency transport were 384 (72.5%) and those who save money for emergency at birth were 437 (82.5%) (Table 3).

Only few, 47 (8.9%) women planned to designate blood donor. (Table 3).

Table 3 Birth preparedness and complication readiness characteristics of respondents in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia Feb,2015 N=530

Variables	Categories	Frequency	percentage
Delivery preparation	Grain for porrage	250	47.0
	Cloth for newborn	148	28.0
	Identified helper	132	25.0
Plan on place of delivery	Yes	411	77.5
	No	119	22.4
Plan skilled health professionals	Yes	505	95.5
	No	25	4.7
Plan to save money	Yes	437	82.5
	No	93	17.5
Plan for emergency transport	Yes	384	72.5
	No	146	27.5
Preferred type of transport	On horse back	30	5.7
	Carried by pepole	183	34.5
	Seeking ambulance	317	59.8
Plan to prepare blood donor	Yes	47	8.9
	No	483	91.1

5-4 Knowledge of respondents about obstetric danger signs

5-4-1 Knowledge of danger signs during pregnancy

Four hundred eleven (77.3%) of the respondents spontaneously mentioned at least one key danger sign, 95 (17.9%) mentioned at least two key danger sign and 21(3.9%) mentioned all three key danger signs (Table 4).

5-4-2 Knowledge of Obstetric danger signs during child birth

Four hundred and six (76.3%) respondents spontaneously mentioned at least one key danger sign, 102 (19.2%) mentioned at least two key danger signs while, 22 (4.1%) cited at least three key danger signs. Only 4 (0.7%) respondents named all four key danger signs (Table 4).

5-4-3 Knowledge of danger signs during postpartum

Four hundred sixty (78.2%) of the study participants spontaneously mentioned at least one key danger sign, 87 (16.4%) mentioned at least two key danger signs and 27 (5.1%) mentioned all three key danger signs (Table 4).

Generally 21(3.9%), 22(4.1%) and 87(16.4) of respondents were knowledgeable during pregnancy, child birth and postpartum periods respectively. Here respondents were more knowledgeable in the postpartum period.

Table 4 Proportion of women who reported knowledge of key danger signs during pregnancy, childbirth and Postpartum Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia Feb,2015 (N=530

Variables	Pregnancy		Child birth		Postpartum	
	N	%	N	%	N	%
Severe vaginal bleeding	277	52.2				
Swollen hand/face	75	14.1				
Blurred vision	110	20.7				
Mention one key dang.sign	411	77.3				
Mention two key dang. Signs*	95	17.9				
Mention all three key dang.signs	21	3.9				
Severe vaginal bleeding			235	44.3		
Retained placenta			49	9.2		
Labour lasting > 12 hour			134	25.2		
Convulsion			39	7.3		
Mention one key dang.sign			406	76.3		
Mention two key dang. Signs			102	19.2		
Mention three key dang.signs*			22	4.1		
Mention all four key dang.signs			4	0.7		
Severe vaginal bleeding					259	48.8
High fever					31	5.8
Foul smelling vaginal discharge					133	25.0
Mention one key dang. Sign					416	78.2
Mention two key dang signs*					87	16.4
Mention all three key dang. signs					27	5.1

***Those respondents who were knowledgeable based on operational definitions**

5-5 Bivariate and Multivariate Analysis

5-5-1 Bivariate analysis

5-5-1-1 Correlates of Socio-demographic factors

Binary logistic regression was applied to identify crude association of socio-demographic variables such as age at interview, educational status , occupation, marital status, age at first marriage, family size and husband education with birth preparedness/complication readiness practice. Among those variables age of respondents at interview , husbands education and family size were significantly associated with birth preparedness/complication readiness practice at $P<0.05$(Table 6).

Women of young age groups (18- 24) (COR= 8.927, 95% CI 4.750 , 16.955) were nine times more prepared for birth preparedness practice than the respective age groups (25-31)(COR=7.211, 95%CI 4.263, 12.198).

Educational, occupational and marital status of respondents did not show any significant influence on birth preparedness practice in the study. (COR=1.452,95%CI 0.689 , 3.058 / COR=1.217, 95%CI 0.606 , 2.446), (COR=0.978, 95%CI 0.329 , 2.909) and (COR=2.332, 95%CI 0.448 , 12.142) respectively.

Women of husbands with primary education had more birth preparedness practice and its complication than those with their husbands illiterate/higher education (COR=0.227 95% CI 0.116 ,0.660).

Table 5 Association of socio-demographic factors with birth preparedness practice in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia Feb,2015

Variables	Birth preparedness YES No(%)	NO No(%)	Crude OR(95%CI)
Age			
18-24	114(34.4)	23(11.8)	**8.927(4.750, 16.955)**
25-31	175(52.90	72(37.1)	**7.211(4.263 , 12.198)**
32-40	42(12.7)	99(51.0)	1.00
Respondents education			
Illiterate	123(37.2)	88(45.4)	1.00
Primary	164(49.5)	81(41.8)	1.452(0.689 , 3.058)
Secondary& above	44(13.3)	25(12.8)	1.217(0.606 , 2.446)
Respondents occupation			
Housewife	254(76.7)	159(81.9)	1.00
Non house wife	76(23.20	35(18.0)	0.978(0.329 , 2.909)
Marital status			
Married	310(93.6)	181(93.3)	1.00
Others	21(6.3)	13(6.7)	2.332(0.448 , 12.142)
Age at first marriage			
15-19	209(63.1)	131(67.5)	1.00
20-25	122(36.9)	63(32.5)	0.862(0.212 , 3.499)
Family size			
2-5	285(86.1)	94(48.5)	**12.128(1.339, 109.855)**
6+	46(13.9)	100(51.5)	1.00
Husbands' education			
Illiterate	86(25.9)	51(26.3)	1.00
Primary	202(61.0)	123(63.4)	**0.227(0.116 , 0.660)**
Secondary& above	43(12.9)	20(10.3)	0.854(0.416 , 1.754)

5-5-1-2 Obstetric correlates

Bivariate analysis was applied on obstetric variables such as birth order, ANC attendance, age at first pregnancy, previous delivery at health facility , assisted delivery , frequency of ANC , decision maker in HH ,obstetric complication , gestational age of ANC and mode of delivery. Among those variables, previous deliveries, delivery assisted and obstetric complications were significantly associated with birth preparedness at $P<0.05$.

Mothers who had given birth less or equal to five had more BP/CR practice than those more than five (COR=2.000 ,95%CI 1.313, 3.046)(Table 6).

Women's age at firs pregnancy had no birth preparedness practice than their counter parts (COR=1.055, 95%CI 0.710, 1.568)(Table 6).

Respondents with previous health facility delivery (COR=1.276,95%CI 0.894, 1.821) had no association with birth preparedness and complication readiness than those with their deliveries assisted by skilled birth professionals (COR=1.747, 95%CI 1.165, 2.620)(Table 6).

Decision making ability of women , had no significant contribution on developing birth preparedness practice in this study (COR= 1.558, 95%CI 0.897, 2.705) (Table 6).

Women who had previous obstetric complications were more likely to have birth preparedness practice than their counterparts (COR=0.612 95%CI 0.417, 0.897)(Table 6)

Table 6 Association of obstetric characteristics of respondents with birth preparedness in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia Feb,2015(n= 530)

Variables	Birth preparedness		Crude OR(95%CI)
	Yes No(%)	No No(%)	
Previous delivery			
1-5	454(97.6)	11(2.4)	**2.000(1.313, 3.046)**
6+	53(81.5)	12(18.5)	1.00
Attend ANC			
Yes	458(98.5)	7(1.5)	0.483(0.097, 1.980)
No	61(93.8)	4(6.2)	**1.00**
Frequency of ANC			
1-3	92(31.6)	65(37.8)	0.761(0.513 , 1.130)
4+	199(68.4)	107(62.2)	1.00
Gest/nal age of ANC			
1-3	185(55.9)	113(58.2)	1.00
4+	146(44.1)	81(41.7)	0.908(0.635, 1.300)
Age at first pregnancy			
15-19	339(72.9)	43(66.1)	1.055(0.710, 1.568)
20-25	125(26.9)	22(33.8)	1.00
Previous delivery at HF			
Yes	248(48.3)	265(51.7)	1.276(0.894, 1.821)
No	1 (6.3)	15 (93.8)	1.00
Delivery assisted			
Nurse	356(78.8)	22(36.0)	**1.747(1.165, 2.620**)
others	94 (20.8)	39(63.9)	1.00
Decision maker			
Self	61(18.4)	24(12.4)	1.558(0.897, 2.705)
Husband	146(44.1)	94(48.5)	0.952(0.647, 1.400)
Both	124(37.5)	76(39.2)	1.00
Obste. Compl/n			
Yes	185(55.9)	113(58.2)	**0.612(0.417, 0.897)**
No	146(44.1)	81(41.7)	1.00
Mode of delivery			
SVD	256(91.1)	156(94.5)	1.094(0.181, 6.620)
Instrumental	22(7.8)	7(4.22)	2.095(0.289, 15.191)
C/S	3(1.1)	2(1.2)	1.00

5-5-2 Multivariate analysis

Socio-demographic and obstetric variables were independently analyzed on bivariate analysis and those variables that showed significant association with BP/CR were again analyzed independently on multivariate analysis. Finally, among those socio-demographic and obstetric variables only age, husband education, previous deliveries and previous obstetric complication were significantly associated with birth preparedness practice at P<0.05(Table 7).

Women in the age groups 25-31, showed less likely to birth preparedness practice compared to younger age groups(18-24) (AOR=0.169, 95%CI 0.104 , 0.272 VS AOR=0.093, 95%CI 0.051, 0.169) (Table 7).

Women with literate husbands were more likely to birth preparedness and complication readiness practice than women with illiterate husband (AOR=1.695, 95%CI 1.109 , 2.590).

Women with previous delivery five and less than five had less likely to prepare on birth preparedness practice and its complication than those with birth order six and above.(AOR=0.493, 95%CI 0.305 , 0.799).

Mothers with obstetric complications were two times more likely to prepare for birth and its complications than their counterparts.(AOR=1.710, 95%CI 1.092, 2.680).

Table 5Selected Socio-demographic and Obstetric factors of respondents with Birth preparedness and complication readiness practices in Semen Bench Woreda, Bench Maji Zone, SNNPR, Ethiopia Feb,2015 (N = 530)

Variables	Birth preparedness		Crude OR(95% CI)	Adjusted OR(95% CI)
	Yes No (%)	No No(%)	COR	AOR
Age				
18-24	117(35.3)	23(11.8)	8.260(4.379, 15.581)	**0.093(0.051, 0.169)**
25-31	175(52.9)	72(37.1)	6.499(3.881,10.884)	**0.169(0.104, 0.272)**
32-40	42(12.7)	99(51.0)	1.00	1.00
Husband edu.				
Illiterate	117(35.3)			
Literate	214(64.7)	86(44.3)	0.687(0.478, 0.986)	1.00
		108(32.6)	1.00	**1.695(1.109, 2.590)**
Previous deliveries				
1-5	274(82.7)	137(70.6)	0.228(0.980, 0.532)	**0.493(0.305, 0.799)**
6+	57(17.2)	57(29.4)	1.00	1.00
Delivery assisted				
Skilled attend	251(78.4)	127(67.5)	1.747(1.165, 2.620)	0.643(0.406, 1.018)
Unskilled attend	69(21.6)	61(32.4)	1.00	1.00
Obstetric c/n				
YES	130(39.3)	55(28.3)	1.881(1.127, 3.140)	**1.710(1.092, 2.680)**
NO	201(60.7)	139(71.6)	1.00	1.00

6. Discussion

This community based study has attempted to identify magnitude and determinant factors of birth preparedness and complication readiness in Semen Bench Woreda, Bench Maji Zone, SNNPR. Ethiopia.

The study revealed that proportion of birth preparedness and complication readiness was 62.2% which indicate higher in the study area. The study mainly tried to identify determinant factors of BP/CR and arrangements made during pregnancy by the mothers for birth and its complication. The result showed that more respondents had made arrangement in a comprehensive way prior to the last childbirth commonly by identifying a means of transportation, skilled provider, saving money and place of delivery.

The finding of this study contrast with a previous study that variables showed significant association with BP/CR in other studies were not significant in this study as showed in the tables 4 and 5 [27]. The magnitude of BP/CR is better than the finding in Adigrat Town (22%), which is found in Northern Ethiopia [24] and study done in Northern Nigeria (27.5%) [25]. This difference on preparation might be due to strong awareness created by HEWs, HDAs and local NGOs working on supporting health posts.

In this study, 410(77.2%) of the respondents planned place of delivery , 505(95.1%) planned to arrange skilled health professional ,437(82.3%) planned to save money and 384(72.3%) planned to arrange means of transport which were relatively better. However, only 46(8.7%) planned to arrange blood donor which could be considered low. Such low levels of preparations were also reported in other prior studies in the country[24,26]. This may be explained by the low socio-economic status, low level of knowledge and low education among women as well as the general population. Service providers and program planers might not have given it special attention since birth preparedness and complication readiness is relatively a recent strategy.

As the occurrences of complications during the process of childbirth are unpredictable, every woman needs to be aware of the key danger signs of obstetric complications during pregnancy,

delivery and the postpartum period. This knowledge will ultimately empower them and their families to make prompt decisions to seek care from skilled health professionals [11].

However, knowledgeable respondent of key danger signs in this study was found to be very low. The three key danger signs during pregnancy, the four key danger signs during labor and delivery, the three key danger signs during postpartum period were spontaneously mentioned by 3.9%, 4.1%, and 5.1%, respectively, which were also very low. Similar low rates were reported in other prior studies in Ethiopia and other African countries [24, 26,31].

This low level of knowledge of key obstetric danger signs in developing countries may be explained by the low coverage of ANC visits and inadequate number of visits. This may also indicate that less attention might have been given to key danger signs while giving health education and advice during ANC. In this study, 40.0% didn't attend any formal education and the other 47% attended only primary education and only 13% attend secondary and above educational level. This low level of education might have also limited their access to information and contributed to this low level of knowledge.

Delivery service to the pregnant women is the most important component of reproductive health care(13). In this study about 55.8% of women had given birth at health facilities. The reasons for utilizing health facility for delivery include: the facility is near(4.7%), gave better service(32.1%), better outcome before(9.8%), health workers advice(21.6%), difficulty of labour(12.0%), and had problem with previous home delivery(2.4%)

This finding was in line with EDHS,2011report (62.3%) for Addis Ababa and higher than a study done in North Gonder, Amhara Region(25%) (20) and also higher than EDHS,2011(10%). This finding may be due to better expansion of health institutions, in an effort to achieve MDGs and since the report of the demographic health survey covers hard to reach areas.

When multivariate analysis was applied on selected socio-demographic and obstetric variables to identify independent predictors of birth preparedness and complication readiness, age of respondent at interview, husbands' educational status, previous deliveries and obstetric complications showed significant association.

About 53 % of respondents in the age groups (25-31) (AOR= 0.169, 95%CI 0.104 ,0.271) were less likely prepared for birth preparedness practice than those in younger age groups(18-24) (AOR=0.039, 95%CI 0.051 , 0.169).

When men accompany their wives to health facility, they have more access to reproductive health information and could result in greater communication between men and women on subjects related to reproductive health and child care. This improved inter spousal communication, could enhance pregnancy planning, birth preparedness and complication readiness (44)

Wives of literate husband had higher preparation for birth and its complication than those with illiterate ones (AOR=1.695,95%CI 1.109, 2.590). Since education creates better awareness on health which may sensitize the family to decide for birth preparation(34).

Consistent with other studies, previous deliveries were found to be an independent determinant for preparation of birth preparedness practices. Women with previous deliveries higher than five were less likely to be prepared for birth than their counterparts (AOR=0.493,95%CI 0.305, 0.799) (20,37,38). This may be, since women with birth order less than six may not as such be familiar with pregnancy outcomes, so they get prepared for birth due to fear of obstetric complications.

Consistent with other studies, women who had develop obstetric complication during their immediate pregnancy were likely to be prepared on birth practices(AOR=1.710,95%CI 1.092, 2.680). Studies conducted in Bangladesh, Gonder and Adigrat showed similar findings(19,23,43).

7. Strengths and limitations of the study

7-1 Strength

- The study used different tools and methods to identify determinant factors of birth preparedness and complication readiness.
- This study tried to minimize selection bias by employing community based study with probability sampling method. Additionally, attempt was made to reduce recall bias by involving women who have given birth in the last 12 months preceding the study.
- Efforts were made to use standard and as many variables as possible to make them objective.
- Data collectors were extensively trained and were same sex with study participants

7-2 Limitations

- Temporal relation could not be assessed due to the study design.
- Dichotomizing composite variable may have its own limitations in identifying cut-off points.
- Outbreak of measles at time of data collection
- Most respondents were out of their home for farming

8. Conclusions and recommendations

8-1 Conclusion

Based on the findings of the research the magnitude of BP/CR in the study area was relatively high (62.2%). The principal factors affecting BP/CR were age of respondents at interview, husband's educational status, birth order and women who have knowledge of obstetric complications.

The study has also clearly evidenced that the respondents' knowledge of key danger signs and plan to prepare blood donor was low, so large proportion of clients were not prepared for obstetric emergencies.

8-2 Recommendations

Thus, community-based education about preparation for birth and its complications and empowerment and expanding husbands educational opportunities are important factors to enhance knowledge of danger signs and reduce the effect of pregnancy related complications.

Antenatal care clinics should give due emphasis to preparation for birth and its complications and integrate partners/husbands when providing information and education to women .

Further research should be conducted on quality of maternal health services; particularly the reason for gaps between ANC, BP/CR and delivery service utilization as well as provider's knowledge, practice and attitude towards BP/CR.

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10. ANNXES

Annex –I English version structured questionnaire

Addis Ababa University , Collage of Health Sciences, School of Public Health

Instruction :Circle the appropriate response of each closed ended question and write correct response for each open ended question.

PART-I Socio -demographic Information

S.No	Question	Respondents possible answer	Code	Skip
101	How old are you(in completed year)?	----------years		
102	What is your level of education?	1-Illitrate 2-can read and write 3-Grade1-8 4-secondary and above		
103	What is your occupation?	1-House wife 2-Farmer 3-Marchant 4-House maid 5-Government employee 6-Others specify----------		
104	How much do you earn per month ETB?	----------ETB		
105	What is your current marital status?	1-Married 2-Never married 3-Seprate 4-Divorced 5-Widowed		
106	What was your age at first marriage	----------years		
107	What is the level of education of your husband (for those married only) ?	1-Illitrate 2-Can read and write 3-1-8 grade 4-Secondary and above		
108	Occupation of your husband(for those married only)	1-Farmer 2-Marchant 3-Government employee 4-Daily laborer 5-other specify----------		
109	How much income does your husband get from his work /month?	----------in ETB ----------in quality		
110	How many of you are living in your house hold	----------		

111	Who is the decision maker in the house hold	1-Self 2-Husband 3-Self and husband 4-Others,specify---------- -		

PART-II Obstetric Information

S.No	Question	Respondents possible answer	Code	Skip
201	What is the number of births you gave up to now(include if there is still birth or died soon)	----------		
202	At what age was your first pregnancy	----------years		
203	What outcomes did you face during your pregnancy and child birth ? (more than one answer is possible)	1-Abortion 2-Live birth 3-Still birth 4-Others,specify----------		
204	Are you pregnant now	1-Yes 2-No		

PART-III Information on service delivery

301	Did you attend ANC before?	1-yes 2-No		
302	Do you think ANC is useful ?	1-Yes 2-No		
303	Do you attend ANC during your last pregnancy?	1-Yes 2-No		
304	Who attended your ANC visit?	1-Skilled health professional (Midwife, Nurse & Doctor) 2-HEW 3-TBA 4-Others,specify----------		
305	At what week/month did you start your ANC?	----------week/month		
306	How many times you attended ANC in your last pregnancy?	1-Once 2-Twice 3-Three times 4-Four and above		
307	Do you think that preparing for delivery is important?	1-Yes 2-No		
308	Did you make any preparation in your last pregnancy?	1-Yes 2-No		
309	What preparations did you make?	1-Grain for porrage 2-Cloth for newborn 3-Identified helper 4-Others,specify---------		

310	Do you think that plan for place of delivery is important?	1-Yes 2-No		
311	Did you plan for place of delivery?	1-Yes 2-No		
312	Where do you plan place of delivery?(only for pregnant)	1-Home 2-Health post 3-Health center 4-Hospital 5-Others,specify---------		
313	Where were your last deliveries?	1-Home 2-Health post 3-Health center 4-Hospital 5-Others, specify----------		
314	Why do you prefer to deliver at home?(Possible to answer more than one answer)	1-Need to be with relatives 2-Prefer home ceremony after delivery 3-B/c of the cost is cheap 4-Presence of TBAs 5-My husband accepts it 6-My previous home deliveries were normal 7- Lack of transport 8-The health facility is too far 9-Health care providers approach are not good 10-No female provider 11-Lack of accompanying family members 12-Others,specify		
315	Why do you prefer to deliver at health facility?	1-The facility is near to me 2-Gave better service 3-I had better out come before 4-Health workers advice 5-Difficulty of labour 6-I had problem with previous home deliveries 7-Others,specify----------		
316	In what way did you give birth before?	1-Spontaneous vaginal delivery 2-Instrumental delivery 3-Cesarean section 4-I didn't remember 5-Others,specify----------		
317	Have you given birth at health facility?	1-Yes 2-No		
318	If Yes, how many births have you given?	----------		
319	Do you think that delivering at	1-Yes 2-No		

	facility is useful?			
320	Is plan to have skilled attendant at delivery useful?	1-Yes 2-No		
321	Who attended your delivery before?	1-Doctor 2-Nurse 3-HEW 4-TBAs 5-Others ,specify		
322	What was the outcome of your last delivery?	1-Live birth 2-Live birth but died soon 3-Still birth 4-Others,specify----------		
323	Did you save money for your previous delivery?	1-Yes 2-No		
324	Did you plan for transport for emergency at delivery?	1-Yes 2-No		
325	So what was your transport?	1-On foot 2-On hoarse back 3-Carried by pepole 4-Seeking ambulance 5-Others,specify		
326	Did you prepare blood donor	1-Yes 2-No		
327	Do you think it is important	1-Yes 2-No		
328	Have you been encountered with any problem during pregnancy, delivery and after birth	1-YES 2-No		
329	If yes, what was the problem	1-Excessive vaginal bleeding 2-prolonged labour(>12 hr0 3-Retained placenta(>1 hr) 4-Inability to control urine/faces/both 5-Mal presentation 6-Fetal death 7-Early rapture of membrane 8-Fver and offensive vaginal discharge 9-Loss of consciousness 10-Others ,specify		
330	Were you referred to next the facility?	1-Yes 2-No		
331	If yes, who went with you there?	1-Husband 2-Relatives 3-Community emergency committee 4-With health care provider 5-Others ,specify		
332	What order was your last birth?	1-First 4- Four and above		

		2-Second 3-Third		

PART-IV-Women's knowledge of obstetric danger sign

Instruction - Put "X" mark on free columns after the response of respondents, i.e. weather answering the question spontaneous or after explanation

S.No	Variables	Respondents possible answer	Spontaneous	After explanation
401	Do you know any danger sign throughout pregnancy, delivery and soon after birth?	1-Yes 2-No		
402	If yes, from where did you get the information?	1-Health workers 2-HEW 3-Community health Promoters 4-Radio 5-Television 6-My neighbors 7-Read pamphlets/books 8-Others,specify----------		
403	Do You think that these danger signs threaten the life of the women	1-Yes 2-No		
404	What danger signs are there during pregnancy?	1-Severe vaginal bleeding 2-Swollen hand and face 3-Blured vision 4-I don' know		
405	What danger signs are there during child birth?	1-Severe bleeding 2-Prolonged labour 3-Convlusion 4-Retained placenta 5-I don 'kno		
406	What are the danger signs that occur soon after birth?	1-Severe vaginal bleeding 2-Foul smelling of vaginal discharge 3-High fever 4- I don 'know		

Amharic Version questionnaire

በዓማርኛ የተዘጋጀ ቃለመጠይቅ

የሱፐርቫይዘሩ ስም---------- ፊርማ----------ቀን----------

የጥያቄ ኮድ---------- ቀበሌ---------- ጎጥ---------- የቤት ቁጥር----------

ማሳሰቢያ፡ ምርጫ ያላቸዉን መልሶችን ይክበቡ ዝርዝር የሚያስፈልጋቸዉን በክፍት ቦታ ላይ ይጻፉ

<u>ክፍል ዓንድ ፡ ማህበራዊና ስነህዝባዊ መረጃዎች</u>

ተራ.ቁ	ጥያቄዎች	ዓማራጭ መልሶች	ኮድ	ወደሌላ ጥያቄ
101	ዕድሜ ስንት ዓመት ነዉ	----------		
102	የትምህርት ደረጃ ስንት ነዉ	1-ዓልተማርኩም 2-ማንበብና መጻፍ 3-ከ1ኛ-8ኛ ክፍል 4-2ኛ ደረጃና ከዚያ በላይ		
103	ስራዎ ምንድነዉ	1-የቤት ዕመቤት 2-ዓርሶዓደር 3-የቤት ሰራተኛ 4-የመንግስት ስራ ተቀጣሪ 5-የግል መስሪያ ቤት ተቀጣሪ 6-ነጋዴ 7-ሌላ ካለ ይጥቀሱ----------		
104	በወር ስንት ብር ያገኛሉ	----------ብር		
105	የጋብቻ ሁኔታዎ ዕንዴት ነዉ	1- ያገባች 2-ያላገባች 3-የተፋታች 4-ባል የሞተባት 5-ዓግብታ የማታዉቅ 6-ሌላ ካለ ይጥቀሱ----------		
106	መጀመሪያ ሲያገቡ ዕድሜዎ ስንት ነበር	----------ዓመት		
107	የባለቤትዎ የትምህርት ደረጃ ምን ይመስላል(ላገቡ ብቻ የሚጠየቅ)	1-ዓልተማርኩም 2-ማንበብና መጻፍ 3-ከ1ኛ-8ኛ ክፍል 4-2ኛ ደረጃና ከዚያ በላይ 5-ሌላ ካለ ይጥቀሱ----------		
108	የባለቤትዎ ስራ ምንድነዉ	1-ዓርሶዓደር 2-የመንግስት ሰራተኛ 3-የግላ ተቀጣሪ 4-ነጋዴ 5-የቀነ ጉልበት ሰራተኛ 6-ሌላ ካለ ይጥቀሱ----------		

109	ባለቤትዎ ከሚሰራዉ ስራ ምን ያህል ገቢ ያገኛል	----------ብር ----------በዓይነት		
110	በዓንድ ቤት ዉስጥ ስንት ሆናቹ ትኖራላቹ	----------		
111	በቤተሰቡ ዉስጥ ዉሳኔ ሰጪ ማነዉ	1-ዕኔራሴ 2-ባለቤቴ 3-ሁለታችንም 4-ሌላ ካለ ይጥቀሱ----------		

ክፍል ሁለት፡ ከዕርግዝና ከወሊድና ከወሊድ በኋላ ሁኔታዎች ጋር የተያያዘ ጥያቄ

ተራ.ቁ	ጥያቄዎች	ዓማራጭ መልሶች	ኮድ	ወደሌላ ጥያቄ
201	ዕስካሁን ስንት ዝዜ ወልደዋል(በህይወት የተወለደ፣ሙቶ የተወለደና ወዲያዉ ዕንደተወለደ የሞተ)	----------ግዜ		
202	ለመጀመሪያ ግዜ ሲያረግዙ ዕድሜዎ ስንት ነበር	----------ዓመት		
203	በዕርግዝናና በወሊድ ግዜ ምን ዓይነት ችግር ዓጋጥሞት ነበር	1-ዉርጃ 2-ህይወት ያለዉ ልጅ መዉለድ 3-የሞተ ልጅ መዉለድ 4-ሌላ ካለ ይጠቀሰ----------		
204	ዓጉን ነፍሰጡር ኖት	1-ዓዎ 2-ዓይደለም		

ክፍል ሶስት፡ የጤና ዓገልግሎት ዓጠቃቀምን በተመለከተ የሚጠየቅ ቃለመጠይቅ

301	ከዚህ በፊት በነበሩት የዕርገዝና ጊዜዎ በቂ የዕርግዝና ምርመራ ዓድርገዉ ነበር	1-ዓዎ 2-ዓይደለም		
302	በዕርግዝና ግዜ የሚደረግ ምርመራ ያስፈልጋል ብለዉ ያስባሉ	1-ዓዎ 2-ዓይደለም		
303	ባሁኑ ዕርግዝናዎ የቅድመ ወሊድ ክትትል ዓድርገዉነበር	1-ዓዎ 2-ዓይደለም		
304	በስንተኛዉ ሳምንት/ወር ክትትሉን ዓደረጉ	----------ወር/ሳምንት		
305	የርግዝና ምርመራዉን የከናወነዉ ማነዉ	1-ዶክተር 2-ነርስ 3-ጤና ጼክስቴንሽን 4-ልምድ ዓዋላጅ 5-ሌላ ካለ ይጥቀሱ----------		
306	በመጨረሻዉ ዕርግዝና ስንት ግዜ ክትትል ዓደረጉ	1-ዓንድ ግዜ 4-ዓራትና ከዚያ በላይ 2-ሁለት ግዜ 3-ሶስት ግዜ		
307	ለወሊድ በቂ ዝግጅት			

	ማድረግ ያስፈግጋል ብለዉ ያስባሉ	1-ዓዎ 2-ዓይደለም		
308	ለወሊድ የሚያስፈልጉ ዝግጅቶችን ዓድርገዉ ነበር	1-ዓዎ 2-ዓይደለም		
309	መልሶ ዓዎ ከሆነ ምንምን ዝግጅት ዓደረጉ	1-የገንፎ ዕህል 2-የልጅ ልብስ 3-የሚያርስ ሰዉ 4-ሌላ ካለ የጥቀሱ----------		
310	የሚወልዱበትን ቦታ ማቀድ ይጠቅማል ብለዉ ያስባሉ	1-ዓዎ 2-ዓይደለም		
311	የት ዕንደሚወልዱ ዓቅደዉ ነበር	1-ዓዎ 2-ዓይደለም		
312	የት ነበር የወለዱት(ለነፍሰ ጡር ብቻ የሚጠየቅ)	1-ቤት 3-ጤና ጣቢያ 2-ጤና ኬላ 4-ሆስፒታል 5-ሌላ ካለ ይጥቀሱ----------		
313	ባለፈዉ የት ነበር የወለድሽዉ	1-ቤት 2--ጤና ኬላ 3-ጤና ጣቢያ 5-ሌላ ካለ ይጠቀሱ--------- 4-ሆስፒታል ----------		
314	ቤት ዉስጥ መዉለድ ለምን መረጡ(ካንድ በላይ መልስ መስጠት ይቻላል)	1-ከቤተሰቤ ጋር መሆን ስለፈለኩኝ 2-ከወለድኩኝ በኋላ በቤት ዉስጥ ያለዉን ዝግጅት ስለፈለኩኝ 3-ምንም የማያስከፍል ስለሆነ 4-የልምድ ዓዋላጅ ስላለ 5-ባለቤቴ ስለተቀበለዉ 6-ከዚህ በፊት ቤት ወላጇ ምንም ችግር ስላልገጠመኝ 7-ትራንስፖርት ስለሌለ 8-የጤና ተቋሙ በጣም ስለሚርቅ 9-ጤና ባለሞያዎቹ ያላቸዉ ዓቀራለብ ጥሩ ስላልሆነ 10-ሴት የጤና ባለሞያ ስለሌለ 11-ዓብሮኝ የሚሄድ ቤተሰብ ስለሌለኝ 12-ሌላ ካለ ይጠቀስ----------		
315	በጤና ተቋም መዉለድ ለምን መረጡ	1-ጤና ድርጅቱ ቅርብ ስለሆነ 2-የተሻለ ዓገልግሎት ስለሚሰጥ 3-ባለፈዉ በጤና ድርጅት በጥሩ ሁኔታ ስለወለድኩኝ 4-የጤና ባለሞያዎቹ ምክር 5-ምጡ በጣም ስለጠናብኝ 6-ባለፈዉ በቤት ዉስጥ ስወልድ ችግር ስላጋጠመኝ 7-ሌላካለ ይጠቀስ----------		
316	ባለፈዉ በምን ዓይነት ሁኔታ ነዉ የወለዱት	1-በራሴ ዓምጬ ወለድኩ 2-በመሳሪያ ታግዤ 3-የማህጸን ቀዶ ጥገና ተደርጎልኝ 4-ዓላስታዉስም 5-ሌላ ካለ ይጥቀሱ----------		
317	ከዚህ በፊት በጤና ተቋም ወልደዉ ያዉቃሉ	1-ዓዎ 2-ዓይደለም		
318	መልሶ ዓዎ ከሆነ ስንት ግዜ በጤና ተቋም ወልደዋል	----------ግዜ		
319	በጤና ተቋም መዉለድ ይጠቅማል ብለዉ ያስባሉ	1-ዓዎ 2-ዓይደለም		

320	በጤና ባለሞያ ዕንዲያግዞት ማቀድ ይጠቅማል ብለዉ ያስባሉ	1-ዓዎ 2-ዓይደለም		
321	ማን ነበር ያዋለደሽ	1-ዶክተር 3-ጤና ጌከስቴንሽን 5-ሌላ ካለ ---------- 2-ነርስ 4-ልመወድ ዓዋላጅ ----------		
322	ህጻኑ ሲወለድ የመጨረሻ ሁኔታዉ ምን ይመስላል	1-ህይወት ያለዉ 2-በህይወት ተወልዶ ወዲያዉ የሞተ 3-ሞቶ የተወለደ 4-ሌላ ካለ ----------		
323	ከርግዝናና ወሊድ ጋር ተያይዞ ለሚፈጠር ችግር የሚሆን ገንዘብ ለማስቀመጥ ዓቅደዉ ነበር	1-ዓዎ 2-ዓይደለም		
324	ድንገት ለሚፈጠሩ ዓስቸጋሪ ሁኔታዎ መጓጓዣ ዓዘጋጅተዉ ነበር	1-ዓዎ 2-ዓይደለም		
325	ከሆነ ያዘጋጁት መጓጓዣ ምን ነበር	1-በዕግር 2-በፈረስ/በበቅሎ 3-ሰዎች በቃሌዛ ተሸክመዉኝ 4-ዓመቡላንስ ዕጠብቃለሁኝ 5-ሌላ ካለ----------		
326	ከላይ የተጠቀሱት ድንገተኛ ችግሮች ቢከሰቱ ደም የሚሰጥ ሰዉ ዓቅደዉ ነበር	1-ዓዎ 2-ዓይደለም		
327	ይህንን ማቀድ ጠቃሚ ነዉ ብለዉ ያስባሉ	1-ዓዎ 2-ዓይደለም		
328	ባለፈዉ ሲወልዱ ከርግዝናና ወሊድ ጋር ተያይዞ ያጋጠሞት ችግር ነበር	1-ዓዎ 2-ዓይደለም		
329	መልሶ ዓዎ ከሆነ ምን ዓይነት ችግር ነዉ ያጋጠሞት	1-ብዙ ደም መፍሰስ 2-ለረጅም ግዜ የቆየ ምጥ 3-ዕንግዴ ልጅ ሳይወጣ ቆይቷል 4-ሽንትና ሰገራ መቆጣጠር ዓቅቶኝ ነበር 5-የጽንሱ ዓቀማመጥ ያልተስተካከለ ነበር 6-ጽንሱ በሁዴ ጸፍቶ ነበር 7-የዕንሽርት ዉሀዉ ፈሶ ቆይቶ ነበር 8-ትኩሳትና መጥፎ ሽታ ያለዉ የማህጸን ፈሳሽ 9-ራስን መሳት 10-ሌላ ካለ ----------		
330	ለነዚህ ችግሮች ወደጤና ተቋም ሄደዉ ነበር	1-ዓዎ 2-ዓይደለም		
331	ከሆነ ዓብሮሽ የሄደዉ ማነዉ	1-ባለቤቴ 3-የዕድር ዓባላት 5-ሌላ ካለ---------- 2-ዘመዶቼ 4-ጤና ባለሞያ ----------		
332	ባለፈዉ የተወለደዉ ልጅ ስንተኛ ልጆ ነዉ	1-ዓንደኛ 3-ሶስተኛ 2-ሁለተኛ 4-ዓራተኛ		

ክፍል ዓራት- ከርግዝና፣ከወሊድ ዕና፣ ከወሊድ በኋላ ለሚከሰቱ ዓደገኛ ች የጤ ናችገሮች የማንዛቤ ቃለመጠይቅ

ማሳሰቢያ - በተቀመጠዉ ከፍት ቦታ ላይ የ ዔክስ(x)ምልክት ያስቀምጡ ሲያስቀምጡም ምላሹን የሰጡት ወዲያዉ ከሆነ ወዲያዉኑ የሚለዉ ከፍት ቦታ ላይከማብራሪያ በኋላ ከሆነ ደግሞ በተቀመጠዉ ክፍት ቦታ ላይ ያስቀምጡ

ተራ.ቁ	ጥያቄዎች	ዓማራጭ መልሶች	ወዲያዉኑ	ከማብራሪያ በኋላ
401	በርግዝነ፣በወሊድና ከወሊድ በኋላ ያሉትን ዓደገኛ ምልክቶች ዕንዳሉ ያዉቃሉ	1-ዓዎ 2-ዓይደለም		
402	ከሆነ ከየት ሰሙ	1-ከጤና ባለሞያ 2-ከጤና ዔክስቴንሽን 3-ከበጎ ጤናመልክተኛ 4-ከሬድዮ 5-ከቴሌቪዢን 6-ጎሮቤቶቼ ነግለዉኝ 7-ከመጻህፍትና በራሪ ወረቀቶች 8-ሌላ ካለ----------		
403	ዕነዚህ ዓደገኛ ምልክቶች ለሞት የሚዳርጉ መሆኑን ያዉቃሉ	1-ዓዎ 2-ዓይደለም		
404	በርግዝና ግዜ የሚከሰቱ ዓደገኛ ምልክቶችን ምንድናቸዉ	1-ብዙ ደም መፍሰስ 2-የፊትና ዕጅ ላይ ዕበጠት 3-የዓይን ብዥታ 4-ዓላዉቅም 5-ሌላ ካለ----------		
405	በወሊድ ግዜ የሚከሰቱ ዓደገኛ ምልክቶች ምንድናቸዉ	1-ከማህጸን ብዙ ደም መፍሰስ 2- ለረጅም ግዜ የቆየ ምጥ 3-ማንዘፍዘፍ 4--ዕንግዴ ልጅ ሳይወጣ መቆየት 5-ዓላዉቅም		
406	ከወሊድ በኋላ የሚከሰቱ ዓደገኛ ምልክቶች ምንድናቸዉ	1--ከማህጸን ብዙ ደም መፍሰስ 2-መጥፎ ጠረን ያለዉ የማህጸን ፈሳሽ 3-ከፍተኛ ትኩሳት 4-ዓላዉቅም		

Annex-II Dummy tables

PART-I Socio -demographic Information

S.No	Question	Respondents possible answer	Frequency	%
101	How old are you(in completed year)?	----------years		
102	What is your level of education?	1-Illitrate 2-can read and write 3-Grade1-8 4-secondary and above		
103	What is your occupation?	1-House wife 2-Farmer 3-Marchant 4-House maid 5-Government employee 6-Others specify----------		
104	How much do you earn per month ETB?	----------ETB		
105	What is your current marital status?	1-Married 2-Never married 3-Seprate 4-Divorced 5-Widowed		
106	What was your age at first marriage	----------years		
107	What is the level of education of your husband (for those married only) ?	1-Illitrate 2-Can read and write 3-1-8 grade 4-Secondary and above		
108	Occupation of your husband(for those married only)	1-Farmer 2-Marchant 3-Government employee 4-Daily laborer 5-other specify----------		
109	How much income does your husband get from his work /month?	----------in ETB ----------in quality		
110	How many of you are living in your house hold	----------		
111	Who is the decision maker in the house hold	1-Self 2-Husband 3-Self and husband 4-Others,specify----------		

PART-II Obstetric Information

S.No	Question	Respondents possible answer	Frequency	%
201	What is the number of births you gave up to now(include if there is still birth or died soon)	----------		
202	At what age was your first pregnancy	----------years		
203	What outcomes did you face during your pregnancy and child birth ? (more than one answer is possible)	1-Abortion 2-Live birth 3-Still birth 4-Others,specify----------		
204	Are you pregnant now	1-Yes 2-No		

PART-III Information on service delivery

301	Did you attend ANC before?	1-yes 2-No		
302	Do you think ANC is useful ?	1-Yes 2-No		
303	Do you attend ANC during your last pregnancy?	1-Yes 2-No		
304	Who attended your ANC visit?	1-Skilled health professional (Midwife, Nurse & Doctor) 2-HEW 3-TBA 4-Others,specify----------		
305	At what week/month did you start your ANC?	----------week/month		
306	How many times you attended ANC in you last pregnancy?	1-Once 2-Twice 3-Three times 4-Four and above		
307	Do you think that preparing for delivery is important?	1-Yes 2-No		
308	Did you make any preparation in your last pregnancy?	1-Yes 2-No		
309	What preparations did you make?	1-Grain for porrage 2-Cloth for newborn 3-Identified helper 4-Others,specify---------		
310	Do you think plan for place of delivery is important?	1-Yes 2-No		
311	Did you plan for place of delivery?	1-Yes 2-No		
312	Where do you plan place of delivery?(only for pregnant)	1-Home 2-Health post		

		3-Health center 4-Hospital 5-Others,specify---------		
313	Where were your last deliveries?	1-Home 2-Health post 3-Health center 4-Hospital 5-Others, specify----------		
314	Why do you prefer to deliver at home?(Possible to answer more than one answer)	1-Need to be with relatives 2-Prefer home ceremony after delivery 3-B/c of the cost is cheap 4-Presence of TBAs 5-My husband accepts it 6-My previous home deliveries were normal 7- Lack of transport 8-The health facility is too far 9-Health care providers approach are not good 10-No female provider 11-Lack of accompanying family members 12-Others,specify		
315	Why do you prefer to deliver at health facility?	1-The facility is near to me 2-Gave better service 3-I had better out come before 4-Health workers advice 5-Difficulty of labour 6-I had problem with previous home deliveries 7-Others,specify----------		
316	In what way did you give birth before?	1-Spontaneous vaginal delivery 2-Instrumental delivery 3-Cesarean section 4-I didn't remember 5-Others,specify----------		
317	Have you given birth at health facility?	1-Yes 2-No		
318	If Yes, how many births you have given?	----------		
319	Do you think that delivering at facility useful?	1-Yes 2-No		
320	Is plan to have skilled attendant at delivery useful?	1-Yes 2-No		
321	Who attended your delivery before?	1-Doctor 2-Nurse 3-HEW		

		4-TBAs 5-Others ,specify		
322	What was the outcome of your last birth?	1-Live birth 2-Live birth but died soon 3-Still birth 4-Others,specify----------		
323	Did you save money for your previous delivery?	1-Yes 2-No		
324	Did you plan for transport for emergency at delivery?	1-Yes 2-No		
325	So what was your transport?	1-On foot 2-On hoarse back 3-Carried by pepole 4-Seeking ambulance 5-Others,specify		
326	Did you prepare blood donor	1-Yes 2-No		
327	Do you think it is important	1-Yes 2-No		
328				
329	Have you been encountered any problem during pregnancy, delivery and after birth	1-YES 2-No		
330	If yes, what was the problem	1-Excessive vaginal bleeding 2-prolonged labour(>12 hr0 3-Retained placenta(>1 hr) 4-Inability to control urine/faces/both 5-Mal presentation 6-Fetal death 7-Early rapture of membrane 8-Fver and offensive vaginal discharge 9-Loss of consciousness 10-Others ,specify		
331	Were you referred to next facility?	1-Yes 2-No		
332	If yes, whom going with you there?	1-Husband 2-Relatives 3-Community emergency committee 4-With health care provider 5-Others ,specify		
333	What order was your last birth?	1-First 4- Four and above 2-Second 3-Third		

PART-IV-Women's knowledge of obstetric danger sign

S.No	Variables	Respondents possible answer	Frequency	%
401	Do you know any danger sign throughout pregnancy, delivery and soon after birth?	1-Yes 2-No		
402	If yes, from where you got this?	1-Health workers 2-HEW 3-Community health Promoters 4-Radio 5-Television 6-My neighbors 7-Read pamphlets/books 8-Others,specify----------		
403	Do You think these danger signs threaten the life of the women	1-Yes 2-No		
404	What danger signs are there during pregnancy?	1-Severe vaginal bleeding 2-Swollen hand and face 3-Blured vision 4-I don' know		
405	What danger signs are there during child birth?	1-Severe bleeding 2-Prolonged labour 3-Convlusion 4-Retained placenta 5-I don 'know		
406	What are the danger signs that occur soon after birth?	1-Severe vaginal bleeding 2-Foul smelling of vaginal discharge 3-High fever 4- I don 'know		

PART-V Socio-demographic and obstetric factors influencing birth preparedness and complication readiness adjusted for confounding variables

Variables	Birth preparedness		COR(95%CI)	AOR
	Yes	No		
Women's Education				
Illitrate Can read and write Grade1-8 Secondary and above				
Monthly income				
Gravida(total number of pregnancy				
ANC Visit				
Birth order First Second Third Fourth and above				
Birth at HF before last delivery Yes No				
History of still birth Yes No				

ANNEX-III Consent form

Good morning/afternoon/evening. My Name is ----------(interviewer)

I am from the research team of SPH,AAU, which is currently carrying out study on Study of knowledge of obstetric danger signs and birth preparedness among rural women. As part of this study we are collecting your information, socio-demographic, Knowledge on obstetric danger signs and birth preparedness and health services. We are speaking with women who gave birth 12 month prior to the study . The finding of this study will be used to improve the health of women and their children.

You have been selected for the interview by means of a random or chance selection process. I would like to ask few questions ,but you may respond or refuse to answer the questions I ask. You can stop the interview at any time. The interview will last approximately 30 minutes. The information collected from you will be used for this study only.

Shall I proceed to ask the questions? YES/NO

If no respect the decision and thank her, If yes continue the interview.

Name of interviewer----------Signature----------Date----------

የህ/ሰብ ጤና ክፍል ፣ የህክምና ፋኩሊቲ፣ዓዲስ ዓበባ ዩኒቨርሲቲ

የስምምነት ፎርም

ደሕናዓደሩ/ደህና ዋሉ/ደህና ዓመሹ፣ ስሜ----------የባላል (መረጃ ሰብሳቢ ነኝ)

ዕኔ በዓዲስ ዓበባ ዩኒቨርሲቲ የህ/ሰብ ጤና ክፍል የጥናትና ምርምር ዓባል ሰሆን ከርግዝና፣ ከወሊድ ና ከወሊድ በኋላ ለሚከሰቱ ዓደገኛ ምልክቶች ዕንዲሁም የገጠር ዕናቶች ለወሊድ በቂ ዝግጅት ያደርጋሉ ወይስ ዓያደርጉም በሚል ጽንሰ ሀሳብ ዙሪያ በመዉለድ ዕድሜ ክልል ዉስጥ ባሉ ሴቶች ላይ ጥናት ማካሄድ ነዉ፡፡ ይህነንንም ጥናት ለማካሄድ የማህበራዊና ስነ ህዝባዊ፣ ከርግዝናና ወሊድ ጋር ታይዘዉ ለሚፈጠሩ ዓደገኛ ምልክቶች፣ለወሊድ የሚደረግ በቂ ዝግጅት ዕና የጤና ዓገልግሎት ዓጠቃቀምን በተመለከተ መረጃ ዓሰባስባለሁ፡፡ መረጃዉን የምንሰበስበዉ ባለፈዉ 12 ወራት ዉስጥ ከወለዱ ሴቶች ሲሆን ከጥናቱ የሚገኘዉ ዉጤት የሴቶችና ህጻናትን ጤና ለማሻሻል የጠቅማል፡፡

ለዚህ ቃለ መጠይቅ የመረጥኖት በዕጣ ወይም በዕድል ነዉ፡፡ ዓኑን ፈቃደኛ ከሆኑ ጥቂት ቃለመጠይቆችን ከርሶ ጋር ማድረግ ዕፈልጋለሁ ፡፡ ለተጠየቁት ጥያቄዎች በሙሉ ወይም በከፊል ዕንዲሁም ያለመመለስ መብቶ የተጠበቀ ነዉ፡፡ ለቃለመጠይቁ የሚያስፈልገዉ ጊዜ 30 ደቂቃ ይሆናል፡፡ ከዕርሶ የሚሰበሰበዉ መለጃ ለዚህ ጥናት ብቻ የሚዉል ይሆናል፡፡

ቃለ መጠይቁን መቀጠል ዕችላለሁ/ ዓዎ/ዓይደለም

በምላሹ መሰረት ቃለመጠይቁን ይቀጥሉ

የጠያቂዉ ሥም----------ፊርማ----------ቀን----------

Annex IV- Map of Study Area

Annex-V Declaration

ASSURANCE OF PRINCIPAL INVESTIGATOR

The undersigned agrees to accept responsibility for the scientific ethical and technical Conduct of the research project and for provision of the required progress reports as

Per terms and conditions of the Research Publications Office in effect at the time

Grant is awarded as the result of this application.

Name of the student: Biftu Bogale Alemu

Date._____ Signature _____

Approval of the primary Advisor

Name of the primary advisor : _____

Date._____ Signature _____

Examiners

External: Dr. Hailu Yeneneh Date_____ Sig_____

Internal: Mr. Muluken Gizaw Date_____ Sig_____