BIRTH PREPAREDNESS, COMPLICATION READINESS AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN IN AGNUAK ZONE, GAMBELLA REGIONAL STATE, ETHIOPIA: COMMUNITY BASED COMPARATIVE CROSS-SECTIONAL STUDY

BY
FIKRU LETOSE (BSc)

A RESEARCH THESIS TO BE SUBMITTED TO DEPARTMENT OF POPULATION AND FAMILY HEALTH SCHOOL OF GRADUATE STUDIES INSTITUTE OF HEALTH AS THE PARTIAL FULFILLMENT OF THE REQUIREMENTS OF MASTER OF PUBLIC HEALTH IN REPRODUCTIVE HEALTH (MPH/RH)

BIRTH PREPAREDNESS, COMPLICATION READINESS AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN IN AGNUAK ZONE, GAMBELLA REGIONAL STATE, ETHIOPIA: COMMUNITY BASED COMPARATIVE CROSS-SECTIONAL STUDY

BY: FIKRU LETOSE (BSc)

Advisors:
1. Dr. Gurmesa Tura (MPH, PhD, Associate Professor)
2. Mrs. Bitiya Admassu (MPH, Assistant Professor, PHD Fellow)

June, 2017
Jimma, Ethiopia.

ABSTRACT

Background: Birth Preparedness and Complication Readiness interventions have a significant reduction in maternal and neonatal mortality risk. However, one of the major reasons for high maternal deaths recorded in sub Saharan Africa was inadequacy or lack of birth and emergency preparedness.

Objective: To assess birth preparedness, complication readiness and associated factors among women in Agnuak zone, Gambella regional state, March, 2017.

Methods: Community based Comparative cross-sectional study design supplemented by qualitative data collection method was conducted from March 10 to April 10, 2017. Multi-stage stratified random sampling technique was used to identify 411 women in urban and 209 in rural setting. Interviewer administered data collection method was used for quantitative method. Data were entered into EpiData and analyzed using SPSS version 21. Birth preparedness was measured using five items then women who score at least three were considered as well prepared. Bivariate logistic regression was performed to identify candidate variables and multivariable logistic regression to control confounders. The results were presented as frequency table and Odds Ratio with 95% CI. Qualitative data were collected from purposely selected 54 members of the community by using open ended/guiding questionnaire and analyzed in line of study objective manually.

Result: A total of 403 urban and 200 rural women were included in the study with response rate of 97.3%. The prevalence of birth preparedness and complication readiness was found to be 23.4% and significantly higher in urban respondents (25.8% urban and 18.5% rural, $p<0.05$). Being in urban residence, having occupation of government employee or merchant, higher wealth quintile, were among socio-economic and demographic factors found to increase the likelihood of preparation for birth and its complications. Mothers with history of obstetric complication, who knew at least three key danger signs, having favourable attitude, who started antenatal care visit during first trimester, had at least four antenatal care visits were among the factors found to increase the likelihood of preparation for birth and its complications.

Conclusion and Recommendation: Prevalence of birth preparedness and complication readiness was very low in urban and rural area, though significantly higher in urban area. Knowledge of a key danger signs, attitude of women, antenatal care visit use, occupational status were identified as significant predictors of birth preparedness and complication rediness. There should be health information and education to all pregnant women to improve birth and emergency preparedness at individual and community level.

Key words: Birth preparedness, Complication rediness, Comparative cross-sectional study, Agnuak Zone.

ACKNOWLEDGEMENTS

I would like to thank Jimma University for giving me this opportunity to conduct the study.

Next to this, I would like to express my deepest gratitude to my advisors Dr. GURMESA TURA and Mrs. BITIYA ADMASSU for their being on my side to comment and guide throughout proposal development and wrighting scientific paper.

I’m also thankful for Gambella regional health bureau, Gambella General Hospital and Agnuak Zone for material support.

I would like to extend thanks to supervisors, data collectors, study participants and my friends who participated directly and indirectly in developing this scientific paper.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

ANC-Antenatal Care

BP&CR-Birth Preparedness and Complication Readiness

CI- Confidence Interval

EDHS-Ethiopia Demographic and Health Survey

FGD- Focus Group Discussion

HSTP- Health Sector Transformation Plan

JHPIEGO- Johns Hopkins Program for International Education in Gynecology and Obstetrics

LMIC- Low and Middle Income Countries

MDGs-Millennium Development Goals

MMR- Maternal Mortality Ratio

PCA- Principal Components Analysis

SDGs-Sustainable Development Goals

SPSS-Statistical Package for Social Science

CHAPTER 1. INTRODUCTION

1.1 Background

Birth Preparedness is a series of steps through which pregnant women and their family members are delivered with basic messages associated with pregnancy and giving birth to safeguard a healthy outcome for both mother and baby(1). Since, all women and newborns are at risk of developing complication, and most of these complications cannot be predicted, the plan includes complication readiness to ensure an appropriate and timely response to any complication that may arise(2).

Birth Preparedness and Complication Readiness (BP&CR) is the first prerequisite step to seek skilled birth attendance, and point towards the need to give birth by skilled birth attendant(3). BP&CR interventions to reduce maternal and neonatal mortality in developing countries showed a significant reduction in maternal mortality by 53% and neonatal mortality risk by 24%(4).

It is essential to all women and families to equip with adequate information about obstetric danger signs and what actions should be taken when an emergency occurs. Woman and her family need to realize the seriousness of the situation and should know where to get help in emergency (5). Community resourses that sensitize and empower access to maternal health services result in a rise in facility birth and skilled birth attendance in rural sub-Saharan Africa(6).

A birth preparedness plan at individual level includes identification of the following components by the pregnant woman; preferred birth attendant, place of the closest facility for appropriate care, saved money for birth related and emergency obstetric expenses, arranging transport to a health facility for the normal birth and in the case of emergency, and identification of compatible blood donors (3, 5, 7).

For complications or emergencies that may occur during pregnancy, delivery or closely after birth, a pregnant woman should have a written plan for birth to dealing with unexpected adverse events and should discuss and review this plan with a skilled birth attendant at each antenatal care(ANC) assessment and at least one month prior to the expected date of birth(7).

1.2 Statement of the Problem

Globally, 303,000 women die each year due to pregnancy-related causes, and developing regions account for approximately 99%, with sub-Saharan Africa alone accounting for 66%.Maternal mortality remains the major public health challenge particularly in Low and middle income countries (LMIC). A woman from sub-Saharan Africa has lifetime risk estimated at 1 in 36 contrasting sharply with approximately 1 in 4,900 in developed countries(8).

Ethiopia is one of the Ten countries which have account for nearly 59% of global maternal deaths across the world with an estimated 11,000 maternal deaths in 2015(8). According to Ethiopian Demographic and Health Survey (EDHS) 2016, the MMR reported was 412 deaths per 100,000 live births (9). However, this figure still drops short of the Health Sector Development Plan (HSDP) target to reduce MMR by 2015 that is 267 maternal deaths per 100,000 live births(10). This high maternal and neonatal deaths can be effectively reduced through developing and implementing BP&CR practices by empowering women, husbands and communities to have knowledge on pregnancy related complications and promoting knowledge of key danger signs during pregnancy, childbirth and after delivery(5).

Maternal deaths have both direct and indirect causes. In Ethiopia, about 80% of maternal deaths are due to causes directly related to pregnancy and childbirth; 31% abortion related complications, 29% obstructed labor or uterine rupture, 21% infection and 12% hemorrhage(11, 12).

Public health sector inequalities with availability, accessibility, and affordability as well as the nature of services and demand factors appear to contribute to the larger urban-rural inequalities in maternal health care mainly in professional birth attendance and delivery care(13).

Inadequacy or lack of birth and emergency preparedness was one of the major reasons for high maternal deaths recorded. Thus, BP&CR plan has been globally recommended as an essential component of safe motherhood programs to reduce the three delays; delays in deciding to seek care for appropriate treatment (1^{st} delay), delays in reaching health facility (2^{nd} delay), and delays in receiving care (3^{rd} delay)(2). It is vital to reduce maternal and neonatal morbidity and mortality given that readiness for complications need immediate action and making arrangement prior to the emergency(5) .

Knowledge of obstetric danger signs and preparing for birth of pregnant women aim to encourage utilization of skilled care in developing countries(14). Early booking and regular attendance to ANC in the course of pregnancy gives an opportunity for a woman to be counselled and make an appropriate plan for delivery(15).

Birth preparedness is a basic component of ANC aiming at reducing any unnecessary delays to seek emergency obstetric care (7). WHO recommend that pregnant women should receive focused ANC(16). Only 34.8% of rural women received ANC from a person with midwifery skill compared with 80.3% of urban women(17).

WHO indicated that birth preparedness reduces home deliveries with a consequent increase in skilled attendance at birth (18). As stated in the EDHS 2016 report, urban women(72.9%) were more likely to deliver at health facility compared with rural women(19.7%) and proportion of women receiving a postnatal checkup within 2 days of delivery is higher in urban areas(45.2%) than in rural areas(12.6%)(9).

The Health Sector Transformation Plan (HSTP) in line with second growth and transformation plan (GTPII) of Ethiopia give top priority to end preventable maternal and child deaths by 2030. Ethiopian government has come up with a road map for accelerating the reduction of maternal mortality and morbidity so as to achieve HSTP goal of 199 per 100,000 live births by the year 2020(11). Therefore, to achieve this, evidence based intervention is crucial and Studies exploring BP&CR practices and associated factors are needed in reduction of the current high MMR.

BP&CR may differ among pregnant women largely with regards to the level of development of the areas in which these women live. Moreover, health service delivery was inefficient and unfair, and quality of healthcare was usually poor between urban and rural setting(10). In Africa including Ethiopia, several studies showed low status of BP&CR (19-23). However, to the best of our knowledge, these studies and others have not assessed the possible community based rural-urban differences associated with BP&CR. Moreover, studies conducted to assess BP&CR were limited to the other parts of Ethiopia. This study therefore conducted to assess the status of BP&CR among pregnant women and its associated factors in urban and rural area of Agnuak zone, Gambela regional state, Ethiopia.

CHAPTER 2. LITERATURE REVIEW

2.1. Prevalence of birth preparedness and complication readiness

Study conducted in rural area of Uganda showed that 35% of the respondents were found to have well birth prepared in 3 of the four birth preparedness practices (61% of the respondents had identified a health professional, 91% had saved money for obstetric emergency and 61% had arranged means of transport, while 71% had bought delivery kits/birth materials during their most recent pregnancy)(23).

One of the purpose of safe motherhood plan of the WHO package is to encourage pregnant women, their families, and communities to plan for normal pregnancies, deliveries, and postnatal periods and to prepare to deal effectively with emergencies if they occur which defines a range of complementary interventions to improve maternal and newborn health(24). Studies conducted to assess BP&CR indicates low and greater difference between urban and rural residence.

Study of Southern Ethiopia (2011) showed 17% of mothers prepared for birth and its complication which spontaneously mentioned at least three components taking into account as a means of transportation, identified skilled provider, saving money, identified place of delivery and identified blood donor(25). Community based cross-sectional study conducted in Basoliben District, Northwest Ethiopia (2013) showed 50.7 % identify health facility for place of delivery, 69.4% save money for the purpose of pregnancy and child birth, 32.1 % decide to deliver by skilled provider, 33.1% identify mode of transport and 7% arrange blood donor. Considering at least three practices among pregnant women, 26.9% of respondents were well birth prepared and ready for complication (26).

Study conducted in Adgrat town[Ethiopia] revealed that 39.1% identified their place of delivery, 10.5% were identified their skilled birth attendant, 35.6% already saved money, 0.7% identified blood donor and 3.2%, identified means of transportation. Overall, 22.0% of the respondents were already prepared for birth and became ready for its complications(20).

Factors Associated with Birth Preparedness and Complication Readiness

2.2. Socio-economic and Demographic Factors

In Ethiopia, place of residence have been shown to influence BP&CR and delivery services. Community based cross-sectional study showed women living in urban area were more likely prepared for birth and ready for complication than those living in rural area(26). Similar finding indicated that BP&CR were two times greater among urban resident women when compared to rural residents(27)

Educational status of women was among the socio demographic factors which affects BP&CR. Education increases the likelihood that women will develop and implement a birth plan(28). Studies of Adama town(2011) and rural Uganda (2014) showed mothers whose educational status was secondary high school and above were more likely to prepare for birth and it's complication than women who did not attend formal education (23, 27). Study conducted in rural communities of Ethiopia revealed occupation of the women was found to be one of the factor which affect birh plan of the women. Being housewife were associated with poor birth preparedness(29).

Occupation of the husband was found to be significant determinant of BP&CR practice. A women whose spouse was employed were more likely pepared for birth and ready for complication when compared to those women whose spouses were not employed(30). Study conducted in rural Uganda revealed that spouse occupation has strong association with a birth plan (31). Government employed husband positively influenced BP&CR(32). Statistically significant association between educational status of husband and birth preparedness was stated by several studies (29, 33, 34).

Married women were more likely to be prepared for birth/complication than non-married (20). Pregnant women with large (≥7) family size were more likely being prepared than women with 1-3 family size (32).

The wealth status of women was among the factors associated with BP&CR practice. Women in the higher wealth quantile were found to be more likely prepared for birth and ready for complication than women in the lower wealth quantile (22, 35, 36)

2.3. Maternal Factors

There was Statistically significant association between number of live births and preparation for birth and its complication(32). Women with parity range of 2 to 4 and first time livebirth were more likely to prepare for birth and its complication than ≥4 livebirths (20). Similarily, study conducted in Rural District of Ghana revealed Women who gave birth for the first time were found to have a birth plan and were more likely prepared for birth as compared to those who had multiple number of deliveries(36).

Early and frequent ANC attendances are important to identify and alleviate risk factors in pregnancy and to encourage women to prepare for birth (37). Studies showed ANC visit were found to be factors associated with BP&CR. Pregnant women who had ANC follow up were more likely to be birth prepared than those did not have ANC follow up (26, 27, 38, 39). Similarly, Women who attended to ANC at least four times were more likely to be prepared for birth and its complications compared to those who attended less (30). Study done in Tanzania revealed that women booked for ANC during the first trimester were more likely to be prepared for birth and its complications as compared to those who booked after first trimester (30). In contrast, a study done in Nigeria found that those who booked late were more likely to be prepared for birth and its complications (40).

Mothers who had reported obstetric complications in the recent pregnancy and/or childbirth and/or postpartum period were more likely to deliver in health facility than mothers who hadn't encountered complications(41). Study in Adigrat, Basoliben District Northwest Ethiopia and Adama showed Women who had history of still birth were more likely to prepared for birth and its complication than those who did not have still birth(20, 26, 32).

Decision making power in the family affects BP&CR practice(42). Mothers who made decision about place of delivery with their husbands were more likely to have skilled birth attendance than those mothers who decided only by themselves(43).

2.4 Knowledge and attitude related factors

Knowledge of obstetric danger signs

One of the essential step towards recognition of complications is Knowledge of the danger signs of obstetric complications which enable one to take appropriate action to access emergency care. Knowledge of key obstetric danger sign increase the likelihood of BP&CR practice of women (20, 27, 29, 30). Women who recognized vaginal bleeding as a danger sign

in pregnancy were 3 times more likely to be prepared for birth than those who did not know(44). Women who know at least one danger sign during pregnancy, child birth and postpartum period were more likely prepared for birth and its complication(23)

Knowledge of community resourses

Women's knowledge of the existence of community-level systems to provide emergency funds, transport, and blood donor help women to prepare for birth. Delay in reaching the health facility, which is considered as second delay may be created by the distance from a woman's home to a health facility or provider, the condition of roads, poorly mobilized community resources for transportation and a lack of emergency transportation (3). Study conducted in Nigeria and rural Ghana showed only 0.3% and 4.5% of respondents had knowledge of availability of community transport system respectively(36, 45). However, study of West Bengal India indicated 90.4% and 78.3% of women had knowledge of Community financial support scheme and Community transport support scheme respectively(46). Southeastern Nigerian study showed that women who knew community resourses of financial support system, transport system, and blood donor system were 20.1%, 23.9%, and 3.3% respectively(47).

Attitude towards birth preparedness and complication rediness

Major barrier to use skilled care by pregnant women were influenced by attitudes and behaviors towards skilled providers (48, 49). BP&CR of women influenced by attitude towards their birth plan(22) and individual perceptions.

2.5 Average distance from health facility

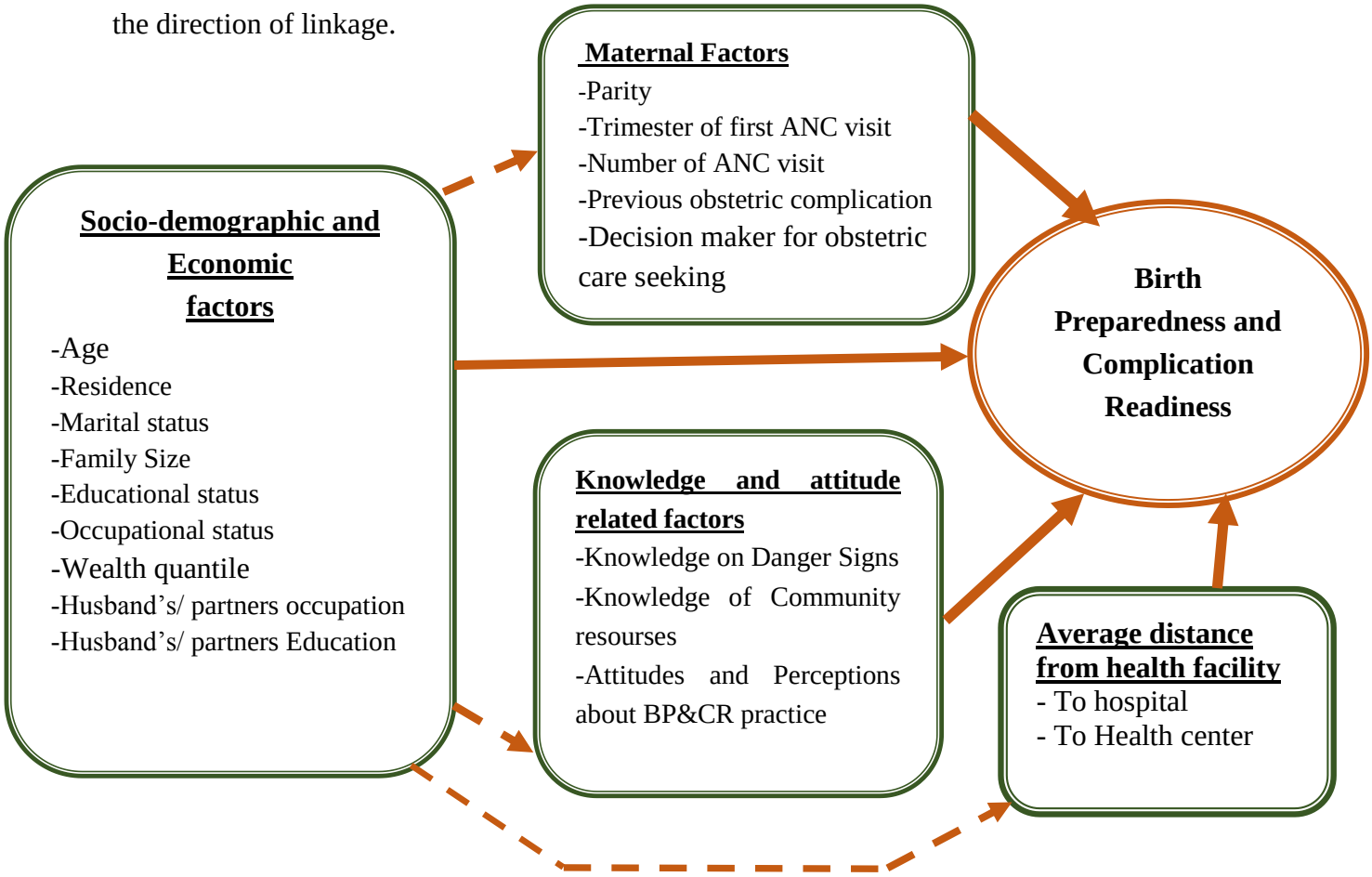
In the case of obstetric emergency, birth preparedness is not easy to achieve specially in rural areas. Even if transportation is available distance and lack of maintained roads still cause delays(7).

A community based cross-sectional study of rural Uganda showed that women resided in areas which located ≥1 hour travel time to a health facility were less likely prepared for birth and ready for complication than counterparts(23). Another study from Jimma Zone revealed that women who travel within two hour walk from health institution were about three times more likely to prepared for birth and its complication than women who reside more than two hours(22).

Several studies conducted to assess BP&CR showed that there is association between Socio-demographic factors such as Level of education, Occupational status, Residence, wealth quintiles, Family Size, Husband's/ partners occupation, and Husband's/ partners Education; Maternal Factors such as parity, ANC attendance, previous obstetric complication and Decision Maker about woman's health care; Knowledge related factors such as Knowledge on danger signs during labor, delivery and post-partum period, Attitudes and Perceptions of pregnant women towards BP&CR; and Average distance from health facility. Several studies showed that there is low status of BP&CR practice in rural area than urban area. However, to the best of our knowledge these studies didn't assess factors associated with urban-rural disparity in BP&CR practice which was assessed by current study.

2.7 Conceptual Framework

Multiple and interrelated factors influence BP&CR. The conceptual frame work below shows this inter related factors associated with BP&CR. For this study, the independent variables are grouped in to four classes; namely, Socio-demographic factors, Maternal Factors, Knowledge and attitude related factors and average distance from health facility. Each factors with their constructs are linked with BP&CR as well some of them are related with each other as seen by the direction of linkage.



KEY

Shows there may be direction of relationship but not part of the objective of the study

Shows direction of relationship with outcome variable and part of objective of the study

Figure 1. Conceptual framework adapted from reviewing different literatures and showing the relationships among the factors associated with Birth Preparedness and Complication Readiness.

2.8 Significance of the Study

This study determined magnitude of BP&CR and identified magnitude of BP&CR practice among pregnant women in urban and rural setting of Agnuak Zone. Moreover, it also identified the different factors which appear to contribute to BP&CR in urban and rural area.

Findings from this study will be used for priority setting and designing effective program by zonal and regional health bureau, and other stakeholders to consider urban and rural setting in addressing the problems of the pregnant women associated with BP&CR.

The findings will be also used as a basis for those who are interested in carrying out further study.

CHAPTER 3. OBJECTIVES

3.1 General objective

To assess Birth Preparedness, Complication Readiness and associated factors among pregnant women in Agnuak Zone, Gambella Regional State, Ethiopia, March, 2017.

3.2 Specific objectives

1. To determine magnitude of birth preparedness and complication readiness
2. To compare birth preparedness and complication readiness among urban and rural pregnant women.
3. To identify factors associated with Birth Preparedness and Complication Redness among pregnant women.

CHAPTER 4. METHODS AND MATERIALS

4.1 Study area and period

The study was conducted in Agnuak Zone which is one of the three zones of Gambella Regional state boardered Southwest by South Sudan, Southeast by SNNPR, East by Mezhenger Zone, Northeast by the Oromia Region, and Northwest by South Sudan and Nuer Zone. Abobo town which is capital city of Agnuak Zone located at 822km from Addis Ababa and 45km from Gambella town, capital city of Gambella Regional state.

Agnuak Zone has five Woredas (Districts); Abobo, Dima, Gambella Zuria, Jor, and Gog which constitutes a total of 21 urban kebeles and 59 rural kebeles. The Zone has a total population of nearly 158,875 of which 99,831 are urban residents and 59,046 rural residents. Pregnant women constitute 4,766(3%) of total population which 2,995 urban residents and 1,771 rural residents in 2017(50). The Zone has 21 urban and 43 rural health posts, 6 urban and 5 rural health centers, 6 private clinics in urban, and 1 hospital. Currently, the zone has 5 ambulances and 1 blood bank (51). The study was conducted from March 10 to April 10, 2017.

4.2 Study design

A Community based comparative cross-sectional study design supplemented with qualitative data collection method was used.

4.3 population

4.3.1 Source population:

All pregnant women of Agnuak zone.

4.3.2 Study population:

For quantitative study: randomly sampled pregnant women who fulfill the selection criteria and included in the study in Agnuak zone.

For qualitative study: Purposely selected pregnant women, health development army leaders, and fathers.

4.3.3 Study unit

For quantitative study: A pregnant women.

For qualitative study: an individual pregnant women, health development army leaders, and fathers

4.4. Eligibility criteria

4.4.1 Inclusion criteria

For quantitative study:

-Pregnant women who were residents in the sampled kebeles for more than 6 months.

-Pregnant women whose gestational age was above three months.

4.4.2 Exclusion criteria

- Critically ill pregnant women who cannot respond to the questionnaire in quantitative study.
- Pregnant women and health development army leaders who were participated in quantitative study were excluded from Focus Group Discussion (FGD).
- All residents of refuge cumps found in the study area were excluded from the study.

4.5 Sample size determination and sampling technique

4.5.1 Sample size:

For quantitative study:

Specific objective two

Among factors associated BP&CR, knowledge on obstetric danger sign yield largest sample size. Two population proportion for comparative cross-sectional study was used and calculated by epi-info version 7.1.1.14 based on the following assumptions;

Community based cross-sectional study conducted on pregnant women in Ethiopia(39).

P1 =prevalence of BP&CR among mothers who were considered to be good Knowledge on obstetric danger sign during pregnancy=70.2%

P2= prevalence of BP&CR among mothers who were considered to be Poor Knowledge on obstetric danger sign during pregnancy=29.8%

The CI and power considered were 95% and 80% respectively. Design effect of 2 used. Ratio of 2:1 was taken because pregnant women in urban and rural setting of Agnuak Zone were 2,995 and 1,771 (50) and also total pregnant women identified before actual data collection was 573 and 276 respectively. Non-response rate of 10% was added. The final sample size become urban=90 and rural=46.

Specific objective three

Among factors associated BP&CR, attitude of women towards BP&CR yield largest sample size. Two population proportion for comparative cross-sectional study was used and calculated by epi-info version 7.1.1.14 based on the following assumptions;

Community based cross-sectional study conducted on pregnant women in Southwest Ethiopia(22).

P1 =Prevalence of BP&CR among mothers having favourable attitude=41.1%

P2= Prevalence of BP&CR among mothers having unfavourable attitude=23.9%

The 95% CI and 80% Power were considered; Ratio of 2:1 was taken because pregnant women in urban and rural setting of Agnuak Zone were 2,995 and 1,771 (50) and also total pregnant women identified before actual data collection was 573 and 276 respectively; Design effect of 2 taken; and 10% was added for non responses. Finally calculated sample size become n_1=411 and n_2=209.

From the three objectives, the largest sample size was 620 and taken as the final sample size for the study.

Table 1. Summary of sample size calculation

	Factors	Power	Two sided confidence level	P_1	P_2	Urban to rural ratio	Design effect	Nonresponses	n_1	n_2
By using two population proportion formula	Knowledge of danger signs	80%	95%	0.702	0.298	2:1	2	10%	90	46
	Attitude of women	80%	95%	0.411	0.239	2:1	2	10%	**411**	**209**

For qualitative study

By considering characteristics and homogeneity of population, a total of 54 participants were recruited purposively. These consists of 18 pregnant women, 18 health development army leaders and 18 Fathers. The recruitment of pregnant women, health development army leaders and Husbands/partner were assisted by each selected kebele administrators. Pregnant women, health development army leaders and Fathers who were active participators in community affairs and expected to participate actively in FGD were included in the study.

4.5.2 Sampling techniques

For quantitative study:

Multistage stratified random sampling technique was used to select the study participants. In the first stage from five districts of Agnuak Zone, three districts; Gamella Zuriya, Abobo and Gog districts were selected by simple random sampling method; lottery method. The Districts were stratified into urban and rural kebeles based on residence. In the second stage, 7 urban kebeles were selected proportionally from urban kebeles of the three districts by SRS; lottery method. In the same way, 10 rural kebeles were selected proportionally from rural kebeles of the three districts by SRS; lottery method. After study kebeles were selected, a list of pregnant women for those selected kebeles were obtained from family folder assisted by grade 10 complete and above females and identification number was given for each eligible pregnant women. Two hundred nine pregnant women were allocated proportionally to rural kebeles and 411 pregnant women for urban kebeles in the study. At the end, simple random sampling method (computer generated random numbers) was used to select eligible pregnant women from each urban and rural kebeles. The detail of sampling procedure explained below *(Figure 2).*

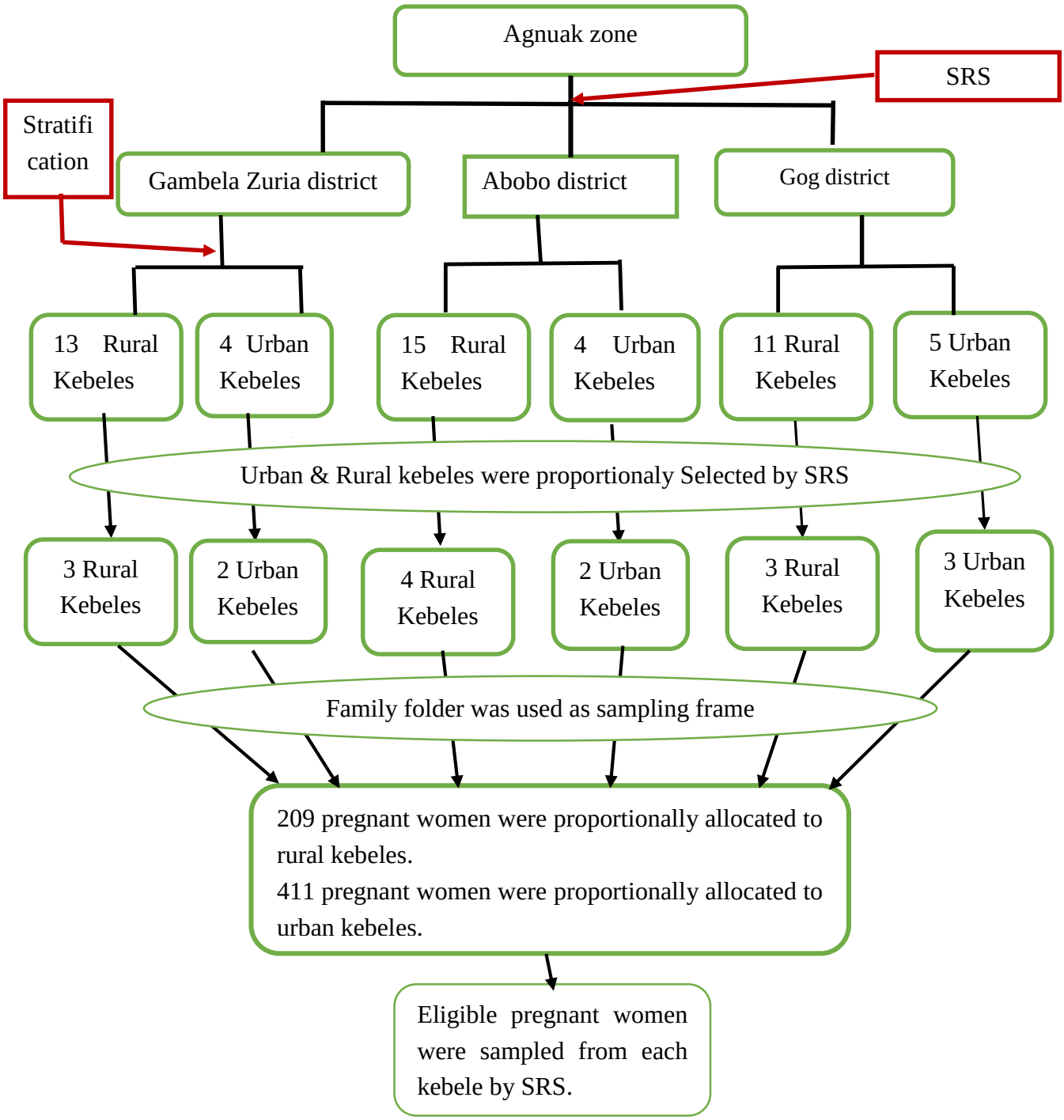


Figure 2. Schematic presentation of sampling procedure for quantitative study, Agnuak Zone, Gambela regional state, Ethiopia, 2017.

Table 2. Sampling procedure for quantitative study showing proportional allocation to size, Agnuak Zone, Gambella regional state, March, 2017.

	SRS Selection	Stratification	SRS Selection of kebeles	Estimated total population	Expected pregnant women	Total number of pregnant women identified	Sample size allocated proportionally
Agnuak Zone	Gambela zuria district	4 Town kebeles	1.Bonga	1989	60	52	37
			2.Abol Kir	2551	77	93	66
		13 Rural Kebeles	1.Pukong	763	23	19	15
			2.Opagna	830	25	17	13
			3.Jawe	1185	36	29	22
	Abobo district	4 Town kebeles	1.Wankak	2636	79	72	52
			2.Abaru	3085	93	82	58
		15 Rural Kebeles	1.Ukuna	1767	53	36	28
			2.Village 8&9	1973	59	67	50
			3.Tegni	1304	39	23	17
			4.Chobo kir	1323	40	21	16
	Gog district	5 Town kebeles	1.Pukedi	2982	89	97	70
			2.Ulegn	3263	98	104	75
			3.Poljay	3018	91	73	53
		11 Rural Kebeles	1.Abodo	710	21	19	14
			2.Puchale	720	22	16	12
			3.Dipach	804	24	29	22
TOTAL			Town kebeles=7 Rural kebeles=10	Town=19,524 Rural=11,379	Town=586 Rural=341	Town=573 Rural=276	Town=411 Rural=209

Source: Gambella regional health bureau (2008 E.C.)

For qualitative study:

One rural kebele; Village 8&9, and one urban kebele; Abaru were selected purposely due to their abandant population that might offer a possibility to get variety of participants. Then, a total of 18 pregnant women, 18 health development army leaders and 18 fathers from each rural and urban kebeles were recruited for FGD. Each group consists of 9 participants and have similar characteristics which help participant to talk freely whatever they know.

4.6 Study variables

4.6.1 Outcome variable

Birth preparedness and complication readiness

4.6.2 Independent variables

- Socio- demographic and economic variable
  - Age
  - Residence
  - Marital status
  - Family Size
  - Educational status
  - Occupational status
  - Wealth quintiles
  - Husband's/Partner's Education
  - Husband's/Partner's occupation
- Maternal Factors:
  - Parity
  - ANC follow up
  - Trimester of first ANC visit
  - Previous obstetric complication
  - Decision maker for woman's obsetric care seeking
- Knowledge and attitude related factors
  - Knowledge of danger signs during pregnancy, delivery and postnatal period
  - Knowledge of community resourses
  - Attitude and Perceptions towards BP&CR
- Accessibiloity of Health facility (on foot)
  - To hospital
  - To health centre

4.7 Operational Definitions and terms

Birth Preparedness and complication rediness: is a composite measure of five variables (identified health facility for place of delivery, Saved money, decided to deliver by skilled provider, identified mode of transport and arranged blood donor). Women who spontaneously responded at least three practices considered as 'well prepared' otherwise 'less prepared'. Women

were coded as yes=1 if well prepared and no=0 if less prepared. This scoring was used to identify and compare factors associated with BP&CR between urban and rural pregnant women. This scoring were previously used by studies to assess pregnant women's BP&CR practice (20, 22, 26, 30).

Institution delivery: If she will have plan to be assisted by skilled birth attendant with midwifery skills (Midwives, Nurses, Health Officers and Physicians) who can manage normal deliveries and diagnose, manage or refer obstetric complications.

Saved money: any money put aside by the woman or her family to pay for expenses during childbirth or obstetric emergencies.

Skilled birth attendant: a skilled attendant is an accredited health professional such as a midwife, nurse, or doctor who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns (52).

Mode of transport: any kind of transport which is identified ahead by the women or her family for the purpose of transportation to place of childbirth or for the time of obstetric emergencies reported by the woman.

Blood donor: a women planned at least one person who donate blood if she was in need of blood transfusion at the time of obstetric emergency.

Attitudes and Perceptions about BPCR Practice: Women's attitudes and Perceptions about BP&CR were measured by a five point Likert scale with a total of eight questions. Scores of all questions were added for each respondent to form composite variable categories. The responses were coded as 5=strongly agree, 4= agree, 3= Indifferent, 2=disagree, and 1= strongly disagree. Negatively worded questions were reverse coded before analysis. Then, mean score was computed to measure the attitudes of the participants towards BP&CR. Accordingly, respondents who scored above the mean were considered as having favourable attitude were as those who scored below the mean were considered as unfavourable attitude towards BP&CR.

Key danger signs: are those that are common, can easily be recognized and are signs of serious complications(3) and they are grouped under three phases of pregnancy, childbirth and postpartum. The key danger signs during pregnancy include: severe vaginal bleeding, swollen hands/face and

blurred vision; key danger signs during childbirths are: severe vaginal bleeding, prolonged labour (labour lasting more than 12 hours), convulsions and retained placenta; key danger signs during postpartum include: severe vaginal bleeding, foul smelling vaginal discharge and high fever.

Knowledge of the key obstetric danger signs during pregnancy, childbirth and postpartum: A woman was considered as having "favourable knowledgeable" if she spontaneously mentioned a total of three obstetric danger signs in all the three phases otherwise "unfavourable knoeledgeable."

Knowledge of Community resourses: A woman was considered as "favourable knowledgeable" if she responded all the three knowledge related questions on the existence of community resourses otherwise "unfavourable knowledgeable."

Trimester of first ANC visit: a stage of pregnancy a women attended the first ANC visit determined by her self-response and categorized as 1st trimester and other for analysis.

Number of ANC visit: a total number of ANC Visits received and planned to attend at all by the women and categorized in to Planned not to attend at all, 1-3 visits and ≥4 visits then grouped into ≥4 visits and <4 visits for analysis.

Previous obstetric complication: a woman had a history of obstetric complication of abortion and/or stillbirth. She was considered as having history of obstetric complication if she experienced even a single obstetric complication.

Decision maker for obstetric care seeking: categorized in to herself and husband/partiner/ family/relative/mother in law, herself only, husband only, and family/relative. In the analysis herself and husband/partner/family/relative/mother in law labeled as herself and husband

Age of the women: a women's age was recorded in years then categorized into '<20 years', '20-29 years,' and '>/=30 years' for descriptive analysis then further into <25 and ≥25 for logistic regression. This classification was previously used by other studies (23, 39, 53).

Average time it took to the health institution: A pregnant women was asked for how long it takes on foot from her home to the nearest health institution in minutes on average. The responses were then categorized in to >one hour and <one hour for analysis.

Wealth quintiles: Wealth index is a composite measure of the cumulative living standard of households and was calculated using easy-to collect data on ownership of household assets and equipments, water supply, power supply, sanitary facility, residential homes, farmlands and livestock ownership. Wealth index was generated by using statistical procedure called principal components analysis (PCA). PCA places wealth index score of individual households on a continuous scale of relative wealth. Then wealth status of households was categorized in to five quintiles ranked from 1st quintile (poorest), 2nd quintile, 3rd quintile (middle), 4th quintile, to 5th quintiles (wealthiest) which used previously by Ethiopian demographic health survey.

4.8 Data collection instruments and procedures

4.8.1 Data collection instruments

A pre tested Structured interview questionnaire was used for data collection. It was taken from the monitoring BP&CR: tools and Indicators for maternal and newborn health JHPIEGO, an affiliate of John Hopkins University (3) and adapted according to local context and the objectives of the study. Wealth index questionnaires were developed from EDHS(17) according to local situation. The questionnaires were composed of six parts: Section 1. Socio-demographic and economic information; Section-2: Plan to use obstetric services; Section-3: Knowledge of obstetric danger signs; Section-4 Knowledge of community resourses; Section-5: Past obstetric history; and Section-6: Attitudes and Perceptions about BP&CR practice.

Open ended FGD guide and tape recorder were used to conduct the FGDs.

4.8.2 Data collection procedures

Quantitative part:

One female data collector for town kebeles and the same number for rural kebeles with in each district were assigned for data collection. All data collectors were Grade 10 and above who were living in the study area and fluent in speaking Amharic and local language (Agnua). Three supervisors followed the entire data collection process with in each Woreda. All supervisors were Bachelor of Science degree (BSc) holder health professionals. The whole data collection process were monitored by the principal investigator.

All data collectors used a list of pregnant women from updated family folder and specific code marked for each eligible pregnant women before actual data collection. A pregnant women was

identified by district (Woreda), weather urban or rural, names of the kebeles, Got name/number, and name of head of household.

Using a pre tested questionnaire, information was collected through face to face interview. Socio-economic and demographic characteristics including: Age, ethnicity, marital status, family size, residence, religion, education, household's wealth assets, Average time to hospital and Average time to health center. History of previous pregnancy complication, Plan to use obstetric services, and Attitudes and Perceptions about BP&CR practice were also included. Furthermore, the study participants were asked their BP&CR practice waiting their spontaneous answer to check whether they plan/practiced those operationally defined BP&CR component. Danger signs during pregnancy, delivery and postnatal period were also asked waiting their spontaneous response. A woman was asked about ANC services for number of visits and trimester of pregnancy during the 1st ANC visit.

Qualitative part:

FGD was used as the data collection technique to get participants experiences related to BP&CR. By using open ended/guiding questionnaire, six sessions of FGDs were undertaken to explore birth plan experience of the community regarding BP&CR practice. For urban and rural kebeles, separate FGD conducted for pregnant women, health development army leaders and for fathers. After the purpose of the study were explained and informed consent were obtained, FGDs were moderated by a principal investigator and a note taker. During discussion, Notes were taken and their voices were recorded using tape record.

4.9 Data processing and analysis

For quantitative analysis:

Collected data were checked for completeness and consistency, and coded manually. Data were entered into EpiData version 3.1 then exported to Statistical package for social science (SPSS) statistic 21 for cleansing, recode, compute, and do other statistical analysis. First, Descriptive statistics was computed to determine the prevalence of BP&CR and other independent variables for frequency distribution, central tendency, and variability.

Wealth index was determined by computing PCA. First, descriptive statistics was used to explore all variables that measure wealth index. Those variables with empty categories and less than 1%

observation were excluded from PCA. The resulting household assigned one for asset present and zero for asset absent. Continous variables were standardized in relation to a standard normal distribution with mean zero and standard deviation one. These standardized scores were then used to create a break points that define wealth index from lowest quintile (poorest) to highest quintile (wealthiest). Each household's asset for which information collected were assigned a weight or factor score generated through PCA. The PCA result showed that variables highly loaded on the first PCA component were Television, Refrigerator, Electricity and Roof type. Variables highly loaded on the second component were Firewood, Charcoal, finished floor with cement, and Wood with cement covered. Variables loaded on the third component were animal drawn cart, horses, and agricultural land. Variables loaded on the fourth component were separate room for kitchen, ownership of home, and Goats *(Annex-J Wealth Index).*

Independent variables with p-value ≤0.25 in bivariate logistic regression analysis were considered as candidate variables for multivariable logistic regression analysis. Independent variables with p-value ≤0.25 in bivariate logistic regression analysis were checked for multicollinearity using Variance Inflation Factor (VIF) and no significant multicollinearity observed (the largest VIF observed was 1.690). Those independent variables with p-value ≤0.25 were entered into multivariable logistic regression model using backward stepwise method. Hosmer-Lemeshow Goodness-of-fit was checked to test model fitness and the model was best fit (p-value =0.402). Attitude and perception composite variable was checked for internal consistency with Cronbach's alpha reliability scale coefficient and showed acceptable scale (=0.735). In multivariable logistic regression analysis, independent variables with p-values <0.05 were considered as statistically significant. The results were presented as frequency table, crude and adjusted ORs and with 95% CI.

Qualitative analysis:

Prior to analyzing data, all FGDs were write down in Amharic by replaying the recorded interview from tape and the notes taken during discussion then transcribed in to English text. Different ideas in the text were merged in their thematic areas and a thematic framework analysis was done manually. Then, the results were presented in narration by triangulating with quantitative findings.

4.10 Data quality management

To insure the quality of data, the quantitative questionnaires originally prepared in English were translated to Amharic and local language (Agnua) by a translator and back to English language by second other translator who were health professionals. Consistency of questionnaires were compared and found consistent. To ensure competence of data collectors and supervisors, peer interview were made then two days training were provided. The training was given for data collectors and supervisors about objectives of the study, data collection tools, data collection procedures and ethical considerations. In addition to this, supervisors were trained for supervisory skill about data completeness and cross-checking. The questionnaire was pre tested on 5% of sample size in Itang Woreda which was not included in the study and analysis. Modification was made after pretest for skipping pattern, logical sequence of quostionnaire sections, choices of some variables. Every collected data were reviewed and checked for completeness and consistency by supervisors within two days of collection.

Open ended/guiding FGD guide which was originally prepared in English version translated in to Amharic by one person then back translated in to English and was compared with the original version and consistency was checked and it was consistent. All FGDs were conducted in Amharic because all discussants were fluent speakers. All FGDs were audio-recorded so that important messages were not missed. A person with an experience of note taking during FGD were assigned for observation and note taking. The FGDs were conducted in the health posts and in the compound of kebele administration office as the discussants preference.

4.11 Ethical considerations

Ethical clearance was obtained from Institutional Review Board (IRB), Institute of health, Jimma University. A formal letter from Jimma University was submitted to Agnuak zone Health Department and respective Districts. All pregnant women who fulfill the inclusion criteria were presented with the objectives and rationale of the study and were informed of their right to stop the interview at any time if they wished, without giving any reason. The interviewer was discussed the issue of confidentiality and obtain verbal consent before the actual interview were launched. For this purpose, a one-page consent form was attached as cover page to each questionnaire. In addition, the name of the participants were not written in the questionnaire. By doing so, the issue

of confidentiality were addressed. In addition to this, for the qualitative data the moderator explained the purpose of the study and obtain voluntary informed consent prior to the discussion, including to take note and to use tape recording.

4.13 Dissemination plan

The finding of this study will be disseminated through:

- Presentation of the findings on thesis defense and seminars
- Submission of the written document to department of population and family health, Agnuak Zone health bureau, respective districts and other stake holders.
- All attempts will be made to publish the result of the study on national or international journal.

CHAPTER 5. RESULTS

5.1 Socio-Economic and Demographic Characteristics

A total of 603 pregnant women (403 urban and 200 rural) giving a response rate of 97.3% were participated in the study. The mean (± Standard Deviation) age of women in urban and rural area were 25.1 (± 4.4) and 26.6(±4.9) years respectively. Regarding their ethnicity, 295 (48.9%) were Agnuak of which 164(40.9%) urban and 131(65.5%) rural. Out of the total respondents, 271 (44.9%) were Protestant [213(53.3%) urban, 58(29.3%) rural] *(Table 3).*

The majority [557(92.3%)] of the mothers were married [366(90.8%) were urban and 191(95.5%) rural]. Regarding the respondents' educational status, 65(16.1%) in urban and 88(44.0%) in rural had no formal education and this difference was statistically significant ($p<0.001$). Twenty two (5.5%) urban and 84 (42.2%) rural of their husbands had no formal education (statistically significant difference with $p<0.001$). Occupational status of women in urban area were statistically different from rural ($p<0.001$). Four hundred twenty seven (70.8%) of respondents were housewives [267(66.3%) urban and 160(80.0%) rural]. Seventy (19.7%) and 154(81.5%) of their husbands in urban and rural area were farmers resipectively. About 396(98.3%) of women in urban and 31(15.5%) in rural resided in areas that were located less than one hour travel time to health center($p<0.001$). One hundred twenty (19.9%) were in the first quantile (poorest) of wealth quintile (*Table 3).*

Table 3. Socio-economic and demographic characteristics of the study participants by Residence, Agnuak Zone, Gambella regional state, March, 2017 (n = 603).

Variables	Urban(n=403)		Rural(n=200)		Total(n=603)			
	No	%	No	%	No	%	χ^2	P-value
Age(years)							4.02	<0.05
<25	177	44.3	71	35.7	248	41.4		
≥25	223	35.8	128	64.3	351	58.6		
Family size							96.44	<0.001
<4	205	50.9	36	18.0	241	39.9		
5-6	166	41.2	93	46.5	259	42.9		
≥7	32	7.9	71	35.5	103	17.1		
Ethnicity							31.95	<0.001
Agnuak	165	41.0	131	65.5	296	48.9		
Others[1]	237	59.0	69	34.5	306	50.8		
Religion							52.96	<0.001
Protestant	213	53.3	58	29.3	271	44.9		
Orthodox	91	22.8	34	17.2	125	20.7		
Catholic	48	12.0	52	26.3	100	16.6		
Others[2]	48	12.0	54	27.3	102	16.9		
Marital Status							3.13	0.077
Married/Cohibited	369	91.6	191	95.5	560	92.9		
Others[3]	34	8.4	9	4.5	43	7.1		
Women's Educational Status							34.1	<0.001
No formal education	40	9.9	57	28.5	153	25.4		
formal education	363	90.1	143	71.5	103	17.1		
Women's occupational status							13.17	<0.001
Housewife	267	66.3	161	80.5	428	71.0		
Others[4]	136	33.7	39	19.5	175	29.0		
Husband's educational status							14.1	<0.001
No formal education	22	5.7	84	44.4	106	18.4		
Primary school	184	47.7	78	41.3	262	45.6		
Secondary and above	180	46.6	27	14.3	207	36.0		
Husband's occupational status							21.79	<0.001
Farmer	77	19.9	156	82.5	233	40.5		
Gov't/NGO/Self employee	130	33.7	20	10.6	150	26.1		
Merchant	120	31.1	3	1.6	123	21.4		
Others[5]	59	15.3	10	5.3	69	12.0		
Time taken to nearby health inistitution on foot							442.9	<0.001
<1 hours	396	98.3	31	15.5	427	70.8		
≥1 hours	7	1.7	169	84.5	176	29.2		
Wealth quantiles							0.054	1.000
First quantile(poorest)	80	19.9	40	20.0	120	19.9		
Second quantile	81	20.1	41	20.5	122	20.2		
Third quantile	77	19.1	39	19.5	116	19.2		
Fourth quantile	85	21.1	41	20.5	126	20.9		
Fifth quantile(wealthiest)	80	19.9	39	19.5	119	19.7		

[1]= Oromo, Kambata, Amhara, Tigre, Guraghe, [2]=Islam, Traditional, [3]=Widowed, Single, Separated, Divorsed [4]= Gov't/NGO/Self employee, Farmer, Merchant, Student, House maid, Daily labourer, [5]=Daily labourer, Student

5.2 Maternal characterstics

Higher number of respondents in urban area were expecting their first child. [138(34.2%) urban and 43(21.5%) rural, p<0.01]. Two hundred eighty six (47.4%) of them gave live birth for the first time and higher in urban area [190(74.5%) urban and 96(61.5%) rural, p<0.05] *(Table 4).*

Regarding the ANC visit of the respondents, higher proportion women had attended ANC service during current pregnancy at least one time of which 346(85.9%) were urban and 143(71.5%) rural residents; p<0.001. Majority [510 (84.6%)] of respondents had ANC visits and/or planned to attend ANC of four and above but significantly higher in urban area [366 (92.0%) urban and 144(72.0%) rural; p<0.001]. Only 93(15.4%) of women started ANC visit during the first trimester [63(18.3%) urban and 30(21.3%) rural]; p>0.05 *(Table 4).*

Forty two (10.4%) women in urban and 31(15.5%) in rural had history of obstetric complication; p>0.05. Concerning to decision maker for obstetric care seeking, majority of respondents [501(83.8%] made decision jointly by herself and husband [340(84.4%) of urban and 161(80.5%) of rural]; p>0.05 *(Table 4).*

Table 4. Obstetric characteristics of respondents by residential area, Agnuak zone, Gambella Regional State, March, 2017 (n=603).

Variables	Urban(403)		Rural(200)		Total(603)			
	No	%	No	%	No	%	χ^2	P-value
Gravidity							10.76	<0.01
1	138	34.2	43	21.5	181	30.0		
2-4	232	57.6	134	67.0	366	60.7		
≥5	33	8.2	23	11.5	56	9.3		
Parity								
1	190	74.5	96	61.5	286	47.4	822	0.474
2-4	50	19.6	49	31.4	99	16.4		
≥5	15	5.9	11	7.1	26	4.3		
Started ANC service							6..3	0.481
Yes	346	85.9	143	71.5	489	81.1		
No	57	14.1	57	28.5	114	18.9		
Trimester of first ANC visit(by weeks)							97.0	0.476
≤12	63	18.3	30	21.3	93	15.4		
13-24	270	78.5	100	70.9	370	61.4		
≥25	11	3.2	11	7.8	22	3.7		
Number of antenatal care visits							11.96	0.478
Planned not to attend at all	24	6.0	38	19.0	62	10.3		
1-3	8	2.0	18	9.0	26	4.3		
≥4	366	92.0	144	72.0	510	84.6		

History of obstetric complication							3.19	0.074
Yes	42	10.4	31	15.5	73	12.1		
No	360	89.6	169	84.5	529	87.9		
Decision maker for obstetric care seeking							8.28	0.041
Herself and husband	340	84.4	161	80.5	501	83.1		
Herself only	30	7.4	18	9.0	48	7.9		
Husband only	24	6.0	8	4.0	32	5.3		
Family/relative	9	2.2	13	6.5	22	3.6		

Majority of Participants in the discussion raised that a pregnant women started ANC visit to nearby health institution when her pregnancy was about 5 months. The discussants mentioned the importance of attending ANC. They said "it is important to attend ANC; to ascertain the duration of the pregnancy, to get vaccinated, to undergo some medical investigations, to know the date of birth, and obtain some medications such as for anemia."

The participators discussed the importance of ANC for the health of both the women and fetus as follows;

"Yes it has important to follow ANC visit. When I attended a health center, the professional did some checkups and advised me to come back for any unusual signs/symptoms. He also told me to prepare some clothes and bed sheets." (A 24 years old pregnant women from urban area, FGD5)

*"It is important to follow ANC visit. Because during her visit to health center, the health professional might update her on the wellbeing of baby. Besides, he/she may informed to make some savings for any uncertainties and to prepare some clothes for the newborn baby."*29 years old Urban HDA, FGD5)

The qualitative finding pointed out that majority of participants made decisions jointly for a women to seek obstetric health care. However, they added that fathers were the usual finance providers especially in rural area so decision was not simply by a pregnant women. One of the discussant from rural area explained as below;

*"When it comes to decision, husband and wife decide jointly. However, a better idea is suggested by the husband. There is time she attends by herself, and sometimes, the husband accompanies her. However, I also know husbands who are very strict and never let her go unless he is willing."*33 years old rural father, FGD7.

"I am the one in charge of offering advice (permission). But she can still go without my advice or permission since she can do things willfully. I also provide cash when she buys groceries or other necessary materials for her birth related costs." 33 years old urban father, FGD6

5.3 Knowledge of key danger signs and attitude towards BP&CR practice

Vaginal bleeding was the most common type of a key danger sign spontaneously identified by the respondents during pregnancy, childbirth and the postpartum period but significantly higher in urban area; 135(33.5%) of urban and 53(26.5%) of rural women during pregnancy ($p<0.001$), 277(68.7%) of urban and 79(39.5%) of rural during labour and child birth ($p<0.001$), 221(54.8%) of urban and 65(32.5%) of rural during postpartum ($p<0.001$). Only 38(9.4%) and 4(2.0%) spontaneously identified swelling of hands/face as a pregnancy danger sign from urban and rural residents respectively ($p<0.01$). One .hundred fifty six (38.7%) of urban and 60(30.0%) of rural spontaneously identified prolonged labour as a key danger sign during labour and delivery ($p<0.05$). A few respondents spontaneously identified foul smelling vaginal discharge as a key danger sign during postpartum period [10(2.5%) urban and 16(8%) rural, $p<0.001$]. By considering greater than or equal to three obstetric danger sign spontaneous responses at least one in each phase, only 98(16.3%) respondents mentioned spontaneously [131(32.5%) urban and 44(22.0%) rural, $p<0.01$] (*Table 5)*

Regarding attitude towards BP&CR practice, significantly higher women in urban area scored above the mean and considered as having favourable attitude[249 (61.8%) urban and 81(40.5%) rural; $p<0.001$] (*Table 5).*

Table 5. Knowledge of key danger signs and attitude towards birth preparedness and complication readiness of respondents by residential area, Agnuak zone, Gambella Regional State, March, 2017 (n=603).

Variables	Urban(403)		Rural(200)		Total		χ^2	P-value
	No	%	No	%	No	%		
Knowledge of key danger signs during pregnancy (multiple responses)								
Severe vaginal bleeding	135	33.5	53	26.5	188	31.2	29.35	<0.001
Swollen hands/face	38	9.4	4	2.0	42	6.9	14.52	<0.01
Blurred vision	13	3.2	45	22.5	58	9.6	23.37	<0.001
Knowledge of key danger signs during labour and delivery (multiple responses)								
Severe vaginal bleeding	277	68.7	79	39.5	356	59.0	48	<0.001
Convulsions	23	5.7	4	2.0	27	4.5	8.20	<0.05
Prolonged labour	156	38.7	60	30.0	216	35.8	7.77	<0.05
Retained placenta	40	9.9	20	10.0	60	9.9	35.14	<0.001

Knowledge of key danger signs during postnatal period (multiple responses)								
Severe vaginal bleeding	221	54.8	65	32.5	286	47.4	32.47	<0.001
Foul smelling vaginal discharge	10	2.5	16	8.0	26	4.3	19.79	<0.001
High fever	95	23.6	40	20.0	135	22.4	28.39	<0.001
Knowledge of key danger signs during pregnancy, labour and delivery, and postpartum							7.16	<0.01
Favourable knowledge	131	32.5	44	22.0	153	29.1		
Unfavourable knowledge	272	97.5	156	78.0	428	70.9		
Attitude towards birth preparedness and complication readiness							24.44	<0.001
Favourable attitude	249	61.8	81	40.5	330	54.7		
Unfavourable attitude	154	38.2	119	59.5	273	45.3		

In qualitative study, the most frequently and correctely mentioned danger signs during discussion were vaginal bleeding, prolonged labor, swelling of leggs and retained placenta. However, majority of participants mentioned that most of these problems were frequently occur during childbirth or after giving birth. They also mistakenly mentioned anemia, lack of vitamins, loss of appetite, and vomiting as danger signs. Twenty five years old pregnant women shared the danger signs raised by majority of discussants but she noticed her idea as written below;

"*In my opinion, the problem occurs from the beginning of her pregnancy. For example, if she fails down or carry heavy weights, she may experience physical deterioration, running liquids (leakages) in her vagina or change in her voice. At this time, her husband notices and take her to health centers. Hence, such experience is not only during birth but also throughout her pregnancy."* From urban, FGD2

Knowledge of Community resources

Although community services has an important role in reducing barriers of reaching health care contact as well as improving access to a health care facilities for pregnant/labouring/postpartum women, majority of discussants didn't know community support systems which might be because they were unavailable and/or because information about them was not made available to them and/or much far from their residence. During discussion, majority of participants were not aware of organised community support services such as a blood bank and ambulance service. In the discussion, they reported that there were communities that pregnant women supported by relatives and/or neighborhood and also communities that estabilished local group '*edir*' who were saving money reguralry that support a women financially at the time of emergency (referral).

Participants mentioned that a women get supported by herself or her relatives in emergency situation if she was not part of the community with established local group '*edir.*' Bringing clothes for women and newborn, flour and helping the mother to perform household chores such as cooking, searching for firewood, and fetching water were the most commonly mentioned community support by discussants. A 29 years old pregnant women from rural area expressed the issue as follows (FGD3);

"There is no financial support in our community. The individual help him/herself when a women referred to Gambella or elsewhere."

Contrary, another discussant from urban area mentioned;

"In my area, there is a traditional association 'edir' which established to save money and a pregnant women get supported at the time of difficulties." (28 years old pregnant women, FGD2)

Another father from urban area explained his experience as follows:

"When my wife had referred to Gambella hospital Last year, I got cash contributed from my and my wife's relatives and we recruited a car and went to there."(32 years old, FGD4)

"… There is no blood bank around here. It was in Gambella hospital when she was in need of blood transfusion... Then, she have transfused blood from blood bank and then, referred to Jimma referral hospital." (35 years old Father from rural area, FGD2)

5.4 Birth Preparedness and Complication Readiness Practice by Residence

Of the spontaneous responses from five BP&CR practices considered in this study; A significant majority of the urban women compared to their rural counterpart identified health facility for delivery and/or emergency [183(45.5%) urban and 59(29.5%) rural; $p<0.001$] and identified mode of transport [66(16.4%) urban and 53(26.5%) rural; $p<0.01$]. Two hundred seventy five (68.4%) urban and 124(62.0%) rural women saved money to pay for costs related to delivery and/or emergency; $p>0.05$. Fifty two (12.9%) urban and 20(10.0%) rural women identified skilled health personnel who assist during child birth and/or emergency and 59(9.8%) identified potential blood donor [44(10.9%) urban and 15(7.5%) rural]. Considering residential area, significantly higher women in urban area than their counterparts followed at least three basic steps of BP&CR practice [104(25.8%) in urban and 37(18.5%) rural; $p<0.05$] (*Figure 3).*

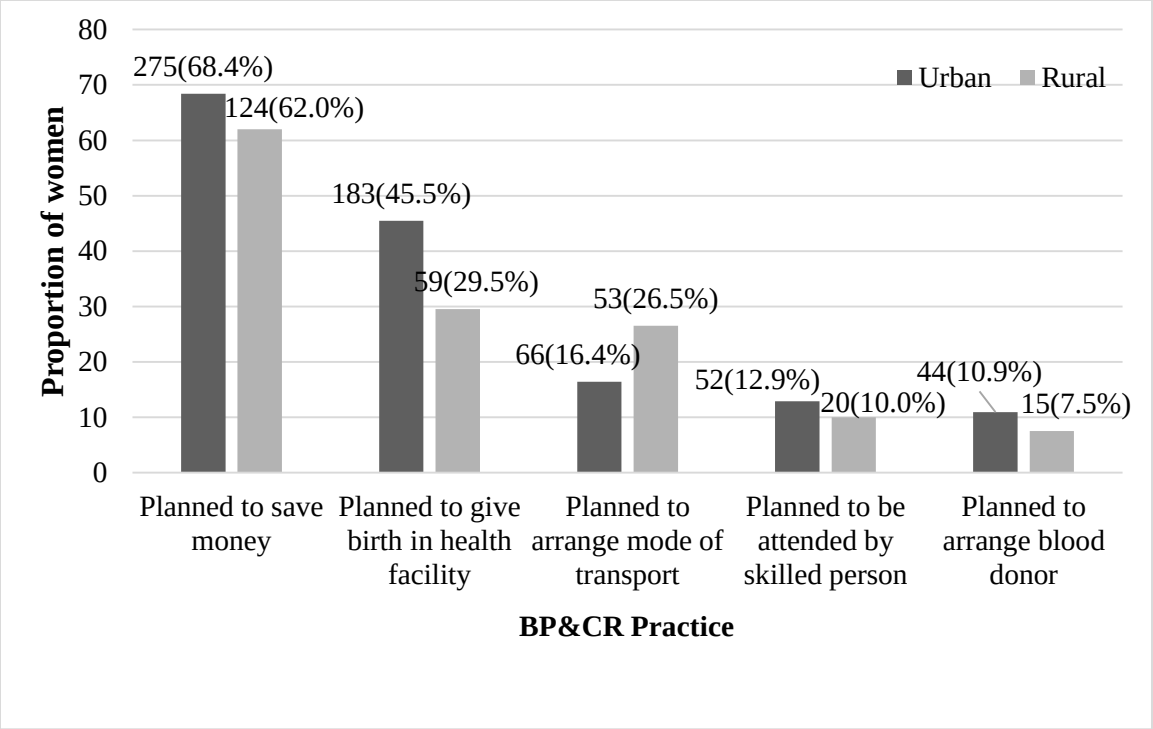


Figure 3. Birth preparedness and complication readiness practice among the respondents by residential area, Agnuak Zone, Gambella regional state, March, 2017 (n=603).

In the qualitative study, majority of discussants mentioned about household preparations related to food, drinks and clothes. They were unable to mention beyond saving money and didn't well understood birth preparation components as per recommended. The most commonly mentioned items by discussants were food stuffs like butter, drinks like soup, juices, and clothes for newborn and mother. A 32 years old father from urban described the situation as (FGD4*)*;

"…When my wife was about to give birth, I prepared many things. The surrounding environment would be cleaned, I saved money for some expenditures, like to buy bed sheets and groceries. When a woman gets birth, there is bleeding, so she needs to eat good diets."

Another discussant from rural area described similar idea.

"…I have prepared butter, cloth for myself and my baby and saved money", a 21 years old pregnant women from rural.

Majority of discussants from urban area raised that major means of transportation in the area were private vehicle and tricycles (bajaj) where as in rural area discussants mentioned that means transport available mostly were motorbikes or tricycles (bajaj). "Even if they saved money for the cost of transportation, the vehicle were not ready available in the area," majority of discussants said. Although women had positive attitudes towards giving birth in health facilites, they often encountered barriers reaching health facilities. One of the discussant who is 31 years old father from rural area, FGD4 explained as;

"…There was a man whose wife was told to go to Hospital and wait there until she give birth. But he ignored and kept her here. …When the labour started, we had to carry her by local stretcher to the transportation center, a distance which takes 20 minutes on foot. *We recruited a Bajaj (a small vehicle) to Abobo where we got a car to Gambella. In such situations, prior readiness is very important. Therefore, lack of preparedness costed us this much."*

5.5 Factors Associated With Birth Preparedness and Complication Readiness

Bi-variate logistic regression analysis indicated that among socio-economic and demographic variables; residence, family size, women's educational status, women's occupational status, husband's educational status, husband's occupational status and wealth quintiles have p-value ≤0.25 and considered candidate variables for multivariable logistic regression (*Table 6)*

Maternal factors of bi-variate logistic regression analysis indicated that gravidity, trimester of first ANC visit, number of ANC visits, history of obstetric complication, and decision maker for obstetric care seeking have p-value ≤0.25 and considered candidate variables for multivariable logistic regression. Lkewise, Time taken to nearby health institution, Knowledge status of obstetric danger signs and Attitude of women towards BP&CR practice have p-value ≤0.25 *(Table 7).*

Table 6. Binary logistic regression analysis of socio-economic and demographic variables predicting the odds of birth preparedness and complication readiness of respondents in Agnuak zone, Gambella Regional State, March, 2017 (n=603).

Variables	BP&CR			Crude OR (95%CI)
	Well prepared [No (%)]	Less prepared [No (%)]	Total [No (%)]	
Residence				
Urban	104(73.8)	299(64.7%)	403(66.8)	1.5(1.1,2.3)*
Rural	37(26.2)	163(35.3)	200(33.2)	1
Age				
<20	13(9.2)	55(12.0)	68(11.4)	.5(.3,1.1)
20-29	94(66.7)	327(71.4)	421(70.3)	.6(.4,1.0)
≥30	34(24.1)	76(16.6)	110(18.4)	1
Family size				
<4	55(39.0)	186(40.3)	241(40.0)	1.7(.9,3.2)*
4-6	71(50.4)	188(40.7)	259(43.0)	2.2(1.2,4.1)*
≥7	15(10.6)	88(19.0)	103(17.1)	1
Women's educational status				
No formal education	153(25.4)	141(30.5)	153(25.4)	1
Primary school	74(52.5)	231(50.0)	305(50.6)	3.8(1.9,7.2)*
Secondary school and above	55(39.0)	90(19.5)	145(24.0)	7.2(3.7,14.2)*
Women's occupational status				
Housewife	75(53.2)	352(76.2)	427(70.8)	1
Student	14(9.9)	57(12.3)	71(11.8)	1.2(.6,2.2)*
Gov't/NGO/Self employee	23(16.3)	19(4.1)	42(7.0)	5.7(2.9,10.9)*
Merchant	16(11.3)	22(4.8)	38(6.3)	3.4(1.7,6.8)*
Other[1]	3(9.2)	22(2.6)	25(4.1)	.6(.1,1.6)*
Husband's educational status				
No formal education	10(7.5)	96(21.8)	106(18.4)	1
Primary school	52(38.8)	210(47.6)	262(45.6)	2.4(1.2,4.9)*
Secondary and above	72(53.7)	135(30.6)	207(36.0)	5.1(2.5,10.4)*
Husband's occupational status				
Farmer	40(29.9)	193(43.8)	233(40.5)	1
Gov't/NGO/Self employee	57(42.5)	93(21.1)	150(26.1)	2.9(1.8,4.8)*
Merchant	27(20.1)	96(21.8)	123(21.4)	1.4(.8,2.3)*
Other[2]	10(7.5)	59(13.4)	69(12.0)	.8(.4,1.7)*
Wealth quantiles				
1st quantile(poorest)	16(11.3)	104(22.5)	120(19.9)	.2(.1,.4)*
2nd quantile	26(18.4)	96(20.8)	122(20.2)	.4(.2,.6)*
3rd quantile	23(16.3)	93(20.1)	116(19.2)	.3(.2,.6)*
4th quantile	25(17.7)	101(21.9)	126(20.9)	.3(.2,.6)*
5th quantile(wealthiest)	51(36.2)	68(14.7)	119(19.7)	1

[1] = Farmer, Daily labourer, house maid, [2]= Daily labourer, Student;

*= p-value <0.25 and candidate variables for multivariable logistic regression

Table 7. Binary logistic regression analysis of distance to health institution, obstetric characterstics, knowledge and attitude related variables predicting the odds of birth preparedness and complication rediness of respondents in Agnuak zone, Gambella Regional State, March, 2017 (n=603).

Variables	BP&CR			Crude OR (95%CI)
	Well prepared [No (%)]	Less prepared [No (%)]	Total [No (%)]	
Time taken to nearby health institution on foot				
≥1 hour	32(22.7)	144(31.2)	176(29.2)	1
<1 hour	109(77.3)	318(68.8)	427(70.8)	1.5(.9,2.4)
Gravidity				
1	27(19.1)	154(33.3)	181(30.0)	1
2-4	99(70.2)	267(57.8)	366(60.7)	2.1(1.3,3.4)*
≥5	15(10.6)	41(8.9)	56(9.3)	2.1(1.0,4.3)*
Trimester of first ANC visit				
First trimester	55 (40.4)	38(10.9)	93(19.2)	5.6(3.4,8.9)*
Other[1]	81(59.6)	311(89.1)	392(80.8)	1
Number of ANC visits				
≥4 visits	128(91.4)	261(57.2)	389(65.3)	7.9(4.3,14.8) *
<4 visits	12(8.6)	195(42.8)	207(34.7)	1
History of obstetric complication				
No	91(64.5)	438(95.0)	529(87.9)	1
Yes	50(35.5)	23(5.0)	73(12.1)	10.5(6.1,18.0)*
Decision maker for obstetric care seeking				
Herself & husband	126(89.4)	375(81.2)	501(83.1)	1.9(1.1,3.5)*
Others[2]	15(10.6)	87(18.8)	102(16.9)	1
Knowledge status of obstetric danger signs				
Unfavourable knowledge	43(30.5)	385(83.3)	428(71.0)	1
Favourable knowledge	98(69.5)	77(16.7)	175(29.0)	11.4(7.3,17.6)*
Attitude of women towards BP&CR practice				
Unfavourable attitude	24(17.0)	249(53.9)	273(45.3)	1
Favourable attitude	117(83.0)	213(46.1)	330(54.7)	5.7(3.5,9.2)*

[1] = herself only, husband only, family member, relative; **[2]** =2nd trimester, 3rd trimester

*= p-value <0.25 and candidate for multivariable logistic regression

In multivariable logistic regression analysis, independent predictors of BP&CR with p-value <0.05 were residence, occupational status of women, history of at least one obstetric complication, trimester of first ANC visit, number of ANC visits, knowledge of three obstetric danger signs at least one from each phase of pregnancy, labour and delivery, and postpartum, attitude of women towards BP&CR practice and wealth quantiles.

Among socio-demographic variables, residence, occupational status of women and wealth quintiles were found to be statistically significant association with BP&CR. Women in the urban area were about 1.5 times more likely well prepared for birth and its complication than in the rural area (AOR=1.4; CI: 1.1, 3.8). Women having occupation of student were 1.5 times (AOR=1.5; CI: 1.1, 2.9) and Government employee were about 2 times (AOR=2.1; CI: 1.3, 5.9) more likely to be prepared for birth and its complication than being housewife. Women in the lowest quintile of wealth status (poorest) were about 80% (AOR=.2; CI: .1, .7), in the 2nd quantile were about 70% (AOR=.3; CI: .1, .7) or 3rd quantile were about 60% (AOR=.4; CI: .2, .9) times less likely to be prepared for birth and its complication than fiveth quintiles of better wealth status *(Table 1).*

Among the obstetric characteristics, history of obstetric complication, trimester of first ANC visit and number of ANC visits showed statistically significant association. Mothers who had history of obstetric complication found to be about 7 times more likely to be well prepared for birth and ready for complication than their counterparts (AOR=7.3; CI: 3.1,17.4). Mothers who started ANC visit during first trimester were about 3.7 times more likely to be well prepared than those who started during the second or third trimester (AOR=3.7; CI: 1.8, 7.6). Those mothers who attended four or more ANC visits were about 1.9 times more likely to be well prepared as compared to their counter parts (AOR=1.9;CI:1.2,4.3) *(***Error! Reference source not found.**)

Knowledge of obstetric danger signs was found to be statistically significant association with BP&CR. Mothers who knew three danger signs at least one in each phase of pregnancy, labour and delivery, and postpartum were about 7.3 times more likely to be well prepared than counterparts (AOR=7.3; CI: 3.1, 17.4). Regarding to mothers' attitude towards BP&CR practice, those who have favourable attitude were found to be about 2.3 times more likely well prepared than their counterparts (AOR=2.3; CI:1.2, 4.4) (*Table 8).*

Table 8. Factors independently associated with birth preparedness and complication rediness of respondents in Agnuak zone, Gambella Regional State, March, 2017 (n=603).

Variables	BP&CR			Crude OR (95%CI)	Adjusted OR (95%CI)
	Well prepared [No (%)]	Less prepared [No (%)]	Total [No (%)]		
Residence					
Urban	104(73.8)	299(64.7%)	403(66.8)	1.5(1.1,2.3)*	**1.4(1.1,3.8)****
Rural	37(26.2)	163(35.3)	200(33.2)	1	1
Women's occupational status					
Housewife	75(53.2)	352(76.2)	427(70.8)	1	1
Student	14(9.9)	57(12.3)	71(11.8)	1.9(1.2,3.9)*	**1.5(1.1,2.9)****
Gov't/NGO/Self employee	23(16.3)	19(4.1)	42(7.0)	5.7(2.9,10.9)*	**2.1(1.3,5.9)****
Merchant	16(11.3)	22(4.8)	38(6.3)	3.4(1.7,6.8)*	2.9(.9,9.0)
Other[1]	3(9.2)	22(2.6)	25(4.1)	.6(.1,1.6)*	.4(.4,2.2)
Trimester of first ANC visit					
First trimester	55 (40.4)	38(10.9)	93(19.2)	5.6(3.4,8.9)*	**3.7(1.8,7.6)****
Other[2]	81(59.6)	311(89.1)	392(80.8)	1	1
Number of antenatal care visits					
≥4 visits	128(91.4)	261(57.2)	389(65.3)	7.9(4.3,14.8) *	**1.9(1.2,4.3)****
<4 visits	12(8.6)	195(42.8)	207(34.7)	1	1
History of obstetric complication					
Yes	50(35.5)	23(5.0)	73(12.1)	10.5(6.1,18.0)*	**7.3(3.1,17.4)****
No	91(64.5)	438(95.0)	529(87.9)	1	1
Knowledge status of obstetric danger signs					
Favourable knowledge	98(69.5)	77(16.7)	175(29.0)	11.4(7.3,17.6)*	**6.4(3.6,11.4)****
Unfavourable knowledge	43(30.5)	385(83.3)	428(71.0)	1	1
Attitude of women towards BP&CR					
Favourable attitude	117(83.0)	213(46.1)	330(54.7)	5.7(3.5,9.2)*	**2.3(1.2,4.4)****
Unfavourable attitude	24(17.0)	249(53.9)	273(45.3)	1	1
Wealth quantiles					
1st quantile(poorest)	16(11.3)	104(22.5)	120(19.9)	.2(.1,.4)*	**.2(.1,.7)****
2nd quantile	26(18.4)	96(20.8)	122(20.2)	.4(.2,.6)*	**.3(.1,.7)****
3rd quantile	23(16.3)	93(20.1)	116(19.2)	.3(.2,.6)*	**.4(.2,.9)****
4th quantile	25(17.7)	101(21.9)	126(20.9)	.3(.2,.6)*	.4(.2,1.1)
5th quantile(wealthiest)	51(36.2)	68(14.7)	119(19.7)	1	1

[1] = Farmer, Daily labourer, house maid, [2] =2nd trimester, 3rd trimester

*= p-value <0.25 and candidate for multivariable logistic regression

= p-value<0.001*= p-value <0.01, ****= p-value <0.05

CHAPTER 6. DISCUSSION

Nevertheless, BP&CR was proven and effective health care strategy in preventing maternal mortality especially in countries with prevailing high risk of maternal deaths and inefficient health care system(54) the overall prevalence of BP&CR in this study was 23.4% (CI: 20.1%, 27.2%). This figure was consistent with study from Northwest Ethiopia (26) of 26.9% and Jimma zone, Ethiopia(22) of 23.3%. The study result showed that significantly higher proportion of urban respondents were well prepared for birth and ready for complication than their counterparts. About twenty six percent (25.8%; CI: 21.8%, 30.3%) of urban and 18.5% (CI: 13.5%, 20.5%) of rural pregnant women were well prepared for birth and ready for complication. The current study result of urban area was consistent with study from Adgrat town, Ethiopia(20) which was 22%. In rural locality, our study was lower than 35% of study done in rural Uganda(23). The dissimilarity might be due to the fact that respondents from Uganda study were recently delivered women. The urban-rural disparity in the current study might be because urban women were more educated, near to information and health facility compared to rural women.

Identification of a health facility for child birth is a key component of birth preparedness. In the current study, statistically significant higher proportion of respondents from urban identified a health facility for childbirth (45.5 %; CI: 40.5%, 50.5%) as compared to their rural counter parts (29.5%; CI: 23.0%, 36.0%). This urban and rural discrepancy in the current study might be due to urban women having better educational status and exposure to mass media such as television. This urban and rural finding were consistent with 39.1% of study done in Adgrat town(20) and lower than 50.8% which reported from rural communities of centeral Ethiopia(38) resipectively. The discrepancy observed in rural locality might be because study participants in previous study were reproductive age group.

About thirty (12.9%; CI: 10.0%, 16.4%) Pregnant women in urban and 10% (CI: 6%, 14.5%) in rural area planned to deliver by assistance of skilled provider. This finding in urban area was consistent with study conducted in Adgrat town[Ethiopia] (20) of 10.5% and in rural area was lower than rural Uganda(23) of 88%. The difference might be explained by low level of awareness and low educational status of pregnant women in the cuurent study.

To reach the place of delivery they identified on time, setting aside money for necessary expences and arranging transportation is vital. In this study, nearly similar proportion of urban (68.4%; CI: 63.2%, 72.9%) and rural (62.0%; CI: 55.0%, 68.4%) respondents saved money to pay for expenses for the purpose of child birth. This finding was higher than 35.6% of study conducted in Adigrat town[Ethiopia](20) and lower than rural Uganda(23) of 91% respectively. The discrepancy in the urban setting might be due to women thought to save money during ANC visit and in the rural setting might be due to the socio economic difference in the study setting.

Even when money is available, it can be difficult to secure transport at the last minute after complication has occurred. Arranging transport ahead of time reduces the delay in seeking and reaching health facility. Current study revealed that significantly higher proportion of rural women (26.5 %; CI: 20.1%, 33.5%) were arranged mode of transport compared with counterparts (16.4 %; CI: 12.7%, 19.9%). Transportation in rural area was the main obstacle for women to get to health facility when labor started irrespective of prior plan compared to urban area. In urban area means of transport to health facility were private vehicle and tricycles (bajaj) where as in rural area tricycles (bajaj) and motor bikes. This may be explained by women in urban area might not consider planning for transportion were necessary as they contemplate they may got at any time when they are in need as compared with their counterparts. Findings in this urban area was higher than what was found in Adgrat town[Ethiopia] of 10.1% where as in rural area was consistent with study conducted in rural communities of Eastern Ethiopia(29) of 30.5% and lower than rural uganda(23) of 97%. The difference observed might be due to difference in transportation type and awareness level.

Identifying blood donor seems an ignored practice. Only 10.9 %(CI: 8.2%, 13.9%) of urban and 7.5 %(CI: 4.0%, 11.0%) of rural respondents identified blood donor. This finding in urban area was lower than study from Adgrat town[Ethiopia] of 17.6% and but in rural area was higher than rural communities of Eastern Ethiopia(29) of 1.7%. This may be explained by women thought that they may plan for normal child birth and may consider blood transfusion as a critical condition and few women think they will reach that condition especially if they have not been told to be anaemic during pregnancy.

Knowledge status of key obstetric danger signs was significantly different among urban and in the rural pregnant women. Those mothers who knew three key danger signs at least one in each phase of pregnancy, labour and child birth, and postpartum were more likely well prepared for child birth and ready for complication than counterparts. Similar finding observed in another study(29, 30).This might be because a woman who didn't know a key danger signs of obstetric complications have less intention to seek care than those who aware of the the risks related to pregnancy and/or child birth and the need to plan to utilize health service at birth or during emergency. This showed that opportunity to increase their plan for birth and emergency preparation by increasing awareness on obstetric danger signs.

This study revealed that women with history of even a single obstetric complication were more likely to be well prepared than those who didn't have history of obstetric complication. This might be the fact that those pregnant women could anticipate serious complications from their previous experiences as supported by study conducted in Adigrat town, Ethiopia(20) and Northwest Ethiopia(42).

In this study women's occupation was statistically significant associated with BP&CR practice. Housewife women were less likely well prepared for birth and ready for complication than those who were Government/NGO/Self employee or merchant in this study. This finding was supported by study done in Ethiopia(29). The possible reason might be housewife women resides at home and were less likely to be exposed to health information related to birth preparedness than counterparts.

ANC visit during the first trimester and number of ANC visits were also another important factor which was associated with BP&CR. Evidence suggests that ANC is more effective when received earlier in the pregnancy (3, 55). Current study result showed that starting ANC visit during the first trimester increase likelihood of BP&CR. The result was in line with study done in Tanzania(30) but in contrast with study done in Nigeria(40). The difference might be less attention given to advice on components of BP&CR in the early stage of pregnancy during ANC visit in the Nigerian study. Previous studies revealed that women who attended ANC at least four times were more likely to be prepared for birth and its complications compared to those who attended less (30, 42). Similar result obtained in the current study. However in the current study, only 25.8% of women were well prepared indicating the opportunity to advise a woman on all components of

BP&CR practice during ANC visit. Our result indicated that mothers who attended ANC were not advised on all components of BP&CR practice.

Women's attitude towards BP&CR practice was important predictor of BP&CR in the current study. Women with favorable attitudes were more likely to prepare for birth and ready for complication than those with unfavorable attitude. This study was supported by study done in Jimma zone, Ethiopia(22).

In this study, wealth quintiles were identified as determinant factor of BP&CR. This result goes inline with study conducted in Jimma zone(22). This might be due to the fact that women in the higher quantile have better opportunity for education, professional occupation and increased health seeking behavior.

Strength and Limitation

Strength

The study tried to see urban and rural factors associated with BP&CR.

Limitation

There may be social desirability bias and great effort were made to minimize it during the training and data collection period.

Since the respondents have not completed their pregnancies, they may not yet have had the opportunity or need to make measures related to BP&CR.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

The result of this study indicated that prevalence of BP&CR is very low in urban and rural area, though significantly higher in urban area. Despite, three-fourth of women attended ANC 4^{+} visit which is far greater than EDHS (2016) report, the proportion of mothers who knew at least three danger signs of obstetric complication were found to be very low.

Statistically significant predictors of BP&CR were; knowledge of obstetric danger signs, trimester of first ANC visit, history of obstetric complication, number of ANC visits, attitude of women towards BP&CR practice, residence, women's occupational status and wealth quantiles.

7.2 Recommendations

- **To Regional and Zonal health bureau**

  Should give due emphasis on Information Education Communication (IEC) and Behavior Change Communication BCC) by strengthening health facilities and community based interventions to promote favourable attitude and raise awareness on obstetric danger signs.

- **To Zonal and Woreda health offices**

  Should give due emphasis on ANC clinics to provide information and education to all pregnant women on the components of BP&CR practice and knowledge on danger signs.

- **To Health facilities**

  Should give information and education to all pregnant women during ANC visit on knowledge of obstetric danger signs and BP&CR practice.

- **To researchers**

  Further research should be done on weather health workers have knowledge gap and/or they didn't provide information on the BP&CR practice because large proportion of women attend ANC visit but prevalence of BP&CR and knowledge of obstetric danger sign found to be very low.

REFERENCES

1. Canavan A. Review of global literature on maternal health interventions and outcomes related to skilled birth attendance KIT Working Papers Series H3 Amsterdam: 2009.
2. Barbara Kinzie and Patricia Gomez. Basic Maternal and Newborn Care: A Guide for Skilled Providers September 2004.JHPIEGO/Maternal and Neonatal Health Program. USA: 2004.
3. JHPIEGO, Maternal and Neonatal Health (MNH) program. Monitoring Birth preparedness and complication readiness, tools and indicators for maternal and newborn health. 2004:12.
4. Dieudonné Soubeiga, Lise Gauvin, Marie A Hatem, and Mira Johri. Birth Preparedness and Complication Readiness (BPCR) interventions to reduce maternal and neonatal mortality in developing countries: systematic review and meta-analysis. *BMC Pregnancy and Childbirth*. 2014:129.
5. Santarelli c. Working with individuals, families and communities to improve maternal and newborn health. Geneva, switzerland: 2010.
6. Ni Bhuinneain GM, McCarthy FP. A systematic review of essential obstetric and newborn care capacity building in rural sub-Saharan Africa. *BJOG*. 2015;122:174-82.
7. World Health Organization. Birth and emergency preparedness in antenatal care. Intergrated management of pregnancy and childbirth (IMPAC). Geneva: 2006.
8. WHO, UNICEF, UNFPA, World Bank Group, and United Nations Population Division. Trends in maternal mortality:1990 to 2015. Geneva, Switzerland 2015.
9. Central Statistical Agency (CSA) [Ethiopia] and ICF. Ethiopia Demographic and Health Survey 2016: Key Indicators Report Addis Ababa, Ethiopia and Rockville, Maryland, USA: 2016.
10. Federal Democratic Republic of Ethiopia, Ministry of Health. Health Sector Development Programme IV 2010/11 – 2014/15. Addis Ababa,Ethiopia: MoH, 2010.
11. The Federal Democratic Republic of Ethiopia Ministry of Health. Health Sector Transformation Plan 2015/16 - 2019/20. Addis Ababa,Ethiopia: 2015.
12. Berhan Y, and Berhan A. Causes of maternal mortality in ethiopia: Asignificant decline in abortion related death. *Ethiop J Health Sci*. 2014.
13. Houweling TA, Ronsmans C, Campbell OM, Kunst AE. Huge poor-rich inequalities in maternity care: an international comparative study of maternity and child care in developing countries. [PubMED]: Bull World Health Organ; 2007 [February,20,2017].
14. Baya B, Sangli G, and Maiga A. Measuring the effects of behavior change interventions in Burkina Faso with population-based survey results. Baltimore, Maryland, USA: 2004.
15. WHO. Mother-Baby Package: Implementing Safe Motherhood in Countries, Practical Guide. Geneva: 1994
16. United Nations Children's Fund. Programming for Safe Motherhood: Guidelines for Maternal and Neonatal Survival UNICEF Headquarters, Health Section Programme Division. 1999 .
17. Central Statistical Agency [Ethiopia]. Mini Demographic and Health Survey 2014. Addis Ababa, Ethiopia: Minstry of Health, 2014.
18. World Health Organization. Roadmap for Accelerating the Attainment of the MDGs Related to Maternal and Newborn Health in Africa. Geneva: 2008.
19. Zubairu I, Isa S, Hadiza S, Muktar H. Birth preparedness, complication readiness and fathers' participation in maternity care in a Northern Nigerian community. Maternity care in a Northern Nigeria. Afr J Reprod Health 2010;14(22).
20. Hiluf M, and Fantahun M. Birth Preparedness and Complication Readiness among women in Adigrat town, north Ethiopia. *EthiopJHealth Dev*. 2008;22(1):14-20.

21. Moran AC, Sangli G, Dineen R, Rawlins B, Yaméogo M, Baya B. Birth-preparedness for maternal health: Findings from Koupéla District, Burkina Faso J Health Popul Nutr 2006;24:489-97.
22. Tura G, Fantahun M, and Worku A. Factors affecting birth preparedness and complication readiness in Jimma Zone, Southwest Ethiopia: a multilevel analysis. *Pan African Medical Journal*. 2014;19 272.
23. Jerome K Kabakyenga, Per-Olof Östergren, Eleanor Turyakira, and Karen O Pettersson. Knowledge of obstetric danger signs and birth preparedness practices among women in rural Uganda. 2011 [cited 8 33]; Available from: http://www.reproductive-health-journal.com/content/8/1/33.
24. McPherson AR, Khadka N, Moore MJ, Sharma M. Are birth preparedness programmes effective? Results from a field trial in Siraha District, Nepal. J Health Popul Nutr. 2006;24(4):479-88.
25. Hailu M, Gebremariam A, Alemseged F, Deribe K. Birth Preparedness and Complication Readiness among Pregnant Women in Southern Ethiopia. *PLoS ONE*. 2011;6(6).
26. Bishaw W, Awoke W, and Teshome M. Birth Preparedness and Complication Readiness and Associated Factors among Pregnant Women in Basoliben District, Amhara Regional State, Northwest Ethiopia. 2013 [updated 26 Aug cited 4 4]; 171]. Available from: http://dx.doi.org/10.4172/2167-1079.1000171.
27. Desalegn Markos, and Daniel Bogale. Birth preparedness and complication readiness among women of child bearing age group in Goba woreda, Oromia region, Ethiopia. *BMC Pregnancy and Childbirth*. 2014;14:282.
28. WHO. Birth and emergency preparedness in antenatal care. In: Standards for Maternal and Neonatal Care. 2007.
29. Tilahun T, and Sinaga M. Knowledge of obstetric danger signs and birth preparedness practices among pregnant women in rural communities of Eastern Ethiopia. 2016 [cited 8 1]; 1-11]. Available from: http://www.academicjournals.org/IJNM.
30. Deogratius Bintabara, Mohamed A. Mohamed, Janneth Mghamba, Peter Wasswa, and Rose N.M Mpembeni. Birth preparedness and complication readiness among recently delivered women in chamwino district, central Tanzania: a cross sectional study. *BMC Reproductive Health*. 2015;12:44.
31. Othman K, Dan. K, and Michael O. Male involvement in birth preparedness and complication readiness for emergency obstetric referrals in rural Uganda *Reproductive Health*. 2011; 8(12).
32. Abel Girmay Mekuaninte, Alemayehu Worku, and Dawit Jember Tesfaye. Assessment of Magnitude and Factors Associated with Birth Preparedness and Complication Readiness Among Pregnant Women Attending Antenatal Clinic of Adama Town Health Facilities, Central Ethiopia. 2016 [cited 4 2]; 32-8]. Available from: http://www.sciencepublishinggroup.com/j/ejpm.
33. Krishna Kumar Deo, and Ravi Kumar Bhaskar. Socio-Cultural Factors Associated with Antenatal Services Utilization: A Cross-Sectional Study in Eastern Nepal. *Clinics Mother Child Health* 2014;11(2):166.
34. Furaha August, Andrea B. Pembe, Rose Mpembeni, Pia Axemo, and Elisabeth Darj. Men's Knowledge of Obstetric Danger Signs, Birth Preparedness and Complication Readiness in Rural Tanzania. *PLoS ONE*. 2015;10(5).
35. Nawal D, and Goli S . Birth preparedness and its effect on place of delivery and post-natal check-ups in Nepal. *PLoS ONE*. 2013;8(5).
36. Robert B. Kuganab-Lem, Razak Dogudugu, and Ladi Kanton. Birth Preparedness and Complication Readiness: A Study of Postpartum Women in a Rural District of Ghana. *Public Health Research*. 2014;4(6):225-33.

37. Gross K, Alba S, Glass TR, Schellenberg J, and Obrist B. Timing of antenatal care for adolescent and adult pregnant women in south-eastern Tanzania. *BMC Pregnancy Childbirth*. 2012;12(1):16.
38. Muhammedawel Kaso, and Mesfin Addisse. Assessment of birth preparedness and complication readiness in Robe Woreda, Arsi Zone, Oromia Region, Central Ethiopia: Cross-sectional study. 2012.
39. Gebre M, Gebremariam A, and Alemu T. Birth Preparedness and Complication Readiness among Pregnant Women in Duguna Fango District, Wolayta Zone, Ethiopia. *PLoS ONE*. 2015;10(9).
40. Kuteyi EA, Kuku J, Lateef I, Ogundipe J, Mogbeyteren T, and Banjo M. Birth Preparedness and Complication Readiness of Pregnant Women Attending the Three Levels of Health Facilities in Ife Central Local Government, Nigeria. *Community Medicine and Primary Health Care Association of Community Physicians of Nigeria*. 2013;23(1-2):41–54.
41. Sileshi S, and Betre M. Birth preparedness, complication readiness and other determinants of place of delivery among mothers in Goba District, Bale Zone, South East Ethiopia. *BMC Pregnancy and Childbirth* 2016;16:73.
42. Bitew Y, Awoke W, and Chekol S. Birth Preparedness and Complication Readiness Practice and Associated Factors among Pregnant Women, Northwest Ethiopia. *International Scholarly Research Notices*. 2016.
43. Lakew Y, Tessema F, and Hailu C. Birth Preparedness and Its Association with Skilled Birth Attendance and Postpartum Checkups among Mothers in Gibe Wereda, Hadiya Zone, South Ethiopia. *Journal of Environmental and Public Health*. 2016.
44. Phanice K. Omari, Yaw A. Afrane, Peter Ouma. Birth Preparedness and Complication Readiness among Women Attending Antenatal Care Clinic in Health Facilities within Bureti Sub County of Kericho County, Kenya. American Journal of Medicine and Medical Sciences. 2016;6(4):123-8.
45. U. C Emma-Ukaegbu, H I Nwokeukwu, B.S.C Uzochukwu. An Assessment Of Birth Preparedness And Complication Readiness In Antenatal Women In Umuahia North Local Government Area, Abia State, Nigeria. IOSR Journal of Dental and Medical Sciences (IOSR-JDMS). 2014;13(1):90-4.
46. Rupsa Mazumdar, Dipta K. Mukhopadhyay, Seshadri Kole, Debabrata Mallik, Apurba Sinhababu. Status of birth preparedness and complication readiness in a rural community: a study from West Bengal, India. Al Ameen J Med Sc i. 2014;7(1):52-7.
47. John E. Ekabua, Kufre J. Ekabua, Patience Odusolu, Thomas U. Agan, Christopher U. Iklaki, Aniekan J. Etokidem. Awareness of Birth Preparedness and Complication Readiness in Southeastern Nigeria. ISRN Obstetrics and Gynecology. 2011.
48. Thaddeus S, Maine D. Birth Preparedness and Complication Readiness: A Matrix of Shared Responsibilities. Maternal and Neonatal Health (MNH) Program, Too far to walk: Maternal mortality in context. Social Science and Medicine. 2004;38(1091).
49. Anya SE, Hydara A, Jaiteh LES. Antenatal care in The Gambia: Missed opportunity for information, education and Communication. BMC pregnancy and child birth 2008;8(9).
50. Federal Democratic Republic of Ethiopia [CSA]. Population Projection of Ethiopia for All Regions At Wereda Level from 2014 – 2017. Addis Ababa,Ethiopia: 2013.
51. Agnuak Zone Health Office. Anual health report. 2016.
52. World Health Organization. Making pregnancy safer: the critical role of the skilled attendant A joint statement by WHO, ICM and FIGO. 2004.
53. Pius Kaba Affipunguh, and Alexander Suuk Laar. Assessment of knowledge and practice towards birth preparedness and complication readiness among women in Northern Ghana: crosssectional study. *Int J Sci Rep*. 2016;;2(6):121-9.

54. Killewo J., Anwar I., Bashir I., Yunus M, Chakraborty J. Perceived delay in healthcare-seeking for episodes of serious illness and its implications for safe motherhood interventions in rural Bangladesh. *J Health Popul Nutr* 2006;24:403-12.
55. Villar J., Ba'aqeel H., Piaggio G., Lumbiganon P., Belizan J, and Farnot U. WHO antenatal care randomized trial for the evaluation of a new model of routine antenatal care *The Lancet*. 2001;357:1551-64.

ANNEXES

Annex-A: Format to Identify Pregnant Women

JIMMA UNIVERSITY

INSTITUTE OF HEALTH SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF POPULATION AND FAMILY HEALTH

Format for list of females age from 15-49 during census period to identify pregnant women

Part I – Consent Form

Good morning/afternoon! My name is _____. I represent the research team from Jimma University. We are visiting all households in the selected kebeles of Agnuak Zone to identify pregnant women for the study entitled ***"Birth Preparedness, complication readiness and associated factors in*** Agnuak Zone***, Gambela Regional State."*** I may ask you a few questions about marital and pregnancy status and you have the right to refuse any question you are not comfortable.

Are you volunteer to give the information? Yes ☐ No ☐

If she is willing to participate tick on "yes" and proceed to the next step, otherwise tick on "no" and stop the interview then thank them.

Census conductor (enumerator):

Name _____, sig. _____, Date _____

Supervisor:

Name _____, sig. _____, Date _____

Part II- Women Identification Format

General background

1. Woreda: ……
2. Kebele: ……..
3. Got: …….
4. Gare: …….

S. No	Name of head of the household (A)	List of pregnant mother* (B)	Relation to Head of household (C)	Marital status (D)	Approxi GA in Weeks (E)	Language Preference (F)	Pregnant women code (G)
I		1.					
		2.					
		3.					
		4.					
		5.					
		6.					
II		1.					
		2.					
		3.					
		4.					
		5.					
		6.					
III		1.					
		2.					
		3.					
		4.					
		5.					
		6.					
IV		1.					
		2.					
		3.					
		4.					
		5.					
		6.					

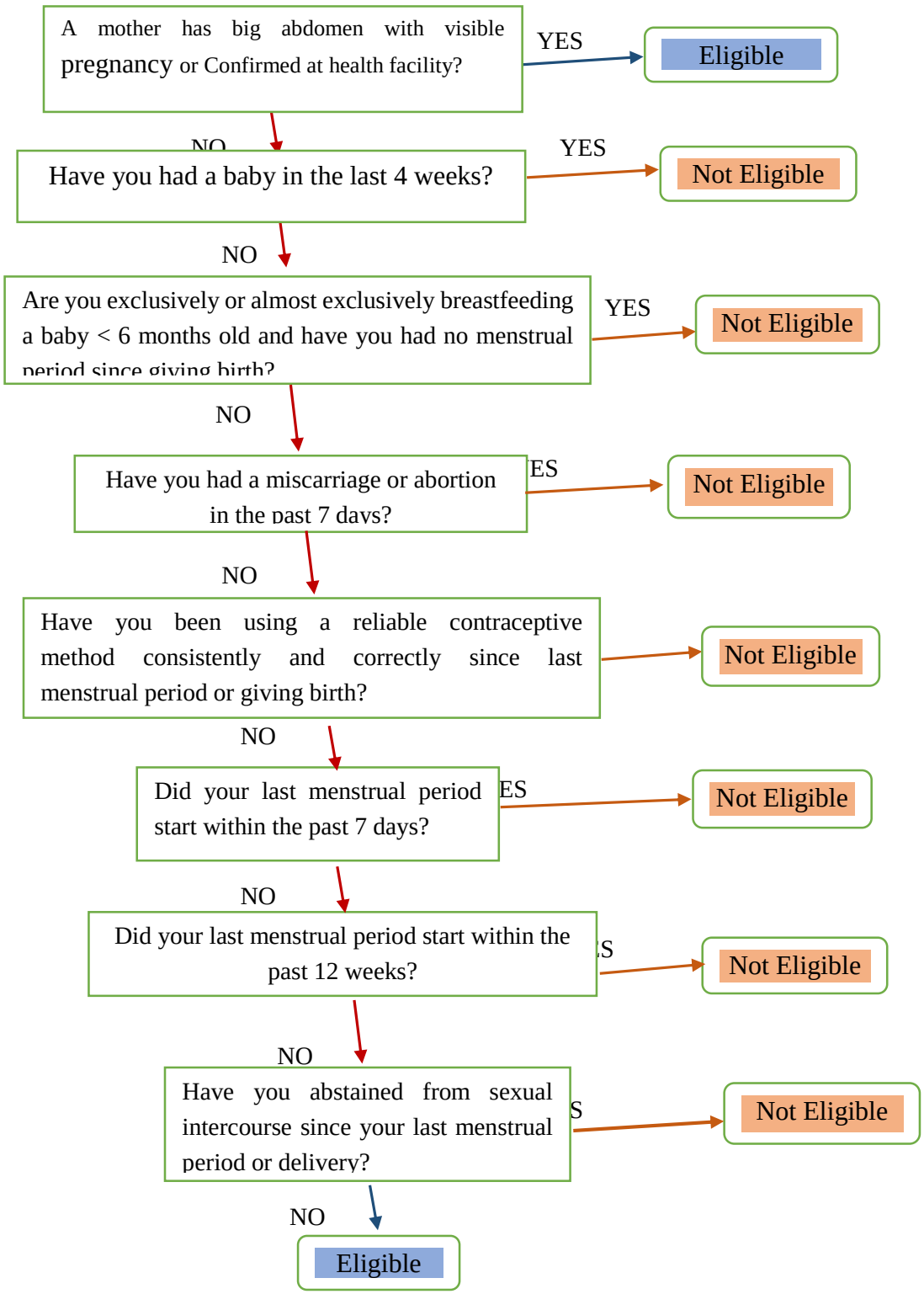
Key

- (B) Pregnancy status of women: 1.pregnant 2.not pregnant(*Use pregnancy screening criteria attached below)
- (C) Relation to Head of household:1.wife 2.daughter 3.relative 4.house made 5.other
- (D) Marital status: 1.married 2.cohibition 3.single 4.separated 5. Divorced 6.widowed
- (E) Approximate GA in Weeks: record the nearest weeks of pregnancy duration
- (F) Language Preference 1.for Amharic 2.for Agnua
- (G) Pregnant women code: will be assigned by PI later

Annex-B: Pregnancy Screening Criteria

(Adapted from Stanback et al, 1999)

Follow the steps to identify whether a women who are sexually active will be pregnant or not.



Annex-C: English Version Questionnaires

JIMMA UNIVERSITY
INSTITUTE OF HEALTH SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF POPULATION AND FAMILY HEALTH

Quantitative Questionnaire on birth preparedness and complication readiness among pregnant women in Agnuak Zone, Gambela Regional State

Informed Consent Form for Quantitative Survey

Good morning /after noon

My name is……

First of all, I would like to thank you for giving your time.

I am working as data collector with the research team of Jimma University Institute of Health which conducting research on pregnant women from April 10 to May 10, 2017 in Agnuak Zone. The aim of this study is to assess status of birth preparedness and complication readiness among pregnant women. The information obtained from this study by your participation will help you/mothers to prepare for safe delivery, the health care provider for proper service provision, the government for logistic supply and to design evidence based strategy to improve institutional delivery. The study will not cause any harm to you except giving the information. The information will be collected from the above mentioned mothers by using pretested structure questioners on Sociodemographic information, past obstetric history, Knowledge of danger signs, Plan to use obstetric services and Knowledge of Community Resources through house hold in selected kebeles. We are inviting pregnant women with gestational age above 12 weeks to contribute for the study. You have been selected randomly for this interview, so I would like to ask you some questions related to the subject. Your name will not be recorded and all the information you give will be kept strictly confidential and is to be used only for the purpose of this study. You have the right to refuse participation at any time. The interview will take approximately 30 min.

Are you willing to participate?

Yes ☐ No ☐

If she say yes, say thanks and proceed to the consent form. If say no, say thanks, do not force or reinforce to participate in the study.

Consent form

I have read or it has been read to me in the language I understand about the above stated conditions therefore I am willing to participate in this study.

Signature of participant/fingerprint…….

Date of interview……..

Result of interview

1. Completed 2. Partially completed. 3. Refuse

Name of interviewer……..…. Signature…….

Name of supervisor ……Signature…….

Date checked…… (DD/MM/YY)

In case you need to contact:

Contact address of the investigator: Name: Fikru Letose

Mobile: 0921416858

Email: fikruletose6 @gmail.com

WOMAN IDENTIFICATION NO…….

1. Woreda: …….

2. Kebele: ……..

3. Got: …….

4. Gare: …….

5. Name of Head of House Hold …….

1. SOCIO-DEMOGRAPHIC INFORMATION

Q.#	Question	Codes	Go to Q
101	Residence of the women?	1.urban 2.rural	
102	How old are you?	----------Years	
103	What is your religion?	1.Orthodox Christian 2.Islam 3.Protestant 4.Catholic 5.Other (specify) ----------	
104	What is your ethnicity?	1.Agnuak 4.Tigire 2.Oromo 5.Amhara 3.Kambata 6.Nuer 7.Other (Specify) ----------	
105	How many is your number of family that lives with you?	----------	
106	What is your marital status now?	1.Married 4.Separated 2.Cohabited 5.Divorced 3.Single 6.Widowed 7.other(specify)	
107	What is your educational status?	1.Can't read and write 2.Read and write only 3. Grade 1-4 4. Grade 5-8 5. Grade 9-12 6. College 7. University	
108	What is your occupation?	1.House wife 2.Farmer 3.House maid 4.Gov't/NGO employee 5.Merchant 6.Student 7.Other(Specify)	
109	In addition to your house work, do you do any other work for which you are paid in cash or in kind?	1.Yes 2.No	If NO, Go to →**Q111**

110	If yes to Q109, how much birr is paid for you per month?	_____ET. Birr	
111	What is your husband's/partners educational status?	1.Can't read and write 2.Read and write only 3.Grade(1-4) 4.Grade(5-8) 5.Secondary and above 6. I have no partner	Currently, if you have no partner/ not in marital union, →Q114
112	What is your Husband's/partners current occupation?	1.Farmer 2.Gov't/NGO employee 3.Merchant 4.Student 5.Daily laborer 6.Other(Specify)_____	
113	What is approximate monthly income of your husband per month?	_____ET. Birr	
114	What is the main source of drinking water for members of your household?	1.Pipe water 2.Public hand pump 3.Public tap/standpipe(Bono) 4.Protected dug well 5.Unprotected dug well 6.Protected spring 7.Unprotected spring 8.Rain water	
115	What kind of toilet facility do you have that your household members use?	1. Flush toilet 2. Traditional Pit toilet/latrine 3. Ventilated Improved Pit (VIP) latrine 4. No facility-use open field 5.Other(specify) _____	
116	How is your residential home ownership?	1.Own home 2.Rented home 3.Other (specify)_____	
117	How many rooms/classes does your household have	_____ rooms	
118	How many rooms in this household are used for sleeping	_____ rooms	
119	Do you have a separate room which is used as a kitchen?	1.Yes 2.No	
120	What is the main material of the floor of the home? (RECORD BY OBSERVING)	1.Natural floor- earth 2.Natural floor-dung 3.Rudimentary floor with wood/bamboo 4.Finished floor with Cement 5.Other (specify) _____	

121	What is the main material of the roof of the home? (RECORD BY OBSERVING)	1.Thatched 2.Corrugated iron sheet 3.Other (specify) _____	
122	What is the main material of the wall of the home? (RECORD BY OBSERVING)	1.No wall 2.Wood without mud 3.Wood with mud 4.Wood with cement covered 5.Cement blocks or Bricks 6.Other (specify) _____	
123	What type of fuel do you mainly use for cooking in your Household?	1.Electricity 4.Charcoal 2.Biogas 5.Firewood 3.Kerosene 6.Dung 7..Other (specify) _____	
124	Does your household own the following?		
	Electricity?	1.Yes 2.No	
	Radio?	1.Yes 2.No	
	Television?	1.Yes 2.No	
	A landline telephone functioning?	1.Yes 2.No	
	Refrigerator?	1.Yes 2.No	
125	Does any member of your household own the following?		
	Watch?	1.Yes 2.No	
	Mobile phone?	1.Yes 2.No	
	Bicycle?	1.Yes 2.No	
	Motor cycle?	1.Yes 2.No	
	Animal drawn cart?	1.Yes 2.No	
	A car or truck	1.Yes 2.No	
126	Does any member of this household own any agricultural land?	1.Yes 2.No	If NO, Go to →Q128
127	If Yes to Q124, how many hectares?	_____hectares	
128	Does this household own any livestock, herds, other farm animals, or poultry?	1.Yes 2.No	If NO, Go to →Q130
129	If yes to Q032, how many:		
	1. Cattle?		
	2. Milk cows or bulls?		
	3. Horses, donkeys or mules?		
	4. Goats?		
	5. Sheep?		
	6. Chickens?		
130	What is the approximate time it takes from the nearest health center on foot (in munities)?	----------minute	
131	What is the approximate time it takes from the nearest hospital on foot (in munities)?	----------minute	

MATERNAL FACTORS

2. PAST OBSTETRIC HISTORY

Q. #	Question	Code	Go to Q
201	How many pregnancies have you ever had, including current pregnancy, abortion and stillbirth?	1.First pregnancy 2.two and above	If this is her 1st pregnancy, skip to →301
202	Did any of these pregnancies ended in abortion (termination of pregnancy before 28 weeks of gestation)?	1.Yes 2.No	If NO, Go to →Q204
203	If Yes to Q202, how many of them ended in abortion?	----------times	
204	Did any of these pregnancies ended in stillbirth (delivery ended in birth of dead foetus after 28 weeks of gestation)?	1.Yes 2.No	If NO, Go to →Q206
205	If Yes to Q204, how many of them ended in still birth?	----------times	
206	How many of them ended in live birth (a new-born that showed any signs or life)?	----------	
Add The Responses Of Q203,Q205 And Q206 And Compare With Q201 and Reconcide For Discrepancies ----------			

3. PLAN TO USE OBSTETRIC SERVICES

Q.#	Question	Code	Go to Q
301	Did you have any Antenatal care during this pregnancy?	1.Yes 2.No	If NO, Go to →**Q306**
302	If Yes to Q301, where was the place for ANC?	1.Hospital 2.Health centre 3.Health Post 4.Home of the respondent 5. Other (Specify).....	
303	If Yes to Q301, How many times in total did you receive ANC for this pregnancy till today?	----------times	
304	If Yes to Q301, whom do you see for the ANC?	1.Doctor 2.Nurse 3.Midwife 4.Health Officer 5.Health Extension Worker 6.Family Member 7.Other (specify _____	

305	If Yes to Q301, at what weeks of Gestation did you have the first care/Visit?	----------weeks	
306	How many ANC Visits have you planned to attend at all? (the attended[if you attended] and future plan)	1.Planed not to attend at all 2.Once only 3.Twice only 4.Three times only 5.Four times and above 6. Any other response (Specify)……..	
307	Who can made the final Decision for your obstetric health care seeking?	1.Herself only 2.Husband only 3.Herself & husband/partner/family/relative/mother in law 4.Family/relatives	
308	Have you planed on the place where to give this birth?	1.Yes 2.No	If NO, Go to **Q311**
309	If Yes to Q307, where have you planned to deliver?	1.Hospital 2.Health centre 3.Health Post 4.Home of the respondent 5. Other (Specify)	
310	Why did you prefer this place for your plan? PROB: Any other reasons? (More than one answer is possible)	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----------	
311	Have you planned by whom to be attended for the delivery of this pregnancy?	1.Yes 2.No	If No skip **Q312** & **Q313**
312	If Yes to Q311, by whom did you plan to be attended?	1.Doctor 2.Nurse 3.Midwife 4.Health Officer 5.Health extension worker 6.Family Members	
313	Why did you prefer this attendant for your plan? PROB: Any other reasons?	---------- ----------	

KNOWLEDGE RELATED FACTORS

4. KNOWLEDGE OF DANGER SIGNS

Instruction:

- From question number 403-405 first read the question only then probe them if additional danger sign they mention.
- Infront of each response on empty box put number "1" when respondents mentioned obstetric danger sign spontaneously, put "2" when respondents answer obstetric danger sign after you mention the items and put :3" when respondent say I don't know (for Q no 403-405).

Q.#	Question	Code		Go to Q
401	In your opinion, can unforeseen problems related to pregnancy, delivery or child birth occur?	1.Yes 2.No 3. I don't know……..		If NO, Skip 402
402	If Yes to Q401, Do You think that these problems threaten the life of the women?	1.Yes 2.No 3. I Don't know		
403	What are some of serious health problems that can occur **during pregnancy**? PROBE: Any others?	1.Vaginal Bleeding		
		2.Blurred vision		
		3.Swollen hands/face		
		4.Severe headache		
		5.Convulsions		
		6.High fever		
		7.Loss of consciousness		
		8.Difficulty breathing		
		9.Sever weakness		
		10.Severe abdominal pain		
		11.Accelerated/reduced foetal mov't		
		12.Water breaks without labour (PROM)		

404	What are some serious health problems that can occur **during labour and child birth** that could endanger the life of the woman? PROBE: Any others?	1.Severe Vaginal Bleeding		
		2.Blurred vision		
		3.Placenta not delivered 30 minutes after baby		
		4.Severe headache		
		5.Convulsions		
		6.High fever		
		7.Loss of consciousness		
		8.Labour lasting >12 hours		
405	What are some serious health problems that can occur **during the first 2 days after birth** that could endanger the life of the woman? PROBE: Any others?	1.Severe Vaginal Bleeding		
		2.Blurred vision		
		3.Swollen hands/face		
		4.Severe headache		
		5.Convulsions		
		6.High fever		
		7.Loss of consciousness		
		8.Difficulty breathing		
		9.Sever weakness		
		10.Malodorous vaginal discharge		

5. BP&CR PRACTICE AND KNOWLEDGE OF COMMUNITY RESOURSES

Instruction:

- For question number 502 first read the question and wait for spontaneous response then if no more they able to mention, probe them for additional BP&CR practice.
- Infront of each response on empty box put number "1" when respondents mentioned BP&CR practice spontaneously, put "2" when respondents answer BP&CR practice after you mention the items and put :3" when respondent say I don't know for Q no 502.

Q.#	Question	Code		Go to Q
501	Have you ever heard the term "Birth preparedness"?	1.Yes 2.No		
502	In your opinion, what are some things a woman can do to prepare for birth? PROBE: more than one answer is possible so ask as 'any others? Until she says no more.	1.Identify mode of transport		
		2.Save money		
		3.Identify blood donor		
		4.Identify place of delivery		
		5.Identify skilled provider		
		6.Identify who accompanies		
		7.Identify decision maker		
		8. Grain for porage/other food item		
		9. Rather blade, thread		
		10. Cloth for new born		
		11..Others (list) _____		
503	Does your community provide services to assist women in preparing for birth? For instance:			
	1. Are there transportation services for woman?	1.Yes 2.No I Don't know…….		
	2. Are there ways to get money to help families pay for birth?	1.Yes 2.No I Don't know…….		

	3. Are there ways to get blood donated during pregnancy or complications?	1.Yes 2.No I Don't know	
504	Which one of the above have you/your family planned to arrange?		
	1. Have you/your family planned to arrange transportation services for this birth?	1.Yes 2.No	
	2. Have you/your family planned to save money to help you for during this birth?	1.Yes 2.No	
	3. Have you/your family planned to arrange ways to get blood donation during pregnancy or complications of this birth?	1.Yes 2.No	

5. ATTITUDES AND PERCEPTIONS ABOUT BP&CR

Now I am going to read out a list of common perceptions about pregnancy, childbirth, and the period immediately after childbirth. I would like to know whether you 1=Strongly disagree(SD), 2=Disagree(D), 3=Indifferent(ID), 4=agree(A), or 5=Strongly agree(SA) with these statements. There is no right or wrong answer to any of these questions. We are only interested in hearing your opinion.

Q.#	**Questions**	**Response Codes**				
		SD (1)	**D (2)**	**ID (3)**	**A (4)**	**SA (5)**
601	A pregnant woman should plan ahead of time where she will give birth to her baby.					
602	A pregnant woman should plan ahead of how she will get to the place where she will give birth.					
603	It is necessary for a husband/partner to accompany his wife to ANC visits.					
604	It is necessary for a husband/partner to accompany his wife when she is giving birth.					
605	Giving birth is mostly a woman's matter. Husbands/partners have nothing to contribute.					
606	When women do not go to a health facility to give birth, it is mainly because it is too expensive.					
607	When women do not go to a health facility to give birth, it is mainly because the staff there do not treat women respectfully.					
608	When women do not go to a health facility to give birth, it is mainly because it is too difficult to get there.					

I have finished the interview. Thank you for spending your time and valuable information you gave us.

Annex-D: English Version FGD Guide

JIMMA UNIVERSITY
INSTITUTE OF HEALTH SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF POPULATION AND FAMILY HEALTH

Qualitative Questionnaire on birth preparedness and complication readiness among pregnant women in Agnuak Zone, Gambela Regional State.

Informed Consent form for FGDs

Good morning /after noon

My name is……

First of all, I would like to thank you for giving your time.

I and my colleagues working by representing the research team of Jimma University Institute of Health which conducting FGDs for the study entitled "Birth Preparedness and complication readiness and associated factors among pregnant women in Agnuak Zone." The information obtained from this discussion by your participation will be used to plan interventions to improve birth preparedness and complication readiness in the future and there is no direct benefit for you. All participants for discussion are selected purposefully and I can raise few questions about your community that how mothers prepared for birth and its complications and influencing factors so that you can discuss on them. The average time that FGD take will be 1 hour. I and my colleagues requesting your permission to take note and record your voice during discussion so that important messages will be not missed. You have the right to refuse to respond any question that you are not comfortable. Your name will not be recorded and all the information you give will be kept strictly confidential and is to be used only for the purpose of this study.

Are you willing to participate in the discussion? 1. Yes 2. No

Continue the interview and take fill the consent form if they are volunteer to participate in the discussion otherwise terminate the interview.

Consent form certificate

After the moderator informed me about the discussion and confidentiality of the response to be at highest possible level, I am willing to participate in the study.

S.No	Code	Age	Educational Status	Occupational Status	Marital Status	Signature	Date
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Name of moderator……. Signature…….. Date……

Name of note taker……Signature…….. Date……

Guide questions for FGDs

1. Have you ever heard the term “Birth preparedness”?

2. In your community, what are some things a woman can do to prepare for birth?

3. Does ANC followup influence a pregnant women to prepare for birth and ready for obstetric complication? How? Explain? (Probe)

4. In your community, are there community support system that encourage a pregnant woman in preparation for child birth and obstetric emergencies? If existent, what are some of these community support systems? Do you think that pregnant womens in your community know the existence of these system? Do you think that knowing the existence/non existence of these community support system influence a pregnant womn in preparation for childbirth? How? (Probe)

5. In your community, who is the usual final Decision maker for a pregnant women in seeking health care? Why? (Probe) Do you think that this has an influence on preparation for childbirth? How? (Probe)

6. In this community, are there health problems related to pregnancy, labor and postpartum that endanger the life of the women? (Probe) If so, when does a woman recognize to have danger health problems in connection to pregnancy, labor and postpartum? What are the signs/symptoms for these during pregnancy, childbirth and postpartum period? (Probe) Do you think knowing these danger signs encourage a pregnant wman in birth preparedness and complication readiness? How? (Probe)

Annex-E: Amharic Version Format to Identify Pregnant Women

ጅማዩኒቨርሲቲ

ጤና እንስቲዩት ድህረምራቃ ትምህርት ክፍል ስነህዝብና ቤተሰብ ጤና ድፓርትመንት

እድሜያቸዉ ከ15-49 ያሉትን ሴቶችን በመመዝገብ በቀበሌ ዉስጥ ያሉትን እርጉዝ እናቶችን ለመለየት የሚያገለግል ቅፅ

ክፍል አንድ፡ የስምምነት ቅፅ

እንደምን አደሩ? /እንደምን ዋሉ? እንደምንነዎት! እኔ ስሜ.....ይባላል& የጅማ ዩኒቨርሲቲ ጤና እንስቲዩት የምርምር ቡድን አባል ሲሆን በአኙአክ ዞን በተመረጡ ቀበሌዎች ላይ ከእርግዝና ከወሊድና ከድህረወሊድ ጋር ተያይዘው ሊከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት ማድረግን በሚመለከት ከየካቲት 25/ 2009 አስከ መጋቢት 30/ 2009 ዓ.ም. ለምደረገዉ የዳሰሳ ጥናት ሁሉንም ቤቶች በመዞር የጥናቱ ተሳታፊ የሆኑትን እርጉዝ ሴቶችን የመለየት ስራ እየሰረሁ ነው፡፡ የጋብቻንና የእርግዝናን ሁኔታን ጨምሮ የተወሰኑ ጥያቄዎችን እጠይቆታለሁ፡፡ ያልተመቾትን ጥያቄ ያለመመለስ የመሳተፍና ያለመሳተፍ መብት የእርሶ ነዉ፡፡

ለምጠየቁት ጥያቄ ፈቃደኛ ነዎት? አዎ ☐ አይደለሁም ☐

ለመሳተፍ ፈቃደኛ ከሆኑ “አዎ” በምል ፊትለፊት ክፍት ቦታ ለይ “√” ምልክት ያስቀምጡና ወደምቀጥለዉ መጠይቅ ይለፉ፡፡
ካልተስማሙ “አይደለሁም” በምል ፊትለፊት ክፍት ቦታ ለይ “√” ምልክት ያስቀምጡና ቃለመጠይቁን አቋርጠዉ ያመስጊኑአቸዉ፡፡

ቆጠራዉን የሚያካሄደዉ፡

ስም _____, ፊርማ _____, ቀን(በኢት.አቆጣጠር) _____

ተቆጣጣሪው፡

ስም _____,ፊርማ_____,ቀን(በኢት.አቆጣጠር) _____

ክፍል ሁለት፡ የምልመላ ቅፅ

<u>ጠቅለላ መነሻ</u>

ወረዳ.....

ቀበሌ.....

ጎጥ.....

ገሬ.....

ተ.ቁ	የቤተሰብ ሀላፊ ስም (A)	የዕርጉዝ ሴቶች ስም ዝርዝር (B)	ከቤተሰብ ሀላፊ ጋር ያላት ዝምድና (C)	የጋብቻ ሁኔታ (D)	እርግዝናዎ ስንት ግዜ ሆኖታል (በሳምንት) (E)	የቋንቋ ምርጫ (F)	የእርጉዝ እናት መለያ ምልክት (G)
I		1.					
		2.					
		3.					
		4.					
		5.					
		6.					
II		1.	.				
		2.					
		3.					
		4.					
		5.					
		6.					
III		1.					
		2.					
		3.					
		4.					
		5.					
		6.					
IV		1.					
		2.					
		3.					
		4.					
		5.					
		6.					

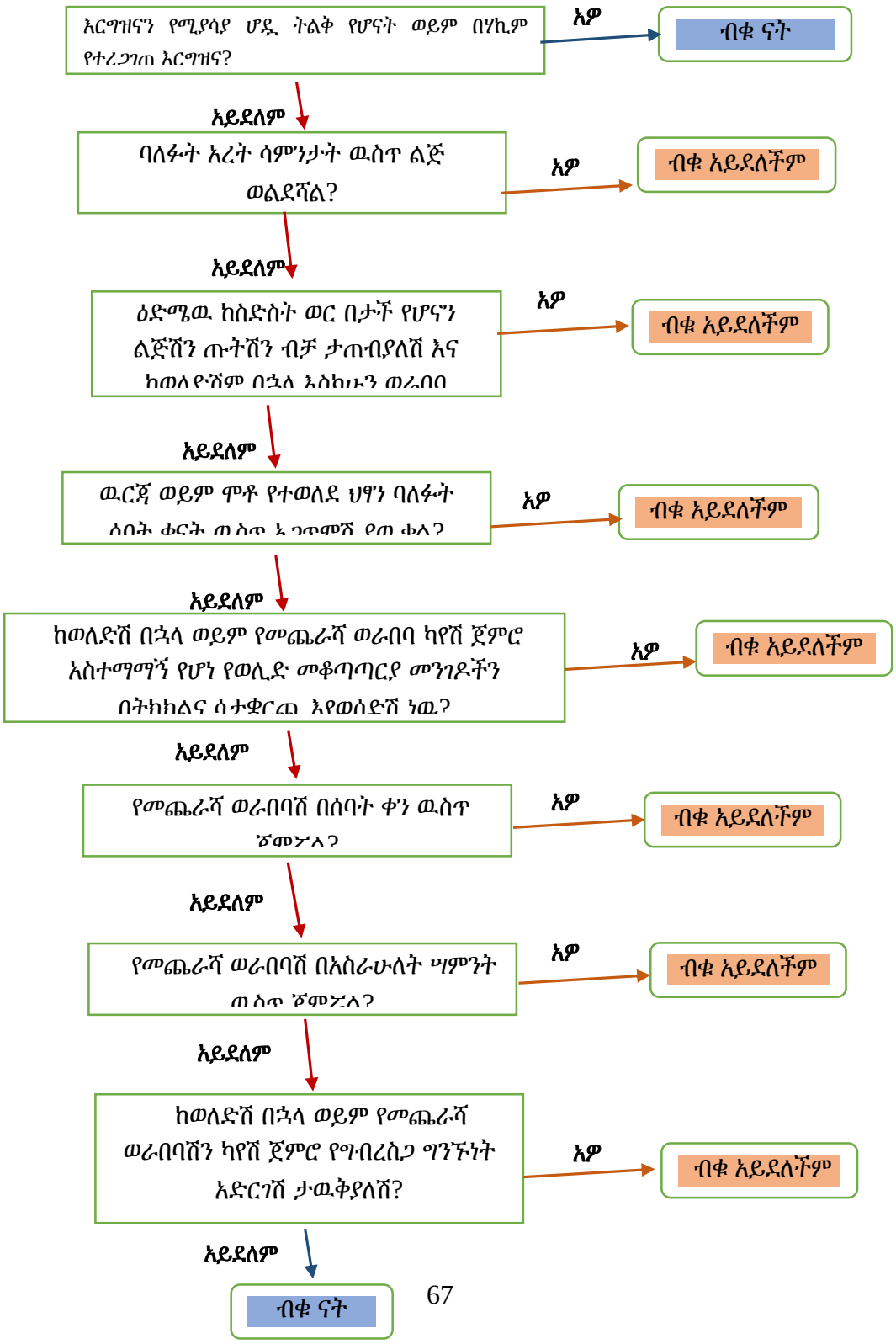
<u>ማብራርያ፡-</u>

- (B) ያሁኑ የዕርግዝና ሁኔታ፡ 1.እርጉዝ ከሆነች 2.እርጉዝ ካልሆነች **(<u>*በምቀጥለዉ ገፅ ላይ ያለዉን የእርግዝና መለያ ቅፅ ተጠቀም</u>)**
- (C) ከቤተሰብ ሀላፊ ጋር ያላት ዝምድና፡ 1.ምስት 2.ልጅ 3.ዘመድ 4.የቤት ሠረተኛ 5.ሌላ
- (D) የጋብቻ ሁኔታ፡ 1. ያገባች 2. ሳይጋቡ አብረው የሚኖሩ 3. ያላገባች 4. የፈተች 5. የተለያዩ 6. ባል የሞተባት
- (E) እርግዝናዎ ስንት ግዜ ሆኖታል(በሳምንት)፡ በሳምነታት አጠጋግተህ ፃፍ
- (F) የቋንቋ ምርጫ 1.አማርኛ 2.አኝዋ
- (G) የእርጉዝ እናት መለያ ምልክት፡ በመጨራሻ በተቆጣጣሪዉ ስለሚሞላ አሁን አይሞላም

Annex-F: Amharic Version Pregnancy Screening Criteria
(Adapted from Stanback et al, 1999)

እርጉዝ እናቶችን መለያ ቅፅ

አንድ ሴት እርጉዝ መሆን አለመሆኗን ለመለየት የሚከተለዉን መጠይቅ በቅደም ተከተል ጠይቃት፡፡



Annex-G Amharic Version Questionnaire

ጅማዩኒቨርሲቲ

ጤና እንስቲዩት ድህረምራቃ ትምህርት ክፍል ስነህዝብና ቤተሰብ ጤና ድፓርትመንት

የግንዛቤና ፈቃደኝነት መጠየቂያ ቅፅ

በጅማ ዩኒቨርሲቲ ጤና እንስቲዩት ለጥናቱ ተሳታፊዎች በግንዛቤ ላይ የተመሰረተ ለወሊድ መዘጋጀትና ከዕርግዝናና ከወሊድ ጋር ተያያዘው ሊከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት ማድረግን በሚመለከት የከተማና ገጠር ነዋሪ በሆኑት እርጉዝ እናቶች ላይ ጥናት ለማካሄድ የተዘጋጀ የግለሰቦች ፈቃደኝነት መጠይቅያ ቅፅ፡፡

እንደምን አደሩ? /እንደምን ዋሉ? እንደምንነዎት?

በመጀመሪያ ጊዜዎን ስጥተው ስላናገሩኝ ላመሰግንዎ እወዳለሁ።

እኔ ስሜ.....ይባላልኬ የጅማ ዩኒቨርሲቲ ጤና እንስቲዩት የምርምር ቡድን ከየካቲት 25/ 2009 አስከ መጋቢት 30/ 2009 በአኝዋ ዞን እርጉዝ እናቶች ላይ በሚያደርገው የዳሰሳ ጥናት ላይ በመረጃ ሰብሳቢነትት እየሰራሁ ነው፡፡

የዚህ ጥናት ዋና አላማ ከተማና ገጠር ነዋሪ በሆኑና እርጉዝ እናቶች ላይ ስለወሊድ ዝግጅት እና ከእርግዝና ከወሊድና ከድህረወሊድ ጋር ተያይዘው ሊከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት ማድረግን በሚመለከት የዳሰሳ ጥናት ለማድረግ ነው፡፡ እርሶዎ የሚሰጡት መረጃ የጥናቱን አላማ ለማሳካትና ውጤቱም ስለወሊድ ዝግጅት እና ከእርግዝናና ከወሊድ ጋር ተያይዘው ሊከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት ማድረግን በሚመለከት እናቶች ጠቀሜታ ያለው ዝግጅት እንዲያደርጉ ጤና ባለሙያዎች አግባብነት ያለው አገልግሎት እንዲሰጡ እና መንግስትም መረጃን መሰረት ያደረገ ፖሊሲ ቀረጾና ፕሮግራም አፈፃፀም ማሻሻያ ለማድረግ ጠቃሚ ነው፡፡ የተፈለገዉን መረጃ ከመውሰድ ውጭ ጥናቱ በተሳታፊዎች ላይ የሚያደርሰው ምንም አይነት ጉዳት የለም፡፡

ጥናቱ የሚጋብዘው እርጉዝ እናቶችን ነው፡፡ እርስዎ ለዚህ ቃለመጠይቅ የተጋበዙት በእጣ ነው፡፡ ከዚህም ሌላ ላረጋግጥልዎት የምፈልገው እርስዎ የሚሰጡት ማንኛውም መረጃ ሚስጥራዊነቱ የተጠበቀና ለዚህ ጥናት አላማ ብቻ የሚውል መሆኑን ነው፡፡ ስምዎም አይፃፍም፡፡ በጥናቱ የመሳተፍ አና ያለመሳተፍ መብትዎ የተጠበቀ ነው፡፡ መጠይቁ የሚወስደው 30 ደቂቃ ያህል ነው፡፡ ስለዚህ ከጥናቱ ጋር የተያያዙ የተወሰኑ ጥያቄዎችን ልጠይቅዎ እወዳለሁ፡፡

አሁን በጥናቱ ላይ ለመሳተፍ በቅድሚያ ፍቃደኝነትዎን ይግለፁልኝ፡፡

ፈቃደኛ ነኝ ☐ ☐ ፈቃደኛ አይደለሁም

ፈቃደኛ ከሆኑ አመስግኖ በስምምነታቸው እንዲፈርሙ ማድረግ ፈቃደኛ ካልሆኑ ማመስገን፡

የስምምነት ማስፈረሚያ ቅፅ

ከላይ ያለው መረጃ ተነቦልኝና ተረድቼ በጥናቱ ላይ ለመሳተፍ ፈቃደኝነቴን በፊርማዬ አረጋግጣለሁ፡፡.

የተሳታፊዋ ፊርማ.....መጠይቅ የተካሄደበት ቀን (በኢትዮ).....

የቃለመጠይቁ ዉጤት

1. የተሟላ ቃለመጠይቅ 2. በከፊል የተጠናቀቀ 3. መጠየቅ አልፈልግም

የጠያቂው ስም.....ፊርማ .....

የጥያቄ ወረቀት ቁጥር.....የቤት ቁጥር.....

የተቆጣጣሪው ስም .....ፊርማ .....

የተረጋገጠበት ቀን(በኢትዮ) .....

የተጠያቅዋ መለያ ቁጥር.....

1. ወረዳ.....

2. ቀበሌ.....

3. ጎጥ.....

4. ገሬ.....

5. የቤተሰብ ሀላፊ ስም.....

መመርያ፡- ከተሰጡት ምርጫዎች ውስጥ ትክክለኛውን መልስ ያክብቡ መልሰ ለሚፃፍላቸው ደግሞ በተዘጋጀው ቦታ ላይ ይፃፉ::

ክፍል 1፡ በጥናቱ የሚሳተፉ ሴቶች ስነ ህዝባዊና ማህበራዊ ሁኔታዎች

መጠ. ቁ	ጥያቄ	ዓማራጭ መልሶች	ዝለል
101	የመኖርያ ቦታ	1.ከተማ 2.ገጠር	
102	እዴሜዎ ስንት ነው?	.....ዓመት	
103	የየትኛው ሃይማኖት ተከታይ ነዎት?	1. ኦርቶዶክስ ክርስትና 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሉክ 5. ላላ (ይጠቀስ)	
104	ብሄርዎት?	1. አኙአክ 2. ኦሮሞ 3. ከምባታ 4. ትግሬ 5. አማራ 6.ኑዌር 6. ሌላ (ይጠቀስ)----------	
105	ቤትዎ ውስጥ አብሮ የሚኖር ስንት የቤተሰብ አባል አለ?	.....	
106	የጋብቻ ሁኔታዎ?	1. ያገባች 4. የተፋቱ 2. ሳይጋቡ አብረው የሚኖሩ 5. የተለያዩ 3. ያላገባች 6. ባል የሞተባት 7.ሌላ	
107	የትምህርት ደረጃሽ ምን ይመስላል?	1-ማንበብና መጻፍ አልችልም 2-ማንበብና መጻፍ ብቻ 3.ከፍል 1-4 4.ከፍል 5-8 5.ከፍል 9-12 6. ኮሌጅ 7. ዩኒቨርሲቲ	
108	ስራዎ ምንድነዉ?	1.የቤት ዕመቤት 5. ነጋዴ 2.ዓርሶዓደር 6. ተማሪ 3.የቤት ሰራተኛ 4.የመንግስት/መንግስታዊ ያልሆነ ስራ ተቀጣሪ 7.ሌላ ካለ ይጥቀሱ----------	
109	ከቤት ስራ በተጨማሪ በቁስ ወይም በብር የሚከፈልሽ ስራ አለሽ ወይ?	1.አዎ 2.የለኝም	የለኝም ከሆነ ወደ ጥያቄ ቁ. 111 ዝለል
110	ጥያቄ ቁ. 109 መልሱ አዎ ከሆነ በወር ምን ያህል ብር ታገኝያለሽ?	.....(የእት.ብር)	

111	የባለቤትዎ/የኢጋሪዎ የትምህርት ደረጃ ምን ይመስላል? (ላገቡ/አብረዉ ለሚኖሩ ብቻ የሚጠየቅ)	1-ማንበብና መጻፍ አይችልም 2-ማንበብና መጻፍ ብቻ 3-ከ1ኛ-4ኛ ክፍል 4.ከ5ኛ-8ኛ ክፍል 5-2ኛ ደረጃና ከዚያ በላይ 6 ባለቤት/የትዳር አጋር የለኝም	በአሁኑ ወቅት ትዳር/የትዳር አጋር ከሌላት ወደ ጥያቄ ቁ.114 ዝለል
112	የባለቤትዎ ስራ ምንድነዉ?	1-ዳርሶዳደር 2.የመንግስት/መንግስታዊ ያልሆነ ስራ ተቀጣሪ 3 -ነጋዴ 4-ተማሪ 5-የቀን ጉልበት ሰራተኛ 6-ሌላ ካለ ይጥቀሱ----------	
113	ባለቤትዎ/የኢጋሪዎ ከሚሰራዉ ስራ ምን ያህል ገቢ ያገኛል?	.....(የእት.ብር)	
114	የመጠጥ ዉሃ ከየት ነዉ የምታገኙት?	1.ከቧንቧ ዉሃ 2.በእጅ ተገፍቶ የምወጣ ዉሃ 3.ከጉድጓድ ዉሃ(ቦኖ) 4.ከተከለለ/ከታጠረ የጉድጓድ ዉሃ 5.ካልተከለለ/ካልታጠረ የጉድጓድ ዉሃ 6.ከተከለለ/ከታጠረ የምንጭ ዉሃ 7.ካልተከለለ/ካልታጠረ የምንጭ ዉሃ 8. የዝናብ ዉሃ	
115	የቤተሰብሽ አባላት የሽንት ቤት የሚጠቀሙት የት ነዉ? (በአካል ሄዶ በመመልከት የሚሞላ)	1.በዘመናዊ የዉሃ መስመር ባለዉ ሽንት ቤት 2.በባህላዊ የጉድጓድ ሽንት ቤት 3. በባህላዊ የጉድጓድ ሽንት ቤት ሆኖ እንፋሎት ማስወጫ ቱቦ ያለዉ 4.ሜዳ ላይ 5.ሌላ ከሆነ ግለጽ.....	
116	መኖርያ ቤትሽ ባለቤትነቱ ምን ይመስላል?	1.የግል 2.የከራይ 3.ሌላ (ይገለጽ).....	
117	መኖርያ ቤትሽ ስንት ክፍል አለዉ?	.....ከፍል	
118	ለመተኛት የምትጠቀሙት ስንት ክፍል ነዉ?	.....ከፍል	
119	ከመኖርያ ቤት የተለዩ ለኩሺና የምትጠቀሙት ክፍል አላችዉ?	1.አዎ 2.የለም	
120	የቤትዎ ወለል ከምን አይነት ቁስ የተሰራ ነዉ? (በአካል ሄዶ በመመልከት የሚሞላ)	1.የአፈር ወለል 2. የአፈር ወለል ሆኖ በኩበቶች እበት የተመረገ/የተለሰነ 3.ከጠዉላ የተሰራ ወለል 4. በስምንቶ ተሰርቶ ያለቀለት ወለል 5. ሌላ (ይገለጽ).....	
121	የቤትዎ ጣርያ ልባስ በምን አይነት ቁስ የተከደነ ነዉ? (በአካል ሄዶ በመመልከት የሚሞላ)	1.በሳር የተከደነ 2. በቆርቆሮ 3. ሌላ	
122	የመኖርያ ቤትዎ ግድግዳ ከምን አይነት ቁስ የተሰራ ነዉ? (በአካል ሄዶ በመመልከት የሚሞላ)	1.ግድግዳ የለዉም 2.በጭቃ ያልተመረገ/ያልተከደነ የእንጨት ግድግዳ 3.በጭቃ የተመረገ/የተለሰነ የእንጨት ግድግዳ 4.በስምንቶ የተለሰነ የእንጨት ግድግዳ 5.በስምንቶ እነ በብሎኬት የተሰራ ግድግዳ 6. ሌላ (ይገለጽ).....	

123	በበቤታችሁ ዉስጥ ለምግብ ማብሰያነት የሚትጠቀሙት የሃይል ምንጭ ከምንድነዉ	ነ.የኤሌክትሪክ ሀይል 4.ከሰል 2.ከተፈጥሮ ጋዝ 5.ከእንጨት 3.ከነጭ ጋዝ/ቡታጋዝ 6.ከከብቶች እበት 6. ሌላ	
124	ከቀረቡት አማራጮች ዉስጥ በመኖሪያ ቤትዎ የሚገኘዉን ምረጭ?		
		አዎ / የለም	
		ነ.መብራት: ነ / 2	
		2.ሬድዮ: ነ / 2	
		3.ቴሌቪዥን: ነ / 2	
		4.መደበኛ ስልክ: ነ / 2	
		5.ማቀዝቀዣ: ነ / 2	
125	ከዚህ በታች ከተዘረዘሩት ምርጫዎች ለቤተሰብሽ አባል ያለዉን ምረጭ?		
		አዎ / የለም	
		ነ.ሰዓት: ነ / 2	
		2.ተንቀሳቃሽስልክ/ሞባይል: ነ / 2	
		3.ሣይክል: ነ / 2	
		4.ሞቶር ሳይክል: ነ / 2	
		5.በእንስሳት የሚሣብ ጋሪ: ነ / 2	
		6.መኪና: ነ / 2	
126	ካሉት የቤተሰብ አባላት የእርሻ መሬት ያለዉ አለ	ነ.አዎ 2.የለም	የለም ከሆነ ወደ ጥያቄ ቁ. 128 ዝለል
127	ለጥያቄ ቁ.126 መልሱ አዎ ከሆነ በሄክታር ስንት የሆናል	.....ሄክታር	
128	በመኖርያ ቤትዎ ዉስጥ ከብት:ዶሮ:ወይም ለእርሻ የሚያገለግሉና የመሳሰሉት አለ ወይ	ነ.አዎ 2.የለም	የለም ከሆነ ወደ ጥያቄ ቁ. 130 ዝለል
129	ለጥያቄ ቁ.128 መልሱ አወ ከሆነ ከተዘረዘሩት ውስጥ አንዱ ወይም አብዛኛው አለ ወይ? ካለ በቁጥር ስንት ናቸዉ?	ነ.ከብት 2.የምታለብ ላም/ኮርማ 3.ፈረስ/አህያ/በቅሎ 4.በግ 5.ፊየል 6.ዶሮ	
130	ከቤትዎ እስከ ጤና ጣቢያ በደቂቃ ምን ያህል ይወስዳል?	.....ደቂቃ	
131	ከቤትዎ እስከ ሆስፒታል በደቂቃ ምን ያህል ይወስዳል?	.....ደቂቃ	

ክፍል 2: እርግዝናና ወሊድን የሚመለከቱ ጥያቄዎች

መጠ. ቁ	ጥያቄ	ዓማራጭ መልሶች	ዝለል
201	በህይወት ዘመኖት ስንት ጊዜ አርግዘው ያውቃሉ?	1.የመጀመርያ እርግዝና 2.ሁለትና ከዚያ በላይ እርግዝና	የአሁኑ አርግዝና የመጀመርያዋ ከሆነ ወደ ጥያቄ ቁ.301 ዝለል
202	የተቋረጠ ፅንስ ነበር?(ከ28 ሳምንት በፊት)	1.አዎ 2.የለም	የለም ከሆነ ወደ ጥያቄ ቁ. 204 ዝለል
203	ለጥያቄ ቁ.202 መልሱ አዎ ከሆነ የተቋረጠ ፅንስ ምን ያህሌ ነበር?	.....	
204	ከእርግዝናዎችሽ ዉስጥ ሞቶ የተወለደ ነበር	1.አዎ 2.የለም	የለም ከሆነ ወደ ጥያቄ ቁ. 206 ዝለል
205	ለጥያቄ ቁ.204 መልሱ አዎ ከህሆነ ሞቶ የተወለደ ምን ያህሌ ነበር?	.....	
206	በህይወት የተወለዱት ምን ያህል ናቸዉ	.....	
ጥያቄ ቁ. 203፣205ና፤206ን ደምር ከዚያም ከጥያቄ ቁ. 201 ጋር አወዳድር፡፡ ልዩነት አለ.....			

ክፍል 3. ከእርግዝና አገልግሎት እቅድና አጠቃቀም ያላቸው ግንዛቤና ዝንባሌን የሚመለከቱ መጠይቆች

መጠ. ቁ	ጥያቄ	ዓማራጭ መልሶች	ዝለል
301	በዚህኛዉ እርግዝናዎ የቅድመወሊድ ክትትል ተከታትለዋል?	.አዎ 2.አልተከታተልኩም	.አልተከታተልኩም ከሆነ ወደ ጥያቄ ቁ. 307 ዝለል
302	ለ301 መልስዎ አዎ ከሆነ፣ የቅድመ ወሊድ ትትልሽን የት አካሄዴሽ?	1.ሆስፒታል 2.ጤናጣቢያ 3.ጤናኬላ 4.ቤት 5.ሌላ(ግለጽ)	
303	ለ301 መልስዎ አዎ ከሆነ፣ በዚህኛዉ እርግዝናዎ እስካሁን ድረስ ምን ያህል የቅድመ ወሊድ ትትል አካሄዴሽ?	.....	
304	ለ301 መልስዎ አዎ ከሆነ፣ ማን ነበር ያየዎት?	1. ዶክተር 4.ጤና መኮነን 2. ነርስ 5.ጤና ኤክስቴንሽን 3. አዋላጅ ነርስ 6. የቤተሰብ አባል 7. ሌላ ከሆን ይጥቀሱ.....	
305	በስንተኛ ወርዎ ላይ ነበር የቅድመ ወሊድ ክትትልዎን የጀመሩት?	----------ወር	
306	በአጠቃለይ ስንት ጊዜ የቅድመ ወሊድ ክትትል ለማድረግ አቅደዋል?(ክትትል ያደረጉትንና ያቀዱትን ጨምሮ)	1.ለመከታተል አላቀድኩም 2.አንድ ጊዜ ብቻ 3.ሁለት ጊዜ ብቻ 4.ሶስት ጊዜ ብቻ 5.አረት ጊዜ ብቻ 6.የተለዬ መልስ ካለሽ.....	

307	የህክምና አገልግሎት እንድታገኚ ዉሳኔ የምሰጠዉ መን ነዉ?	1.እኔ ብቻ 3. አኔና ባለቤቴ/ቤተሰብ/ቤተዘመድ/እናቴ 2.ባለቤቴ ብቻ 4.ቤተሰብ/ዘመድ	
308	የት እንደሚወልዱ አቅደዋል?	1.አዎ 2.አላቀድኩም	አላቀድኩም ከሆነ ወደ ጥያቄ ቁ. 311 ዝለል
309	ጥያቄ ቁ.307 አዎ ከሆነ የት ለመውለድ አቅደዋል?	1.ሆስፒታል 3.ጤና ኬላ 2.ጤና ጣቢያ 4.ቤት ዉስጥ 5.ሌላ ከሆነ ይጥቀሱ	
310	በጤና ተቋም መዉለድ ለምን መረጡ?	1.ጤና ድርጅቱ ቅርብ ስለሆነ 2.የተሻለ አገልግሎት ስለሚሰጥ 3.ባለፈዉ በጤና ድርጅት በጥሩ ሁኔታ ስለወለድኩኝ 4.በጤና ባለሞያዎቹ ምክር 5.ምጡ በጣም ስለጠናብኝ 6.ባለፈዉ በቤት ዉስጥ ስወልድ ችግር ስላጋጠመኝ 7.ሌላ ካለ ይጠቀስ.....	
311	በማን መዉለድ አንዳለብዎ እቅድ አለዎት?	1.አዎ 2.አላቀድኩም	አላቀድኩም ከሆነ ጥያቄ ቁ. 312ንና 313ን ዝለል
312	ጥያቄ ቁ.311 አዎ ከሆነ ማን እንድያዋለድዎ አቅደዋል?	1. ዶክተር 4. ጤና መኮነን 2. ነርስ 5. ጤና ኤክስቴንሺን 3.አዋላጅ ነርስ 6. ሌላ ከሆነ ይጥቀሱ	
313	በጤና ባለሙያ መዉለድ ለምን መረጡ?	....	

ክፍል 4. ከእርግዝና፣ከወሊድ እና፣ ከወሊድ በኋላ ለሚከሰቱ ዓደገኛ የጤና ችግሮች የማንዛቤ መጠይቅ

መመሪያ፡

ከጥያቄ ቀጥር 403-405 ላሉ ጥያቄዎች በቅድማያ ጥያቄዉን ብቻ አንብቢ (ከምርጫዎቹ ሳይነበብላቸዉ መመለስ ይችሉ እንደሆነ) ከዚያ በመቀጠል ከምርጫዎቹ አንብቢ

በተዘረዘሩት **ዓማራጭ መልሶች** ፊትለፊት ባለዉ ክፍት ቦታ ላይ ዝርዝሩ ሳይነበብላቸው ለጠቀሱ "1" ቁጥር ከነኑ ፃፊ፤ ዝርዝሩ ተነቦላቸው መልሱን ለመለሱ "2" ቁጥር ከነኑ ፃፊ፤ መልሱን አላውቅም ካሉ "3" ቁጥር ከነኑ ፃፊ (ከጥያቄ ቁ.403-405)

መጠ. ቁ	ጥያቄ	ዓማራጭ መልሶች		ዝለል
401	በእርግዝና በወሊድ ወይም በድህረወሊድ ወቅት በተያያዘ ልከሰት የሚችል ያልተጠበቀ የጤና ችግር/አደገኛ ምልክት አለ?	1.አዎ 2.የለም 3.አላዉቅም		የለም ከሆነ ወደ ጥያቄ ቁ. 402 ዝለል
402	ጥያቄ ቁ.401 አዎ ከሆነ እነዚህ አደገኛ ምልክቶች የእናትን ህይወት ለአደጋ ያጋልጣሉ?	1.አዎ 2.አያጋልጡም 3.አላዉቅም		
403	በእርግዝና ወቅት ሊከሰተቱ የሚችሉ ዓደገኛ ምልክቶች ምንድናቸዉ? (መጀመርያ ምርጫዎቹን አታንብብ/ቢ ምናልባት በራሳቸው መዘርዘር ይችሉ እንደሆን)	1. ከማህፀን ደም መፍሰስ		
		2. የእይታ መደብዘዝ		
		3. የእጅ/ፊት ማበጥ		
		4. ከባድ የራስ ምታት		
		5. ያልተለመደ የሰውነት መንቀጥቀጥ/መንዘፍዘፍ		
		6. ከፍተኛ ትኩሳት		
		7. ራስን መሳት		
		8. የትንፋሽ ማጠር		
		9. ከባድ ድካም		
		10. የሆድ ህመም		
		11. የፅንስ ያልተለመደ አንቅስቃሴ ማድረግ ወይም አንቅስቃሴዉን በጣም ስቀንስ		
		12. ምጥ ሳይኖር የሽርት ውሃ መፍሰስ		

404	በምጥ ወይም በወሊድ ወቅት ሊከሰተቱ የሚችሉ ዓደገኛ ምልክቶች ምንድናቸዉ? (መጀመርያ ምርጫዎቹን አታንብብ/ቢ ምናልባት በራሳቸው መዘርዘር ይችሉ እንደሆን)	1. ከባድ የማህፀን ደም መፍሰስ		
		2. የእይታ መደብዘዝ		
		3. ህጻኑ ልጅ ከተወለደ በሁአላ እንግዴ ልጅ ከ30 ደቂቃ በላይ መቆየት		
		4. ከባድ የራስ ምታት		
		5. ያልተለመደ የሰውነት መንቀጥቀጥ/መንዘፍዘፍ		
		6. ከፍተኛ ትኩሳት		
		7. ራስን መሳት		
		8. የምጥ ሰአት መርዘም (ከ12 ሰዓት በላይ)		
405	ከወሊድ በኋላ በሁለት ቀናት ዉስጥ የሚከሰቱ ዓደገኛ ምልክቶች ምንድናቸዉ? (መጀመርያ ምርጫዎቹን አታንብብ/ቢ ምናልባት በራሳቸው መዘርዘር ይችሉ እንደሆን)	1. ከባድ የማህፀን ደም መፍሰስ		
		2. የእይታ መደብዘዝ		
		3. የእጅ/ፊት ማበጥ		
		4. ከባድ የራስ ምታት		
		5. 5. ያልተለመደ የሰውነት መንቀጥቀጥ/መንዘፍዘፍ		
		6. ከፍተኛ ትኩሳት		
		7. ራስን መሳት		
		8. የትንፋሽ ማጠር		
		9. ከባድ ድካም		
		10.ጥሩ ያልሆነ ሽታ ያለው ፈሳሽ ከማህፀን		

ክፍል 5. የቤተሰብና የማህበረሰብ ድጋፍ እዉቀትን በተመለከተ የሚለኩ መጠይቆች

ለጥያቄ ቀጥር 502 በቅድማያ ጥያቄዉን ብቻ አንብቢ (ከምርጫዎቹ ሳይነበብላቸዉ መመለስ ይሞከሩ) ከዚያ በመቀጠል በራሳቸዉ መመለስ ሲያቅታቸዉ ከምርጫዎቹ አንብቢ

በተዘረዘሩት **ዓማራጭ መልሶች** ፊትለፊት ባለዉ ከፍት ቦታ ላይ ዝርዝርሩ ሳይነበብላቸው ለጠቀሱ "1" ቁጥር ከጎኑ ፃፊ፤ ዝርዝሩ ተነቦላቸው መልሱን ለመለሱ "2" ቁጥር ከጎኑ ፃፊ፤ መልሱን አላውቅም ካሉ"3" ቁጥር ከጎኑ ፃፊ (ጥያቄ ቁ.502)።።

መጠ. ቁ	ጥያቄ	ዓማራጭ መልሶች		ዝለል
501	የወሊድ ቅድመ ዝግጅት በተመለከተ ሰምተዉ ያዉቃሉ?	1. አዎ 2.አልሰመሁም		
502	አንድ እናት ለወሊድ ስትዘጋጅ ምን ምን ታደርጋለች ብለሽ ታስቢያለሽ? (ከአንድ በላይ መልስ/መጥቀስ ይቻላል)	1.መጓጓዣ/ትራንስፖርት ማዘጋጀት/ማቀድ		
		2.ገንዘብ መቆጠብ		
		3. በድንገተኛ ጊዜ ደም የሚሰጥ ሰው ማዘጋጀት		
		4. የት እንደምትወልድ መወሰን		
		5. ማን እንደሚያዋልድ መለየት		
		6.በወሊድ ወቅት አብሮአት የሚሆን ሰዉ መለየት		
		7.በአደጋ ጊዜ ዉሳኔ የሚሰጥ ሰዉ መለየት		
		8. የገንፎ እህል ማዘጋጀት		
		9. ምላጭና ክር ማዘጋጀት		
		10. የህፃን ልብስ ማዘጋጀት		
		11. ሌላ ካለ ይጥቀሱ _____ _____		
		12. አላዉቅም		
503	አንድ እናት ለወሊድ ስትዘጋጅ የሚረዳ የማህበረሰብ ድጋፍ አለ? ለምሳሌ፡-			

	ነ. ለእርጉዝ እናት የመጓጓዣ/የትራንስፖርት አገልግሎት አለ?	ነ. አለ 2. የለም 3. አላዉቅም	
	2. በወሊድ ጊዜ ለሚያስፈልግ ወጪ የሚሆን የገንዘብ አገልግሎት አለ?	ነ. አለ 2. የለም 3.አላዉቅም	
	3. በአደጋ ጊዜ ለእርጉዝ እናት የምሰጥ የደም ባንክ አገልግሎት አለ?	ነ. አለ 2. የለም 3. አላዉቅም	
504	ከላይ ከተጠቀሱት የእርስዎ ቤተሰብ ለማዘጋጀት ያቀደዉ የትኛዉን ነዉ?		
	ነ. በወሊድ ጊዜ የሚሆን የመጓጓዣ/የትራንስፖርት አገልግሎት ቤተሰቦችሽ አቅደዋል?	ነ. አለ 2. የለም	
	2. በወሊድ ጊዜ ለሚያስፈልግ ወጪ የሚሆን ገንዘብ ለማስቀመጥ ቤተሰቦችሽ አቅደዋል?	ነ. አለ 2. የለም	
	3. በአደጋ ጊዜ የምሰጥ ደም እንዴት እንደሚያገኙ ቤተሰቦችሽ አቅደዋል?	ነ. አለ 2. የለም	

6. ስለወሊድ ዝግጅት እና ከእርግዝና ከወሊድና ከድህረወሊድ ጋር ተያይዘው ሊከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት በማድረግ ዙርያ ያለ አመለካከት መለኪያ ጥያቄ

ከዚህ በመቀጠል ከእርግዝና ከወሊድ እና ከወለድ በኋላ የተያያዙና የተለመዱ አመለካካቶችን አነብላችኋለሁ፡፡ በእያንዳንዱ የአመለካካት ጥያቄ ላይ የእናንተን የስምምነት ደረጃ ይህም ማለት ነ=በጣም አልስማማም 2=አልስማማም 3=አስተያት የለኝም 4=እስማማለሁ 5=በጣም እስማማለሁ በማለት እንድትመልሱልኝ እፈልጋለሁ፡፡ ለትያቄዎቹ ትክክለኛም ሆነ የተሳሳተ ምላሽ የለም፡፡

መጠ. ቁ	ጥያቄ	አማራጭ መልስ				
		በጣም አልስማም (ነ)	አልስማማም (2)	አስተያት የለኝም (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
60ነ	አንዲት ነፍሰጡር ሴት ስለምትወልድበት ቦታ ቀድማ ማቀድ ኣለባት፡፡					
602	አንዲት ነፍሰጡር ሴት ወደምትወልድበት ስፍራ እንዴት መድረስ እንዳለባት አስቀድማ ማቀድ ኣለባት፡፡					
603	በቅድመ ወሊድ ክትትል ወቅት ባል ከምስቱ ጋር አብሮአት ልሆን ይገባል፡፡					
605	ልጅ መዉለድ የሴቶች ሀላፍነት/ተግባር ስለሆነ ባሎች ብዙም አስተዋፅኦ ማበርከት አይጠበቅባቸዉም፡፡					
606	ሴቶች ለመዉለድ ወደ ጤና ተቁአም የማይሄዱ ከሆነ ዋነኛ ምክኒያታቸዉ **የዋጋ ዉድነት ነዉ፡፡**					
607	ሴቶች ለመዉለድ ወደ ጤና ተቋም የማይሄዱ ከሆነ ዋነኛ ምክኒያታቸዉ **የተቋሙ ሰራተኞች ነፍሰጡር ሴቶችን በአክብሮት ስለማያስተናግዱ ነዉ፡፡**					
608	ሴቶች ለመዉለድ ወደ ጤና ተቋም የማይሄዱ ከሆነ ዋነኛ ምክኒያታቸዉ **ጤና ተቋም ለመድረስ በጣም አስቸጋሪ ስለሆነ ነዉ፡፡**					

ጥያቄዎቼን ጨርሻለሁ፡፡ ላበረከቱልኝ ዉድ ግዜ አመሰግናለሁ!

Annex-H: Amharic Version FGD Guide

ጅማዩኒቨርሲቲ

ጤና እንስቲዩት ድህረምራቃ ትምህርት ክፍል ስነህዝብና ቤተሰብ ጤና ድፓርትመንት

ለቡድን ውይይት የፈቃደኝነት መጠየቂያ ቅፅ

እንደምን አደሩ/እንደምን ዋሉ

እኔ ስሜ.....

በመጀመሪያ ላበረከቱልኝ ዉድ ገዜ ላመሰግን እወዳለሁ፡፡

እኔና የስራ ባልደረቦቼ የጅማ ዩኒቨርሲቲ ጤና እንስቲዩት የምርምር ቡድን አባል ስንሆን እርጉዝ እናቶች ላይ ስለወሊድ ዝግጅት እና ከእርግዝና ከወሊድና ከድህረወሊድ ጋር ተያይዘው ሊከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት ማድረግን በተመለከተ በሚያደርገው የቡድን ውይይት ላይ በመረጃ ሰብሳቢነትት እየሰረን ነው፡፡እርሶዎ የሚሰጡት መረጃ የጥናቱን አላማ ለማሳካትና ውጤቱም ስለወሊድ ዝግጅት እና ከእርግዝናና ከወሊድ ጋር ተያይዘው ሊከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት ማድረግን በሚመለከት እናቶች ጠቀሜታ ያለው ዝግጅት እንዲያደርጉ ጤና ባለሙያዎች አግባብነት ያለው አገልግሎት እንዲሰጡ እና መንግስትም መረጃን መሰረት ያደረገ ፖሊሲ ቀረጻና ፕሮግራም አፈፃፀም ማሻሻያ ለማድረግ ጠቃሚ ነው፡፡ ለእናንተ የሚሆን ቀጥተኛ የሆነ ጥቅም የለም፡፡ የቡድነኑ ውይይት ተሳታፊወች የተመረጡት በተመራማሪው በጎ ፍላጎት በቂ መረጃ ይሰጣሉ ተብሎ የሚጠበቁትን በማቀድ ነው፡፡

አሁን በወሊድ ዝግጅት እና ከእርግዝና ከወሊድና ከድህረወሊድ ጋር ተያይዘው ለሚከሰቱ የጤና ችግሮች ቅድመ ዝግጅት በተመለከተ በእነንተ ማህበረሰብ ምን እንደሚመስል ለመዳሰስ የተወሰኑ ጥያቄወችን እጠይቃቸዋለው እናንተ ደግሞ ውይይት ታደርጋላችው፡፡የውይይት ጊዜ የሚወስደው በአማካይ አነድ ሰዓት ነው፡፡ እናንተ የተወያያችሁበትን ዉይይት ለማስተወስ እንድመች ማስተወሻ ለመያዝና ድምፅ ለመቅረፅ የእናንተን ፍላጎት እንጠይቃለን፡፡ ከዚህም ሌላ ላረጋግጥልዎት የምፈልገው እርስዎ የሚሰጡት ማንኛውም መረጃ ሚስጥራዊነቱ የተጠበቀና ለዚህ ጥናት አላማ ብቻ የሚውል መሆኑን ነው፡፡ ስምዎም አይፃፍም፡፡ በዉይይቱ የመሳተፍ አና ያለመሳተፍ መብትዎ የተጠበቀ ነው፡፡

በዉይይቱ ለመሳተፍ ፈቃደኛ ነዎት? አዎ ☐ አይደለሁም ☐

በዉይይቱ ለመሳተፍ ፈቃደኛ ከሆኑ በምቀጥለዉ ገፅ ያለዉን የስምምነት ፎርም ሙለ ካልሆነ ዉይይቱን አቋርጥና አመስግነህ ተሰናበት፡፡

የዉይይት መሪዉ ስለዉይይቱ አላማና ስለመረጃ አያያዝ ባሳወቀኝ መሰረት በዉይይቱ ለመሳተፍ ያለኝን ሙሉ ፍላጎት በፍርመየ እገልፃለሁ፡፡

ተ.ቁ.	ኮድ	እድሜ	የት/ት ደረጃ	ስራ	የጋብቻ ሁኔታ	ፊርማ	ቀን
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

ዉይይት መሪ ስም..... ፊርማ..... ቀን(በኢት.አቆጣጠር) .....

ማስተዎሻ ያዥ ስም.....ፊርማ..... ቀን(በኢት.አቆጣጠር) .....

ለቡድን ውይይት መሪ ጥያቄዎች

1. የወሊድ ቅድመ ዝግጅት በተመለከተ ሰምተዉ ያዉቃሉ?

2. በእናንተ ህብረተሰብ ዉስጥ አንድ እናት ለወሊድ ስትዘጋጅ ምን ምን ታደርጋለች?

3. የወሊድ ክትትል ማድረግ አንድ እርጉዝ እናት የወሊድ ዝግጅት እና ከእርግዝና ከወሊድና ከድህረ ወሊድ ጋር ተያይዘዉ ልከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት እንድታደርግ ወይም እንዳታደርግ አስተዋፅኦ አለዉ? እንዴት? (አብራሩ)

4. በእናንተ ህብረተሰብ ዉስጥ አንድ እርጉዝ እናት ለወሊድ ስትዘጋጅ የሚረዳ የማህበረሰብ ድጋፍ አለ? ካላ ይጠቀስ? በእናንተ ህብረተሰብ ዉስጥ እነዚህን የማህበረሰብ አቀፍ ድጋፎች መኖራቸዉን እርጉዝ እናቶች ያዉቃሉ ብላችዉ ታስባላችዉ? በእናንተ ህብረተሰብ ዉስጥ እነዚህን የማህበረሰብ አቀፍ ድጋፎች መኖራቸዉ ወይም አለመኖራቸዉ አንዲት እርጉዝ እናት ለወሊድ ዝግጅት እና ከእርግዝና ከወሊድና ከድህረወሊድ ጋር ተያይዘው ሊከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት እንድታደርግ ወይም እንዳታደርግ ያደርጋሉ ብላችሁ ታስባላችሁ? እንዴት (አብራሩ)

5. በእናንተ ማህበረሰብ ዉስጥ አንድ እርጉዝ እናት የህክምና አገልግሎት እንድታገኝ ወይም እንዳታገኝ ዉሳኔ የሚሰጠዉ ማን ነዉ? ለምን? ይህ አንድ እርጉዝ እናት ለወሊድ ዝግጂት በመወታደርግበተ ወቅት አስተዋጽኦ አለዉ? እንዴት (አብራሩ)

6. በዚህ ማህበረሰብ ዉስጥ አንድ እናት ከእርግዝና ከወሊድ ወይም ከድረ ወሊድ ጋር በተያያዘ አደገኛ የጤና ችግር እነደገጠማት የምታውቀው መቼ ነው? የነዚህ አደገኛ የጤና ችግር ምልክቶች ምንድናቸዉ? (አብራሩ) (በእርግዝና ጊዜ፤ በወሊድ ጊዜና ከወሊድ በኋላ) እነዚህን አደገኛ የጤና ችግር ምልክቶች ማወቅ አንድ እርጉዝ ሴት ለወሊድ ዝግጅት እና ከእርግዝና ከወሊድና ከድህረወሊድ ጋር ተያይዘው ሊከሰቱ ለሚችሉ ችግሮች ቅድመ ዝግጅት እንድታደርግ ያግዟታል? እንዴት (አብራሩ)

የመወያያ ነጥቦቼን ስለጨረስኩ ለተሳተትአጭሁ አመሰግናለሁ።።

Annex-I AgnuakVersion Quantitative Questionnaire

JÖÖR PÄÄNGÖ MARE

1. Apoole moa ngëëtge en maal mo li dwäädi adäk (3) ki maal
   (BeeKare----- Bänggö-------)
2. Apoole moa ngëëtge en maal mo li dwäädi ki däädi abïcien (6) ki maal Ni en ya Atut.
   (Kare---- Bänggö----------)
   Ni näk mo di pïëc ariew Ni beekare, køøre nyootha apool mo ena I kwäänö man køøre manynya gø nee joot.

NYUUDHI MAR JÖÖR PÄÄNG PÏËC

Dëëtu jööt / Uunu rïïö ni dïï/Uunu buttu ni dïï?
Ngengnga----------
Dikwøng acïppa pwøc kiper mana cïppu caae moo
Aani atïïö na amanynya tiet jammi ni waanu dwäättø ki kar pwöc mar "JIMMA UNIVERSITY" na amanynya kwäänö bäät apoole moa näk ngëët-ge ena maal ki mano täge dwää 7, 1—30/2017 ki kwään Aoroopa ya atut mar Anywaa jöön.Tier kwäänö man bäre, bee per nee jiing dëël de gø kiper lwaar mar apoole moa näk ngëët-ge ena maal këël mano pïïc-ge ri caa mar lwaar ni dëët-ge jööt kar lwaar øt-jaath nee ge jit-ge ki køny. Dööti moo lwør/joot yi kwäänö man ki køør cïp dëël mari, kunynyö kiperi/ mëë nee dee jiing dëël kiper lwaar mar-ge ni dëët-ge jööt , nee jit-ge ki køny ki bang jiy moo gwøk lwaar mar apoole kar lwaar mar jööt dëël . Kwäänö man
Bang gin mo raac mo di dwöö dëëri ki man cïppï acaara Mari. Acaara man løny man joodi ki dëët moi Ni mal kany ii.
Dëët apoole Ni dëël køny dikwøng ki pïëc moa en maal bäät bëëtö mar dhaanhø kipper nee can, nee bee bëëtö mar kany mo opöödhö ki ngeth mar täk gin mo leth ri ngïï mare. Ki jöö man käl acaara mar yi nyïm wøk ki gø nee bëëdö ki køøre ya atut keel mano cääth jiy dï atude wala kebale.
Waani wa pänhnha apoole moa näk ngëët-ge ena maal ki bäät dwäädi/ jwøk/juu 12 kiper nee ge cïp-ge ka acaare yi kwäänö man. Uuni o dijierø ni jø kany ki kany ni patha kanya ciel keere.
Nyengngi kär göori. Pïëc ge beet moo pëëny ïïnï ki ge ki løk Pïëc wør kani nee kunynye kiper kwäänö man keere.
Løny man jier ïïnï ki met ec. . Pïëc dagø mo løny man käde ki digiige mo 30(thääng caa).
Ïïna jïëy nii nudi yi kwäänö man?

Beekare --- Bänggö------

Ni näk mo ïïno köö ni beekare cage, Ni näk Bänggö math dëëri.

CÄÄNÖ MAN

Aanai løny jira ki kwaan wala Akwaan jira ki dhøk, aciwia ki køør mana can maal kany kipper mano gø nø, yia met na anuda yi kwäänö man.

Ngïï mar ngat päängö----------

Caa mar pïëc----------

Anguudi mar pïëc ----------

1. Athööra 2. Athööramëëth 3. Kweer
   Nyeng ngata pëëö---------- Ngïï----------
   Nyeng ngata nëënö---------- Ngïï----------
   Dwääy mana neeni yie----------

   Kanyo manyi gääbö;

   Gääbö ki ngatta kwäänö;
   Nyengnge: Fikru Letose
   Kwään ugut: 0921416858
   E-mail: fikruletose6@gmail.com

Ngïï mara apoole moa ngëët ge en maal

1. Warada----------
2. Kebele----------
3. Atut man en piny-------
4. Nyeng ngata ni wää paac-----

PÏËC MO KWÄÄNË

1. ÏKWÄÄNÖ MANAPOOLE MO JOOT YIE KI ÏLÏNG BËËTÖ MAR GE

K.	PÏËC	LØK PÏËC	CIBANG PÏËC
101	Kar bëëtö mari	1 pääny 2 yanywua	
102	Cwiiri moi adïï?	----------Cwiiri	
103	Ngäädhe mari ki Jwøk angø ?(Øt-Jwøk man lämi yie)	1.Ørthødøk 2.Icelam(Mucelem) 3.Protestant 4.kathølic Mør nee dagø göörï----------	
104	Wï jur mari angøni?	1.Anywaa 4.Tigire 2.Orømu 5.Amäära 3.Kambatha 6 Mør nee dagø göörï----------	
105	Kwään uuni adïï yi paac maru?	----------	
106	Nywöm mari ni dïï?	1.Onyömmö 4.Apääk 2. Dwättö 5.Bødhø 3.kär nyömmö 6.Cithøø 7 Mør nee dagø göörï----------	
107	Göör mari ni dïï?	1.kwäänö ki Göör piny ba løny 2 kwäänö ki Göör piny keere 3. Øtø(class)---------- 4. College------ 5. University-------	
108	? Tïïc mari ni dïï?	1.Ngat paac 2.Ngat puur 3.Ngat mo tïïö kipper tïïc mar paac 4.Ngat tïïc bang Akwooma wala Path 5Ngat gadha 6. Nyilaar göör	

		7 Mør nee dagø göörì----------	
109	Tïïc mør dagø jiri mi dicuunnø ki gwel/jammi ki gø, Bäät Tïïc mar paac mari?	1.Beekare 2.Bäng-gø	Ni näk lølpïëc mari .Bäng-gø päär bang tiel man→**111**
110	Ni näk lølpïëc mari beekare ki køør pïëc 108, Agwel adii ocool ki yi dwääy jiri?	_____Gwel moo Ithiöpiea	
111	Göör mar ngat paac mari ni dii?	1. .kwäänö ki Göör piny ba løny 2 kwäänö ki Göör piny keere 3. Øtø(1-4)---------- 4. Øtø (5-8) 4.Riet Øt- Göör ki maal	Ennø Ni näk mo I kär nyømøcibang →114
112	Tïïc mar ngat paac mari ni dii?	1.Ngat puur 2.Ngat tïïc bang Akwooma wala path 3Ngat gadha 4. Nyilaar göör 5 NgatTïïc mar yi cäng bäre 6 Mør nee dagø göörì----------	
113	Agwel adii wø cool ji ngat paac mari cooth ki yi dwääy?	_____ Gwel moo Ithiöpiea	
114	Pïï mo maathi käli gø Böööba mar joa thööth?	1. Pïï mo Böömba 2. Pï jøa thööth mo Böömba mano tuk ki ceno (Anøk-nøk) 3. Pïï mo Böömba mana näk wen ki wiie 4.Pï iith mo di koonyø mo deng-nge ogeerø 5. Pï iith mo di koonyø mo deng-nge kär ogeerø (kär gwø ni beer) 6.Pï-jøørø mo dengnge ogeerø(ogwøøni beer) 7. Pï-jøørø mo dengnge kär ogeerø(kär gwøø ni beer) 8.Pïï mo køth	
115	Akar laac mo nyïëdï wør okønynyu dëëtu ki gø ki jø paac mari?	1. Øt-laac mo pang ki bääte maal 2. kar laac mar kööngö 3. Kar laac mo geerø ni waany 4kar pïïn piny di paap 5. Mør nee dagø göörì---------- _____	
116	Øtø man enni yie enø amar nga?	1.Mara 2.mar dhaanhø mør(kiraay)	

		3. Mør nee dagø göörï---------- _____	
117	Øtø mano gø ïthe adïï?	_____	
118	Øtø mano gø ïthe adïï moo kunynyi kipper nine ji jø paac?	_____	
119	Da kar thaal jiri ri Øtø mano gø mo ena kur keere modëël løny man kønyi ki gø?	1Beekare 2.Bäng-gø	
120	Øtø mari man eni yie en, otïïö ki ngø ki piny?(Di joot ngatto cii)	1Othöönh(Ngøøm) 2.Weenye mo dhäk 3.Böölï/ jenni 4.Odhöönh O jøri ka cimenthi 5. Mør nee dagø göörï---------- _____	
121	Geer mar øtø mari agïne ni tïï ki gø ki bääte maal? (Di joot ngatto cii)	1Bung ki luum 2.Luul mar nywïëny 3. Mør nee dagø göörï---------- _____	
122	Dëër øtø mari, otïïö ki ngø?	1.Bänggø 2.riic ki jenni mo bäng ö odhöönh 3. jenni ko odhöönh 4.jenni ka acimenthi 5.Bulukëth 6. Mør nee dagø göörï---------- _____	
123	Ïïnu tëdï ki ngø yi paac mari?	1.karaba 5.Bel 2.Natural gas 6.Jenni moa noo tal 3.Biogas 7.weenye mo dhäk 4.Kerosene 8. Mør nee dagø göörï---------- _____	
124	Paac mar jammi moi ni piny kany ii dagø yie?		
	Karaba	1.Beekare 2.Bänggø	
	Radio?	.Beekare 2.Bänggø	
	Television?	1. .Beekare 2.Bänggø	
	Telephone	1. .Beekare 2.Bänggø	
	Thilaya (Refrigerator)?	1. .Beekare 2.Bänggø	
125	Da dhaanhø mo ena buuti mo jammi moi ni piny kany ii dagø jire?		
	Caa (Watch)?	1. .Beekare 2.Bänggø	
	Ogut (mobile)	1. .Beekare 2.Bänggø	
	Okweeny nywïënyö	1. .Beekare 2.Bänggø	
	Adät-dät (Motor cycle)?	1. .Beekare 2.Bänggø	

	Okweeny lääy	.Beekare 2.Bänggø	
	Thurubïl (jää)	.Beekare 2.Bänggø	
126	Da kar puur ji ngati mannø ji jey moo en buuti yi paac mari?	1. .Beekare 2.Bänggø	Ni näk lølpïëc mari .Bänggø päär bang tiel man →Q128
127	Ni näk lølpïëc mari beekare ki køør pïëc 124, yi ööng pwödhø nyïëdï?	_____hectares	
128	Ngat paac mano gø jire da dhäk, pwöth dhäk, /gwïën?	1.Beekare 2.Bänggø	Ni näk lølpïëc mari .Bänggø päär bang tiel man →130
129	Ni näk lølpïëc mari beekare ki køør pïëc 032, how many:		
	Dhäk?	_____	
	Dher caak/ Rwath?	_____	
	Arëëni, okweny lääy	_____	
	Adëë?	_____	
	Rööm?	_____	
	Gwïën?	_____	
130	Ïtha kiic paac ki kar jööt dëël (Øt-jaath)bär mare nyïëdï?	----------caae	
131	Kar paac mari bär mare nyïëdï ki Øt-jaath ki wääth tiel.	----------caae	

BËËTØ MOO GÄÄBÖ KI MËË

2. BËËT PEEK MAR DËËL

K. #	PÏËC	LØKPÏËC	CIBANG PÏËC
201	Akwöre adïï ni ngëtti timö ni ena maal nee dagø wala bänggø(man ni nut en, ni poot kär lwaarø ki gø ki moa no oräänyö ec?)	----------	Ni näk man poot ni bee tim ngëëte ni ena maal,dikwøngci bang pïëc →301
202	Ni bëëdi ni ngëëti ena maal tïmö thumapiny ni rääm (wala nyilaal kale wøk ki ec noo løny ni juu 28)?	1 Beekare 2.Bänggø	Ni näk lølpïëc mari .Bänggø päär bang tiel man →204

203	Ni näk løl-pïëc mari Beekare ki køør pïëc 202, Akwöre adïï ni ni thuma piny ni rääm ?	----------caae	
204	Kanya bëëdi ni ngëëti tïmö ni ena maal nii räämö nyilaal wala thøw ec)?	1. Beekare 2.Bänggø	Ni näk løl-pïëc mari .Bäng-gø päär bang tiel man →206
205	Ni näk løl-pïëc mari Beekare ki køør pïëc ,204, adïï dëët-ge ni ni thuma piny no obwöre thøw ïth-ge?	----------caae	
206	Adïï dëët-ge ni thuma piny ni dilwaarø ko obwöre ni ge kwøw ïth-mëë wala ngïïce mo nëënö ni mo kwøw ?	----------	
Dwal løk pïëc moi 203,205 ki 206 O nëëni gø ki pïëc man 201 køøre gääbö mana nut kiper apääk marge wala bang jwør dëël?----------			

3. PLAN TO USE OBSTETRIC SERVICES

K.#	PÏËC	LØKPÏËC	CIBANG PÏËC
301	Ïïnu neenu kar jööt dëël kanya bëëdi ni ngëët-ge ena maal?	1. Beekare 2.Bänggø	Ni näk løl-pïëc mari .Bäng-gø päär bang tiel man **→306**
302	Ni näk løl-pïëc mari beekare ki køør pïëc 301, Akanya ngø ni neen ïïnï yie?	1.Øt-jaath mana dwøng(Hospital) 2. Øt-jaath mana en dïër 3. Øt-jaath mana thiinh 4.ki paac 5.møøk needagø göör piny-------	
303	Ni näk løl-pïëc mari beekare ki køør pïëc 301, Akwöre adïï nii di neenø ki jööt ni ngëëti ena maal keel kar kany ?	----------caae	
304	I Ni näk løl-pïëc mari beekare ki køør pïëc 301, nga ni neen ïïnï kipper jööt dëël mari?	1. Døktør 2.Ngat rang ngat täw 3.Ngat rang jø-lwaar 4. Ngat tïïc mar jööt dëël. 5. Jø-rang beet atut ni tøng ki jööt dëël. 6. Jø dhi-øtø 7. .møøk needagø göör piny-------	

305	Ni näk lølpïëc mari beekare ki køør pïëc 301, Ïïnu kwøng neen re jwøk mana dikwøng kipper jööt dëël mari I wäne?	----------juu/wøk	
306	Ni näk lølpïëc mari beekare ki køør pïëc 301, Akwöre adïï ni di lïïmø (neenø) nii käl wøk kipper nee thööri bäre? (Ni lïïmø/cäädhö ki mana näk I maa)?	1.ya maa nib a løny ni bäre 2.yie ciel keere 3.kwöre ariew keerege 4. kwöre adäk keerege 5 kwöre angween ki maal 6. møøk needagø göör piny-------	
307	Anga Ocaan gø jiri kanyu lwaari yie?	1.Eni keere 2.cwøre keere 3.Enni kicwøre ge bëët 4.Jø-paac / Tuungge	
308	Acaara dagø jiri mo I maa kiper kar lwaar mari?	1. Beekare 2.Bänggø	Ni näk lølpïëc mari .Bäng-gø päär bang tiel man **311**
309	Ni näk lølpïëc mari beekare ki køør pïëc 307, Awäne no cari kiper lwaar mari?	1.Øt-jaath mana dwøng(Hospital) 2. Øt-jaath mana en dïër 3. Øt-jaath mana thiinh 4.ki paac 5.møøk needagø göör piny-------	
310	Agina ngø ni jieri kany kipere ni kar bëëdö mari kipper yi nyim? Nee daa acaara mør?	1.kar jammi cään ka aani 2.o duunö dëëra ki yi jammi mo thööth 3.A ööy ki gø ki kany mo bäär 4. ki køør acaare moo tïïö bäät jööt dëël 5. Bëëtø mar atut aïmö nit eek. 6. Bäng gääbö daa yïtha kiic waani ki jø paac mana dikwøng. 7.møøk nee dagø caani---------	
311	Dhaanhø man ni ii enø kïthya acaara ki ngata joota gø ki gø?	1.Beekare 2.Bänggö	Ni näk lølpïëc mari .Bäng-gø päär bang tiel man **312** & **313**
312	Ni näk lølpïëc mari beekare ki køør pïëc 311, acaara mare yoo maa ki nga nee kithi bäät tïïc?	. Døktør 2.Ngat rang ngat täw 3.Ngat rang jø-lwaar 4. Ngat tïïc mar jööt dëël. 5. Jø-rang beet atut ni tøng ki jööt dëël. 6. Jø dhi-øtø	

313	Akiperngø ni jiri man kithi acaara mari bäät tïïc kipper yi nyim?	---------- ----------	

kwany tiet jammi moa näk ogääbö.

1. kwany tietjap- nyuuthë mo gïoleth.

Ki mano täge ri pïëc tiel 403-405, kwøng pïëc keere kwaan dikwøng køøre can nø, cïp acaara mari jïge ni näk

BWÖDHI: Ki nyim løl pïëc mannø, cïp aciel piny yaa acanduk(box) kanyu näk moo jø løl pïëc köö nyuuthë mo gïoleth kanyo cääth.), ni cïppi 2) piny yaa acanduk kanyu köö jø- köö nyuuthë mo gïoleth kanyo cääth. ki cïppi 3) piny kany piny yaa acanduk kanyu köö ngatu løk pïëc ni bäng gin mo ngäa kipere (kipper pïëc tiel 403-405)keerge.

K..#	PÏËC	LØKPÏËC		CIBANG PÏËC
401	Ki ya acaaramari gin mo raac mo kär dïëdö løny man tägø re bëëdö ni ngeet ena maal, re lwaar mar nyilaal?	1.Beekaere 2.Bung-gø 3bung gin mo ngäa kipere		Ni näk lølpïëc mari .Bäng-gø päär bang tiel man 402
402	Ni näk lølpïëc mari beekare ki køør pïëc 401, I caarø ni gin gø ni raac enu løny man peem jwïëy apool manugø?	1 Beekaere 2.Bung-gø 3.bung gin mo ngäa kipere		
403	Jammi moa ,reyø døc moo dunni ki bang jööt dëël ni näk tägö re bëëtø ni ngëëti ena maal, a jaba ngø?	1.Wääth pïï ki dëël		
		2.Dïjïmnyeng		
		3. kwötceno/täär nyïm		
		4.Rääm wïc		
		5.Diinymar läär		
		6. Lïëth dëël		
		7.Bängjwør dëël		
		8.Thøøngø		
		9.Bääbö		
		10. Rääm peny ec		
		11.Bänglaar jittoki nyilaal		
		12. Wääth pïï ki dëël nibäng tïïc		
404	Agina ngø ni raac døc kiper dhaagø ngëëte ena maal	1. Wääth pïï ki dëël		
		2.Dïjïmnyeng		

	kipper jööt dëël wala relwaar mar nyilal?, Nee da møøk meeti	3.Bïërø balaaröwøk ki thääng caa		
		4.Rääm wïc mo dwøng døc		
		5. Diinymar läär		
		6.Lïëth dëël moo kaadhø(Adïrïgi)		
		7. Bängjwør dëël		
		8.Tïïc mo pöödhö ki icäng bäre		
405	Agina ngø noo tägi ni raac døc re jööt dëël mar dhaagø re ki køør lwaar ki køør nïïne2mo nyilaal? Nee da møøk meeti.	1 Wääth pïï ki dëël		
		2.Dïjïmnyeng		
		3. kwötceno/täär nyïm		
		4.Rääm wïc		
		5.Diinymar läär		
		6. Lïëth dëël		
		7.Bängjwør dëël		
		8.Thøøngø		
		9.Bääbö		
		10.Ngwäány pïdëël		

5. GÏNAKWANY JØA ATUT KI NGIIC DËËL NI JØLA JØ PAAC MAAL

K..#	PÏËC	LØKPÏËC		CI BANG PÏËC
501	Da gin mo I winyø(ngäy) kiper jiing dëël mar lwaar?	1. Beekaere 2.Bung-gø		
502	Ki yaa acaara mari agina ngø noo tïïc o jïïö jiri man jëtti (cïppi) ki løk pïëc 2 ki maal këël kanyu köe yie ni bäng møør.	1.man ngäc jïëthe mo tuung dëël/wääth .		
		2.gwøk gwel/kan		
		3.man ngäc jöör cip remø.		
		4.man ngäc kar lwaar.		
		5.man ngäc acaara mano cip.		
		6.man ngäc jø-ojïëdhï.		
		7.man ngäc ngatu acip acaara.		
		8. jammi moo guur cammi kige/ ki nyeng cammi møøk.		
		9. man køny dëël ki waarø ni paa gin mobeth(nguur wic,muuc/muuth).		
		10. Abïï kiper nyilaal mano lwaaru ki gø.		
		11.møøk nee dagø ----------		
		12.Bäng gin mo ngäa kipere		
503	Daa kany mo moo jiingngø ya atut maru kiper lwaar mara apoole? Ka teeng,			
	1. Daa jap wääth jige moo jingngø ?	1 Beekaere 2.Bäng-gø 3.bäng gin mo ngäa kipere		

	2.Daa jïëthe mo jø paac jittø ki gwel gø kiper lwaar?	1. Beekaere 2. Bäng-gø 3.bäng gin mo ngäa kipere	
	3. Daa jïëthe mo joot reemø ki gø re lwaar?	1. Beekaere 2. Bäng-gø 3.bäng gin mo ngäa kipere	
504	Ki røk jammi moa en maal kagø amane ni i kith yaa acaara wala jø paac?		
	4. Ïïnï/jø paac daa acaara jige kiper jöör lwaar?	Beekaere 2. Bäng-gø	
	5. Ïïnï/jø paac daa acaara jige ki man gwøk gwel kier lwaar?	1 Beekaere 2. Bäng-gø	
	6. Ïïnï/jø paac daa jïëthe mo joot reemø ki gø re lwaar?	1. Beekaere 2 Bäng-gø	

6. ACAARA MANA JOOTI KIPER BP & CR

Ennø jammi moi ni piny kany ii kwaana kwaanø jïïu kiper acaare mo dhaagø mo ngëëte ena maal, lwaar mar nyilaal ki køør kanyu lwaarø. A manynya gø nee ngäa man näk 1. Ï kär jïëy døc, døc **(SD)**. 2.Ï kär jïëy døc **(D)**, 3.bängö apääk **(ID)**4. Aana jïëy døc(**A)**, 5. Aana jïëy døc, døc ki køør döötì moi piny kany en(SA). Bäng løk pïëc mo patha kare kiper pïëc moi ni piny ii. Ïtha met man winynya acaare moo.

Q.#	**PÏËC**	**Response Codes**				
		SD (1)	**D (2)**	**ID (3)**	**A (4)**	**SA (5)**
601	Apool mana näk ngëëte ena maal dëëre ejiinggø ki caa kany lwaare yie ki nylaal mare.					
602	Apool mana näk ngëëte ena maal dëëre ejiinggø ki jÖÖ kany lwaare yie ki nylaal mare.					
603	Beer kiper dicwø/nywat ki man jieth cïïë ne ci kar jiing dëël kiper lwaar ni liimgø.					
604	Beer kiper dicwø/nywat ki man jieth cïïë kanyo lwaare.					
605	Lwaar ena öölö mar apoole keer-ge. Dicwøø mare ba kunyi ki relwaar mare.					
606	Kanyo näk apoole ge ba ci øt-jaath kiper lwaar bekayo tïmë niteekdøc.					
607	Kanyo näk apoole ge ba ci øt-jaath kiper lwaar bekanyo tïme bekiper jøtïïc øt-jaath apoole ba gwøge ni egiwørø.					
608	Kanyo näk apoole ge ba ci øt-jaath kiper lwaar bekanyo tïme nijøtïïc øt-jaath bajoot kaacë.					

Una-pwøa kiper cïp-dëël maru. Pïëc Møa en jïra athum !

Annex-J Wealth Index

Kaiser-Meyer-Olkin Measure of Sampling Adequacy

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.763
Bartlett's Test of Sphericity	Approx. Chi-Square	4837.582
	Df	120
	Sig.	.000

Communalities

	Initial	Extraction
public hand pump	1.000	.787
public tap/standpipe	1.000	.830
own home	1.000	.710
presense of separate room for kitchen	1.000	.773
finished floor wih cement	1.000	.731
corrugated iron sheet	1.000	.658
wood with cement covered	1.000	.568
Charcoal	1.000	.792
Firewood	1.000	.783
household with electricity	1.000	.708
household with functional television	1.000	.807
household with functional refrigerator	1.000	.731
household member own animal drawn cart	1.000	.849
agricultural land in hector	1.000	.611
HORSES1	1.000	.844
GOATS1	1.000	.537

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.925	30.778	30.778	4.925	30.778	30.778	2.976	18.599	18.599
2	2.395	14.972	45.750	2.395	14.972	45.750	2.932	18.326	36.925
3	1.551	9.696	55.446	1.551	9.696	55.446	2.249	14.058	50.983
4	1.460	9.126	64.572	1.460	9.126	64.572	1.970	12.310	63.293
5	1.388	8.677	73.249	1.388	8.677	73.249	1.593	9.956	73.249
6	.765	4.784	78.033						
7	.711	4.445	82.478						
8	.523	3.268	85.746						
9	.505	3.154	88.901						
10	.381	2.382	91.282						
11	.336	2.102	93.384						
12	.315	1.970	95.354						
13	.237	1.484	96.838						
14	.194	1.213	98.051						
15	.182	1.135	99.186						
16	.130	.814	100.000						

Extraction Method: Principal Component Analysis

Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
household with functional television	.838				
household with functional refrigerator	.781				
household with electricity	.772				
corrugated iron sheet	.764				
Firewood		-.853			
Charcoal		.847			
finished floor wih cement		.767			
wood with cement covered		.662			
household member own animal drawn cart			.920		
HORSES1			.913		
agricultural land in hector			.665		
presense of separate room for kitchen				.849	
own home				.740	
GOATS1				.584	
public tap/standpipe					-.888
public hand pump					.849

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 6 iterations.

DECLARATION

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in this or any other university and that all sources of materials used for the thesis have been fully acknowledged.

Name: _____

Signature: _____

Name of the institution: _____

Date of submission: _____

This thesis has been submitted for examination with my approval as University advisor

Name and Signature of the first advisor _____

_____

Name and Signature of the second advisor _____

_____