

**ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCE
ALLIED SCHOOL OF HEALTH SCIENCES
DEPARTMENT OF NURSING AND MIDWIFERY**

**ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE
OF OBSTETRIC DANGER SIGNS DURING PREGNANCY
AMONG MOTHERS IN DEBRE BIRHAN CITY
ADMINISTRATION, NORTH SHEWA, AMHARA REGION,
ETHIOPIA**

PRINCIPAL INVESTIGATOR: SODERE NURGI (BSC)

**A Thesis Submitted to the School of Graduate Studies of Addis Ababa
University in Partial fulfillment of the requirements for the Degree of
Master's of Science in Maternal and Reproductive Health Nursing.**

**June, 2014
ADDIS ABABA**

**ASSESSMENT OF KAP OF OBSTETRIC DANGER SIGNS
DURING PREGNANCY AMONG MOTHERS IN DEBRE
BIRHAN CITY ADMINISTRATION, NORTH SHEWA ZONE,
AMHARA, ETHIOPIA.**

**BY: SODERE NURGI (BSc)
ADVISOR: ERDAW TACHBELE (MSc, PhD fellow)**

June, 2014

Addis Ababa

APPROVED BY THE BOARD OF EXAMINERS

This thesis by Sodere Nurgi is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of master in Maternity and Reproductive Health Nursing.

Internal examiner:

_____	_____	_____	____/____/____
Full name	Rank	Signature	Date

Research advisor:

_____	_____	_____	____/____/____
Full name	Rank	Signature	Date

June, 2014
Addis Ababa

Acknowledgment

First of all I would like to Praise and thanks GOD for his grace and blessings, without him I could not be here today.

I would like to acknowledge Addis Ababa University, College of Health Sciences, School of Allied Health Sciences and the Department of Nursing and Midwifery for assigning and funding me to perform this research thesis.

My heartfelt thanks goes to my advisor Ato Erdaw Tachbele for his continuous help equipping me with the necessary knowledge, information, and encouragement and helping me to prepare this research thesis.

My gratitude goes to my beloved husband Mr. Wondewosen Dibekulu and my son Ermias Wondewosen for their all rounded support and understanding throughout the study period.

My acknowledgement goes to Sr. Samrawit Addisu and Ato Matewos for reviewing both the proposal and the thesis, providing me their constructive comments, for their continuous follow up and encouragement.

I would like to thank: Debre Birhan Woreda Health Office, HEW who helped me by giving me important information during data collection, Debre Birhan University Health Science Staffs, Debre Birhan University Gender office and Ato Azmeraw from DBU Community service.

I would like to appreciate the supervisors and data collectors who showed the greatest effort in collecting appropriate information.

Finally, I would like to acknowledge the study participants who have kindly cooperated in providing the required information.

Table of Contents

Acknowledgment	i
List of Figures	v
List of Tables	vi
List of Abbreviations	vii
Abstract	viii
CHAPTER ONE	1
1. INTRODUCTION	1
1.1 Background.....	1
1.2. Statement of the problem	3
1.3. Significance of the study	5
CHAPTER TWO	6
2. LITERATURE REVIEW	6
Conceptual framework	9
CHAPTER THREE	11
3. OBJECTIVE	11
3.1. General objective.....	11
3.2. Specific objectives.....	11
CHAPTER FOUR	12
4. METHODS AND MATERIALS	12
4.1. Study area and period	12
4.2. Study design	12
4.3. Source population.....	12
4.4. Study population	12
4.4.1. Inclusion criteria.....	13
4.4.2. Exclusion criteria	13
4.5. Sample size determination	13
4.6. Sampling procedure	13
4.7. Data collection instrument.....	15
4.8 Data collection procedure.....	16
4.9. Study variables.....	16

4.10. Operational definitions	17
4.11. Data quality assurance	18
4.12. Data processing, analysis and Interpretation	18
4.13. Ethical clearance	19
4.14. Dissemination and Utilization of results	20
CHAPTER FIVE.....	21
5. RESULTS	21
5.1. Socio-demographic characteristics of the study subjects	21
5.2: Obstetric characteristics of the respondents	24
5.3. Source of information regarding obstetric danger signs during pregnancy	24
5.4: Obstetric danger signs Knowledge, Attitude and Practice among mothers in Debre Birhan City Administration.....	24
5.4.1: Knowledge on danger signs during pregnancy	24
5.4.2. Attitude towards obstetric danger signs	27
5.4.3. Practice of obstetric danger signs	28
5.5. Factors associated with knowledge, attitude and practice of obstetric danger signs.....	29
5.5.1. Factors associated with knowledge about obstetric danger signs	29
5.5.2 Factors associated with attitude towards obstetric danger signs during pregnancy	32
5.5.3 Factors associated with practice of obstetric danger signs during pregnancy.....	35
CHAPTER SIX.....	36
6. DISCUSSION.....	36
6.1. Source of information about obstetric danger signs during pregnancy	36
6.2. Knowledge of obstetric danger signs during pregnancy	36
6.3. Attitude of obstetric danger signs during pregnancy	37
6.4. Practice of obstetric danger signs during pregnancy.....	38
CHAPTER SEVEN	39
7. STRENGTH AND LIMITATION OF THE STUDY	39
7.1 Strength of the study	39
7.2Limitation of the study.....	39
CHAPTER EIGHT.....	40
8. CONCLUSION AND RECOMMENDATIONS.....	40
8.1 Conclusion	40

8.2. Recommendation	41
References	42
Annexes	45
Annex I – Information sheet	45
Annex – II consent form.....	48
Annex -III English version questionnaires for interview	50

List of Figures

Figure 1: Conceptual frame work on assessment of KAP of obstetric danger signs during pregnancy among mothers in Debre Birhan City Administration, North Shoa Zone, Amhara Region, April, 2014.....	10
Figure 2: Diagrammatic presentation of sampling procedure for the study.....	14
Figure 3: Graphic representation of overall knowledge category of obstetric danger during pregnancy among mothers in Debre Berhan City Administration, North Shoa zone, Amhara Region, April, 2014.....	26

List of Tables

Table1: Distribution of socio-demographic and economic variables of respondents, of selected kebeles of Debre Birhan city administration, 2014.....	21
Table 2: Knowledge of obstetric danger signs during pregnancy among mothers in selected kebeles of Debre Birhan City Administration, April 2014.....	25
Table 3: Overall knowledge category of mothers on obstetric danger signs during pregnancy in Debre Birhan City Administration, April, 2014.....	26
Table 4: Attitude of mothers on obstetric danger signs during pregnancy in Debre Birhan City Administration, April, 2014.....	27
Table 5- Overall attitude category of mothers on obstetric danger signs during pregnancy in Debre Birhan City Administration, April, 2014.....	28
Table6: Socio-demographic and other factors associated with knowledge of obstetric danger signs during pregnancy among mothers Debre Birhan City Administration, April, 2014.....	30
Table 7: Socio-demographic and other factors associated with attitude of obstetric danger signs among mothers Debre Birhan City Administration, April, 2014.....	33
Table 8: Socio-demographic and other factors associated with practice attitude of Obstetric danger signs among mothers Debre Birhan City Administration, April, 2014.....	35

List of Abbreviations

ANC - Antenatal Care

AOR- Adjusted Odds Ratio

CI- Confidence Interval

COR- Crude Odds Ratio

CSA - Central Statistical Authority

DHS - Demographic and Health Survey

DBU- Debre Birhan University

EDHS - Ethiopian Demographic and Health Survey

HEW- Health Extension Worker

IEC- Information, Education and Communication

IMR- Infant Mortality Rate

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

KAP- Knowledge, Attitude and Practice

MDG- Millennium Development Goal

MMR- Maternal mortality rate

MOH- Ministry of Health

NMR-Neonatal mortality rate

SPSS -Statistical Package for Social Science

TBA -Traditional Birth Attendant

TV-Television

UNICEF -United Nations Children's Fund

WHO -World Health Organization

Abstract

Background: Pregnancy complications are the major health problems among women in developing countries. Approximately 529,000 women die from pregnancy related causes annually and almost all (99%) of these maternal deaths occur in developing countries.

Objective: To assess knowledge, attitude and practice of mothers towards obstetric danger signs during pregnancy in Debre Birhan City Administration, April, 2014.

Methods: A community based cross-sectional quantitative study was conducted in April, 2014, on a sample of 634 mothers who are at least 4 months pregnant for primi gravid and delivered in the past 24 months selected from, 4 urban and 2 rural Kebeles of Debre Birhan city Administration. Multistage sampling technique was employed to select the study participants.

Results: A total of 634 mothers were enrolled in the study giving a response rate of 99.7%. The study participants from selected urban kebeles constituted 76.7%. Most (68.2%) of the study participants were found to have poor knowledge. Respondents who got obstetric danger signs information from media had 2.8 times good knowledge than those respondents who didn't get information from the same source [AOR=2.8, 95%CI (1.7- 4.65)]. 52.7% of the study participants had negative attitude. Participants who had formal education have 2.2 times positive attitude than a participants who had informal education [AOR=2.2, 95% CI (1.1- 4.4)]. Out of 51 (8.1%) who experienced obstetric danger signs 44 (7.0%) had Good practice.

Conclusion: Knowledge and attitude of study participants are not satisfactory (68% poor knowledge and 52.7%) the practice of the study participants who had experienced obstetric danger signs during pregnancy was good.

Recommendation: Awareness of key danger signs needs to be given priority as it prepares women and their families for timely and appropriate decisions and action in case of obstetric danger signs.

Key words: *Danger signs, Pregnancy, Obstetric care.*

CHAPTER ONE

1. INTRODUCTION

1.1 Background

Pregnancy complications are the major health problems among women in developing countries. Approximately 529,000 women die from pregnancy related causes annually and almost all (99%) of these maternal deaths occur in developing countries. The global maternal mortality is unacceptably high **(1)**.

Although there was significant progress in all developing regions, the average annual percentage decline in the global maternal mortality ratio (MMR) was 3.1%, short of the millennium Development Goals (MDGs) target of 5.5%. Every day, almost 800 women still die due to pregnancy or child birth, and for every woman who dies 20 or more experience serious complications. One of the United Nations' MDGs is to reduce MMR by 75% by 2015 **(2)**.

Developing countries account for 99% (284,000) of the global maternal deaths, the majority of which are in sub-Saharan Africa (162,000) and Southern Asia (83,000). These two regions accounted for 85% of global burden, with sub-Saharan Africa alone accounting for 56%. The average maternal mortality ratio in developing countries in 2010 was 240 per 100,000 births versus 16 per 100,000 in developed countries reflecting inequities in access to health services, and highlighting the gap between rich and poor. Sub-Saharan Africa had the highest maternal mortality ratio at 500 maternal deaths per 100,000 live births. According to a systematic analysis of progress towards Millennium Development Goal 5 more than 50% of all maternal deaths in 2008 were in only six countries (India, Nigeria, Pakistan, Afghanistan, Ethiopia, and the Democratic Republic of the Congo) **(3)**.

The situation in Ethiopia is similar to the situation in many developing countries. In Ethiopia the levels of maternal mortality and morbidity are among the highest in the world and the current estimate of MMR is **676** per 100, 000 live births and it is reported that Maternal deaths accounted for 30% of all deaths to women age 15-49 **(4)**. Reduction of mortality and morbidity of both mother and newborn have been identified as priority areas need urgent attention by the health sector.

Maternal morbidity and mortality could be prevented and minimized significantly if women and their families recognize obstetric danger signs and promptly seek health care (6).

The commonest danger signs during pregnancy include severe vaginal bleeding, swollen hands/face and blurred vision. Key danger signs during labor and childbirth include severe vaginal bleeding, prolonged labor, convulsions, and retained placenta. Danger signs during the postpartum period include severe bleeding following childbirth, loss of consciousness after childbirth, and fever. Hemorrhage remains the leading cause of maternal mortality, accounting for approximately one third of deaths (7).

Many of the complications that result in maternal deaths contributing to prenatal deaths are unpredictable, and their onset can be both sudden and severe. The complications leading to maternal death can occur without warning at any time during pregnancy and childbirth (8).

Low awareness of danger signs and symptoms during pregnancy, labor, delivery and postpartum contribute to delays in seeking and receiving skilled care. Awareness of the danger signs of obstetric complications is the essential first step in accepting appropriate and timely referral to obstetric and newborn care. Knowledge of obstetric danger signs and birth preparedness are strategies aimed at enhancing the utilization of skilled care during low risk births and emergency obstetric care in complicated cases in low income countries. Increased knowledge and awareness is essential for reducing delays in seeking health care and in reaching a health facility. Communities and individuals should be empowered not only to recognize pregnancy related risks, but they must also have the means to react quickly and effectively once such problems arise (9-11).

The national reproductive strategy of Ethiopia has given emphasis to maternal and newborn health so as to reduce the high maternal and neonatal mortality. The strategy focuses on the need to empower women, men, families and communities to recognize pregnancy related risks, and to take responsibility for developing and implementing appropriate response to them. One of the targets in the strategies is to ensure that 80% of all families recognize at least three danger signs associated with pregnancy related complications by 2010 in areas where health extension program is fully implemented (12).

1.2. Statement of the problem

Maternal mortality is the leading cause of the adult female deaths in many countries. Women's death during childbirth often means death for the newborn, and both death and disabilities translate into emotional, social, and economic hardships for women's older children, their entire families, and even for communities (11). Every minute, a woman dies due to causes related to pregnancy, childbirth and postnatal period (13). Maternal deaths are avoidable, if women with complications are able to identify and seek appropriate emergency obstetric care which makes a difference between life and death (14).

Maternal deaths have both direct and indirect causes. Around 80% of maternal deaths worldwide is brought about by direct obstetric complications. The five major global causes of maternal death are: severe bleeding (mostly bleeding postpartum), infections (also mostly soon after delivery), unsafe induced abortion, hypertensive disorders in pregnancy (eclampsia) and obstructed labour. Globally, about 80% of maternal deaths are due to these causes. Hemorrhage alone accounts for one third of all maternal deaths in Africa, yet many of these deaths are preventable. Severe bleeding after birth can kill a healthy woman within two hours if she is unattended. Obstetric fistula resulting from obstructed labor is a long term complication suffered by as many as two million women). Indirect causes such as malaria, diabetes, hepatitis, anemia and other cardiovascular disorders which are aggravated by pregnancy can also lead to maternal death (1, 3).

Awareness of the danger signs of obstetric complications is the essential first step in accepting appropriate and timely referral to obstetric and newborn care. Raising awareness of women on danger signs of pregnancy, childbirth and the postpartum period improve mother's attitude to seek medical care and is crucial for safe motherhood (11).

When mothers do not recognize the danger signs in pregnancy, adverse effects can occur to the mother, the unborn baby, or the pregnancy itself. Adverse effects include:

Illness or death of the mother, for instance, severe bleeding can lead to anemia or death of the mother, infection to the unborn baby through prematurely ruptured membranes, when amniotic fluid leaks from the vagina. If not attended to, this can lead to fetal or neonatal morbidity and mortality, termination of a pregnancy before term in vaginal bleeding. Maternal hypertension or

fever, can lead to increased numbers of neonatal deaths or prematurely born babies who may eventually die due to inadequate facilities to care for them (2).

A mother's death in childbirth denies her children their natural, primary care giver and significantly increases the risk that her infant will die or fail to survive to age 5. A mother's death also has an extremely detrimental effect on her children's access to education and health care. Many children who survive without mothers also risk being emotionally lost (1, 2, 3).

Most maternal deaths are avoidable, as the health care solutions to prevent or manage complications are well known. All women need access to antenatal care in pregnancy, skilled care during childbirth, and care and support in the weeks after childbirth. It is particularly important that all births are attended by skilled health professionals, as timely management and treatment can make the difference between life and death (1, 2).

According to the Ethiopian Federal Ministry of Health, only 10% of the deliveries is attended by health professionals. In one nation where the maternal mortality ratio is 676 per 100,000 live and IMR 59/1000 and NMR 37/1000 live births which are the highest in the world. In Ethiopia, there is little information about the knowledge, attitude and practice of obstetric danger signs during pregnancy since the introduction of Health Extension Workers (HEWs), despite the national Reproductive strategy aim to raise the awareness to 80% in the area in which HEW are deployed (12).

Studies conducted in Aleta Wondo district, indicated that the knowledge level of pregnant women about obstetric danger signs (during pregnancy, childbirth and postpartum period) was low and affected by residential area. Therefore, the identified deficiencies in awareness should be addressed through maternal and child health services by designing an appropriate strategies including provision of targeted information, education and communication. In spite of great potential of knowledge, attitude and practice of obstetric danger signs in reducing the maternal and newborn deaths its status is not well known in most of Sub-Saharan Africa including Ethiopia (15).

The study therefore aims to fill this gap by assessing the current status of knowledge, attitude and practice of danger signs among mothers in the study area.

1.3. Significance of the study

As there is no adequate information on obstetric danger signs KAP, the study result will be vital and can be used as an input for maternal health curriculum, strategy and package establishment. This study will provide basic data on the issue that may help policy makers and as baseline data for MOH to reduce the highest maternal mortality rate of Ethiopia. In addition to this, this study can have the following importance to different stake holders:

The outcome of the study can be an input for concerned policy makers in decision making process regarding obstetric danger signs for pregnant and delivered mothers. And also it serves as an input for health education program undertaken by different organizations so as to keep the pregnant and delivered mothers being aware of the consequence of obstetric danger signs. It is also assumed to help the health sector management to notice the current situation of their clients and pregnant mothers danger signs KAP and then to work accordingly with other stakeholders like families, health professionals, governmental and nongovernmental organizations and with the university students as well. It can be used as a stepping stone for health professionals if there is any possibility of intervention. The research can be used as a base for other health professionals including midwives in understanding the situation of the case and extending their intervention or work to different institutions.

The information from the research will also help to identify gaps in the provision of ANC which will call for interventions that will encourage women to attend ANC. This information will also help to improve on the ways of providing information to Antenatal mothers that will help to increase awareness on danger signs in pregnancy.

Families and individuals can be benefited from this study by reading the research findings and also by taking part in the interventions that will be made by different stake holders. Since there is no tangible research conducted in the study area, this research can provide baseline data for a researcher who is interested in the area.

The information generated from the study should benefit both service providers and district health management teams in improving the quality of antenatal care (ANC) services, particularly the quality of information provided to pregnant women in the health care facilities. The findings should provide information to health care practitioners regarding the awareness of danger signs of obstetric complications among pregnant women. Finally, the findings should help and guide the development of focused behavioral change strategies for pregnant women.

CHAPTER TWO

2. LITERATURE REVIEW

Relative to other negative health outcomes, maternal mortality is not widely perceived to be a major personal health risk. Many communities are declared to accept a certain level of maternal and newborn mortality as a natural occurrence. Low knowledge of danger signs and symptoms during pregnancy, labor, delivery and postpartum period contribute to delays in seeking and receiving skilled care (18, 19).

The low status of women, poverty and background system also prohibit women from obtaining maternal services. In most societies within the country there is little or no encouragement or support for women with pregnancy complication to seek appropriate care. Furthermore, women as well as the family members are often not aware of the life threatening danger signs of pregnancy or birth related complications, on either the mother or the newborn (20).

Information, education and communication (IEC) strategies designed to increase the knowledge of danger signs during pregnancy, child birth or postpartum period among women. Safe motherhood programs can effectively increase knowledge of danger signs of pregnancy through facility and community based educational strategies (21).

According to a study from Sidama Zone in Ethiopia, when asked to mention danger signs during pregnancy the most common spontaneously mentioned danger signs were vaginal bleeding by 45.9%, difficulty of breathing by 14.1% and loss of consciousness by 12.7%. Other signs mentioned include high fever accounting for 9.2%, severe headache for 7.4%, and severe abdominal pain for 7.0%. 39.0% didn't know any danger signs of pregnancy. 30.4% mentioned at least two danger signs during pregnancy and 63.6% believed that a woman could die of the above mentioned danger signs (15).

According to the study in Tsegedie District, vaginal bleeding was the most commonly mentioned danger signs of pregnancy (49.1%) and childbirth (52.8%). 58.8% of respondents mentioned at

least two danger signs of pregnancy. 35.1% of respondents didn't know any danger signs of pregnancy(16).

Cross sectional study in Tanzania revealed as there were no differences in the awareness of danger signs during pregnancy, delivery or after delivery as related to age, educational level, number and place of deliveries. Number of antenatal care visits and woman informed of a complication during antenatal care and having secondary education or above increase the likelihood of awareness of obstetric danger signs. Moreover, the likelihood of awareness of obstetric danger signs increased with age, number of deliveries, number of antenatal visits, when deliveries was at a health institution. According to this study marital status, occupation, and advice to deliver in hospital were not associated with awareness of a danger sign during pregnancy, delivery and after delivery (19). Study done in Tanzania Mpwapwa district women with primary education and above were twice more likely to be prepared for birth and ready for complications (22).

A cross sectional study done in Gambia revealed that women who had four or more pregnancy had good awareness about pregnancy danger sign than those with few pregnancy. Apart from this two to four children and higher number of visits were not significantly associated with higher levels of awareness of danger signs. Pregnant women who received antenatal care in rural areas and those that received antenatal care in urban areas were similar in most respects with regard to knowledge of danger signs of pregnancy, delivery/ labor, and postpartum period. This study also revealed; ANC follow up only will not make the women to have high awareness of danger signs of obstetric complications. Better awareness of danger signs was strongly associated with higher level of education of the woman. Educated women are more likely to seek appropriate medical care during pregnancy and delivery (25).

Safe motherhood programs can effectively increase knowledge of danger signs through clinic and community based educational strategies. IEC strategies designed to increase the awareness of danger signs during pregnancy, delivery or the postpartum period among pregnant or recently pregnant women (21). A prospective community based intervention study in Pakistan revealed health education of mothers in the community improves mother's knowledge about danger sign of pregnancy (26).

Studies in Tanzania and Guatemala revealed the role of educational status in increasing women awareness of obstetric danger signs. The difference was statistically significant between level of awareness and level of education (19, 21). Occupation, number of family members, parity, and places of previous delivery, attendance of ANC and women with pregnancy complication during last pregnancy associated with knowledge of danger sign of pregnancy (8, 21, 23).

Socio-economic and cultural factors were among major barriers of knowledge on pregnancy related complications and preventing mothers not to have knowledge about danger sign of pregnancy (28). Women who are using health facilities, who had heard radio, TV message or participated in women groups, are more likely to have heard of danger signs in pregnancy (21).

Un-educated women and those not using health facilities for delivery care are more likely to have pregnancy complications in the later stage of pregnancy (26). In most societies there is little or no encouragement or support for women who have a pregnancy complication to seek appropriate care. Women, particularly in the poor socio-economic status have the tendency of late reporting of morbidity episodes. Hence it is necessary to impart knowledge about pregnancy related problems and to understand the root cause of generating complications during delivery among such poor women (28).

Maternal and child survival are dependant up on recognition of the problem, decision making about care, access to care, and quality of care (29). Anya et al (2008) who stated that, educated women have better pregnancy outcome compared with un- educated women. The danger signs occurring during pregnancy are predictive of poor outcome rather than historic risk factors (30). Educated women have better pregnancy outcome compared with uneducated women (25).

A study done on Knowledge and Practice of maternal health care in Indonesia, revealed that among the pregnant women who attended ANC, 36.6% of the respondents gave correct answers to a question on common knowledge such as, it is necessary to go to the hospital when severe headache or vision problems happens in pregnancy(32). This indicates that when women are taught about danger signs, they develop positive attitude towards their own health and their pregnancy.

In a related study done in Lusaka on Attitude and Practice of child bearing women towards danger signs in pregnancy, revealed that the hindrances to positive attitude were low income and

noninvolvement of other relatives in decision making when danger signs are observed. This indicates that adequate income levels allow pregnant women to seek medical services early when they face pregnancy related problems (31).

The study done in Karachi indicate a poor knowledge of common and serious pregnancy related complications based on their perception related to danger signs. Five percent of the women perceived absent/decreased fetal movement as a danger sign of pregnancy. Other reported danger signs included premature uterine contraction by 3%, premature rupture of membranes by 3%, convulsions by 13%, obstructed labor by 23% and bleeding by 39% (33).

In summary, low awareness of danger signs and symptoms during pregnancy, labor, delivery, and post-partum contribute to delays in seeking and receiving skilled care. Safe motherhood programs can effectively increase knowledge of danger signs through clinic and community based educational strategies. Recognition of danger signs in pregnancy and subsequently getting medical help can drastically affect maternal and newborn morbidity and mortality. Awareness of obstetric danger signs increased with age, number of deliveries, number of antenatal visits, when delivery was at a health institution.

Many studies revealed age, residence, marital status, occupation, educational level, gravidity, parity, number of family members, places of previous delivery, attendance of ANC and women with pregnancy complication during last pregnancy associated with knowledge of danger sign of pregnancy. Studies revealed maternal and child survival rate dependent upon recognition of the problem, decision making about care, access to care, and quality of care.

Conceptual framework

The conceptual frame work shows the boundary that the study will cover and the relationship which will be proven after going through all research steps. The relationship was proposed between four categories of independent variables (Personal, socioeconomic, health service related factor and source of obstetric danger signs information) and the dependent variable; KAP on obstetric danger signs of the study participants.

The relation is depicted by one directional effect of the independent variable on the dependent variable with no relations between the independent variables. It was prepared by principal investigator after reviewing for different literatures.

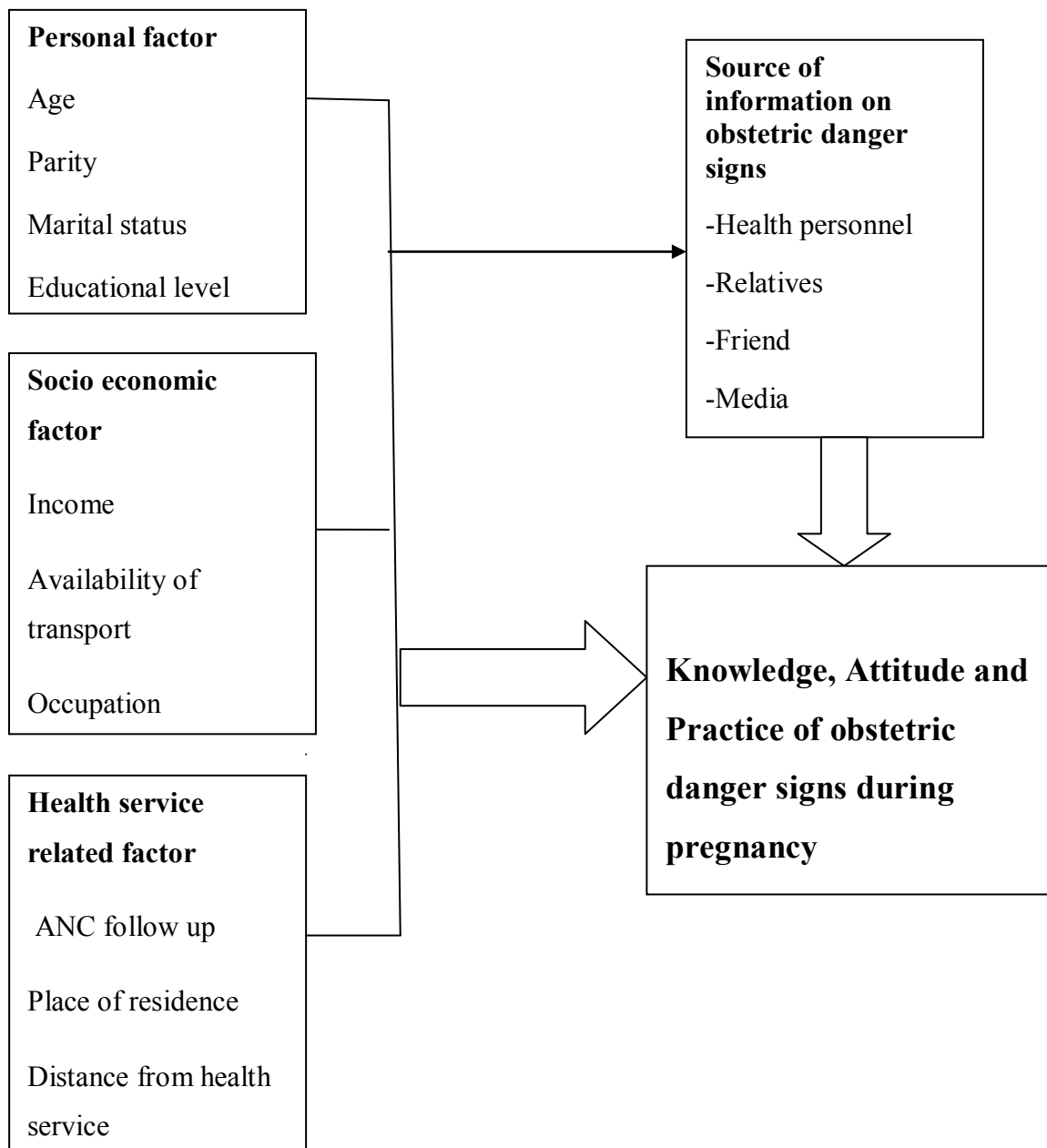


Figure 1: Conceptual frame work on assessment of knowledge, attitude and practice of danger signs among mothers in Debre Birhan City Administration, North Shoa Zone, Amhara Region, April, 2014.

CHAPTER THREE

3. OBJECTIVE

3.1. General objective

The general objective of the study was;

- To assess knowledge, attitude and practice of obstetric danger signs during pregnancy among mothers in Debre Birhan city administration, North Shoa, Amhara, Ethiopia April, 2014.

3.2. Specific objectives

The specific objectives of the study were;

- To assess mothers level of knowledge on danger signs during pregnancy.
- To determine mothers attitude towards danger signs during pregnancy.
- To assess mothers practice on danger signs during pregnancy.
- To investigate the possible effect of the socio-demographic characteristics of study participants and source of danger signs information on KAP of obstetric danger signs during pregnancy of the respondents.

CHAPTER FOUR

4. METHODS AND MATERIALS

4.1. Study area and period

The study was conducted in Debre Berhan City Administration. Debre Birhan is a City Administration in central Ethiopia, Located in the North Shoa Zone of the Amhara Region, about 130 kilometers North East of Addis Ababa on the paved highway to Dessie. It has a latitude and longitude of 9°41'N39°32'E / 9.683°N 39.533°E Coordinates: 9°41'N39°32'E / 9.683°N 39.533°E and an elevation of 2,840 meters. It was an early capital of Ethiopia and after wards, with Ankober and Angolalla, was one of the capitals of the kingdom of Shewa.

A community survey with gestational age of at least 4 months for primi gravid and delivered mothers within the last 24 months will be conducted in April 2014 in Debre Birhan city administration. Administratively, Debre Birhan town is divided into 9 urban and 5 surrounding rural kebeles. The total population of the town is estimated to be 84, 944 of which 41, 248 (48.6%) were males and 43, 696 (51.4%) were females (35). The study was conducted in April, 2014 using pretested interviewer administered questionnaire.

4.2. Study design

Community based cross-sectional quantitative study was conducted to assess knowledge, attitude and practice of obstetric danger signs during pregnancy among mothers in Debre Birhan city administration.

4.3. Source population

All pregnant women with gestational age of at least 4 months for primi gravida and all mothers who gave birth within 24 months preceding the survey irrespective of place and outcome of delivery in the community of Debre Birhan city administration were source population.

4.4. Study population

Randomly selected women of childbearing age who were with gestational age of at least 4 months for primi gravid and who gave birth in the last 24 months prior to the survey on which the actual study was conducted in Debre Birhan city Administration.

4.4.1. Inclusion criteria

Mothers who were mentally and physically capable of being interviewed and those who were volunteer to participate in the study.

4.4.2. Exclusion criteria

Mothers who were critically sick and pregnant health worker.

4.5. Sample size determination:

The following assumptions were made to determine the sample size:

The formula to calculate the sample size was

$n = (Z\alpha/2)^2 p(1-p) / D^2$, Where

n=number of the study subjects

Z= the standardized normal distribution curve value for the 95% confidence interval (1.96)

P= the level of KAP of obstetric danger signs during pregnancy in Debre Berhan City

Administration which is 50%

d=the desired precision of the estimate (the margin of error between the sample and population, 5%)

$= (1.96)^2 \times 0.50 (1-0.50) / (0.05)^2$

$= 384 + 38 = 422$

$422 \times 1.5 = 634$

The total sample size after computing for 10 % non-response rate and 1.5 design effects was **634**.

4.6. Sampling procedure

Multistage sampling was used to select study subjects. First, all the Kebeles in the District were stratified in to urban and rural. Then 4 out of 9 urban and 2 out of 5 rural Kebeles are selected by lottery method. The calculated sample size was proportionally allocated to urban (n= 485) and rural (n= 147) areas respectively. Then the number of all pregnant women, at least four months for primi gravid and their gestational age and all delivered mothers in 24 months prior to the study were taken from each selected kebeles health extension workers. Then, frames of households were prepared for each kebele in collaboration with the health extension workers.

In kebele 1 there were 727 households and 280 delivered and pregnant mothers were registered. Regarding kebele 3 there were 1036 households and 313 delivered and pregnant mothers were found. Census of kebele 5 indicated that 993 total house hold were found and 166 delivered and

pregnant mothers were registered. According to kebele 7 Health extension worker data there were 733house holds, 252 delivered and pregnant mothers were registered. In Faji kebele 445 households and 112 delivered and pregnant mothers were registered. Finally Genet kebele had 503 household, 145 delivered and pregnant mothers. Households with pregnant women of at least 4 months for primigravid and mothers who gave birth in the last 24 months prior to the survey were selected using systematic random sampling from the existing sampling frame of households. For selecting the study participants, simple random sampling was used for each kebeles. For households with no eligible woman the immediate next household was selected and then subsequent households were selected according to the already pre-determined order.

Sampling procedure

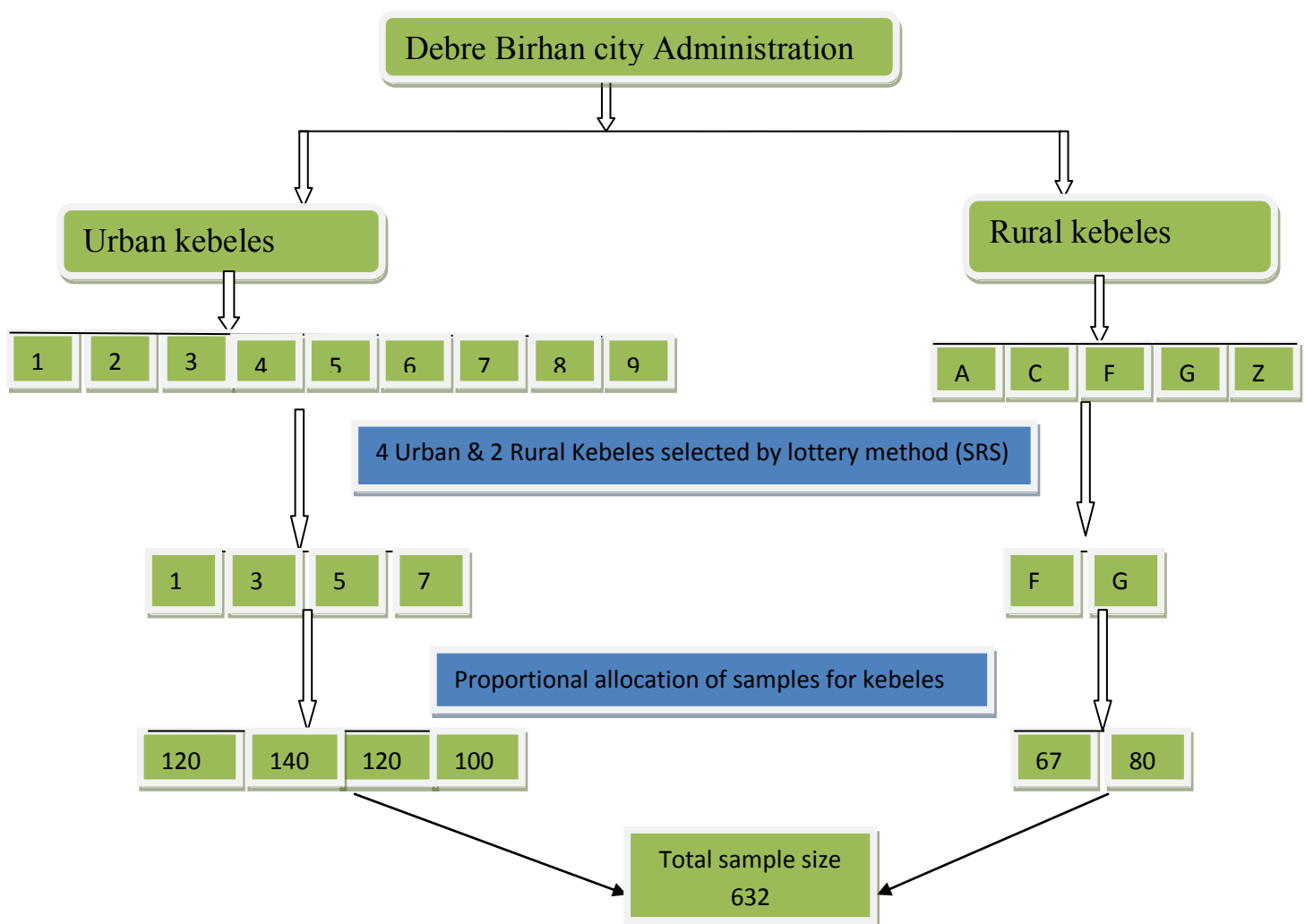


Figure 2: Diagrammatic presentation of sampling procedure for the study.

4.7. Data collection instrument

A structured questionnaire adapted from the survey tools developed by JHPIEGO Maternal Neonatal Health Program (12), developed in English in such a way that it includes some variables to meet the objectives, which was knowledge and other related literatures are used for other objectives. An individual who had very good knowledge of both English and Amharic languages translated the English version to Amharic language for better understanding of the enumerators and respondents. Then it was translated back to English.

The data collection tool was pre-tested on similar women on the other Debre Birhan urban kebeles which were not included in the study before the initiation of the main study.

Findings and experiences from the pre-test was utilized in modifying the interview.

The questionnaire consists of six parts with a total of 42 questions. The first part was about socio-demographic characteristics of the study participants composed of 8 questions. The second part was about past obstetric history and other part consisted of questions raised for assessment of obstetric danger signs knowledge, attitude, and Practice and health service related. Questions about past obstetric history include-gravidity, parity, number of children and decision maker during delivery. Questions about knowledge -on obstetric danger signs consists of 7 questions focusing on information given, meaning of obstetric danger signs, source of information, can any woman develop, mentioning danger signs they know. The attitude aspect includes- importance of knowing danger signs and health seeking behavior of mothers. Practice of obstetric danger signs include-experience of obstetric danger signs, what danger signs they experienced and measure they took when they faced obstetric danger signs. The last part was health service related question and it was consisted of-time it takes to nearest health facility, ANC follow up, number of ANC visits, last delivery place.

The questionnaire was first Prepared in English and then translated into Amharic language for better understanding by respondents. The Amharic version of the questionnaire was then translated back to English language to check for its consistency.

Two days training was given for six data collectors (nursing students) and two supervisors. The training was given on the study purpose and the questionnaire itself, regarding interviewing techniques and correct completion of the structured questionnaire and also ethical considerations in collecting the data. The supervisors were monitoring the data collection process and they were also availing the participants for the data collectors.

4.8 Data collection procedure

Six Nursing degree students (one nurse for each Kebele community) were recruited as data collectors, two BSc graduates Midwife were recruited as supervisor. All data collectors and supervisors were oriented for 2 days on data collection process based on the guide that was developed by principal investigator for data collectors and clarifying how to interview the questionnaire. They were allowed to fill the questionnaire and later discussion were made in all contents of the format and areas of difficulties were revised.

Additionally, they were trained on their responsibilities for describing the purpose of the study, giving orientation, telling clients the importance of honest and sincere reply, on responding to questions. The principal investigator and the coordinator strictly follow the overall activities for each activity on daily base to ensure the completeness of questionnaire, to give further clarification and support for data collectors.

4.9. Study variables

Dependent variable

Knowledge of obstetric danger signs (key danger signs during pregnancy: vaginal bleeding, swollen hands/face and blurred vision.

Attitude of obstetric danger signs

Practice of obstetric danger signs

Independent variable

Socioeconomic and demographic factors:

Age

Marital status

Religion

Ethnicity

Educational status

Monthly income

Obstetric factors

Parity

History of still birth

Number of children,

Live birth

Husband's factors

Occupation

Health service related factors

Time taken to nearest health facility

ANC follow up

4.10. Operational definitions

Danger signs: Presence of condition that increases the chances of pregnant woman and/ or her unborn child dying or having poor health.

Mothers: Refers to women who are pregnant and/ or who have child.

Knowledge: Knowledge of obstetric danger signs means the basic information that the mothers have regarding obstetric danger signs.

Good knowledge: refers to those participants who respond correctly to knowledge questions and score above the median value.

Poor knowledge: refers those participants who correctly respond to knowledge questions and score median value and below the median value.

Attitude: It is an opinion of study participants towards obstetric danger signs.

Positive Attitude: refers to those participants who respond correctly to attitude questions and score above the median value

Negative Attitude: refers to those participants who respond correctly to attitude questions and score median value and below the median value

Practice: A woman's activities in relation to obstetric danger signs of pregnancy.

Good practice: refers to those participants who seek medical care first when they experience obstetric danger signs.

Poor practice: refers to those participants who seek care from a TBA and an older woman first, and who stayed home when they experience obstetric danger signs.

Health personnel: (HEW, physicians, health officers, nurses/midwives) who can manage normal deliveries and diagnose, manage or refer obstetric complications.

Not married-Mothers who were not in marital union during data collection.

Informal education-Mothers who were illiterate and can read and write only.

Formal education- Mothers who were primary and secondary school.

High level education- Mothers whose educational status were diploma and above.

4.11. Data quality assurance

Questionnaire was prepared in English version and translated in to Amharic and back to English. Before the initiation of the main study pre-test was carried out on 10% of the calculated sample size in urban kebele community which are not selected in the study in order to check understandability, clarity and completeness of the questionnaire. Based on the finding of the pre-test the questionnaire was modified as necessary. Data collection was carried out by trained nursing students from Debre Birhan University. Ten percent of the collected data was checked by the supervisor daily for completeness and finally the principal investigator monitored the overall quality of data collection.

To control the quality of the data processing, the data was checked for its completeness before data entry and the cleaning process was done by running simple frequency after data entry for its consistency. The inconsistent data was checked referring the hard copy of the questionnaire.

4.12. Data processing, analysis and Interpretation

After the data collection, each questionnaire was checked for its completeness. Data entry, cleaning and coding was done by Epi Info version 3.5.4 statistical soft ware package & exported to SPSS window version 20 for analysis. Associations between variables were assessed by using odds Ratio, 95% Confidence Intervals. Multiple logistic-regressions were also used to adjust for possible confounding variables. Corresponding P value of < 0.05 was considered as statistically significant at 95% of confidence interval. Tables, bar graphs, pie charts and cross tabulations were used to present the data.

To determine obstetric danger signs knowledge level of the study subjects 12 questions were used. In order to obtain summarized extent of knowledge of the study subjects the correct responses were counted on the SPSS software package for each individual .The correct answers were represented by „1“ while the wrong responses were represented by“0“.Then the total score of each individual, out of the total 12 marks, were again computed on the SPSS software package. Then the mean, median, maximum value and minimum Value was computed. Histogram with normal distribution curve was done for the total score of the study participants and the distribution of the score of the respondents was seen. Since the distribution was normal distribution the median value was used as reference to classify the study respondents. Accordingly those respondents who score above the median value were classified as having good

knowledge and those who score median and below the median value were classified as having poor knowledge.

To assess summarized extent of Attitude of the study subjects; on the first place each attitude questions were re coded in to the same manner; those who responded correctly were re coded as „3“ and those who responded wrongly were re coded as „1“.Those who responded “not sure” were coded as „2“.Then the total attitude score for each respondents was computed on SPSS software package. Then the mean, median, maximum value and minimum Value was computed. Histogram with normal distribution curve was done for the total score of the study subjects and the distribution of the score of the respondents was seen. Since the distribution was normal distribution the median value was used as reference to classify the study respondents. Accordingly those respondents who score above the median value were classified as having Positive Attitude and those who score median and below the median value were classified as having Negative Attitude.

To assess the obstetric danger signs practice of the study subjects only one question was used; those respondent of practice question who seek medical care first when they faced obstetric danger signs were classified as having Good practice and those who used traditional means such as: sought care from a traditional birth attendants and sought care from an older woman first and stayed home were taken as Poor practice.

Bivariate logistic regression analysis was used to identify factors associated with knowledge, attitude and practice of obstetric danger signs. Variables significant in the bivariate analysis were then entered into a multivariate logistic regression analysis. The associations between awareness and each independent variable were estimated by odds ratio (OR) and 95% confidence interval (CI). A CI was considered statistically significant when the interval between the upper and lower values did not include 1.

4.13. Ethical clearance

Ethical approval was obtained from the Research and Publications committee of Department of Nursing and Midwifery, School of Allied Health Sciences, College of Health Science, Addis Ababa University. A formal letter for permission and support was written to the Debre Berhan City Administration Health bureau and for the selected kebeles. Permission to carry out the study was obtained from the City Administration Health bureau. Similarly, Consent from the respective kebeles authorities was obtained prior to commencement of the study. The purpose of

the study was clearly explained to concerned bodies. All the study participants were informed the purpose of the study, their right to completely free to choose whether or not to participate, and so written as well as verbal consent was also obtained from respondents. Confidentiality was maintained and assured by excluding their names from identification of the study subjects.

The instruments and procedures did not cause any harm to the study subjects, the community, the data collectors and supervisor, who were involved in the research project.

4.14. Dissemination and Utilization of results

Result of the study will be disseminated to Addis Ababa University School of Nursing as partial fulfillment of master's degree in nursing. And will be communicated to the Ministry of Health, Amhara Health Bureau and all government health services in Amhara region. The findings will be presented in different seminars, meetings and workshops and will be published in a scientific journal. Hard and soft copy will be available in the library of Addis Ababa University for graduate students as well as for other concerned readers.

CHAPTER FIVE

5. RESULTS

5.1. Socio-demographic characteristics of the study subjects

A total of 634 mothers were enrolled in the study giving a response rate of 99.7%. The study participants from selected urban kebeles constituted 76.7% while selected rural kebeles were represented by 23.3% of respondents. The mean ages of the respondents were 28 years. 571(90.3%) of the participant were Orthodox in religion and 587 (92.9%) were Amhara.

Majority 563 (89.1%) of the women were married and most 413(65.3%) of the respondents were housewives. 295(46.7%) had completed secondary school and above and 185 (29.3%) of the respondents had income between 501 to 1000 birr during the survey. In regard to their husbands, 170 (26.9%) were private employee (Table1).

Table1: Distribution of socio-demographic and economic variables of respondents, of selected kebeles of Debre Birhan city administration, 2014.

Variable	Frequency	Percent (%)
Residence		
Urban	485	76.3
Rural	147	23.3
Total	632	100
Age in years		
15-19	2	0.3
20-24	121	19.1
25-29	270	42.7
30-34	148	23.4
>=35	91	14.4
Total	632	100

Table 1: Distribution of socio-demographic and economic variables of respondents, of selected kebeles of Debre Birhan city administration, 2014 continued...

Variables	Frequency	Percent (%)
Marital status		
Single	22	3.5
Married	563	89.1
Widowed	11	1.7
Divorced	36	5.7
Total	632	100
Religion		
Orthodox Christian	571	90.3
Muslim	24	3.8
Protestant Christian	31	4.9
Catholic	6	0.9
Total	632	100
Ethnicity		
Amhara	587	92.9
Oromo	28	4.4
Tigre	14	2.2
Gurage	3	0.5
Total	632	100
Occupation		
Housewife	413	65.3
Government employee	80	12.7
Private employee	73	11.6
Own business	37	5.9
Farmer	18	2.8
Other	11	1.7
Total	632	100

Table1: Distribution of socio-demographic and economic variables of respondents, of selected kebeles of Debre Birhan city administration, 2014 continued...

Variable	Frequency	Percent (%)
Educational status		
Illiterate	112	17.7
Can read and write only	80	12.7
Primary school	145	22.9
Secondary school	149	23.6
Diploma and above	146	23.1
Total	632	100
Monthly income		
<500 birr	166	26.3
501-1000 birr	185	29.3
1001-1500	76	12.0
1501-2000	65	10.3
>2001	140	22.2
Total	632	100
Husband occupation		
Private employee	170	26.9
Government employee	142	22.5
Own business	78	12.3
Farmer	136	21.5
Other	35	5.5
Total	561	88.8
Missing system	71	11.2
Total	632	100

5.2: Obstetric characteristics of the respondents

From total number of respondents 411(65%) had history of 2-4 pregnancies and 35(5.5%) mothers were pregnant for more than four times. Regarding first pregnancy age 382(60.4%) mothers got their first pregnancy at 20-29years. About 414(65.6%) respondents had 2 and above live children followed by 186(29.4%) who have 1 live children. Majority 591 (93.5%) of the respondents had no history of still birth but only 5 (0.8%) respondent had history of 2 and above still births. From the total number of mothers 576(91.1%) had 1-4 number of children and only 21(3.3%) mothers had 5 and more children. In the case of previous history of pregnancy, 532(86.6%) had ANC follow up, among those who had ANC follow up 336(53.2%) had 4 and more visits. Majority 469(74.2%) of the mothers gave birth at health institutions and 359 (56.8%) study respondents had final decision by themselves.

5.3. Source of information regarding obstetric danger signs during pregnancy

480(75.9%) had heard obstetric danger signs during pregnancy and from those mothers 374(59.2%) got information from clinics regarding obstetric danger signs during pregnancy. From those who heard obstetric danger signs majority 76.3% of the study participants answered the signs that indicate the pregnant or/and the pregnancy has illness.

430(68%) of the study participants had got danger signs information from health personnel followed by media, friends and relatives with respective frequencies of 21%, 18.4% and 7% respectively.

5.4: Obstetric danger signs Knowledge, Attitude and Practice among mothers in Debre Birhan City Administration.

5.4.1: Knowledge on danger signs during pregnancy

Out of the 632 respondents, 374(75.9%) reported that they had got information about obstetric danger sign during pregnancy. From those who had the information 386(61.1%) identified severe vaginal bleeding at any time during pregnancy as danger sign while Persistent vomiting especially from 4th month of pregnancy onwards was indicated by 117(18.5%).

Swelling of the body 116(18.4%), persistent headache and blurred vision 104(16.5%), leaking of fluid from birth canal 89(14.1%) were also indicated by the study subjects as danger sign. Foul smelling vaginal discharge was mentioned by the least 19(3.0%) of the respondents (Table 2).

Table 2: knowledge of obstetric danger signs during pregnancy among mothers in selected kebeles of Debre City Administration, April 2014.

Variable	Category	Frequency	Percent (%)
Mentioned severe bleeding as danger sign during pregnancy	Yes	386	61.1
	No	246	38.9
	Total	632	100
Mentioned severe headache or blurred vision as danger sign during pregnancy	Yes	104	16.5
	No	528	83.5
	Total	632	100
Mentioned leaking of fluid from birth canal as danger signs during pregnancy	Yes	89	14.1
	No	543	85.9
	Total	632	100
Mentioned swelling of the body as danger sign during pregnancy	Yes	116	18.4
	No	516	81.6
	Total	632	100
Mentioned high fever as danger sign during pregnancy	Yes	89	14.1
	No	543	85.9
	Total	632	100
Mentioned unusual abdominal pain as danger sign during pregnancy	Yes	62	9.8
	No	570	90.2
	Total	632	100
Mentioned feeling very tired as danger sign during pregnancy	Yes	87	13.8
	No	545	86.2
	Total	632	100
Mentioned absent or decreased fetal movement as danger sign during pregnancy	Yes	80	12.7
	No	552	87.3
	Total	632	100
Mentioned persistent back pain as danger sign during pregnancy	Yes	52	8.2
	No	580	91.8
	Total	632	100
Mentioned persistent vomiting especially from 4th month onward as danger sign during pregnancy	Yes	117	18.5
	No	515	81.5
	Total	632	100
Mentioned foul smelling vaginal discharge as danger sign during pregnancy	Yes	19	3.0
	No	613	97.0
	Total	632	100

Most 431(68.2%) of the study participants were found to have poor knowledge scoring median and below the median value. (Table3, Figure 3)

Table 3: Obstetric danger signs during pregnancy overall knowledge category of mothers in Debre Berhan City Administration, April, 2014.

Overall knowledge category	Number(n=632)	Percent (%)
Good knowledge	201	31.8
Poor knowledge	431	68.2
Mean =1.93	Minimum value=0	Standard deviation=1.7
Median=2	maximum value=9	Total mark=12

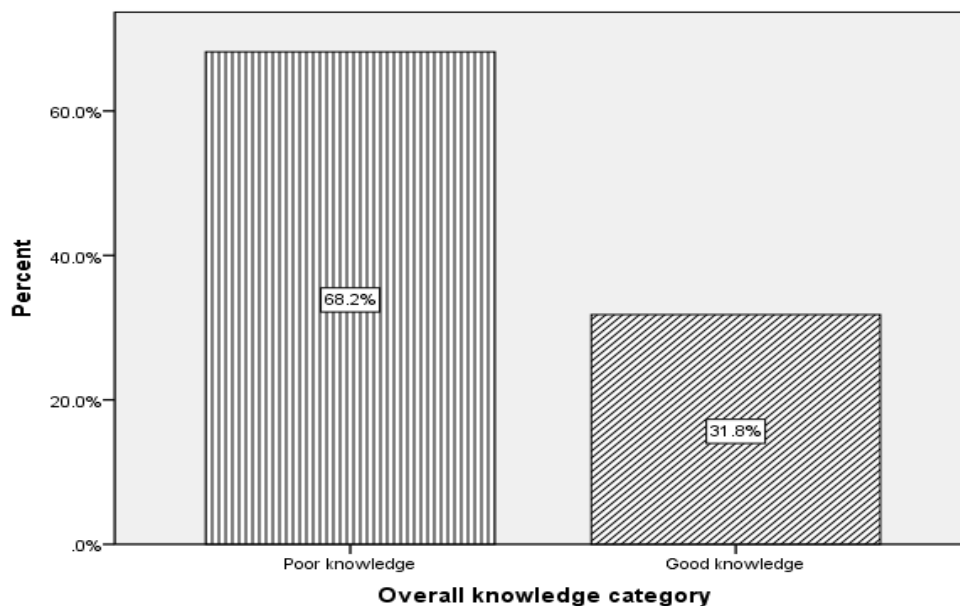


Figure 3: Graphic representation of overall knowledge category of obstetric danger during pregnancy among mothers in Debre Berhan City Administration, North Shoa zone, Amhara Region, April, 2014.

5.4.2. Attitude towards obstetric danger signs

Majority 89.2% of the study respondents were agreed with importance of knowing obstetric danger signs. 88% the study participants agreed that knowing obstetric danger signs is important because women will seek medical care on time. Regarding the prevention of obstetric danger signs 57% of the respondents were agreed. Most 71.2% disagree on the idea that mothers who develop obstetric danger signs should seek help from traditional birth attendants. Majority 85.3% of the study participants agreed on the idea that mothers who develop obstetric danger signs should seek help from other older women (Table 4).

Table 4: Attitude of obstetric danger during pregnancy among mothers in Debre Berhan City Administration, April, 2014.

Indicators of attitude	Likert scale					
	Agree		Neutral		Disagree	
	N	(%)	N	(%)	N	(%)
It is important for women to know obstetric danger signs during pregnancy	564	(89.2)	62	(9.8)	6	(0.9)
To know about obstetric danger signs is important because women will seek medical care on time.	556	(88.0)	54	(8.5)	22	(3.5)
To know obstetric danger signs is important because the danger signs will not go away by their own.	581	(91.9)	40	(6.3)	11	(1.7)
A woman can prevent danger signs during pregnancy.	360	(57.0)	29	(4.6)	243	(38.4)
Mothers who develop obstetric danger signs should seek medical advice.	501	(79.3)	2	(0.3)	129	(20.4)
Mothers who develop obstetric danger signs should seek help from traditional birth attendants.	147	(23.3)	35	(5.5)	450	(71.2)

333(52.7%) of the study participants had negative attitude by scoring the median value and below the median value (**Table 5**).

Table 5-Obstetric danger signs overall attitude category during pregnancy among mothers in Debre Berhan City Administration, April, 2013.

Overall attitude category	Number (n=632)	Percent (%)
Positive attitude	299	47.3
Negative attitude	333	52.7
Mean=10.3		Median=10
Minimum value=7		Maximum value=18
Standard deviation=1.86		Total mark=21

5.4.3. Practice of obstetric danger signs

Majority of 581(91.1%) of the study participants have claimed as they did not experience any obstetric danger signs during pregnancy.51(8.1%) who experienced obstetric danger signs 44(7.0%) had Good practice seek medical care when they faced problem. About 7(1.1%) of the study subjects had Poor practice.

5.5. Factors associated with knowledge, attitude and practice of obstetric danger signs

5.5.1. Factors associated with knowledge about obstetric danger signs

According to the result of the Bivariate logistic regression analysis was significantly associated with ANC follow up; that the respondents who have had ANC follow up had 6.12 times Good knowledge than respondents who did not have ANC follow up [COR=6.12, 95%CI(2.8-13.5)]. Additionally, respondents monthly income had significant association with obstetric danger signs knowledge that participants who had monthly income more than or equal to 1000 had 3.3 times good knowledge than respondents who had monthly income less than 1000 [COR=3.3, 95%CI(2.32-4.7)]. Similarly, Study participants occupation was significantly associated with knowledge of obstetric danger signs that government employee had 3.41 times good knowledge than housewives and private employee had 2.21 times Good knowledge than house wives [COR=3.41, 95%CI(2.1-5.6)], [COR=2.21, 95%CI (1.5-3.32)] respectively. Additionally the Bivariate analysis indicated that husband occupation was significantly associated with obstetric danger signs knowledge; that government employee had 2.9 times good knowledge than private employee [COR=2.9, 95%CI (1.94-4.3)]. However, the association were insignificant after adjusting for confounding variables.

After controlling for confounders, the multivariate analysis showed that, residence of the study participants was significantly associated with their obstetric danger signs knowledge: respondents from urban kebeles had 2.24 times good knowledge than those respondents from rural kebeles. According to the multivariate analysis obstetric danger signs information from media was significantly associated with obstetric danger signs knowledge of the study participants; respondents' who got obstetric danger signs information from media had 2.8 times good knowledge than those respondents who didn't get information from the same source [AOR=2.8, 95%CI(1.7-4.65)]. Additionally, the multivariate analysis showed that obstetric danger signs information from health personnel and friend were significantly associated with obstetric danger signs knowledge of the study participants: the study participants who got information from health personnel had 2.9 times and 2.1 times Good knowledge than those who did not get information from health personnel and from friend [AOR=2.9, 95CI (1.32-6.43)], [AOR=2.1, 95CI (1.21-3.569)] respectively (Table 6).

Table 6: Socio-demographic and other factors associated with knowledge of obstetric danger signs during pregnancy among mothers Debre Berhan City Administration, April, 2014.

Variables	Knowledge of obstetric danger signs		Odds ratios (95% CI)	
	Poor knowledge N (%)	Good knowledge N (%)	Crude	Adjusted
Residence				
Rural	131(30.4)	16 (8)	1	1
Urban	300(69.6)	185 (92)	5.05(2.91-8.8)*	2.24(1.11-4.52)*
Age				
15-24	95 (22)	28 (13.1)	1	1
25-30	176 (40.8)	94 (46.8)	1.81(1.11-2.96)*	0.55(0.28-1.1)
>=30	160 (37.1)	79 (39.3)	1.7(1.02-2.81)*	1.27(0.77-2.1)
Educational status				
Informal	161(37.4)	31(15.4)	1	1
Formal	204 (47.3)	90(44.8)	2.3(1.45-3.62)*	0.62(0.27-1.46)
High level	66 (15.3)	80(39.8)	6.3(3.8-10.42)*	0.78(0.40-1.51)
Mothers occupation				
Housewife	312(72.4)	101(50.2)	1	1
Government employee	38(8.8)	42(20.9)	3.41(2.1-5.6)*	0.85(0.49-1.49)
Private employee	81(18.8)	58(28.9)	2.21(1.5-3.32)*	0.92(0.41-2.1)

* Reminded the significance of the variables (P value <0.05)

Table 6: Socio-demographic and other factors associated with knowledge of obstetric danger signs during pregnancy among mothers Debre Berhan City Administration, Continued...

Variable	Knowledge of obstetric danger signs		Odds ratios(95%CI)	
	Poor knowledge N (%)	Good knowledge N (%)	Crude	Adjusted
Household income				
<1000	79(64.7)	72(35.8)	1	1
>=1000	152(35.3)	129(64.2)	3.3(2.32-4.7)*	0.8(0.48-1.47)
Husband occupation				
Private employee	311(81.4)	108(60.3)	1	1
Government employee	71(18.6)	71(39.7)	2.9(1.94-4.3)*	0.81(0.48-1.4)
First pregnancy age				
<20	195(45.2)	46(22.9)	1	1
20-29	228(52.9)	154 (76.6)	2.9(1.96-4.2)*	3.5(0.34-35.6)
>=30	8(1.9)	1(0.5)	0.53(0.07-4.34)	4.92(0.5-48.4)
ANC follow up				
No	78(18.1)	7(3.5)	1	1
Yes	353(81.9)	194(96.5)	6.12(2.8-13.5)*	1.52(0.42-5.54)
Time to nearest health facility				
<1 hr	349(81.0)	189(94.0)	1	1
>=1hr	82(19.0)	15(6.0)	0.3(0.14-0.51)*	0.56(0.24-1.3)
Information from health personnel				
No	241(86.4)	189(94)	1	1
Yes	38(13.6)	12(6.0)	0.4(0.21-0.8)*	2.9(1.32-6.43)*

* Reminded the significance of the variables (P value <0.05)

Table 6: Socio-demographic and other factors associated with knowledge of obstetric danger signs during pregnancy among mothers Debre Berhan City Administration, Continued...

Information from relatives				
No	20(7.2)	24(11.9)	1	1
Yes	259(92.8)	177(88.1)	0.57(0.31,1.1)	1.3(0.31-5.64)
Information from friends				
No	49(17.6)	67(33.3)	1	1
Yes	230(82.4)	134(66.7)	0.5(0.28,0.65)*	2.1(1.21-3.6)*
Information from media				
No	44(15.8)	89(44.3)	1	1
Yes	235(84.2)	112(55.7)	0.24(0.2-0.36)*	2.8(1.7-4.52)*

* Reminded the significance of the variables (P value <0.05)

5.5.2 Factors associated with attitude towards obstetric danger signs during pregnancy

Bivariate analysis indicated that study participants occupation was significantly associated with respondents obstetric danger signs attitude, that the government employee have had 1.6 times positive attitude than participants who were housewives [COR=1.6, 95%CI (1.1, 2.3)]. Similarly, husband occupation of the respondents was associated with their attitude towards obstetric danger signs, respondents of the government employee had 1.7times positive attitude than those participants from private employee[COR=1.7,95%CI(1.15-2.52)].The respondents monthly income was significantly associated with respondents obstetric danger signs attitude, that respondents who have had monthly income of greater than 1000 had 2.13times Positive attitude than those respondents who had monthly income of less than 1000[COR=1.54,95%CI(1.54,-2.93)]. But the association was insignificant after controlling for possible confounders.

After controlling for possible confounding variables the educational status of the study participants was found to be significantly associated with participants obstetric danger signs attitude; participants who had formal education have 2.2 times positive attitude than a participants who had informal education [AOR=2.2, 95% CI (1.1,4.4)]. On the other hand, the study participants who had high level education have had 1.9 times positive attitude than those participants with informal education [AOR=1.9, 95% CI (1.02,3.4)]. Additionally, the study respondents ANC follow up was found to be significantly associated with obstetric danger signs attitude: respondents who had ANC follow up have had 3.1 times positive attitude than respondents who did not have ANC follow up [AOR=3.1, 95% CI (1.7-5.8)]. The last delivery place of the study participants was significantly associated with respondents obstetric danger signs attitude: that participants whose last delivery place was in health institution were found to have had 2.71 times positive attitude than participants whose last delivery had taken place at home [AOR=2.71, 95% CI (1.3-5.51)] (Table 7).

Table 7: Socio-demographic and other factors associated with attitude of Obstetric danger signs among mothers Debre Berhan City Administration, April, 2014.

Variable	Attitude towards obstetric danger signs		Odds ratios (95% CI)	
	Negative attitude (%)	Positive attitude (%)	Crude	Adjusted
Residence				
Urban	274(82.3)	211(70.6)	1	1
Rural	59(17.7)	88(29.4)	1.94(1.33-2.82)*	0.65(0.39-1.1)
Age				
15-24	61(18.3)	62(20.7)	1	1
25-29	143(42.9)	127(42.5)	0.87(0.57-1.34)	0.98(0.57-1.7)
>=30	129(38.7)	110(36.8)	0.84(0.54-1.3)	1(0.65-1.5)
Mothers occupation				
Housewife	195(58.6)	218(72.9)	1	1
Government employee	57(17.1)	23(7.7)	1.6(1.1-2.3)*	1.16(0.73-1.87)
Private employee	81(24.3)	58(19.4)	0.6(0.31-1.01)	0.83(0.39-1.8)
House hold income				
<1000	156(46.8)	195(65.2)	1	1
>=1000	177(53.2)	104(34.8)	2.13(1.54-2.93)*	1.3(0.83-2.03)

* Reminded the significance of the variable (P value <0.05).

Table 7: Socio-demographic and other factors associated with attitude of Obstetric danger signs among mothers Debre Berhan City Administration, April, 2014, Continued...

Educational status				
Informal	76(22.8)	116(38.8)	1	1
Formal	153(45.9)	141(47.2)	3.8(2.4-6.0)*	2.53(1.2-5.4)*
High level	104(31.2)	42(14.0)	2.3(1.5-3.5)*	1.9(1.01-3.6)*
Husband occupation				
Private employee	208(70)	211(79.9)	1	1
Government employee	89(30)	53(20.1)	1.7(1.15-2.52)*	0.84(0.51-1.4)
ANC follow up				
No	18(5.4)	67(22.4)	1	1
Yes	315(94.6)	232(77.6)	5.1(2.9-8.7)*	3.1(1.7-5.8)*
First pregnancy age				
<20	113(33.9)	128(42.8)	1	1
20-29	213(64)	169(56.5)	0.7(0.51,0.97)*	5.3(0.58-48.4)
>=30	7(2.1)	2(0.7)	0.25(0.05,1.24)	4.9(0.55-44.1)
Total pregnancy				
1	100(30)	86(28.8)	1	1
2-4	215(64.6)	196(65.6)	1.06(0.75-1.5)	1.12(0.3-4.2)
>4	18(5.4)	17(5.7)	1.1(0.53-2.26)	1.02(0.31-3.4)
Number of ANC visit				
1	2(0.6)	2(0.9)	1	1
2-3	105(33.3)	102(44)	0.97(0.13-7.03)	1.1(0.14-8.3)
4 and above	208(66.0)	128(55.2)	0.62(0.09-4.42)	1.5(0.99-2.4)
Last delivery place				
At home	260(81.8)	209(73.3)	1	1
Health institutions	58(18.2)	76(26.7)	1.63(1.1-2.4)*	2.7(1.3-5.51)*
Decision maker				
Husband	37(11.1)	41(13.7)	1	1
Yourself	186(55.9)	173(57.9)	0.84(0.51-1.37)	2(1.0-3.6)
Family	110(33)	85(28.4)	0.7(0.41-1.18)	1.5(1.0-2.4)

* Reminded the significance of the variable (**P value <0.05**).

5.5.3 Factors associated with practice of obstetric danger signs during pregnancy

According to the Bivariate analysis there were no significant association between study participants and variables. This may be due to small number of sample size of the study participants who were experienced obstetric danger signs. From 632 sample size there were 51 participants who experienced obstetric danger signs during pregnancy (**Table 8**).

Table 8: Socio-demographic and other factors associated with practice attitude of Obstetric danger signs among mothers Debre Berhan City Administration, April, 2014.

Variables	Practice towards obstetric danger signs		Odds ratios(95%CI)	
	Poor practice (%)	Good practice (%)	Crude	Adjusted
Age				
15-24	2 (28.6)	9 (20.5)	1	
25-29	2 (28.6)	17 (38.6)	1.9 (0.23-15.7)	
>=30	1 (14.3)	10 (22.7)	2.2 (0.17-28.9)	
Income				
<1000	4(57.1)	23(52.3)	1	
>=1000	3(42.9)	21(47.7)	1.23 (0.24-6.1)	
Decision maker				
Husband	1 (14.3)	8 (18.2)	1	
Yourself	4 (57.1)	24 (54.5)	0.75 (0.73-7.73)	
Family	2 (28.6)	12 (27.3)	0.75 (0.6-9.7)	
Educational status				
Informal	2(28.6)	8(18.2)	1	
Formal	3(42.9)	18(40.9)	1.5(0.21-10.8)	
High level	2(28.6)	18(40.9)	2.25(0.3-18.9)	

CHAPTER SIX

6. DISCUSSION

6.1. Source of information about obstetric danger signs during pregnancy

According to this study 75.9% had heard obstetric danger signs and from those mothers about 374(59.2%) got information from clinic and it is less than the study done in Mekele that 79.6% respondents had information about danger signs of pregnancy(17). This difference might be due to socio-economic and geographical location.

According to this study 68% of the study participants had got danger signs information from health personnel followed by media, friends and relatives with respective frequencies of 21%, 18.4% and 7% respectively was higher than the study done in Nigeria, about a quarter of respondents in Birnin Gwari cluster and 13% in Kunchi cluster indicated that danger sign songs in the media were the sources of information about safe motherhood. Over 10% of women in Birnin Gwari cluster and almost 30% in Kunchi cluster indicated that friends and neighbors were their sources of information of safe motherhood (37). The differences might be due to cultural and geographic location variations.

6.2. Knowledge of obstetric danger signs during pregnancy

Based on this study from those who had the information of obstetric danger signs 61.1% identified severe vaginal bleeding at any time during pregnancy which is higher than the findings in Aleta Wondo district (45.9%) (15), Burkina Faso (39.4%) and Guatemala (31.0%) (38, 39). This difference might be due to socio-cultural difference and difference of sample size used.

According to this study 27.8% of the study respondents were unable to mention an obstetric danger sign which is less than the study done in Aleta Wondo district 39.1% and Tsegedie district 35.1% and (15,16). The differences might be due to socio economic and health education provided.

This study revealed that the respondents' occupation, educational level, monthly income, husband occupation, first pregnancy age, having ANC follow up, time to nearest health facility, source of information and place of residence were significantly associated with knowledge of obstetric danger signs during pregnancy.

It was found that residence had significant association with knowledge of obstetric danger signs during pregnancy that urban residents had 2.24 times good knowledge than rural respondents [2.24, 95% CI(1.11-4.52)]. This is congruent to the study done in Aleta wondo(15).

Based on this study it was found that the study respondents occupation was significantly associated with obstetric danger signs knowledge of the respondents: those respondents who were government employee had 3.41times good knowledge than housewives [3.41, 95% CI(2.1-5.6)]. It is congruent with study done in Egypt (8) found that occupation appeared to influence women's awareness of danger signs of obstetric complications. However, this finding is contrasted with study done in rural Tanzania (19).

In this study, the respondents' educational level seems to play a role in having knowledge of obstetric danger signs that respondents who have had formal education had 2.1 times good knowledge than who have informal education [2.3-95CI (1.45-3.62)] and respondents who have had high level education had 6.3 times good knowledge than those respondents with informal education[6.3,95% CI(3.8-10.42)]. This study is similar with the study done in Egypt (8) and rural Tanzania (19) which found that women with higher levels of education were more aware of danger signs of obstetric complications than women with lower or no formal education.

This study found no statistically significant difference in knowledge of danger signs of obstetric danger signs with respondent's number of ANC visits contradict the study done in Tanzania (19), Pembe et al (2009:6) found that women who made four or more ANC visits were more aware of danger signs of obstetric complications than those who made less than four ANC visits, independent of gestational age at booking. This difference might be due health education given during ANC follow up.

6.3. Attitude of obstetric danger signs during pregnancy

88% the study participants agreed that knowing obstetric danger signs is important because women will seek medical care on time. Regarding the prevention of obstetric danger signs 57% of the respondents were agreed. Most 71.2% disagree on the idea that mothers who develop obstetric danger signs should seek help from traditional birth attendants.

According to this study income has no significant association on the attitude of the study participants; similarly with study done in Uganda University on KAP of women in child bearing age towards danger signs (unpublished literature) the study sought if income has influence on the

respondents attitude towards danger signs in pregnancy. The finding showed there was no marked difference in attitude despite the difference in income, but in opposite the study done in Lusaka revealed that the hindrances to positive attitude were low income (31).

Multivariate analysis regression indicated that the educational status of the study participants was found to be significantly associated with participants obstetric danger signs attitude; participants who had formal education have 2.2 times positive attitude than a participants who had informal education [AOR=2.2, 95% CI (1.1-4.4)]. On the other hand, the study participants who have high level education had 1.9 times positive attitude than those participants with informal education [AOR=1.9, 95% CI (1.02-3.4)]. Additionally, the study respondents ANC follow up was found to be significantly associated with obstetric danger signs attitude: respondents who had ANC follow up have had 3.1 times positive attitude than respondents who did not have ANC follow up.

6.4. Practice of obstetric danger signs during pregnancy

According to this study only 51(8.1%) of the study participants experienced obstetric danger signs and 7.1% had good practice. The study done in Mekele indicate that majority of the pregnant mothers had not faced danger signs of pregnancy. From those who had danger signs of pregnancy bleeding was reported by 43.2% respondents (17).

Based on this study finding there were no association with respondent's income and practice. This is congruent with the study done in Uganda University on KAP of women in child bearing age towards danger signs (unpublished literature) the study sought if income has influence on the respondents practice towards danger signs in pregnancy. The finding showed there was no marked difference in practice despite the difference in income.

This study revealed that 51(8.1%) who experienced obstetric danger signs 44(7.0%) had Good practice seek medical care when they faced problem. A study done in Indonesia, revealed that among the pregnant women who attended ANC, 36.6% of the respondents gave correct answers to a question on common practice such as, it is necessary to go to the hospital when severe headache or vision problems happen in pregnancy(30).the difference might be due to small sample size.

CHAPTER SEVEN

7. STRENGTH AND LIMITATION OF THE STUDY

7.1 Strength of the study

The adequate sample size representing both urban and rural kebeles was taken by using appropriate sampling techniques. The utilization of appropriate statistical methods to minimize biases was made and the data was analyzed using appropriate statistical test.

7.2 Limitation of the study

Lack of literature for attitude and practice part and failure to measure statistical significance of practice with independent variables due to small size were limitations of the study.

CHAPTER EIGHT

8. CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

Based on this study 75.9% of the study participants had heard obstetric danger signs during pregnancy and from those mothers 59.2% got information from clinics regarding obstetric danger signs during pregnancy.

68% of the study participants had got danger signs information from health personnel.

Regarding knowledge of obstetric danger signs knowledge in this study, most (68%) of study participants had poor knowledge. From those who had information from clinic 61.1% identified severe vaginal bleeding at any time during pregnancy. Foul smelling vaginal discharge was mentioned by the least 19(3.0%) of the respondents. Source of information of obstetric danger signs during pregnancy like health personnel, friends and media are significantly associated with obstetric danger signs knowledge.

Regarding the attitude of the respondents 89.2% of the study respondents were agreed with importance of knowing obstetric danger signs. 88% the study participants agreed that knowing obstetric danger signs is important because women will seek medical care on time. Majority 85.3% of the study participants agreed on the idea that mothers who develop obstetric danger signs should seek help from other older women. More than half, 52.7% of the study participants had negative attitude towards obstetric danger signs during pregnancy. The educational status of the study participants and the study respondents ANC follow up were strongly associated with participant's obstetric danger signs attitude.

Finally, even if knowledge and attitude of study participants are not satisfactory (68% poor knowledge and 52.7% negative attitude) the practice of the study participants who had experienced obstetric danger signs during pregnancy was good. According to this study only 51(8.1%) of the study participants claimed as they experienced obstetric danger signs and 7.1% had good practice.

8.2. Recommendation

Practice and education

The researcher recommends that:

- The district health office, the regional health bureaus and the federal ministry of health should review and improve the quality of ANC programmes.
- Interventions targeting improvement of maternal health should consider the quality of ANC, including the quality of information offered to pregnant women and the community at large, especially on obstetric danger signs.
- Awareness of key danger signs needs to be given priority as it prepares women and their families for timely and appropriate decisions to take measures.
- The education/information given to pregnant women should not only be through routine antenatal care, but also through the Mass Medias.
- To improve the awareness of mothers towards danger signs of pregnancy community mobilization and health education should be considered with policy makers.

Further research

Further research should be conducted on the following topics:

- The effectiveness of ANC health education at health institutions.
- Challenges health care provider faced informing mothers about obstetric danger signs.
- Assessment of KAP of obstetric danger signs in the different parts of the country
- A study which shows the prevalence and practice of danger signs is recommended to be undertaken

For health professionals

- Health service providers should facilitate ways to provide health education regarding obstetric danger signs.
- Health professionals have to provide materials like pamphlets, posters, magazines and books that help women, families and communities increase their awareness and knowledge concerning obstetric danger signs.

References

1. UNICEF. A Global Overview of Maternal Mortality.2010
2. UNFPA. Safe Motherhood Stepping up Efforts to Save Mothers' Lives 2011.
3. WHO. Trends in Maternal Mortality: 1990 to 2010, WHO, UNFPA, UNICEF and World Bank. Geneva 2012.
4. Central Statistical Agency and ORC Macro. Ethiopian Demographic and Health Survey, 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA; 2012.
5. Thaddeus S, Maine D. Too far to walk: maternal mortality in context. Social Science Medicine 1994; 38: 1091-1110
6. Jackson D, Loveday M, Doherty T, Mbombo N, Wington A, Matizirifa L, et al. Community Based Situation Analysis: Maternal and Neonatal Follow-up Care. Durban: Health Systems Trust.2006. p. 9-13.
7. Dutta DC. Text Book of Obstetrics. 6th ed. Calcutta: New Central Book Agency (P) Ltd; 2004.p. 121-124.
8. Rashad WA, Essa RM. Women's Awareness of Danger Signs of Obstetrics Complications in Egypt. Journal of American Science 2010; 6(10): 1299-1306.
9. Kabakyenga JK, Ostergren PO, TuryakiraE, Pettersson K. Knowledge of obstetric danger signs and birth preparedness practices among women in rural Uganda. BMC pregnancy and Child birth 2011,11: 73
10. Mihret H, Mesganaw F: Birth preparedness and complication readiness among women in Adigrat town, northern Ethiopia. EthiopJHealth Dev 2008, 22(1):14–20.
11. JHPIEGO. Monitoring birth preparedness and complication readiness: tools and indicators for Maternal and Newborn health Baltimore.2004.
12. Federal Democratic Republic of Ethiopia, Ministry of Health. National Reproductive Strategy, 2006-2015. Addis Ababa, Ethiopia: FMOH; 2006.p. 16-21.
13. Abouzahr C. Safe Motherhood:a brief history of the global movement. World Health Organization, Geneva, Switzerland 1947-2002.
14. WHO. Why do so many women still die in pregnancy or childbirth? 2005.
15. Mesay Hailu et al, knowledge about obstetric danger signs among pregnant women in Aleta Wondo district, Sidama zone, Southern Ethiopia. Ethiopian Journal of Health Development 2007; 20(1); 25-32.

16. Hailu D, Berhe H (2014) Knowledge about Obstetric Danger Signs and Associated Factors among Mothers in Tsegedie District, Tigray Region, Ethiopia
17. Gebrehiwot et al. Awareness of Danger Signs of Pregnancy and its Associated Factors among Pregnant Women who Visit ANC in Mekelle Public Hospitals, 2014.
18. USAID. Family Planning and Reproductive Health Indicators Database. Existence of a safe motherhood strategic plan to promote access and quality of safe motherhood services. Measure Evaluation Population and Reproductive health 2010.
19. Pembe et al: Rural Tanzanian women's awareness of danger signs of obstetric complications. BMC Pregnancy Child birth March 2009, 9; 12.
20. Nepal. Improving Maternal, Newborn and Child Health in the South East Asia Region. 2005. p. 63.
21. Perreira KM, Bailey PE, De Bocaletti E, Hurtado E, Recinos de Villagran S, Matute J, Increasing awareness of danger signs in pregnancy through community and clinic based education in Guatemala. Maternal Child Health Journal 2002; 6(1): 19-28.
22. Urassa DP, Pembe AB and Mganga F. Birth preparedness and complication readiness among women in Mpwapwa district, Tanzania. Tanzania Journal of Health Research January 2012; 14(1): 3-6
23. Ali AA, Rayis DA , Abaker AO, Adam I. Awareness of danger signs and nutritional education among pregnant women in Kassala, Eastern Sudan. Sudanese Journal of Public Health 2010; 5(4): 179-181.
24. Alam AY, Qureshi AA, Adil MM, Ali H. Comparative study of Knowledge, Attitude and Practices among Antenatal Care Facilities utilizing and non- utilizing women in Islamabad. Journal of Pakistan Medical Association 2004; 55(2): 2-4.
25. Anya SE, Hydera A, Jaiteh LES. Antenatal care in The Gambia: Missed opportunity for information, education and communication. BMC Pregnancy and Childbirth 2007, 8:9.
26. Agboatwalla M, Akram DS. Impact of Health education on mothers' knowledge of preventive health practices, Karachi Pakistan. PubMed Journal of Pakistan Medical Association 1997; 27(4): 199- 202.
27. Cham M, Sundby J, Vangen S. Maternal mortality in rural Gambia, a qualitative study on access to emergency obstetric care BMC Reproductive Health 2005; 2:3.

28. Sarode VM. Does illiteracy influence pregnancy complications? Among women in the slums of greater Mumbai. *International Journal of Sociology and Anthropology* 2010; 2(5): 82-94.
29. WHO. Maternal, Neonatal, and child health. Strategy Global Health program 2009.
30. Nikiema B, Beninguisse G, Haggerty JL. Providing information on pregnancy complications during antenatal visits: unmet educational needs in sub-Saharan Africa. *Health policy and planning* 2009; 34: 370-374.
31. Chongo C. A study to determine knowledge attitude and practice of women in child bearing age towards danger signs in pregnancy in Lusaka, urban Lusaka 1885.
32. Marco A. Knowledge and practice of maternal health care in Indonesia 2003.
33. I. J. Hasan, N. Nisar. Women's Perceptions regarding Obstetric Complications and Care in a Poor Fishing Community in Karachi, 1999.
34. Making pregnancy and childbirth safer. (1997) Policy Brief. Washington, DC: USA World Population reference bureau. Available: www.measurecommunication.org.
35. World health organization. (2005) make every mother and child count. Switzerland: World Health Organization. Available: http://www.who.int/Whr/2005/Whr2005_en.pdf.
36. Debre Birhan Woreda Health Office (2013 report).
37. Okereke et al. *Reproductive Health* 2013, 10:57. Knowledge of safe motherhood among women in rural communities in northern Nigeria: implications for maternal mortality reduction.
38. Baya B, Sangli G, Maiga A. Measuring the effects of behavior change interventions in Burkina Faso with population-based survey results. Maryland, USA: JHPIEGO; 2004.
39. Becker F, Yglesias C. Measuring the effects of behavior change and service delivery interventions in Guatemala with population-based survey. Maryland, USA: JHPIEGO; 2004.

Annexes

Annex I – Information sheet

ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF ALLIED HEALTH SCIENCES

DEPARTMENT OF NURSING AND MIDWIFERY

Here, I the undersigned, at Addis Ababa University College of Health Science, Department of Nursing and Midwifery, currently I will be undertaking research on a topic entitled Assessment of knowledge, attitude and practices of Obstetric Danger Signs among Mothers in Debre Birhan Debre Berhan City Administration, North Shoa zone, Amhara region, Ethiopia.

For this study, you will be selected as a participant and before getting your assent or permission of your participation, you need to know all necessary information related to the study. Thus, this information will be detailed as;

Objective: To assess knowledge, attitude and practice of obstetric danger signs among Mothers in Debre Birhan City Administration, North Shoa zone, Amhara region, Ethiopia.

Significance of the study: The research finding can be an input for concerned policy makers in decision making process around Obstetric Danger Signs. And also it serves as an input in the health education program by different organizations so as to keep the community being aware of the consequence of obstetric Danger signs.

Participants to be included: All pregnant mothers who are at least 4 months for primi gravid and who are delivered within 24 months prior to the study in the community and mothers who are voluntary to participate in the study included.

Confidentiality: All information you give will be kept confidential and won't be accessible to any third party. Your name won't be registered on the question sheet so that you will not be identified.

Risks and Benefits of the study

Risks: The study will be carried out by interviewer administered questionnaire. The procedure doesn't bear any physical or psychological trauma. Furthermore, you will not be forced to respond to the information you do not know.

Benefits: For your participation in the study no payment will be granted or has no any special privilege to you. But, participating in the study and giving your information to questions asked will have great input in efforts to improve pregnant and delivered mother's reproductive health.

Assent: Your participation in the study will be totally based on your willingness. You have the right not to participate from the beginning, or stop any time after starting participation. You will not be forced to respond to the question you do not know and you can ask any question whenever you like.

Name of principal investigator (PI): Sodere Nurgi

Date: _____ Signature _____

Address of PI:

Mobile: +251921460016

E- Mail: nsodere@yahoo.com

Data Collector

Name _____ Date _____ Signature _____

Supervisor

Name _____ Date _____ Signature _____

Annex 1: የመረጃ ቅጽ

አዲስ አበባ ዩኒቨርሲቲ

የጤና ሳይንስ ኮሌጅ

የነርቪንግና የሚድዊፈሪ ትምህርት ክፍል

የጥናቱ መረጃ ቅጽ

በእናቶች ላይ በእርግዝና፣ በወሊድ እና በድሕረ ወሊድ ጊዜ ሊከሰቱ ስለሚችሉ አደገኛ ምልክቶች የእናቶችን ዕውቀት፣ አመለካከት እና ተግባር ለመፈተሽ የተዘጋጀ መጠይቅ።

የጥናቱ ርዕስ

በደብረ ብርሃን ከተማ በእርግዝና፣ በወሊድ እና ከወሊድ በኋላ /ድሕረ ወሊድ/ ጊዜ ሊከሰቱ ስለሚችሉ አደገኛ ምልክቶች የእናቶችን ዕውቀት፣ አመለካከት እና ተግባር መፈተሽ።

የጥናቱ አላማ

የጥናቱ አላማ በእርግዝና ውቅት፣ በወሊድ ጊዜ እና ከወሊድ በኋላ እናቶችን ልዩጋጥሙ ስለሚችሉ አደገኛ ምልክቶች የእናቶችን ዕውቀት፣ አመለካከት እና ተግባር ለመፈተሽ ነው። የሚመለከተው የመንግስት አካል የእናቶችን ሞት ለመቀነስ አስፈላጊውን እርምጃ እንዲወስድ ለማድረግ ነው።

ምስጢራዊነት

በጥናቱ ላይ መሳተፍ በፈቃደኝነት ላይ የተመረከበ ና የምሠጡት መረጃም ለጥናቱ አላማ ብቻ የሚሆን ነው። በጥናቱ ላይ አለመሳተፍ ወይም መሳተፍ ጀምረው ማቋረጥ ከፈለጉ ማቆም ይችላሉ። እንዲሁም መመለስ የማይፈልጉትን ጥያቄዎች አለመመለስ ይችላሉ። ነገር ግን በጥናቱ ላይ ባለመሳተፍ ምንም ዓይነት ተፅእኖ ወይም ጉዳት የለውም።

ይህን ጥናት በተመለከተ ጥያቄ ካልዎት በ 0921 46 00 16 ደውለው ይጠይቁ።

የተሳታፊ ፊርማ_____

ቀን_____

አመሰግናለሁ።

Annex – II consent form

Addis Ababa University College of health sciences

Department of nursing and midwifery

My name is ----- (Interviewer)

I temporarily represent Addis Ababa University, college of health science, Department of Nursing and midwifery. This is a study to be conducted with the objective of assessing knowledge, attitude and practices with respect to obstetric danger signs during pregnancy, child birth and post partum period among mothers in Debre Birhan City administration. As the study is directly related to women who are living in Debre Birhan city administration, you are one of the women who have been selected randomly to participate in this study. Therefore, you are kindly requested to participate in this study and provide the information required from you. I would like to ask you a few questions if I may, but you can refuse to answer any question I ask. You may end the interview at any time. You can also refuse to participate in the study entirely. The interview will last approximately 30 minutes. Your responses will be kept confidential and there will be no way of linking your individual responses to the final results of the study findings. We would like to inform you that the responses that you provide to the questions are very essential, not only, for the successful accomplishment of the study, but also for producing relevant information which will be helpful in the planning and implementation of intervention activities to prevent delays and improve maternal and neonatal survival. Are you voluntary to respond to the questions?

Yes; proceed with the interview

No; thank her and End.

Name of interviewer who sought the consent: _____

Date _____ Signature: _____

Name of supervisor: _____

Result: Questionnaire completed _____

Questionnaire partially completed _____

Participant refused _____

Checked by Supervisor: Name _____

Supervisor's Signature _____ Date _____

Annex II: የስምምነት ማስገንዘቢያ ቅጽ

**አዲስ አበባ የንብርሲቲ
የጤና ሳይንስ ኮሌጅ
አላይድ ጤና ሳይንስ ትምህርት ቤት
ነርሲንግ እና ሚድዋይሬሪ ትምህርት ክፍል**

የስምምነት ማስገንዘቢያ ቅጽ

መለያ ቁጥር _____

ጤና ይስጥልን! ስሜ _____ ነው። እኔ የነርሲንግ ተማሪ ስሆን በእናቶች ላይ በእርግዝና፣ በወሊድ እና በድሕረ ወሊድ ጊዜ ሊከሳቱ ስለሚችሉ አደገኛ ምልክቶች የእናቶችን ዕውቀት፣ አመለካከት እና ተግባር ለመፈተሽ በሚደረገው በእናቶች እና ሥነ-ተወልዶ ጤና ነርሲንግ የድህረ-ምረቃ ተማሪ በሆኑት በስ/ር ሶደሬ ኑርጊ በሚደረገው ጥናት መረጃ በማሰባሰብ ላይ እገኛለሁ። እርሶ ለዚህ ጥናት እንድሳተፉ የተመረጡት በእጣ ነው። ጥናቱ የሚካሄደው በቃለ መጠይቅ ሲሆን የሚሰጡኝ መረጃዎች በሙሉ ምስጢራዊነታቸው በሚገባ የተጠበቀና ለዚህ ጥናት ብቻ የሚውሉ ናቸው። የእርሶ ስም በየትኛውም ቦታ ላይ አይጻፍም። ለሚሰጡኝ መረጃዎች የተለየ ቁጥር ይሰጣቸዋል። የጥናቱ ዉጤት ቢታተምም እንኳን የእርሶና ሌሎች የጥናቱ ተሳታፊዎች የሚትሰጡት መረጃ አጠቃላይ ይዘቱ ነው የሚታተመው። በአጠቃላይ መጠይቁ በፍቃድኝነት ላይ የተመረኮዘ ነው። እርሶ በጥናቱ ለመሳተፍ ሆነ ላለመሳተፍ ሙሉ መብት አለው። በዚህ ጥናት አልሳተፍም ብሎ ምንም ዓይነት ችግር አይገጥምትም። በመጨረሻም ይህን ጥናት በተመለከተ ጥያቄ ካለው የዚህ ጥናት ባለቤት የሆኑትን ስ/ር ሶደሬ ኑርጊ በዚህ አድራሻ፣ በሞባይል ስልክ ቁጥር 0921460016 መጠየቅ ይችላሉ።

ለዚህ መረጃ ጥናት እንዲውል መረጃ ለመስጠት ፈቃደኛ ኖት?

አዎ _____ አይደለሁም _____

በዚህ ጥናት ላይ ስምምነቱን ያስሞላ ሰዉ

ስም _____ ቀን _____ ፊርማ _____

ዉጤት

1. በሙሉ ተሞልቷል _____

2. መርጃ ሰጪዋ ፍቃደኛ አይደለችም _____

3. መርጃዉ በግማሽ ተሞልቷል _____

4. ሌላ ካለ ይግለጹ _____

ያረጋገጠዉ: ስም _____ ቀን _____ ፊርማ _____

Annex -III English version questionnaires for interview
IDENTIFICATION INFORMATION

001. Code No. _____

002. District _____ Kebele _____ House no. _____

SECTION 1: SOCIO-DEMOGRAPHIC INFORMATION			
101	Age in completed years:	A. 15-19 B. 20-24 C. 25-29 D. 30-34 E. 35-39 F. >=40	
102	Marital status: -	A. Single B. Married C. Widowed D. Divorced	
103	Religion	A. Orthodox B. Muslim C. Protestant D. Catholic E. Other (Specify)	
104	Ethnicity	A. Amhara B. Oromo C. Tigre D. Gurage E. Other (specify)	
105	Occupation	A. Housewife B. Government employee	

		C. Private employee D. Business E. Other (Specify)	
106	Educational status:	A. Illiterate B. Read & write C. Elementary D. Secondary E. Diploma & above F. Other	
107	Monthly income in Eth. Birr: -	A. <500 Birr B. 501-1000 Birr C. 1001-1500 Birr D. 1501-2000 Birr E. >=2001	
108	Husband occupation:	A. Private Employee B. Government employee C. Own business D. Farmer E. Other (specify)_____	
SECTION 2: GRAVIDITY AND PARITY			
201	How many times in total you became pregnant?	A. 1 B. 2 – 4 C. Above 4	
202	At what age you get your first pregnancy?	A. <20 B. 20-29 C. >=30	

203	How many times in total you gave birth?	A. 0 B. 1 – 4 C. >4	
204	How many of your pregnancies resulted in a baby that was born Alive?	A. 0 B. 1 C. 2+	
205	How many of your pregnancies resulted in a baby that was born dead?	A. 0 B. 1 C. 2 +	
206	How many children do you have?	A. No child B. 1-4 children C. 5 children and above	
207	Who gives final decision where you have to give birth?	A. Husband B. Yourself C. Relatives	
SECTION 3: KNOWLEDGE ABOUT OBSTETRIC DANGER SIGNS DURING PREGNANCY, CHILD BIRTH AND POST PARTUM PERIOD			
301	Have you ever heard of “obstetric danger signs during pregnancy?	A. Yes B. No (if no skip to question 401)	
302	If yes, what is the meaning of “obstetric danger signs during pregnancy”?	A. Signs that indicate the pregnant woman or/and the pregnancy has an illness B. Don’t know	
303	What is the source of your information about obstetric danger signs during pregnancy?	A. Health personnel B. Relatives C. Friends D. Media E. Other (specify)	

304	Can any woman develop obstetric danger signs during pregnancy?	A. Yes B. No C. Don't know
305	Name the danger signs during pregnancy that you know (circle all mentioned).	A. Bleeding at any time during pregnancy B. Leaking of fluid from birth canal C. Swelling of the body D. Persistent vomiting especially from 4th month of pregnancy onwards E. Persistent headache or blurred vision F. Fever G. Absent or decreased fetal movements H. Foul smelling vaginal discharge I. Feeling very tired J. Unusual abdominal pain K. Pain /burning on urination L. Persistent backache M. Other _____
306	Were you given information about obstetric danger sign/s you may experience at the clinic?	A. Yes B. No
307	If yes, what information were you given?	A. Danger sign was explained and counseling was done on what to do about it. B. Other (specify)

SECTION 4: ATTITUDE TOWARDS DANGER SIGNS DURING PREGNANCY, CHILD BIRTH AND POSTPARTUM PERIOD		
401	It is important for women to know obstetric danger signs during pregnancy.	Strongly agree Agree Neutral Disagree Strongly disagree
402	To know about obstetric danger signs is important because women will seek medical care	Strongly agree Agree Neutral Disagree Strongly disagree
403	To know about obstetric danger signs is important because the danger signs will not go away by their own.	Strongly agree Agree Neutral Disagree Strongly disagree
404	A woman can prevent danger signs during pregnancy.	Strongly agree Agree Neutral Disagree Strongly disagree
405	Mothers who develop obstetric danger signs should seek medical advice.	Strongly agree Agree Neutral Disagree Strongly disagree
406	Mothers who develop obstetric danger signs should seek help from traditional birth attendants.	Strongly agree Agree Neutral

		Disagree Strongly disagree
407	Mothers who develop obstetric danger signs should seek help from other older women.	Strongly agree Agree Neutral Disagree Strongly disagree
SECTION 5: PRACTICE OF DANGER SIGNS DURING PREGNANCY, CHILD BIRTH AND POST PARTUM PERIOD		
501	Have you ever experienced any obstetric danger sign during pregnancy?	A. Yes B. No
502		A. Bleeding at any time during pregnancy B. Leaking of fluid from birth canal C. Swelling of the body D. Persistent vomiting especially from 4th month of pregnancy onwards E. Persistent headache or blurred vision F. Fever G. Absent or decreased fetal movements H. Foul smelling vaginal discharge I. Feeling very tired J. Unusual abdominal pain K. Pain /burning on L. urination M. Persistent backache

503	What did you do when you experienced obstetric danger signs during pregnancy?	A. Sought medical care B. Sought care from a traditional birth attendants C. Stayed home D. Sought care from an older woman E. Other.....
SECTION 6: HEALTH SERVICE RELATED INFORMATION		
601	How much time do you take to reach the nearest health center?	A. <1 Hour B. >=1 Hour
602	Did you receive antenatal care during your last pregnancy? (For multi gravid and delivered mothers only).	A. Yes B. No (if no skip to question 606)
603	Did you receive antenatal care during your current pregnancy?	A. Yes B. No (if no skip to 605)
604	How many antenatal visits did you make during your last pregnancy?	A. One visit B. Two visits C. Three visits D. Four visits E. More than four visits (give reasons)
605	Where did you give birth during your last pregnancy? (For multi gravid and delivered mothers only).	A. At health institutions B. At home

Thank you!!!

Annex -III AMHARIC VERSION QUESTIONNAIRES FOR INTERVIEW

በአማራጭ የተዘጋጀ ቃለ መጠይቅ

001. መለያ ቁጥር_____

002. ቀበሌ_____

003. የቤት ቁጥር._____

ክፍል አንድ፡ ስነ-ህዝብን (ዲሞግራፊን) የተመለከቱ ጥያቄዎች			
ቁጥር	ጥያቄ	ምርጫዎች	ገለፃ
101	ዕድሜ (በሙሉ ዓመት):	1ኛ) 15-19 2ኛ) 20-24 3ኛ) 25-29 4ኛ) 30-34 5ኛ) 35-39 6ኛ) >=40	
102	የጋብቻ ሁኔታ:	7ኛ) ያላገባች 8ኛ) ያገባች 9ኛ) ባልዋ የሞተባት 10ኛ) የፈታች	
103	ሀይማኖት:	1ኛ) ኦርቶዶክስ 2ኛ) ካቶሊክ 3ኛ) ፕሮቴስታንት 4ኛ) ሙስሊም 5ኛ) ሌላ ካለ ይግለጹ_____	
104	ብሔር	1ኛ) አማራ 2ኛ) ኦሮሞ 3ኛ) ትግሬ 4ኛ) ጉራጌ 5ኛ) ሌላ ካለ ይገለጹ_____	
105	የስራ-ሁኔታ:	1ኛ) የቤት እመቤት 2ኛ) የመንግስት ሠራተኛ 3ኛ) የግል ሠራተኛ 4ኛ) ነጋዴ 5ኛ) ሌላ ካለ ይግለጹ_____	
106	የትምህርት ሁኔታ:	1ኛ) ያልተማረች 2ኛ) ማንበብና መጻፍ የሚችል 3ኛ) የመጀመሪያ ደረጃ 4ኛ) ሁለተኛ ደረጃ 5ኛ) ዲፕሎማና ከዚያ በላይ 6ኛ) ሌላ ካለ ይግለጹ_____	
107	የወር ገቢ	1ኛ) <500 ብር 2ኛ) 500-1000 ብር 3ኛ) 1001-1500 ብር 4ኛ) 1501-2000 ብር	

		5ኛ) >2001ብር	
108	የባለቤትዎ የሥራ ሁኔታ:	1ኛ) የግል ሠራተኛ 2ኛ) የመንግስት ሠራተኛ 3ኛ) ነጋዴ 4ኛ) ገበሬ 5ኛ) ሌላ ካለ ይግለጹ_____	
ክፍል ሁለት: ያረገዙት እና የወለዱአቸው ልጆች ብዛት			
201	በአጠቃላይ ስንት ጊዜ ነው ያረገዙት?	1ኛ) 1 2ኛ) 2 - 4 3ኛ) ከ 4 ጊዜ በላይ	
202	በመጀመሪያ እርግዝናዎች ጊዜ ዕድሜዎች ስንት ነበር?	1ኛ) ከ 20 በታች 2ኛ) 20-29 3ኛ) 30 ና ከዚያ በላይ	
203	በአጠቃላይ የወለዱአቸው ልጆች ብዛት ስንት ናቸው?	1ኛ) 0 2ኛ) 1 - 4 3ኛ) >4	
204	ከአረገዙት ውስጥ በህይወት የተወለዱት ልጆች ብዛት ስንት ናቸው?	1ኛ) 0 2ኛ) 1 3ኛ) 2+	
205	ከአረገዙት ውስጥ ሞተው የተወለዱት ልጆች ብዛት?	1ኛ) 0 2ኛ) 1 3ኛ) 2 +	
206	ስንት ልጆች አሉሽ?	1ኛ) ልጆች የሉኝም 2ኛ) 1-4 ልጆች 3ኛ) 5 ልጆች ና ከዚያ በላይ	
ክፍል 3: በእርግዝና ጊዜ ሊከሰቱ ስለሚችሉ አደገኛ ምልክቶችን የተመለከተ የዕውቀት መጠይቆች			
301	በእርግዝና ጊዜ ሊከሰቱ ስለሚችሉ አደገኛ ምልክቶች ስምተው ያዉቃሉ?	1ኛ) አዎ 2ኛ) የለም	(የለም ከሆነ ወደ ጥያቄ ቁጥር 401 ይለፉ
302	አዎ ከሆነ በእርግዝና ጊዜ ሊከሰቱ የሚችሉ አደገኛ ምልክቶች ስንል ምን ማለት ነው?	1ኛ) አንዲት እናት በእርግዝና ጊዜ የህመም ምልክቶችን ማለትም እንደ ከፍታኛ ራስ ምታት፣ ከምህፃን ደም መፍሰስ እና የመሳሰሉት ካላት 2ኛ) ሌላ (ይጥቀሱ) 3ኛ) አላውቅም	
303	በእርግዝና ጊዜ ሊከሰቱ የሚችሉ አደገኛ ምልክቶችን ከማን ነው የሰሙት?	1ኛ) ከጤና ባለሙያ 2ኛ) ከዘመድ	ከአንድ በላይ መልስ ይቻላል::

		3ኛ) ከገደኞቹ 4ኛ) ከሚዲያ (ሬድዮ፣ ቲቪ) 5ኛ) ሌላ (ይጠቀስ) -----	
304	በእዝርግዝና ጊዜ የምክሰቱት አደገኛ ምልክቶች በሁሉም እናቶች ላይ ሊከሰቱ ይችላሉ?	1ኛ) አዎ 2ኛ) አይችልም(አይከሰትም) 3ኛ) አላወቅም	
305	በእርግዝና ጊዜ የምክሰቱን አደገኛ ምልክቶች የሚያወቁትን ይጥቀሱልኝ፡፡	1ኛ) በእርግዝና ወቅት በየትኛውም ጊዜ ደም መፍሰስ 2ኛ) ከማህፀን ፈሳሽ መፍሰስ 3ኛ) የሰውነት ማበጥ 4ኛ) ከአራት ወር እርግዝና በኋላ የሆነና በተከታታይ ማስመለስ 5ኛ) ለረጅም ጊዜ የሚቆይ የእራስ ምታት ወይም በትክክል ያለማየት ችግር (ብዥታ) 6ኛ) ትኩሳት 7ኛ) የጽንሰ እንቅስቃሴ መቀነስ ወይም ማቆም 8ኛ) መጥፎ ሽታ ያለው የማህፀን ፈሳሽ 9ኛ) ከፍተኛ የድካም ስሜት 10ኛ) ሽንት በሚሸናበት ጊዜ የህመም/የማቃጠል ስሜት 11ኛ) በተከታታይ የጀርባ ህመም 12ኛ) የልተለመደ የሆድ ቁርጠት 13ኛ) ሌላ ካለ ይግለጹ _____ 14ኛ) አላወቅም	(የተጠቀሱትን በሙሉ ያክብቡ)
306	ሊያገጥሙ ስለሚችሉ አደገኛ ምልክቶች ከጤና ተቋም መረጃ ተሰቶት ነበር?	1ኛ) አዎ 2ኛ) አልተሰጠኝም 3ኛ) አላወቅም	
307	አዎ ከሆነ ምን መረጃ ነው ያገኙት?	1ኛ) ስለ አደጋ ምልክቶች ማብራሪያ አግኝቻለሁ; ምን ማድረግ እንዳለብኝም ምክር ሰጥተዋል	

	2ኛ) ሌላ (ይጠቀስ)-----	
ክፍል 4: በእርግዝና ጊዜ ሊከሰቱ ስለሚችሉ አደገኛ ምልክቶችን የተመለከተ አመለካከትን የሚዳስስ መጠይቅ		
401	ለ አንድ እናት በእርግዝና ጊዜ ስለምከሰቱ አደገኛ ምልክቶች ማወቃቸው ጠቀሜታ አለው ::	በጣም እስማማለሁ. እስማማለሁ. ገለልተኛ አልስማማም በጣም አልስማማም
402	ለ አንድ እናት በእርግዝና ጊዜ ስለምከሰቱ አደገኛ ምልክቶች ማወቃቸው በ ጊዜ የሕክምና ዕርዳታ ለማግኘት ይረዳል::	በጣም እስማማለሁ. እስማማለሁ. ገለልተኛ አልስማማም በጣም አልስማማም
403	ለ አንድ እናት በእርግዝና ጊዜ ስለምከሰቱ አደገኛ ምልክቶች ማወቃቸው ያለሕክምና ዕርዳታ ምልክቶቻቸው ስለማይጠፉ ነው::	በጣም እስማማለሁ. እስማማለሁ. ገለልተኛ አልስማማም በጣም አልስማማም
404	አንድት እናት አደገኛ ምልክቶች መከላከል ትችላለች::	በጣም እስማማለሁ. እስማማለሁ. ገለልተኛ አልስማማም በጣም አልስማማም
405	በእርግዝና ጊዜ አደገኛ ምልክቶች የታዩባቸው እናቶች የሕክምና ዕርዳታ ማግኘት አለባቸው::	በጣም እስማማለሁ. እስማማለሁ. ገለልተኛ አልስማማም በጣም አልስማማም

406	በእርግዝና ጊዜ አደገኛ ምልክቶች የታዩባቸው እናቶች ወደ ልምድ አዋላጆች መሄድ አለባቸው፡፡	በጣም እስማማለሁ እስማማለሁ ገለልተኛ አልስማማም በጣም አልስማማም
407	በእርግዝና ጊዜ አደገኛ ምልክቶች የታዩባቸው እናቶች ልምድ ወዳላቸው ሴቶች በመሄድ ዕርዳታ ማግኘት አለባቸው፡፡	በጣም እስማማለሁ እስማማለሁ ገለልተኛ አልስማማም በጣም አልስማማም
ክፍል 5: በእርግዝና ጊዜ ተግባርን በተመለከተ የተዘጋጀ መጠይቅ		
501	በእርግዝና ጊዜ የምክሰቱት አደገኛ ምልክቶች ተከስቶብዎት ያዉቃሉ?	1ኛ) አዎ 2ኛ) አልደረሰብኝም
502	አዎ ከሆነ የትኛው አደገኛ ምልክት ተከስቶብዎት?	በእርግዝና ወቅት በየትኛውም ጊዜ ደም መፍሰስ ከማህፀን ፈሳሽ መፍሰስ የሰውነት ማበጥ ከአራት ወር እርግዝና በኋላ የሆነና በተከታታይ ማስመለስ ለረጅም ጊዜ የሚቆይ የእራስ ምታት ወይም በትክክል ያለማየት ችግር (ብዥታ) ትኩሳት የጽንሰ እንቅስቃሴ መቀነስ ወይም ማቆም መጥፎ ሽታ ያለው የማህፀን ፈሳሽ ከፍተኛ የድካም ስሜት ሽንት በሚሸናበት ጊዜ የህመም/የሚቃጠል ስሜት በተከታታይ የጀርባ ህመም የልተለመደ የሆድ ቁርጠት
503	እኛህ አደገኛ ምልክቶች በደረሰብዎት ጊዜ ምን ነበር ያደረጉት?	1ኛ) ወደ ህክምና አገልግሎት ነጋ የሄድኩት 2ኛ) ወደ ልምድ አዋላጆች መሄድ 3ኛ) የትም አልሄድኩም/ ምንም አላረኩም 4ኛ) ከታላላቆች ሴቶች እገዛ አገኘሁ 5ኛ) ሌላ (ይጠቀስ)-----

ክፍል ስድስት፡ የጤና ተቋማትን የተመለከተ መጠይቆች			
601	በአቀራቢያዎ ወደሚገኝ ጤና ተቋም /ጣቢያ ለመድረስ የሚፈጅብዎት ሰዓት ስንት ነው?	1ኛ) ከ 1 ሰአት በታች 2ኛ) 1 ሰአት ና ከዚያ በላይ	
602	በመጨረሻ እርግዝናዎ ጊዜ የቅድመ ወሊድ ክትትል አድርገዋል? (አንድና ከዚያ በላይ ለወለዱ አናቶች ብቻ)	1ኛ) አዎ 2ኛ) የለም	የለም ከሆነ ወደ.ተ.ቁ. 606
603	በዚህ እርግዝናዎ ወቅት የቅድመ ወሊድ ክትትል አድርገዋል? /የመጀመሪያ እርግዝና ከሆነ ብቻ/	1ኛ) አዎ 2ኛ) የለም	የለም ከሆነ ወደ ተ.ቁ. 606
604	በመጨረሻ እርግዝናዎ ወቅት ስንት ጊዜ ነው የቅድመ ወሊድ ክትትል ያደረጉት?	1ኛ) አንድ ጊዜ 2ኛ) ሁለት ጊዜ 3ኛ) ሦስት ጊዜ 4ኛ) አራት ጊዜ 5ኛ) ከአራት ጊዜ በላይ (ምክናቱን ይግለፁ) -----	
605	የመጨረሻ እርግዝናዎትን የት ነበር የወለዱት((አንድና ከዚያ በላይ ለወለዱ አናቶች ብቻ)	1ኛ) በጤና ተቋም 2ኛ) በቤት	

አመሰግናለዉ!

CURRICULUM VITAE

1. Personal background

Name Sodere Nurgi Djirata
Age 25
Sex Female
Date of birth 04/11/1988 G.C.
Place of birth East Wollega, Nekemte town
Marital status Married
Nationality Ethiopian
Address Addis Ababa, Ethiopia
Tel-phone 09 21 46 00 16 (Mob)

E-mail nsodere@yahoo.com

2. Higher education

Addis Ababa University, school of Health Science
Awarded BSc degree in Midwifery
MSc candidate in maternity and Reproductive health

3. Employment, Experience and Certification

- ✎ Has worked in Debre Birhan University for two years from 2003 – Sep 2005E C as assistant Lecturer.
- ✎ Currently Msc candidate in Addis Ababa University in Maternity and Reproductive Health.
- ✎ Certified on TB/ HIV Training
- ✎ Certified on PMTCT Training
- ✎ Certified on Palliative care Training

- ✎ Certified on PICT Training
- ✎ Certified on STI/ PEP Training

4. Hobbies

- ✎ Involving in research and clinical activities
- ✎ helping patients and poor peoples
- ✎ Teaching in higher institutions
- ✎ Reading books especially medical books
- ✎ Watching films and reading fictions

5. Special Skills

- ✎ Basic computer skill
 - MS –Word
 - MS – Excel
 - MS – Power point
- ✎ Good communication skill

6. Languages

Language	Speaking	Reading	Writing
Afan Oromo	Excellent	Excellent	Excellent
Amharic	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent

7. References

- ☞ Mr. Wendwesen Dibekulu
 - Lecturer of Medicine Health Science college, D/birhan University
 - Tel. 09-11-39-65-27

