

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

**PATTERNS AND ASSOCIATED FACTORS OF SELECTED
ESSENTIAL NEWBORN CARE PRACTICES AMONG
MOTHERS 15-49 YEARS OF AGE WHO GAVE BIRTH AT
HOME IN DAMOT PULASA DISTRICT, SOUTHERN
ETHIOPIA,2016.**

BY: TEFAYE YITNA (BSc.)

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BY: TEFAYE YITNA (BSc.)

NAME OF ADVISOR: BAZIE MEKONNEN (MSc,BSc)

JUNE, 2016

ADDIS ABABA, ETHIOPIA

Approval by the examiner board

This thesis which is done by Tesfaye Yitna is accepted in its present form by the examiner board as it satisfying thesis requirement for the degree of masters of Science in Maternity and Reproductive health nursing.

Internal examiner:

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

Advisor:

Bazie Mekonnen (MSc, BSc)	_____	/	_____	/	_____
Full name		Rank		Signature	Date

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LIST OF ABRIVIATIONS AND ACRONYMS

AAU	Addis Ababa University
ANC	Antenatal Care
EDHS	Ethiopian Demographic and Health Survey
EMDHS	Ethiopian Mini Demographic and Health Survey
ENBC	Essential Newborn Care
HH	House Hold
MDG	Millennium Development Goal
MOH	Minister of Health
NMR	Neonatal Mortality Rate
PNC	Post Natal Care
SDG	Sustainable Development Goal
SNNP	Southern Nation Nationality People
SPSS	Statistical Program Social Science
TBA	Traditional Birth Attendant
WHO	World Health Organization

ABSTRACT

Background – Great efforts have been made to improve health of children around the world but mortality rates in neonates are still high. Neonatal mortality, accounting for an estimated 4 million deaths worldwide each year, constitutes 40% of under-5 mortality and approximately 57% of infant mortality. In Ethiopia neonatal morbidity and mortality rates are among the highest in the world and around 122,000 newborns die every year and the neonatal mortality rate is 37 per 1000 live births. Currently 1 in every 27 Ethiopian children dies within his or her first month of life. Nationally, neonatal deaths account for 42% of under-five deaths and the neonatal mortality rates in the study region is 38 per 1,000 live births.

Objectives - To assess the patterns and associated factors of selected essential newborn care practices among mothers 15-49 years of age who gave birth at home.

Methodology – A community based cross – sectional study design was employed from March-April, 2016. A total of 450 Women of reproductive age 15-49 years who delivered at home in the last one year prior to the study period were selected by using systematic random sampling technique. Data were checked manually for completeness and then coded and entered in to Epi Info version 3.5.1 and then exported in to SPSS version 20 software for analysis. Descriptive analyses such, percentages, cross tabulation, frequency distribution were conducted. Then bivariate analyses between dependent and independent variables were performed using binary logistic regression. Multiple logistic analyses were done to control possible confounding variable. P-value less than 0.05 were taken as significant association.

Result: The study revealed that the prevalence of essential newborn care was 24%. ANC visit (AOR = 0.264, P = 0.015, CI(0.09-0.773)), advice about ENBC (AOR = 0.114, P = 0.0001, CI(0.058-0.221)), PNC visit (AOR = 0.209, P = 0.0001, CI(0.110-0.399)) were found to have statistically significant association with ENBC practice.

Conclusion and Recommendation: The coverage of essential newborn care practice was generally low. Community based behavioral change communication, health facilities should increase the service coverage of ANC and PNC and health extension workers should give education on pre lacteal feeding, bathing time and application of material on the newborn stump.

Keywords: Essential newborn care practice, Newborn.

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND

Great efforts have been made to improve health of children around the world but mortality rates are still high in neonates. Neonatal Mortality Rate (NMR) is reduced by 28% in last two decades from an estimated 32 deaths per 1000 live births (year 1990) to 21 deaths (year 2011) (1). Neonatal mortality, accounting for an estimated 4 million deaths worldwide each year, constitutes 40% of under-5 mortality and approximately 57% of infant mortality (2).

Essential newborn care (ENBC) is a comprehensive strategy designed to improve the health of newborns through interventions before conception, during pregnancy, at and soon after birth, and in the postnatal period(3). Annually around 40 million mothers give birth at home without any trained health worker (4) , and Consequently, most of the maternal, perinatal and neonatal morbidities and mortalities occur at the community level due to lack of good quality care during labour and birth. The causes are multi-factorial, ranging from socio-economic aspects of poverty; poor health status of women; lack of autonomy and decision making authority; and illiteracy to health system related factors like poor antenatal and obstetric care; absence of trained birth attendant; inadequate referral system; lack of transportation facilities; and poor linkages between health centers and communities (4). This burden could be averted by achieving universal coverage in skilled birth attendance and providing good quality care for all births.

Globally, it is proved that postnatal care is crucial in maintaining and promoting the health of the woman and the newborn baby, while providing an opportunity for health professionals to identify, monitor and manage health conditions that may develop in the mother and newborn during the postnatal period. Additionally, postnatal care provides health professionals with the opportunity to promote exclusive breastfeeding, personal hygiene, appropriate feeding practices, and family planning counseling and services. Moreover, postnatal care allows for the provision of postnatal vitamin A and iron supplementation to the mother and immunization of newborns to provide them with optimal start to life (5).

The World Health Organization (WHO) guidelines for essential newborn care include hygiene during delivery, keeping the newborn warm, early initiation of breastfeeding, care of the eyes, care during illness, immunization, and care of low-birth-weight newborns(6). So that it is necessary for the mother and her family to understand these aspects of childbirth and newborn care and be prepared to react to the potential danger signs. Although Ethiopia achieves to improve access to maternal, newborn, and child health services, accelerated progress is needed for the country to achieve Millennium Development Goal 4 (7), particularly in the area of new-born health. Currently 1 in every 27 Ethiopian children dies within his or her first month of life (6). Nationally, neonatal deaths account for 42% of under-five deaths (8) and the primary causes for newborn death include birth asphyxia (30%), sepsis (24%), prematurity (23%), and pneumonia (8%) (9). According to studies conducted in the four regions of Ethiopia the neonatal mortality rates in SNNP is 38 per1,000 live births(10).

In Ethiopia routine health services for mothers and newborns are not well utilized, according to the Ethiopia Mini Demographic Health Survey 2014 ,only 40% of women receive antenatal care from a skilled provider, 15% of births take place at a health facility, and 12% of women receive a postnatal checkup within the first two days of birth (11). To change the practice at the household level, new innovative strategies must be developed for safe home deliveries including essential neonatal care, besides devising means of proper care of the neonate in domestic settings and ensuring proper referral of those neonates who cannot be managed at home (12).The potential of essential interventions to save newborn Ethiopian lives, therefore, has not yet been realized and there is a need for continued efforts to increase coverage especially in rural areas where access to health services and information about newborn care is limited(13). Therefore, the purpose of this study was to assess the patterns and associated factors of selected essential new born care practices in Damot pulasa district.

1.2. STATEMENT OF THE PROBLEM

Although there have been dramatic improvements in child survival, the burden of mortality in the first month of life has remained virtually unchanged. Neonatal deaths in general, early neonatal deaths in particular now represent two-third of infant deaths and one-third of under-five deaths worldwide(14). Between 1990 and 2011, global neonatal mortality decline was slower than that of under-five mortality. Due to this, the proportion of under-five deaths due to neonatal mortality increased. This increase is primarily a consequence of decreasing post-neonatal and under-five mortality as a result of the typical focus of child survival program of the past two decades on diseases affecting children over four weeks of age(15). Even if neonatal mortality rates are also decreasing globally, Africa is experiencing much slower declines than other regions (16). Each year, at least 1.16 million African babies die in the first 28 days of life and 850,000 of these babies do not live past the week they are born. A vast majority of these deaths are occurring in Sub-Saharan Africa countries and has also shown the slowest progress in reducing new born deaths, especially deaths in the first weeks of life(17).

Essential newborn care is important for the proper development and healthy life of a baby. Though 70% of infant deaths occur during the first month of life, the policy-makers and health professionals in developing countries, until recently, gave little attention for the new born care. Even if, the principles of essential newborn care are simple, requiring no expensive high technology equipment(18)

The world health organization recommended essential newborn care practices to reduce the risk of the main causes of neonatal deaths in both community and facility deliveries(19).

Studies conducted in Northern Ghana has indicated that(0.2%) had safe cord care, (5.2%) optimal thermal care, and (50.2%) were considered to have had adequate neonatal feeding(20).

Even though Ethiopia recorded a 67% reduction in under-five mortality and achieved the fourth millennium development goal (22); a large population based survey in Ethiopia (2012) (23) reported that only 50% of newborns had early initiation of breast feeding, 41% had clean cord care, 43% immediate drying and 47% delayed bathing.

Studies conducted in four regions of Ethiopia have indicated that in this populations of recent mothers include bathing during the first 24 hours of life, application of butter and other substances to the cord, and discarding of colostrum milk(10).

In Ethiopia neonatal morbidity and mortality rates are among the highest in the world and around 122,000 newborns die every year and the neonatal mortality rate is 37 per 1000 live births (8,19).

Since reducing neonatal mortality is now critical to achieving the 4th Millennium Development Goal (22,23) and Ethiopia is planning to achieve SDG3 which is to ensure healthy lives and promote well-being for all at all ages(26).

There are simple community based strategies to improve antenatal, childbirth ,and new born healthcare practices that reduces neonatal death, includes : clean delivery practices (clean hands and delivery surface), clean umbilical cord care (cutting the umbilical cord with a sterile instrument, tying it with a sterile thread, and applying nothing to the cut stump of the cord), thermal care (immediate drying and wrapping of the baby after delivery, delay bathing the baby for more than six hours, and skin-to-skin contact with the mother), extra care for low birth weight or preterm birth (additional warmth, cleanliness and nutrition and early recognition of disease), and early and exclusive breastfeeding to minimize the risk factors associated with neonatal mortality in developing countries(27).

There is a need for continued efforts to increase coverage especially in rural areas where access to health services and information about newborn care is limited.

In the context of low uptake of health facility delivery; it is relevant to explore routine immediate newborn care practices that follow the birth of a baby at home within rural communities in Ethiopia. Therefore the aim of this study was to determine the selected patterns (Safe cord care(cord cutting), early exclusive breast feeding ,Thermal care(bathing time)) and associated factors of selected essential new born care practices among mothers 15-49 years who gave live birth at home in the last one year in Damot pulasa district.

1.3. SIGNIFICANCE OF THE STUDY

Many studies on newborn mortality have concluded that one of the important reasons for the high level of newborn deaths in the developing countries is poor household newborn care practices.

In the past the prevalence of essential newborn care practice and associated factors of essential newborn care practice has not been conducted in the study area, but the neonatal mortality rates in the region is 38 per 1,000 live births which is slightly more than the national which is 37 per 1000 live births(10). Since home deliveries are mostly assisted by Traditional Birth Attendants (TBAs), relatives, neighbors and other senior women from the community who lack the requisite knowledge of safe delivery and newborn care practices that may increase maternal and newborn morbidity and mortality. For this reason, improving newborn survival is a major priority in child health today and the government sets universal sustainable development goals which states to end preventable deaths of newborns and under-five children by 2030. Due to this reason studying the patterns and associated factors of selected essential newborn care practice in the study area was vital and governmental issue.

In addition, the study will have greater input to program managers and policy makers to understand the barriers to good newborn care practices at household and community levels for designing, proper implementation and evaluation of programs on reduction of neonatal mortality and improvement of new born care.

CHAPTER TWO

LITERATURE REVIEW

2.1. IMMEDIATE NEWBORN CARE

The World Health Organization (6) suggests the following essential new born care interventions in reducing deaths and diseases in any new born: Clean child birth and cord care to prevent infections, thermal protection in order to prevent hypothermia and the activities include warm room for delivery, immediate drying of the baby, and skin to skin contact, early and exclusive breast feeding which should be started within one hour of birth, initiation of breathing and resuscitation to prevent birth asphyxia, prevention and management of ophthalmia neonatrum, immunizations of BCG,OPV0,and Hepatitis B vaccine, additional care of the preterm /or low birth weight newborn. The study would focus specifically on cord care (cord cutting), thermal care (bathing time) and early exclusive breast feeding.

2.1.1. CORD CARE

The cord stump remains the major means of entry for infections after birth. The umbilical cord should be cut with sterilized blade and tied with sterilized materials, and nothing applied to the stump. Principles of clean cord stump care stipulate keeping the cord dry, clean and nothing is applied on it, neither at home or in the health facility. The stump will dry and mummify if exposed to air without any dressing, binding or bandages. It will remain clean if it is protected with clean clothes and is kept from urine and soiling. No antiseptics are needed for cleaning. If soiled, the cord can be washed with clean water and dried with clean cotton or gauze. Local practices of putting various substances on the cord stump whether in health facilities or homes should be carefully examined and discouraged if found harmful and substituted with acceptable ones. If the umbilical stump becomes red, drains pus with the redness extending to the skin around it, the baby stops suckling well, is sleepy, does not wake up or is having difficulty breathing, this may be a sign of serious infection. The mother or caretaker should seek help from a health facility. The baby must be referred immediately to the hospital for proper treatment(6).

Studies done in India suggest that cord cutting is of particular interest generally being indicative of obstetric care and in home births the primary birth attendant usually does cord cutting with shaving blades, household knives(28).Studies done in rural areas of Bangladesh suggest that

mustard oil and ash were the commonly used material on the cord stump while a substantial proportion used antibiotics/antiseptics(tetracycline/gentamycin ointment/powder(29), but WHO recommends use of 4% chlorhexidine on cord stump to reduce severe infection and neonatal mortality(30).Another study in rural Pondicherry of India found that application of substance on the umbilical cord is a custom followed in many parts and cow dung was used by majority of them which is common cause of neonatal tetanus and neonatal death. The study reported 14% of children had a history of application either with sweet flag(52.6%),oil(42.1%) or ghee(5.3%) (31). In Nawalparasi district of Nepal clean sterile instrument was used in less than half (48.31%) deliveries to cut the umbilical cord, surprisingly in three cases knife and grass cutter was used to cut the umbilical cord and various substances like oil, ash, oil and turmeric, medical drugs and powder was applied in cord stump(33).

Study conducted in Northern Ghana showed that application of substances like including Shea butter, ethylated spirits, Shea butter mixed with powder, local alcoholic drink called ‘Akpeteshie’, ground Shea nuts, and Shea butter mixed with amoxicillin to facilitate the healing process of the cord stump(20).Study conducted in Nigeria also revealed that mothers cleaned their babies cord with methylated spirit while others cleaned with methylated spirit with application of other substances like herbs/cows urine, powders, oils/Vaseline and most of the cord care was given by grandmothers than mothers(32).

Study conducted in sub urban areas of western Nigeria the umbilical cord was cut after the expulsion of placenta in 203 (67.7%) deliveries. cord was cut with a new, boiled blade or sterile scissors in 279 (93.0) deliveries, and in 12 (4.0%) deliveries a sickle/household knife or an old un-boiled blade was used(38).Studies done in South Sudan suggested that(32%) material used to cut the cord include used razor blades, boiled scissors, knives, and sorghum stems and common items applied to the cord after cutting were ash or soot (41%), antiseptic (36%), oil (10%), and dried cow dung (3%)(34).Studies done in four regions of Ethiopia have found that (48.5%) used a new string or thread was used to tie the cord, although (31.3%) the use of a string like fiber from ensete plant (known as the ‘false banana’) was a common cord tie for home births, (37.9%) used other methods of tying. A new razor or blade (88.3%) was used while others (6.2%) used previously used razor and butter was used in the umbilical stamp after cutting(10).

Another studies done in Awebel district, East Gojam of Ethiopia found that a new blade was the most common instrument for cord cutting and (97.6%) of them used a safe instrument for cord cutting but majority of(97.1%) cord was not tied plus application of substance like butter the commonest one and Vaseline ointment(18).

2.1.2. THERMAL CARE

World Health Organization(WHO) recommends that bathing of the newborn should be postponed for at least six hours ,if not at least two to three days after delivery(35). Findings from Rural Bangladesh suggests that Early bathing(71.2%) was prevalent in the area (29).Study conducted in Nepal suggest that Even if delayed bathing was a common practice among all home births, there is non-bathing of the newborn until 7 days as well skin-to-skin care was not practiced in majority of cases(33). Study conducted in Northern Ghana indicated that wrapping the new born within 10 minutes of birth was practiced by majority of mothers but a significant proportion(93.6%) of babies were bathed within 6 hours of delivery making it impossible to maintain optimal thermal care(20).

Study conducted in South Sudan found that even if nine out of ten mothers was wrapping the new born immediately after birth , only (1%) were not bathed within the first six hours after birth(34).Another study done in Eastern Uganda showed that among 414 baby aged 1-4 months (86%) were immediately wrapped, though skin to skin care was almost non –existent (2%), and (56%) of the babies bathed with in the first six hours, (82%) within the first twelve hours and almost all during the first twenty four hours making early bathing the norm(36).

Studies done Western Nigeria also found that among 300 mothers interviewed (50%) newborns were wrapped within 10minutes, and (95.7%) newborns wrapped within 30 minutes after birth. Almost all of these newborns were bathed within six hours after birth, (95.8%) within half an hour, and (98.2%) within one hour(38).Study done in 4 regions of Ethiopia found that only (25.3%) of births that bathing of the newborn was delayed at least 24 hours(10).Another qualitative study done in rural Ethiopia found that immediate bathing was a common practice (13).Study conducted in rural areas of Awebel district, East Gojam of Ethiopia also showed that(65.6%) were bathed their new born before 24 hours of birth, (41.6%) were used to bath

immediately after birth and (55.7%) were used cold water while (44.3%) were used warm water to bath new born the first time after birth(18).

2.1.3. EARLY AND EXCLUSIVE BREAST FEEDING

Though in the recent century importance of immediate breast-feeding of colostrum is widely recognized all over the world,(63%) of cases irrespective of place of delivery non-feeding of colostrum was recorded because most of the mothers were of the belief that colostrum was difficult to digest by the newborn and will create a lump in the abdomen(28). A case study of tribal women, Gujarat showed that delayed breast feeding up to three days was common practice so that till the third day instead of breast-feeding, neonate is given “Gadthuti” (a form of pre-lacteal feed) of sugar water or in some instance even sugarcane juice was given even if the mother has feeding problems then goat’s milk is preferred for top feeding rather than cow’s milk and pre-lacteal feeds were given for all home and institutional births(28). Study conducted in India showed that (65%) newborns were breastfed within an hour after birth and (5.9%) were pre-lacteal fed(31). Study from Nepal found that (51.3%) was practicing early initiation of breast feeding(33). Findings from rural Bangladesh found that only (40%) were put to the breast within 30 minutes and about a third of the newborns offered some kind of pre-lacteals before initiation of breast feeding(29). Study done in Northern Ghana suggest that good neonatal breast feeding was practiced by half of the respondents and less than (80%) was practiced timely initiation of breast feeding. Poor neonatal feeding was mainly due to pre-lacteal feeding (giving feeds other than breast milk as the first feed) and lack of exclusive breastfeeding(20). A study from eastern Uganda found that (50%) of newborn were initiation of breast feeding within the first one hour,(41%) within the first 1-6 hours, and others fed cow’s milk, plain water, sugar or glucose water, gripe water and tea(36). Also a study conducted in Western Nigeria suggest that initiation rates of breast feeding were (65.3%) within one hour while (95.7%) within 24 hours(38).

A study from Southern Tanzania indicated that (83%) initiated breast feeding within 24 hours of delivery and (51%) giving something other than breast milk in the first three days after delivery most commonly sugar water(39).

A study conducted in 4 regions of Ethiopia on newborn practices at home and health facilities suggest that (52.1%) initiate breast feeding within the first 1 hour with similar proportions

between home(50.2%) and facility(56.7%)delivery ,(44.5%) squeezed out the colostrum before breast feeding and (12.4%) given pre-lacteal feeding among these plain water(32.7%),sugar water(25.1%),fresh butter(14.2%), and milk other than breast milk(13.2%)(10).

The findings from two areas of Ethiopia also indicated that (50%) were initiated breast feeding within 1 hour of delivery (14,45).

A qualitative study done in rural Ethiopia found that a mixture of warm water and sugar were immediately given for the new born until the mother was ready to breast fed(13).

Another study conducted in Awebel district, East Gojam of Ethiopia suggest that (41.6%) practiced early initiation of breast feeding ,(58.4%) latter than one hours of birth and (11.2%) given pre-lacteal feeding (butter and water)(18).

2.2. ASSOCIATED FACTORS OF ESSENTIAL NEWBORN CARE PRACTICE

2.2.1. SOCIO-DEMOGRAPHIC FACTORS

Maternal and newborn healths are inseparable from each other. Socio-demographic factors that influence newborn mortality and survival are age of the mother at birth, parity, religion and education of the mother. Several studies have found the association between mother's age at birth and newborn mortality. Study conducted in India found that mothers age at marriage and days of first bath to newborns was significantly associated (31). A prospective population-based study from low-middle income countries found that higher neonatal mortality was associated with maternal age > 35 and <20 relative to women 20-35 years of age(42,43,44). Findings from Rural Bangladesh suggest that practice of giving pre-lacteals was associated with teenage mothers(29). Another finding from rural Bangladesh suggests that there was significant association between religion and early bathing of the newborns. Compared to Hindus, Muslim families were two times more likely to give bath within 3 days of delivery(29).A study done in south west Ethiopia found that first birth order and birth order of 5th or above neonates were more likely to die during neonatal period as compared to 2nd–4th order(45).The education of the mother has been shown to have a strong influence on the utilization of maternal health services and child survival. Mother's education is inversely related to a child's risk of dying. Under-five mortality among children born

to mothers with no education (121 per 1,000 live births) is 2.6 times as high as that of children born to mothers with secondary education (46 per 1,000 live births) and more than five times as high as that of mothers with more than a secondary education (24 per 1,000 live births)(8). Maternal education was significantly associated with application of potentially harmful substances to the cord and breast feeding within one hour of birth(33, 46). Study done in Awebel district, East Gojam of Ethiopia found that educational status was statistically significant association with ENBC(18). Another study done at Mandura district North West of Ethiopia found that the likelihood of good newborn practice was higher among those who attend primary school and high school and above level (14).

2.2.2. SOCIO-ECONOMIC FACTORS

According to EDHS(2011) childhood mortality generally decreases as wealth increases(8). A community based cross sectional study done in the rural area of Pondicherry among 136 newborns found that out of 37 mothers who belonged to poor socio-economic status, 9 (24.3%) mothers practiced application on cord and there was a significant association between application on umbilical stump and socio- economic status of mothers (31).

2.2.3. USE OF MATERNAL HEALTH SERVICES

A community based cross-sectional study done among 404 lactating mothers in Northern Ghana found that early initiation of ANC was positively associated with good neonate feeding practices(20). According to study conducted in Northern Ghana advice about birth preparedness during ANC visits was found to have statistically significant association with essential newborn care practices (20). A multilevel analysis of prospective follow up study and a community based cross-sectional study done in East Gojam and Northwest Ethiopia respectively suggest that those whose mothers had 1–3 ANC visits ,4 or more visits and having at least one ANC follow up were less likely to die during neonatal period as compared to those who had no ANC visit at all(18,14). A large proportion of maternal and neonatal deaths occur during the 48 hours after delivery, and these first two days following delivery are critical for monitoring complications arising from the delivery so that postnatal care is important for both the mother and the child not only to treat complications arising from the delivery, but also to provide the mother with important information on how to care for herself and her child. According to the EDHS result (92 %) did not

receive a postnatal checkup; among women who received a postnatal checkup, 4% were examined within 4 hours of delivery, 2% within 4-23 hours, 1% within 1-2 days, and 2% within 3-41 days of delivery and (7%) of women received postnatal care within two days, as recommended(8). Findings from rural communities of Awebel District, East Gojam of Ethiopia suggest that immediate PNC visit was statistically significant with ENBC practice of women and those women who had got immediate PNC visit after delivery were 3.2 times more likely to practice ENBC when compared with those who had not got immediate PNC after delivery with (18).

A community based cross-sectional study conducted in Awabel district among women in the reproductive age group of 15-49 years who were practicing home delivery also found that those women who had got advise about ENBC practices during monthly pregnant mothers group meeting were 4.8 times more likely to practice ENBC as compared with those women who had not got advise about ENBC practices during monthly meeting(18).

2.2.4. MOTHER'S KNOWLEDGE

A study conducted at Bachauli and Khairahani of Chitwan district suggest that Mothers who knew about newborn care were more likely to practice cord care in comparison to mothers who do not know about it(46).A community-based cross-sectional study carried out on a sample of 404 lactating mothers who have delivered a live baby at home within the past one year prior to the study in Northern Ghana, reviled that women who could mention at least 4 danger signs of the neonate were 4times more likely to give good neonatal feeding to their babies(20).Another community based cross sectional study done in Mandura district, North West of Ethiopia found that knowing first feeding time and bathing time were significantly associated with good newborn care practice of mothers(14).

2.2.5. HEALTH SYSTEM FACTORS

According to EDHS (22%) Women said that the health facility was either too far or that they did not have transportation to get the service(8).

2.2.6. EXPOSURE TO MEDIA (HEALTH INFORMATION)

A study conducted in Awebel district, East Gojam of Ethiopia revealed that those women whose household had radio were 7.9 times more likely to be practice ENBC as compared with those who women whose household had not radio with ,indicating that the presence of radio in the household as Source information was showed statistically significant association with ENBC practice of women(18).

2.2.7. CULTURALFACTORS

Another study conducted in Aceh Province Indonesia showed that cultural practices are strongly seen among Acehnese and showing that inappropriate antenatal care and neonatal care, late initiation of breastfeeding, discarding colostrum and not practicing exclusive breastfeeding were related to cultural practices(47).Study done in Southern Tanzania suggest that due to strong cultural beliefs the need for the placenta to be delivered before the baby is attended to was a major factor in delaying drying and wrapping the newborn. There is also a strong belief that the baby is seen as dirty after delivery, particularly if the vernix was visible which led to stigmatizing of the mother and there is a belief that skin- to -skin care could harm the babies‘ bones or cord(37).

2.3. SUMMARY OF THE LITERATURE REVIEW

Maternal and newborn heaths are inseparable from each other. Newborn care practices are affected by various factors like socio-demographic, socio-economic, health workers counseling, exposure to media, health system, use of maternal health services and traditional health practices. The understanding of the mechanism of how such factors function independently and with each other for the survival or mortality of the newborn is important for newborn programme.

2.4. CONCEPTUAL FRAME WORK

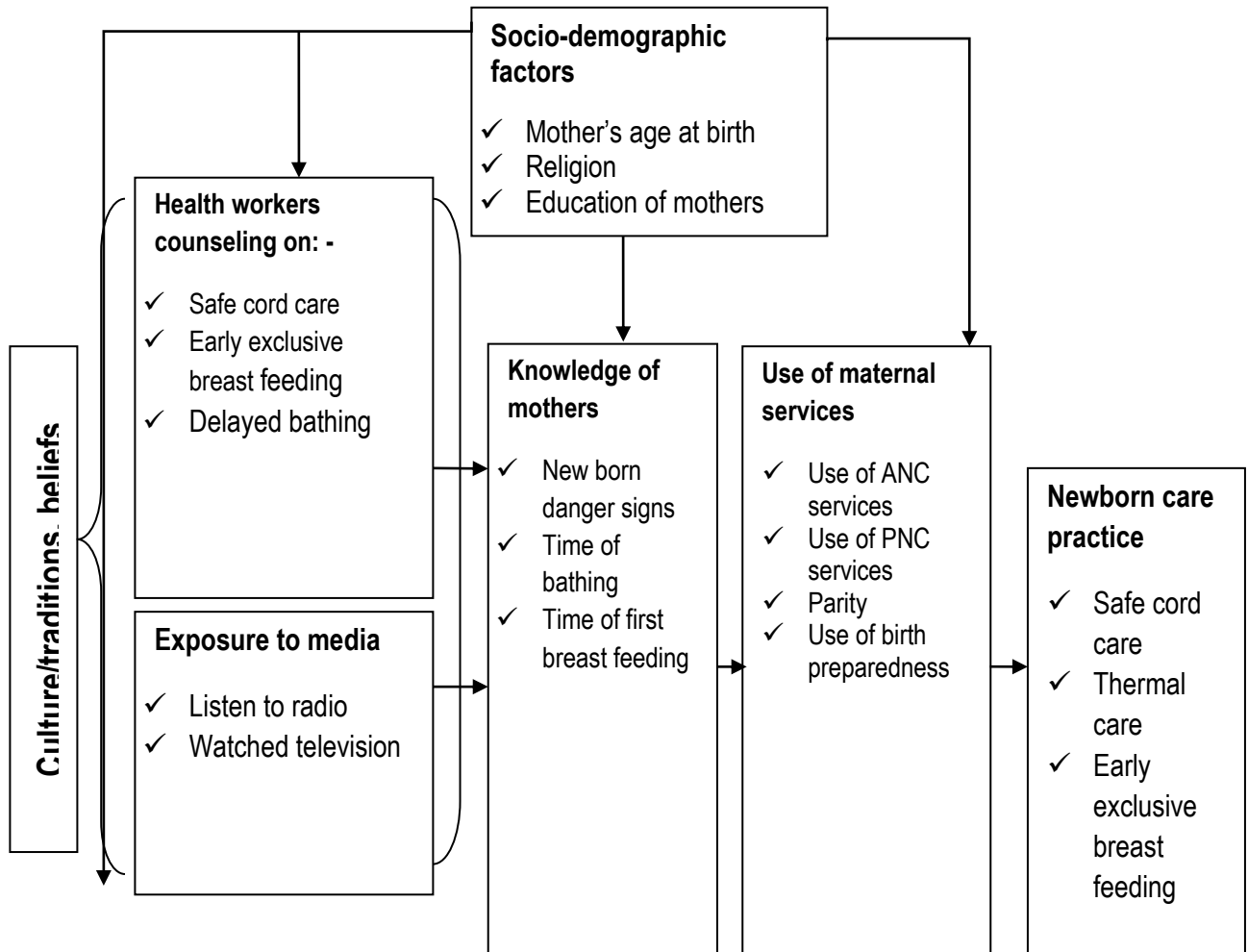


Figure 1: Conceptual frame work for the study on the patterns and determinants of essential newborn care practice in Damot pulasa district, Wolaita zone, 2016 (adopted from the child survival framework for developing countries proposed by Mosley and Chen (1984) and Andersen behavioral model of health service utilization (Andersen, 1995))

CHAPTER THREE

OBJECTIVES

3.1. GENERAL OBJECTIVE

To assess the patterns and associated factors of selected essential newborn care practices among mothers 15-49 years of age who gave birth at home in Damot pulasa district, Southern Ethiopia,2016.

3.2. SPECIFIC OBJECTIVES

- To assess the patterns of selected essential new born care practice among mothers 15-49 years in Damot pulasa district.
- To identify factors associated with selected essential new born care practice among mothers 15-49 years in Damot pulasa district.

CHAPTER FOUR

METHODS AND PROCEDURES

4.1. STUDY AREA AND PERIOD

The study was conducted from March-April, 2016 in Damot Pulasa district, Wolaita zone, SNNP, Ethiopia. The area is located at about 365 Km from Addis Ababa, and 154 Km from Hawasa, the regional capital of SNNP. The district is bounded by Damot gale district in the east and south; Boloso sore district in the west, Hadiya Zone in the north direction. The population of the district was estimated to be 130,515 with an estimated number of women of reproductive age group 30,818 which is 23.6 % of the total population. The total households (HH) in the district are 26,636. The Town has 1 urban Kebele and 22 rural Kebeles.

In the town there are 5 governmental health centers, 8 private clinics, 1 private pharmacy, 1 drug vender and 1 urban and 22 rural health posts (Woreda health office of Damot pulasa district).

4.2. STUDY DESIGN

A community based cross-sectional study design that employed quantitative method of data collection was conducted.

4.3. SOURCE POPULATION AND STUDY POPULATION

4.3.1. SOURCE POPULATION

The source population for this study consisted of all women in the reproductive age group of 15-49 years who have given birth at home in the last one year in Damot pulasa district.

4.3.2. STUDY POPULATION

The study population included randomly selected women of reproductive age groups (15 - 49 years) from selected 11 kebeles who gave live birth at home in the last one year prior to the study.

4.3.3. SAMPLING UNIT

List of all household who had women in the reproductive age (15-49 years) who delivered at home in Damot pulasa district.

4.3.4. STUDY UNITS

Selected women who have given a live birth at home in the last one year.

4.4. ELIGIBILITY CRITERIA

4.4.1. INCLUSION CRITERIA

Those mothers who gave live birth at home from March /2016 12 months backward preceding the study were included in the study.

4.4.2. EXCLUSION CRITERIA

Those mothers who were seriously sick during data collection and mothers who recently delivered died fetus were excluded from the study.

4.5. SAMPLE SIZE DETERMINATION

The required sample size was determined by using single population proportion formula. The study includes women in the reproductive age groups of 15-49 years who were practicing home delivery in Damot pulasa district; the prevalence of ENBC practices in the study area was unknown. A community based cross-sectional study previously done in Awebel district, East Gojam of Ethiopia the prevalence of essential newborn care practice was 23%(p = 0.23), at 95% level of confidence, 5% marginal error the required sample size was calculated as follows:

$$n = \frac{\left(Z \frac{\alpha}{2} \right)^2 p(1-p)}{d^2} \text{ where, } z = 1.96 \text{ for } 95\% \text{ confidence interval}$$

n = required sample size

p = ENBCP (0.23)

q = (1-p)

d = margin of error

$$\frac{(1.96)^2 \times 0.23(1-0.23)}{(0.05)^2} = 272 \quad n = 272, \text{ adding non response rate of } 10\% \text{ and considering a design}$$

effect of 1.5 a total of 450 mothers was the final sample size.

4.6. SAMPLING TECHNIQUE AND PROCEDURES

Stratified multi-stage sampling technique was employed for the Selection of the sampling units. In the district there are 22 rural and 1 urban kebeles. From 22 rural kebeles 10 were selected by simple random sampling namely adeshanto kebele, goloshanto kebele, lera kebele, tontome menta kebele, warbira golo kebele, lamarada kebele, dembagale kebele, zaminewilisho kebele, galcha suke kebele and gale buge kebele and one urban kebele namely shanto ketema kebele was added. The sample size for each of the selected kebeles was determined proportionally to the number of households within each kebele as below.

Proportionate allocation: $n_j = \left(\frac{n}{N}f\right) N_j$

Where, n_j = sample size of j^{th} stratum

N_j = population size of the j^{th} stratum

$n = n_1 + n_2 + n_3 + \dots + n_k$ is the total sample size

$N = N_1 + N_2 + N_3 + \dots + N_k$ is the total population size

Data obtained from the 2015/16 work plan of the District Health Office showed that the number of households in shanto ketema = 1678, adeshanto = 1000, goloshanto = 746, lera = 1266, tontome menta = 1236, warbira golo = 1023, lamarada = 1413, Dembagale = 1092, zamine wilisho = 1176, galcha suke = 1384 and gale buge = 1226.

Therefore: 13252

- ✓ Sample size for shanto ketema kebele(01)= $450/13252 \times 1678 = 57$
- ✓ Sample size for adeshanto kebele(1)= $450/13252 \times 1000 = 34$
- ✓ Sample size for goloshanto kebele(2)= $450/13252 \times 746 = 25$
- ✓ Sample size for lera kebele(3)= $450/13252 \times 1266 = 43$
- ✓ Sample size for tontome menta kebele(4)= $450/13252 \times 1236 = 42$
- ✓ Sample size for warbira golo kebele(5)= $450/13252 \times 1023 = 35$
- ✓ Sample size for lamarada kebele(6)= $450/13252 \times 1413 = 48$
- ✓ Sample size for dembagale kebele(7)= $450/13252 \times 1092 = 37$
- ✓ Sample size for zamine wilisho kebele(8)= $450/13252 \times 1176 = 40$
- ✓ Sample size for galcha suke kebele (9)= $450/13252 \times 1384 = 47$
- ✓ Sample size for gale buge kebele(10)= $450/13252 \times 1226 = 42$

The total sample size was distributed proportionally for each selected kebeles according to their respective total number of HHS. The total number of households in a cluster were divided over the sample size to give the sampling interval ($k = 29$) then the selections was made based on every 29HH using systematic random sampling. When two or more women are there in the household, only one woman was randomly selected for an interview in order to avoid intra-class

Correlation. If the selected household did not have a target respondent, then next household was selected using the systematic sampling procedure.

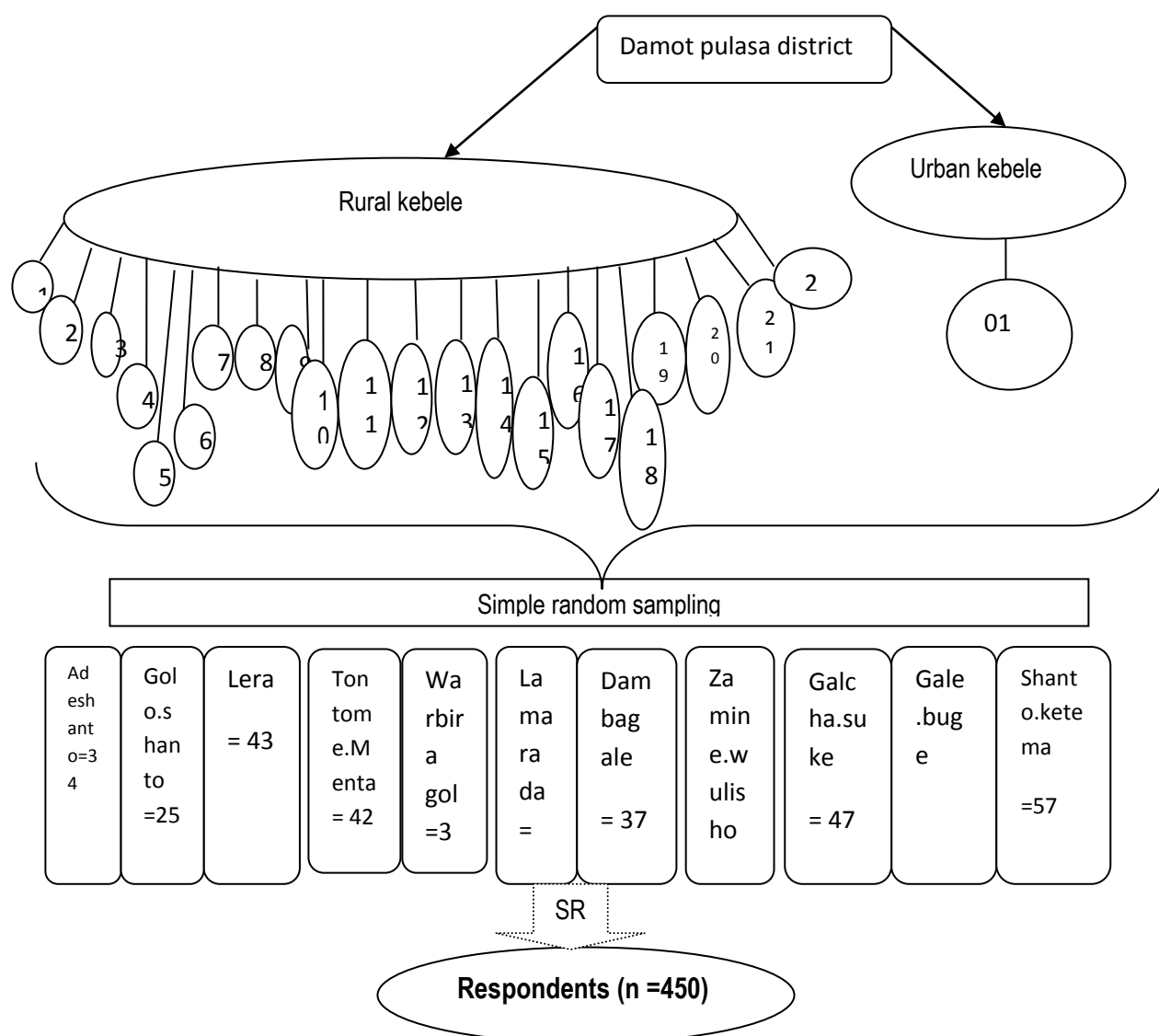


Figure 2: Schematic diagram of sampling procedure for the study on the patterns and determinants of essential newborn care practice in Damot pulasa district, Wolaita zone, 2016.

4.7. DATA COLLECTION TOOLS AND PROCEDURES

Pre tested interviewer administered questionnaire was used– adapted from EDHS and related thesis works(8,18,14).The main points included in the questionnaire were socio demographic characteristics, maternal health services, health service utilizations, knowledge of mothers and newborn care practice. The data was collected by 8trained diploma nurses who are fluent speakers of the local languages for one month under close supervision and facilitation by one health officers and one BSc nurses as a supervisor and the principal investigator as necessary.

4.8. DESCRIPTIONS OF VARIABLES

4.8.1. DEPENDENT VARIABLES

Essential new born care practices

4.8.2. INDEPENDENT VARIABLES

The independent variables were socio-demographic characteristics, use of maternal health services, mother's knowledge, counseling from a health worker, source of information, and traditional practices.

4.9. DATA QUALITY CONTROL

The English version of the questionnaire was translated into local language Wolaitigna for better understanding by both data collectors and respondents. Then it was retranslated back to English by people who were proficient in both languages to maintain the consistency of the questionnaire.

Training was given for one day about the objective, relevance of the study, confidentiality of information, respondent's rights, informed consent and techniques of interview. Moreover, a practical demonstration of the interview was carried out in the classroom.

4.10. PRE-TESTE DONE

The questionnaire was pre tested in another district (Damote gale) on 45 eligible women on 10% of the total sample size for better understandability. Findings were discussed among data collectors and supervisors. Supervision was done on spot by principal investigator and two supervisors. The collected data were checked for its completeness and clarity by the principal investigator and supervisors daily. Data clean up and cross-checking was made before analysis.

4.11. OPERATIONAL DEFINITIONS

Essential Newborn Care practices: A set of practices such as, safe cord cutting (cutting the cord with a clean home delivery kit, a new blade or a boiled blade), thermal care (bathing after 24 hours) and initiating of breast feeding with in the first hour of birth are defined as essential newborn care practices(14).

Thermal care: The recommended practice of bathing a newborn after 24 hours of birth(14).

A dichotomous variable is created as an indicator to measure the good thermal care practice. Those women whose newborn were first bathed after 24 hours of birth will be assigned as ~~practiced~~” and those mothers whose newborn were bathed any time before 24 hours after birth will be assigned as ~~not practiced~~”. Those women who could not recall when their newborn was bathed were not included in the analysis.

Early initiation of exclusive breast feeding: The recommended practice of putting a new born to the mother’s breast within one hour of birth(14).

A dichotomous variable is created as a measure for early exclusive breastfeeding practice. Those mothers whose newborn were breastfed within one hour of birth will be assigned as ~~practiced~~”. Those women whose newborn were breastfed any time after one hour of birth was assigned as ~~not practiced~~”. Those women who could not recall when their newborns were first put to the breast weren’t included in the analysis.

Safe cord care (cord cutting): In this study, safe cord care means the practice of cutting a newborn’s cord with the help of the instrument from a clean home delivery kit, a new blade or a boiled blade(14).

A dichotomous variable was created to measure the safe cord care practice. Those women who used a new blade, a boiled blade or the instrument from a clean home delivery kit to cut the cord of the newborn are assigned as ~~practiced~~”. Those women who used any other instruments such as used blade, sickle, and knife, wood are assigned a score of ~~not practiced~~”. Those women who didn’t recall what instrument was used to cut the cord of their newborn weren’t included in the analysis.

Good newborn care practice - all practices present.

Poor newborn care practice - one or more practices missing.

Knowledge of women about newborn care problems (danger signs): women who were answered ≥ 5 on the listed danger signs.

Knowledge of women about ENBC practices: women who were answered ≥ 3 ENBC practices.

Patterns – In this study patterns means selected essential newborn care practices

Maternal health services – According to this study maternal health service means independent variables like age at current pregnancy, planned pregnancy, ANC service, PNC service, parity, advice about ENBC, preparation for delivery that might affect the essential newborn care practices.

4.12. DATA PROCESSING AND ANALYSIS

Data was checked manually for completeness, and then coded and entered in to Epi Info version 3.5.1 and exported in to SPSS version 20 software for analysis.

After the data was explored and cleaned, descriptive analyses such as percentages, frequency distribution and measures of central tendency were conducted. Then bivariate analyses between dependent and independent variables were performed using bivariate logistic regression. Finally, those variables showed significant association on bivariate analyses were entered in to multiple logistic analyses to control possible confounding variable and to identify independent predictor variable. During the analysis, 0.05 p-value and 95% confidence interval (CI) was used to judge the significance of the associations. So that p-value less than 0.05 were taken as significant association.

4.13. ETHICAL CONSIDERATIONS

Ethical clearance was obtained from Addis Ababa University College of Health Science Department of Nursing and Midwifery Institutional Review Board (IRB). Official letter was received from the department of nursing and midwifery and submitted to Damot Pulasa district Health office and letter of permission was taken from Damot pulasa district health office for each selected kebele to implement the study. Written informed consent was obtained from each respondent before interview. The consent forms addressed issues relating to confidentiality and autonomy of the respondent during data collection.

4.14. DISSIMINATION OF RESULTS

The findings of the study will be submitted to the Addis Ababa University College of Health Science, School of Allied Health Sciences, Department of nursing and midwifery, Damot pulasa district health office, Wolaita zone zonal health department, SNNP Regional State Health Bureau and other concerned body. The result will be presented during thesis defense, as a partial fulfillment of MSc in reproductive health and maternity nursing. Finally, attempts will be made to present the results on scientific conferences and to publish the results of the study on peer reviewed journals.

CHAPTER FIVE

RESULTS

5.1. SOCIO-DEMOGRAPHIC CHARACTERSTICS

A total of 450 women were participated in this study all of them were willing and replied to the interview, giving a response rate of 100%. Majority of the respondent 238(52.9%) were protestant in religion and 434(96.4%) were Wolaita in ethnicity. 195(43.3%) of the respondent did not have education and majority of them 310(68.9%) were house wife. 444 (98.7%) were married and 393(87.3%) rural in residence (Table- 1).

Table 1: Socio - demographic characteristics of the respondent in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016.

Variable	Frequency (n = 450)	Percentage (%)
Religion		
Protestant	238	52.9
Catholic	124	27.6
Orthodox	76	16.9
Muslim	12	2.7
Educational status		
No education	195	43.3
Primary level	175	38.9
Secondary level	67	14.9
Higher education	13	2.9
Ethnic group		
Wolaita	434	96.4
Gammo	8	1.8
Amhara	7	1.6
Gurage	1	.2
Occupation		
Housewife	310	68.9
Farmer	13	2.9
Merchant/Trade	100	22.2
Daily labor	27	6.0
Marital status		
Married	444	98.7
Widowed	6	1.3
Residence		
Urban	57	12.7
Rural	393	87.3

5.2. MATERNAL HEALTH SERVICES

A total of 364(80.9%) of respondents were belong to the age group 19-41 years with a mean ($\pm$ SD) age of respondent was 30.8($\pm$ 4.05). Majority 383 (85.1%) of the respondents their last pregnancy was not planned and of 450 women considered 32(7.1 %) receive at least once ANC visit. 363 (80.7%) of women had birth preparation. Among study participants, 120(26.7%) of them had PNC visits and among who had PNC visits 35(29 %) of them got the visit in the last 7-41days (Table 2).

Table 2: Maternal health services of respondents, in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016.

Variable	Frequency (n= 450)	Percentage (%)
Age at current pregnancy		
< 20 years	2	0.4
20-34 years	364	80.9
34- 49 years	84	18.7
Planned pregnancy		
Yes	67	14.9
No	383	85.1
Receive ANC		
Yes	32	7.1
No	418	92.9
Number of ANC visit		
Once	13	40.6
Twice	10	31.25
Thrice	6	18.75
Four times	3	9.4
Parity		
1	44	12.8
2-4	194	56.6
≥ 5	105	30.6
Advice about ENBC		
Yes	32	7.1
No	418	92.9
Preparation for delivery		
Yes	363	80.7
No	87	19.3
Receive PNC		
Yes	120	26.7
No	330	73.3
Time for frequency of PNC		
Less than 4 hours	12	10
4-23 hours	20	16.7
1-2 days	27	22.5
3-6 days	26	21
7-41 days	35	29

5.3. HEALTH SERVICE UTILIZATION

Concerning health service utilization of study participants in the selected kebeles all of them had access to health facilities and majority 318 (70.7%) of the nearby facilities for the women were health post. In this study the major reasons for women not delivered at health facility were; not seriously ill 283(62.9%), presence of TBAs 247(54.9%), unwelcoming approach of health workers 126(28%) and previous home delivery was normal 123(27.3%). 356 (79.1%) of the women in this study had decided where to deliver by themselves (Table 3).

Table 3: Health service utilization of respondents, in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016

Variable	Frequency (n=450)	Percentage (%)
Availability of HF		
Yes	450	100
Type of HF		
Health post	318	70.7
Health center	132	29.3
HF provide delivery		
Yes	227	50.4
No	179	39.8
I don't know	44	9.8
Decision for place of birth		
Self	356	79.1
Husband	77	17.1
Relatives	17	3.8

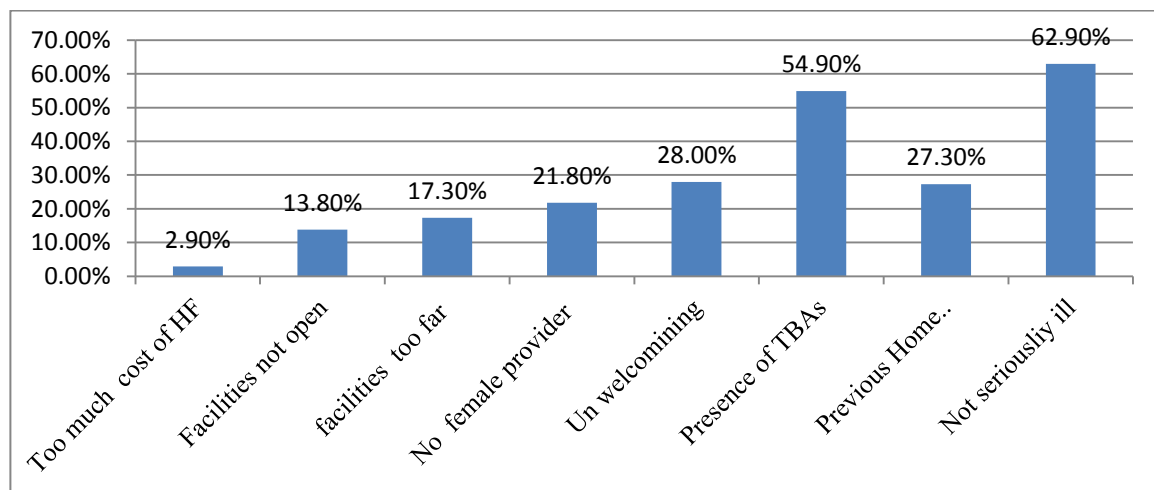


Figure 3: Reasons of women not delivered at health facilities, in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016.

5.4. KNOWLEDGE OF THE RESPONDENTS

About 417(92.7%) of the women had information about newborn care. Among 415(92.2%) women who had information about when to start breast feeding and 141(34%) started breast feeding within the first one hour of birth but the majority 274(66%) of the women breast fed their newborn after one hour. 390 (86.7%) of the women had knowledge on first breast milk and 262(67%) of them stated that first breast milk was important. majority 406(90.2%) of women told that it was possible to expose the neonate for morning sunlight and in addition to this 432(96%) of women also explained that exposing the neonate for vaccination had no problem. Only 139(30.9%) of the respondents were answered ≥ 5 neonatal problems (newborn danger signs) and 82(18.2%) of the women were answered ≥ 3 on the listed essential newborn care practices (Table 4).

Table 4: Knowledge of the respondents, in Damot pulara district, Wolaita Zone, Southern Ethiopia, 2016.

Variable	Frequency (n= 450)	Percentage (%)
Information on newborn care		
Yes	417	92.7
No	33	7.3
Information to start breast feeding		
Yes	415	92.2
No	35	7.8
Time to start breast feeding		
First one hour	141	34.0
After one hour	274	66.0
Knowledge on first milk		
Yes	390	86.7
No	60	13.3
Advantage of first milk		
Advantageous	262	67.0
Disadvantageous	129	33.0
Expose neonate for morning sunlight		
Yes	406	90.2
No	44	9.8
Expose neonate for vaccination		
Yes	432	96.0
No	18	4.0
Information when to bath the neonate		
Yes	436	96.9
No	14	3.1
Time of bathing		
First 24 hours	303	69.5
After 24 hours	133	30.5
Knowledge about neonatal problems		
Good knowledge	311	69.1
Poor knowledge	139	30.9

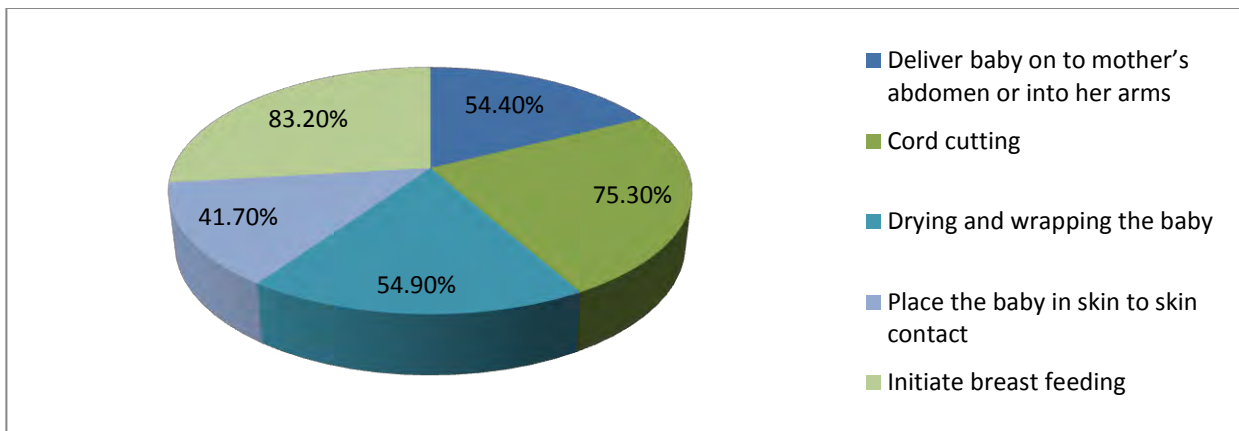


Figure 4: Knowledge of women about ENBC practices in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016.

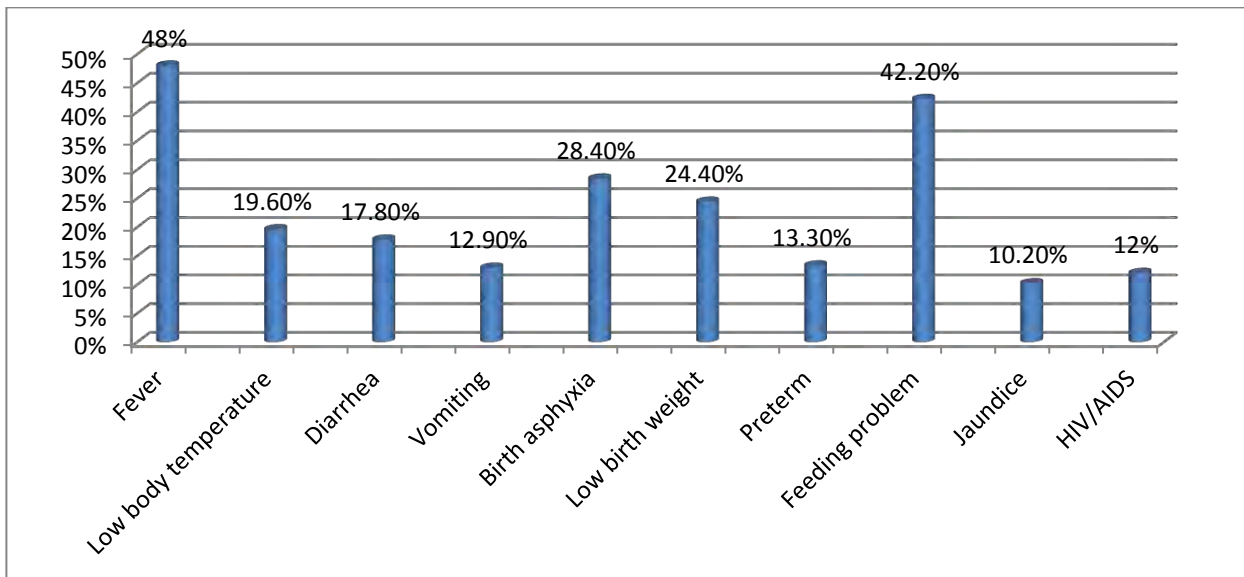


Figure 5: Knowledge of women on newborn danger signs in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016.

5.5. NEWBORN CARE PRACTICE OF THE RESPONDENT

Among respondents, 408(90.7%) of the respondents remembered where they positioned the neonate immediately after delivery. The majority 259(63.5%) of them respond that they positioned their newborn on the mother's abdomen immediately after delivery (Table 5).

Table 5: Newborn care practices of respondents, in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016.

Variable	Frequency (n= 450)	Percentage (%)
Position the neonate		
Yes	408	90.7
No	42	9.3
Place of positioning the neonate		
On the mother's abdomen	259	63.5
Near the delivery surface	86	21.1
On another bed separately	52	12.7
Transferred to father/relatives	9	2.2
I don't remember	2	.5
Dry/wrapping the neonate		
Yes	362	80.4
No	88	19.6
Time of dry/wrap the neonate		
Before delivery of placenta	190	52.2
Immediately after delivery of placenta	169	46.4
I did not remember	5	1.4
Material used for dry/wrap the neonate		
Pre-prepared towel	166	45.6
Piece of blanket/Gabi	72	19.8
Available material	126	34.6
Material used to cut the cord		
Boiled /un-boiled new razor blade	434	96.4
Used razor blade	16	3.6
Remember material used to tie the cord		
Yes	442	98.2
No	8	1.8
Material used to tie the cord		
Thread	442	100
Apply material after cord cutting		
Yes	288	64.0
No	162	36.0

Type of material applied on the cord		
Butter	288	100
Initiate exclusive breast feeding		
Yes	226	50.2
No	224	49.8
Time of initiating exclusive breast feeding		
First one hour	206	45.8
After one hour	244	54.2
Give pre lacteals		
Yes	224	49.8
No	226	50.2
Pre-lacteals given		
Water	218	97.3
Butter	6	2.7
Give first milk		
Yes	223	49.6
No	227	50.4
Frequency of breast feeding		
< 8 times	203	45.1
>= 8 times	247	54.9
Remember time of bathing		
Yes	442	98.2
No	8	1.8
Time of bathing		
First 24 hours	156	34.7
After 24 hours	294	65.3
Skin to skin contact		
Yes	249	55.3
No	201	44.7

5.5.1. SAFE CORD CUTTING

Majority 434(96.4%) of the women in this study the cord of their newborn were cut by using boiled and un-boiled new razor blade. Most 288(64%) of the women had applied material after the cord was cut and 288(100%) of them had putted butter on the cord.

5.5.2. INITIATION OF EARLY EXCLUSIVE BREAST FEEDING

206(45.8%) of them had initiated breast feeding within one hour of birth. From the total of 224(49.8%) of women who gave pre-lacteals 218(97.3%), 6(2.7%) gave water and butter respectively. 223 (49.6%) of the respondent had given first milk to the newborn and 247(54.9%) of the mother breast fed greater than or equal to eight times.

5.5.3. THERMAL CARE (BATHING TIME)

In this study 362 (80.4%) of the women had told they would dry/wrap the newborn and almost half of 190(52.2%) of them dried/wrapped the newborn before delivery of placenta. 166(45.6%) of the respondent had used pre-prepared towel to dried/wrapped up the newborn. About 294(65.3%) of them bathed the newborn after 24 hours. The majority 249(55.3%) of the women made skin to skin contact of the mother and the newborn.

5.5.4. THE PREVALENCE OF ESSENTIAL NEWBORN CARE PRACTICES

The prevalence of cord cutting, initiation of breast feeding and thermal care were studied for a total of 450 women and the study revealed 434(96.4%), 206(45.8%) and 294(65.3%) of the participants demonstrated the practice respectively.

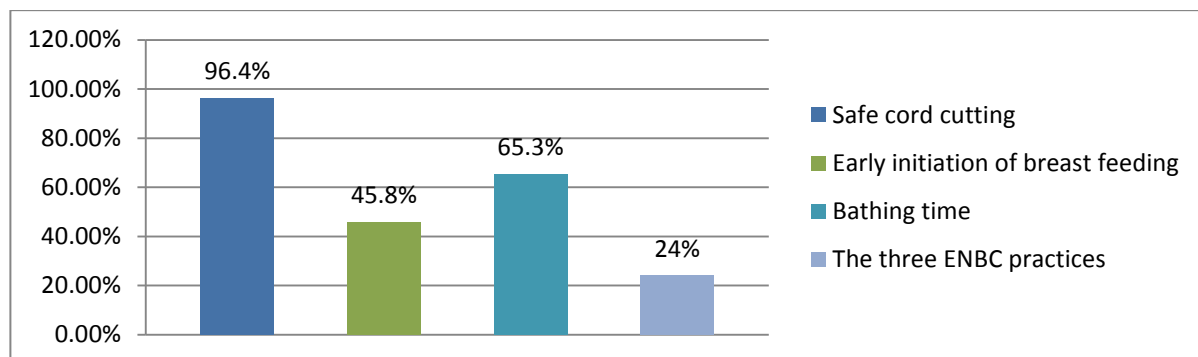


Figure 6: Distribution of the three essential newborn care practice, in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016.

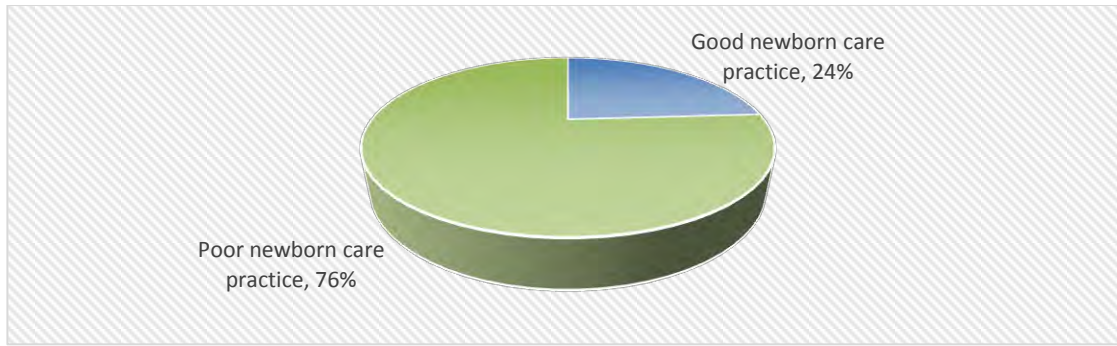


Figure 7: Over all prevalence of ENBC practices in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016.

5.6. ASSOCIATED FACTORS OF ESSENTIAL NEWBORN CARE PRACTICES

In order to determine the association of independent variables with essential newborn care practices both bivariate and multi variate analysis were used. Variables that showed association with the outcome variables in the bivariate analysis were selected for multivariate analysis. Variables like planned pregnancy, education, occupation, residence, age at current pregnancy, planned pregnancy, ANC visit, advice about essential newborn care practice, PNC visit, birth preparedness, knowledge about neonatal danger signs, knowledge about essential newborn care were selected as a candidate for multivariate analysis. ANC visit, advice about essential new born care practice and PNC visit were the independent predictors of essential newborn care practice.

Table 6: Factors associated with the three essential newborn care practices by bivariate and multiple logistic analyses in Damot pulasa district, Wolaita Zone, Southern Ethiopia, 2016.

Variables		ENBC practice		COR(98%CI)	AOR(95%CI)	P-value
		Good ENBC practice	Poor ENBC practice			
Receive ANC	Yes	18	14	1	0.264(0.090-0.773)	0.015
	No	90	328	0.213(0.102-0.446)		
Advice about ENBC	Yes	19	13	1	0.114(0.058-0.221)	0.0001
	No	61	252	0.166(0.078-0.354)		
Receive PNC	Yes	64	56	1	0.209(0.110-0.399)	0.0001
	No	44	286	0.135(0.083-0.217)		

CHAPTER SIX

DISCUSSION

In this study the patterns and associated factors of essential newborn care practice was analyzed: cord cutting, exclusive breast feeding initiation and bathing time. The study revealed that the prevalence of ENBC practice was 24% which was higher than the research done in Awebel district East Gojam zone(18) which was 23.1% but which was much lower than the study conducted in North west Ethiopia, Mandura district(14) which was 41%. Cord cutting was practiced 96.4% of the women, using new blade, which was much higher than the study conducted in, Nawal parasi district of Nepal (48.31%)(33) , Northern Ghana which revealed 90.8%(20) , sub urban areas of western Nigeria (90.3%)(38), study conducted in North West Ethiopia, Mandura district (14) was 59.8% ,and the study conducted in four regions of Ethiopia which was 88.3% (10) , the reason for this might be good awareness and custom followed in the study area but the finding was in line with the study conducted at Awebel district, East Gojam of Ethiopia (97.6%)(18). Majority of the study participants (98.2%) the cord was tied with thread which was higher than the study conducted in the four regions of Ethiopia (48.5%)(10) , this might be due to awareness in the study community. Even though majority of the women used boiled blade to cut the cord and tied with threads, application of butter on the umbilical stump (64%) of the women practiced in the study area which is higher than the study conducted in Northern Ghana(14.4%) and the study conducted in North west Ethiopia Mandura district (18.18%)(20,14) but which was lower than the study conducted in the four regions of Ethiopia (88.3%)(10).A

Initiation of breast feeding within one hour in the study area was 45.8% which was lower than the prevalence of cord cutting and bathing time but this was higher than the study conducted in rural Bangladesh (40%), East Gojam of Ethiopia (41.6%). This finding was lower than the study conducted in India(65%),Nepal(51.3%), Northern Ghana (80%), Eastern Uganda (50%), Western Nigeria (65.3%), four regions of Ethiopia(52.1%), North west Ethiopia and South west Ethiopia(50%) (31,33,20,36,38,10,14,45) respectively. Majority (49.8%) of the women in this study gives pre-lacteals among this (97.3%) water and (2.7%) butter within 28 days. The finding was higher as compared to study conducted in four regions of Ethiopia (12.4%) give pre-lacteals and from this (32.7%) plain water, (25.1%) ,sugar water,(14.2%) fresh butter,(13.2%) milk other than breast milk. This finding was also lower than in study conducted in East Gojam of Ethiopia

Awebel district(11.2%) gave pre-lacteals butter and water(18). The reason might be traditional beliefs of the community. Breast feeding of the first milk (colostrums) was given (49.6%) of the women in the study area. This is lower than a case study of tribal women, Gujarat(63%) (28). The reason was (33%) of the respondent believed that first milk was disadvantageous and from this (31%) believed that it would cause diarrhea,(60.5%) constipation and (58.9%) believed that it would decrease growth of the newborn.

Bathing of the new born after 24 hours was practiced by majority (65.3%) of the women in the study which was in line with(65.6%) the study conducted in East Gojam of Ethiopia, Awebel district(18). But this finding was lower than study conducted in Northern Ghana(93.6%),Rural Bangladesh(72.2%),South Sudan(99%),Easter Uganda(100%),Western Nigeria (98.2%) , study conducted in four regions of Ethiopia(74.7%)(20,33,34,36,38,10).

Initiation of ANC visit was found to have statistically significant association with essential newborn care practice of women. In this study women who had not got ANC visit were 73.6% more likely to practiced essential newborn care practice as compared to who had not initiated ANC visit. This might be due to women who attended ANC have the chance of getting information about the components and the importance of newborn care practice from health care providers.

The finding was also supported by study conducted in Northern Ghana which suggested that women who initiated ANC visit were two times more likely to practiced essential new born care practice as compared to women who initiated ANC visit late(20).

The finding of this study also showed that women who had got PNC visit early were 79% more likely practiced ENBC when compared to women who had not got immediate PNC visit(AOR = 0.209, P = 0.00, CI = 0.110 - 0.399). This could be health extension workers and community health workers might gave proper advice about essential newborn care practice .Study conducted in rural communities of Awebel District, East Gojam of Ethiopia supported the finding of this study that immediate PNC visit was statistically significant with ENBC practice of women and those women who had got immediate PNC visit after delivery were 3.2 times more likely to practice ENBC when compared with those who had not got immediate PNC after delivery with (18).

Advice about essential newborn care practice showed statistically significant association with essential newborn care practice. Those mothers who had got ENBC service during ANC visit or other meetings were 83.4% more likely practiced ENBC practice as compared to women who had not got the advice. The reason could be the health care providers could discuss about essential newborn care practice during ANC visit.

which was supported by the same community based cross sectional study conducted in East Gojam Ethiopia ,Awebel district which described that women who had got advise about ENBC practices during monthly pregnant mothers group meeting were 4.8 times more likely to practice ENBC as compared with those women who had not got advise about ENBC practices during monthly meeting (18).

6.1. STRENGTH OF THE STUDY

- Hundred percent response rate

6.2. LIMITATIONS OF THE STUDY

- There might be recall bias.
- Cross- sectional nature of the study limits to draw any causal conclusions on the relationships found in the current study.

CHAPTER SEVEN

CONCLUSION AND RECCOMENDATIONS

7.1. CONCLUSIONS

- In this study the level of coverage of essential newborn care practices in the district was generally low.
- Traditional practice like: pre lacteal feeding, avoiding of first milk and application of material on the newborn stump were practiced by majority of study participant in the study area.
- This finding revealed that most essential newborn interventions were not reaching the newborns.
- ANC visit, advice about ENBC and PNC visit were predictors of essential newborn care practice in the study area.

7.2. RECOMMENDATIONS

- ✓ Damot pulasa district health office should promote strong community based behavior change communication on the importance of ENBC practices to change the poor ENBC practices in the study area.
- ✓ Health facilities should promote and increase ANC and PNC service coverage.
- ✓ Health extension workers should promote and give health education about pre lacteal feeding, early bathing and application of materials on the newborn stump.

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ANNEX

ANNEX I: ENGLISH VERSION INFORMED CONSENT

Addis Ababa University College of health Science, School of allied health sciences, Department of nursing and midwifery

Interviewer administered questionnaire to collect household survey data on patterns and associated factors of selected essential newborn care practice among mothers' 15-49years in Damot pulasa district, Southern Ethiopia, 2016.

Introduction

Good morning/afternoon!

My name is _____. I am working with the investigator, a graduate student in AAU, who is conducting a research here in Wolaita Zone, Damot pulasa district. The purpose of the study is to assess the patterns and associated factors of selected essential newborn care practice among mothers 15-49years here in Damot pulasa district. For this purpose, I am here to ask you some questions that are important in connection with this particular study. You are selected only by lottery method for this study. Findings of the study will be helpful in bridging and/eliminating the barriers to essential newborn care practice and thereby contribute for reduction of neonatal mortality. The study has no risk to you or your family members but it may take 30-40 min for interview. The information you give will be used only for the research purpose. Your name will not be written on the form and will never be used in connection with any of the information you provide and your responses will be kept completely confidential. Therefore, I kindly request your cooperation to respond to our questionnaire. You have full right to refuse to respond at all or to withdraw in the meantime. However, your honest answers to the questions here under will be crucial to the success of our objective and will have a great importance to concerned bodies in designing appropriate strategies in the reduction of maternal mortality. I would like to thank you in advance for your help! Are you willing to participate?

No→ stop!

Yes→ continue!

ANNEX II: ENGLISH VERSION QUESTIONNAIRE

Questionnaire code _____ Kebele _____ House number _____

Part 1: socio-demographic and socioeconomic variables

Nº	Questions	Responses	Skip
101	To which religion do you belong?	Orthodox Christian ☐ Muslim ☐ Protestant ☐ Catholic ☐ Other, specify ☐	
102	What is the highest grade you completed?	No education ☐ Primary level ☐ Secondary level..... ☐ Higher education ☐	
103	To which ethnic group do you belong?	Wolaita..... ☐ Gammo..... ☐ Amhara..... ☐ Oromo ☐ Gurage ☐ Other, specify..... ☐	
104	What is your occupation?	Housewife..... ☐ Farmer..... ☐ Merchant/Trade..... ☐ Government employee..... ☐ Daily labor..... ☐ Other (specify) ☐	
105	What is your current marital status?	Single..... ☐ Married..... ☐ Divorced..... ☐ Widowed..... ☐ Other (specify)..... ☐	
106	What is your residence?	Urban..... ☐ Rural..... ☐	

Part 2: Maternal health services (obstetric factors)

Nº	Questions	Responses	To skip
201	How old were you at your 1st pregnancy in completed years?		
202	How old were you when you were pregnant this child?	<20..... 20-34..... 35-49.....	
203	Was the pregnancy planned?	Yes No.....	
204	Did you receive antenatal care when you were pregnant this child?	Yes No.....	If no skip to 207
205	How many times did you visit ANC when you were pregnant this child?	Once..... Twice..... Thrice..... Four times..... Other (specify)	
206	During antenatal visit, have you ever been informed /advised about new born care for the babies?	Yes..... No.....	
207	During your pregnancy of this child did you make any preparations for your delivery?	Yes..... No.....	If no skip to 209
208	What preparations did you make for the delivery? (More than one answer is possible)	Financial..... Transport..... Food..... Identification of skilled birth attendant..... Identification of facility..... Clean delivery kit..... Clothes for new born..... Other (specify)	
209	According to your birth order, where does this baby belong?	1 2 3 4 5 6+.....	

210	Who attended during this baby delivery?	No assistant..... Nurse/midwife nurse..... TBA..... Health extension worker..... Relative/friend..... Other (specify)	☐ ☐ ☐ ☐ ☐	
211	Did you use home delivery kit during last delivery?	Yes..... No.....	☐ ☐	If no skip to 213
212	If yes, was the instrument clean?	Yes..... No.....	☐ ☐	
213	Did you receive post-natal care after the delivery of this child?	Yes..... No.....	☐ ☐	If no skip to 301
214	If yes, when did you attend?	Less than 4 hours..... 4-23 hours..... 1-2 days..... 3-6 days..... 7-41 days.....	☐ ☐ ☐ ☐ ☐	

Part 3: Health service utilization

Nº	Questions	Responses	Skip	
301	Is there health facility in your vicinity?	Yes..... No.....	☐ ☐	If no skip to 304
302	What type of health facility is it?	Health post..... Health center..... Hospital Private clinic Other, specify.....	☐ ☐ ☐ ☐	
303	Does the health facility provide delivery service?	Yes No..... I do not know.....	☐ ☐ ☐	

304	What were the reasons you would not delivered at health facility?	Too much cost of HFs..... ☐ Facilities not open regularly..... ☐ Facility too far..... ☐ Poor quality service of HFs..... ☐ No female provider at HFs..... ☐ Husband will not allow..... ☐ Unwelcoming approach Of health workers..... ☐ Presence of TBAs ☐ Previous Home delivery was normal..... ☐ I was told that my Pregnancy is normal..... ☐ Not seriously ill..... ☐ Culturally prohibited..... ☐ Presence of traditional healer... ☐ Other, specify ... ☐	
305	Who decides place for your child birth?	Self ☐ Husband ☐ Relatives ☐ Religious leader ☐ Other, specify ☐	

Part 4: knowledge questions on newborn care

Nº	Questions	Response	Skip
401	Do you have information about immediate newborn care practice?	Yes..... ☐ No..... ☐	If no skip to Q404
402	If yes, mention the source of information about newborn care(more than one answer is possible)	Family/relatives..... ☐ Neighbors..... ☐ Health professional..... ☐ TV/Radio..... ☐ News paper/magazines..... ☐ Others (specify) ☐	
403	What type of immediate newborn care do you know? (More than one answer is possible)	Deliver baby on to mother's abdomen or into her arms... ☐ Cutting cord..... ☐ Drying and wrapping the baby..... ☐ Place the baby in skin to skin contact ☐	

		Initiate breast feeding..... Other (specify).....	
404	Do you have information about when to start breast feeding after birth?	Yes..... No.....	☐ ☐
405	Did you mention the time when should breast feeding be started	hrs	☐
406	Do you know about the first breast milk?	Yes..... No.....	☐ ☐ If no skip to Q409
407	If yes, is the first milk advantageous or disadvantageous?	1. Advantageous..... 2. Disadvantageous.....	☐ ☐ If 1 skip to 409
408	If disadvantageous, mention the disadvantages? (more than one answer is possible)	Causes diarrhea..... Causes constipation..... Decrease growth..... Other (specify).....	☐ ☐ ☐ ☐
409	Is exposing the neonates for morning sunlight important?	Yes No	☐ ☐ If yes, skip to Q411
410	If no, mention the reasons? (more than one answer is possible)	Causes eye problem..... Causes physical flaccid..... Others (specify).....	☐ ☐ ☐
411	Is it possible to expose the neonate for vaccination?	Yes No.....	☐ ☐ If yes skip to Q413
412	If no, mention the reasons(more than one answer is possible)	Culture..... Lack of health facility..... Lack of knowledge..... Bad previous experience... Individual preference..... Other (specify).....	☐ ☐ ☐ ☐ ☐ ☐
413	Do you have information when to bath the neonate immediately after birth?	Yes..... No.....	☐ ☐ If no skip to 415
414	When did the new born should be bathed, mention time?	hr	☐
415	Do you have information about neonatal problems?	Yes..... No.....	☐ ☐ If no skip to Q501
416	What neonatal health problems do you know? (more than one answer is possible)	Fever..... Low body temperature..... Diarrhea..... Vomiting..... Birth asphyxia /breathing difficulty..... Low birth weight..... Preterm..... Feeding problem..... Jaundice..... HIV infection..... Others (specify).....	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Part 5: newborn care practice questions

No	Question	Response	Skip
501	Did you remember where you positioned the neonate/s immediately after delivery?	Yes..... No.....	I If no skip to 503
502	If you remember, where you positioned the neonate/s immediately after delivery?	On the mother's abdomen..... Near the delivery surface..... On another bed separately..... Transferred to father/relatives..... I don't remember..... Others (specify)	
503	Did you dry/wrapping the neonate after birth?	Yes..... No.....	no skip to 506
504	If you dry/wrap the neonate, when did you dry/wrap?	Before delivery of placenta..... Immediately after delivery of placenta..... I did not remember..... Other specify.....	
505	What material did you use to dry the neonate/s' body?	Pre-prepared towel..... Piece of blanket/Gabi..... Available material..... I don't remember..... Other (specify)	
506	Did you remember the material used to cut the cord?	Yes..... No.....	no skip to 508
507	If you remember, what material was used to cut the cord?	Un-boiled new razor blade..... Boiled new razor blade..... Un-boiled used razor blade..... Boiled used razor blade..... Available sharp instrument..... Others (specify)	
508	Did you remember the material you used to tie the cord?	Yes..... No.....	no skip to Q510
509	If yes, what was the material you used?	Thread..... Cord tie..... Cord clamp..... Others (specify)	
510	Did you apply any material on the cord after cutting?	Yes..... No.....	If no skip to Q512

511	If yes, mention type of material applied on the cord	Cow dung..... Dust..... Butter..... Ash..... Others (specify)	☐ ☐ ☐ ☐ ☐	
512	Did you initiate exclusive breast feeding immediately after birth?	Yes..... No.....	☐ ☐	If no skip to Q514
513	When did you initiate exclusive breast feeding?	First one hour..... After one hour.....	☐ ☐	
514	Did you give additional diet (pre-lacteal) within 28 days	Yes..... No.....	☐ ☐	If no skip to Q516
515	If yes, what did you give for the neonate?	Water..... Butter..... Cow milk/ commercial milk formula..... Holy water..... Other (specify)	☐ ☐ ☐ ☐ ☐	
516	Did you give the 1 st milk for your neonate?	Yes No.....	☐ ☐	
517	How often did you breast feed the neonate per day?	< 8 times..... >= 8 times.....	☐ ☐	
518	Did you remember the time you bathed your neonate?	Yes..... No.....	☐ ☐	If no skip to 520
519	How long after birth was your baby bathed for the first time?	First 24 hours..... After 24 hours.....	☐ ☐	
520	Did you keep your neonate immediate skin to skin contact?	Yes..... No.....	☐ ☐	Close the inquiry

Thank you for your cooperation!!!

ANNEX III:WOLAITIGNA VERSION INFORMED CONSENT

Oysha (wolaytatto birsheta)

Addis Ababa Universityan, payateta saynsiya kollojiyannursinginne midwayfere timitrte keeta. Oysha oychiyagaw giigida oyshatun go'eettidi issi issi keetta gellidi yiira natuyo immettiya agelgilotiya (patterns and determinants of essential newborn care practice) giya huphe qoffan damota pulassa allanan wolaytta mottan, tohosa tophiyan 2016 M.L osettiya pilgetaw naqasha shishiya oyshata

Doommettaa

aymala de'eti?

Ta sunttay _____geetetays . Tani addisaba universtiyappe yidi wolayta motan, damota pulas allanan osetiya pilgetayoo wana gadawara issippe ottays. Ha pilgetta halchoy ha allana gidдон layttay 15-49 gakkanaw de'ya ayotti yiray yelleti simmin ayoo immettiya agelgiltiya xelliyagaa aykenna erriyona, hasiyona giyooganee wattidi go'eetidi de'iyonna giyaga eranassa. Tanika haga gaasuwan ha pilgettayo koshiya opyscha ochada inttepe naqsha shishanaw yasi. Inteka ha pilgettan gelido inxena/ qaday gakina. Ha pilgetappe bettiya wurseta ayfee ayotti yirattuyo immettiya agelgelotiya aysi ekenakone eta qassi digiyabay aybako eranassinee coo hayqqiya yiira naatune aayotu hayquwa teqqanawu maadees. Ha pilgetan neena woyko ne keetta as gaakiya issi meetoykka baawa, shin neeni 30-40 daqqiqa wodiya immanna mala bonchuwan shobays. Ha inte immiyo naqashay ha pilgetta xalaw go'eetiyoba gidees. Harabay qassi ne sunttay ha woraqatta bollan xafetena, ne oddiyoba xuuray nagetidagappe attin oyooka odettena. Hega gishaw ne oysha zaarana mala bonchuwan oyschays. Qassi nee awudeka ne koydo saatian koyke gikko agada bana dandayassa. Harabay qassi neeni odiyo zaaroy ubayka hapilgetta halchuwa pollanaw kehi maadiyo gishawune xeeliyoo kifilile ayo beessiya tanguwa ekkiyoogan yira naatunne ayeetu hayqquwa xayssanaw go'ees. Tani intte maadiyooga ammanada kehi galataysi!

Ha pilgettan oneni un'etenan nesheniya gelutee?

Akkay _____agaga

Ee -----domma

ANNEX IV: WOLAITIGNA VERSION QUESTIONNAIRE

Dummayiyaga_____ oysha kodiya_____ kabaliya _____ keetta paydduwa _____

WOLAYTTATO OYSHA

SHAHUWA 1: ASA QODANA AND DE‘UWA AQQUWABA XEELLIYA OYSHA

Qoda	Oysha	Zaaruwaa	Kantta
101	Neeni awuga amanuwa kaallay?	Orthodokisee amanuwa Islama amanuwa..... Protestante Amanuwa Katolikee amanuwa Hara gidkko (qonccissa)	☐ ☐ ☐ ☐ ☐
102	Neeni wursido imrtiya xekay aawugee?	Mulekka tamarabeykee Koyro xeka..... Naa‘‘antto xeka..... Yunburshiya/koollojiyaa timirtiya.....	☐ ☐ ☐ ☐
103	Nee Sheesha Qoomoy Aybee?	Wolaytta..... Gaammo..... Amaara..... Oroomo Guraagee..... hara gidikko (qonccissa)	☐ ☐ ☐ ☐ ☐ ☐
104	Ne ossoy aybee?	Soo maacasa..... Goshancha..... Zal‘‘ancha/..... Kaawo ossancha..... Asa eeqotan..... Hara gidikko (qonccissa)).....	☐ ☐ ☐ ☐ ☐ ☐
105	Ha‘ii dee‘iya acquwa peesha hanotay aymalee?	azina gelabeykee..... acquwaa peesha oyqqas..... azina birshettas..... Am‘ee(azinay hayqqis)..... hara Gidikko (qonccissa)).....	☐ ☐ ☐ ☐ ☐
106	Neeni de‘iyo sohoy awee?	katama..... Gaxxariya.....	☐ ☐

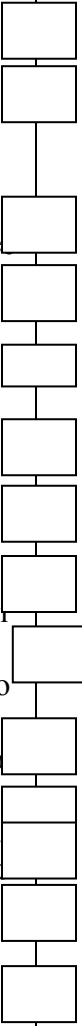
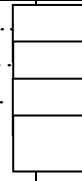
SHAHUWA 2: AYETU PAYATETTA XELIYAA OYSHA (OBSTETRIC FACTORS)

Qoda	Oysha	Zaaruwa	Kanta
201	Koyro shahara neeni shaariyoode neyo laytay appunee?		
202	Wursetta na'a neeni shahariyood neeyo laytay appunee?	<20..... 20-34..... 35-49.....	
203	He wode shara halchada shaharadii?	ee akkay.....	
204	Shahara maca asayo yelanappe kase immitiya payateta naaguwa kalladi?	ee..... akkay.....	
205	Ha kalluwa apputo kallidi	issito..... naa'uto..... hezzuto..... oydduto..... hara gidiko qoncissa	
206	Ha shahara maca asa kalluwa neeni kallishin neeyo yela simmini yirayo imetiya payateta kaaliyoga odiday dee'ii?	Ee..... Akkay.....	
207	Wurseta na'a shaharido wode yellanaayo neena gigisada halchada yeladii?	Ee..... Akkay.....	
208	Yelanaape koyro ayba ayba gigisadi? What preparations did you make for the delivery? (issuwaape daaro zaaruwa immiyooqe dandayeetees)	misha..... transportiya qumma..... Yellisiya lohida asa dooriyooga awa payateta eqotan yeliyak doriyooga geesha yelisiyo mishata gigisiyooga..... yeletiya yiirawu maayuwaa gigisiyooga..... hara gidiko qoncissa.....	

209	Neni yelidoga maaran qoodiyode hawurseta na'ay neeyo appunto?	koyro..... na'anto..... heezantto..... oydanto..... ichashanto.....	☐ ☐ ☐ ☐ ☐	
210	Neena ha wurseta yelisiday onee ?	tawu yellasi..... nursiya/midiwiferiya lohida hilanchiyo..... Xeena ekstenshine osanchiyoo dabuwa /lagiya..... hara gidiko qoncisaa	☐ ☐ ☐ ☐ ☐ ☐	
211	Ha wursetta yelluwan nesonni yelisiyo mishata go'ettadii??	Ee..... Akkay.....	☐ ☐	
212	Ee gidiko hamishay geeshe?	ee..... akkay.....	☐ ☐	
213	Ha wursetta yeluwaape simmin yeli simmi imetiya ayotu kalluwaa kalladii?	Ee..... Akkay.....	☐ ☐	Akkay gikko 301
214	Ee gikko, kaalliyoo ga aydee doommadii?	yellada 4 saateppe simmin..... 4-23 saatetu gidдон..... 1-2 galasatu gidдон..... 3-6 galasatu gidдон..... 7-41 galasatu gidдон..... eerikee kallabneykee.....	☐ ☐ ☐ ☐ ☐ ☐ ☐	

SHAHUWAA 3:- PAYATETA AGELGILOTIYA GO'EETIYOOGAA XEELIYA OYSHATA

Qoda	Oysha	Zaaruwa	Kanta
301	Ne heeran payaateta naaguwa eqotati de'iyona?	Ee akkay..... eerikee.....	☐ ☐ ☐
302	Aymala payateta naguwa eqotee?	Xeena Kella..... Xeena Xaabiya..... hospitaliya..... gile kiliniya..... hara gidiko qoncissa.....	☐ ☐ ☐ ☐ ☐
303	Ha payaatetta eqottay yelisiyo agelgilotiya immi?	Ee Akkay..... Erikkee.....	☐ ☐ ☐

305	Akkay gikko, gassoy aybee?	Payatetta eqotati qnxisiyo mishay darro gidiyoo gishasa..... eqotati ubbato doya giddena gishasa..... Eqottati de'iyoo soohoy keehi hahoo gidido gishasa..... Eqotatun immetiya agegilote ke itta/patenaga gidido gishasa..... Eqotatun maca asi bayna gishasa..... keetaway paqqadana gishasa..... eqotatun de'iya hanotay hshu giisena gishasa..... payateta osanchati hanoya lo'eena gishasa..... heeran lohida yelisiya hilanchati dee'iyoo gishasa koyro son I metoy bayna yerlido gishasa..... ne shaharayo meetoy baaw gido gishasa..... saakibena gishasa..... wogay yelanawu biyooga digiyoo gishasa..... heeran meeze xaliyan akamiya hilancha de'iyoo gishasa..... hara gidiko qoncissa	
306	Ne na'ay yeletiyosa wosanioday one?	tana..... Ta ketawa..... ta dabota amanuwa kaletiyaageta..... hara gidiko qoncissa.....	

SHAHUWAA 4: YIIRA XELLIYAAGAN HASAYABA/ERABA OYCHIYA OYSHATA

Qoda	Oysha	Zaaruwa	kantta
401	Yiirtay yeleti simmin ayo immetiya agelgilotiyaaba eray?	Ee..... Akkay.....	 akkay gikko 403
402	Ee gikko , neeni awppu siyadkko odda	so asappe/dabuwaappe..... Shoruwaappe..... payateta anchatupe.....	

		televizhiniyappe /radooniyaapee.....	☐	
		Gazexxappe /mexxaxifetuppe.....	☐	
		Hara gidikko qoncissa	☐	
403	Yiiray yeleti simmiyoorin immettiya agelgilotetuppe neenieriyooğa zaara (issuwaappe daaro zaaroy dandayettes	yira aye uluwaa bollan wottid yelissiyooğa	☐	
		yiira gul'a qanxxiyooğa.....	☐	
		yira bolla melisiyooğa/qucciyooğa...	☐	
		yira bollanne aaye bolla issipe gattidi xantta xantiyooğa.....	☐	
		hara gidikko qoncissa.....	☐	
404	Yiray yeleti simmin xanttay xanttiyooğee wudekko eray?	Ee.....	☐	
		Akkay.....	☐	
405	Xantta xanttiyooğee yiray yeleti appun satiya dometanawu koshii	hrs	☐	
406	Koyro aayee xanttape kiya maattaba eray ?	Ee.....	☐	Akkay giiko 409
		Akkay.....	☐	
407	Ee giiko, koyo aye xanttappe kiya maattay go'iyee qohii?	1.go'ees.....	☐	gidiko 409
		2.qohees.....	☐	kantta
408	Qohees waati qohiyaakko qoncissa? (issuwaappe daaro zaaroy dandayettes)	kara kallettes.....	☐	
		uluwaa melises/kata sheesha melisees.....	☐	
		dicha digees.....	☐	
		hara gidikko qoncissa.....	☐	
409	Yira wontta xalqiyawu keesiyooğee maaddii?	ee.....	☐	gidiko 411
		akkay.....	☐	kantta
410	Akkay gikko gaasuwaay aybee? (issuwaappe daaro zaaroy dandayettes)	ayfiya metuwa/sahuwaa kallettes.....	☐	
		bolla silisee.....	☐	
		hara gidiko qoncissa.....	☐	
411	Yira kattafisiya ?	ee.....	☐	If ee
		akkay	☐	gikko0413
412	Akkay gikko gaasoy aybee(issuwaappe daaro zaaroy dandayettes)	wogaa.....	☐	
		payatetta eqotqy baynaga...	☐	
		era pacatetta.....	☐	
		kase adhida itta meeziya hara asa atti beessiyooğa...	☐	
		hara gidiko qoncissa).....	☐	
413	Yira yeleti simmin awude mecetana beesiyaako neeni siyidobay de'ii?	ee.....	☐	
		akkay.....	☐	
414	Awude mecettanawu beessiyakko sattiya n qoncissa	saatiyana	☐	

	misha hassayay?	Akkay.....	☐
507	Hassayiyaba gidikko , gul'a aybin qanxxadii?	doysetibenna oratta mulacan... doysettida oratta mulacan..... doysetibenna gal'a mulacan doysettida gal'a mulacan beetidsa qara qanxxiyoban..... hara gidiko qoncissa	☐ ☐ ☐ ☐ ☐ ☐
508	Gul'a qachanaw ay go'eetidako hasayay?	Ee..... Akkay.....	☐ ☐
509	Ee, aybinee?	kriyaana..... gula'a qachiyoo mishana..... gul'a qaphiyana/kilampiyana... shubo milatiya bana..... hara gidiko qoncissa	☐ ☐ ☐ ☐ ☐
510	Gul'a qanxxi simmin abollan wottidobay dee'ii?	ee..... Akkay.....	☐ ☐
511	Ee ayba gul'an wottadii?,	osha..... buhiyaa..... oysa..... bidintaa..... hara gidikko qoncissa (specify)	☐ ☐ ☐ ☐ ☐
512	Yiray yeleti simmiyoorin xantta xantta aggidii?	Ee..... Akkay.....	☐ ☐
513	Aye xanta xalala xanttiyooga awudee domadii?	yeleti simmin issi saate giddon..... yeleti simmin issi saateppe guyiyana.....	☐ ☐ ☐
514	Yiray yeleti simmin 28n gallassa giddon hara gujjo qumma immadii	ee..... Akkay.....	☐ ☐
515	Ee giikoo ay immadii?	haatta..... oysa..... mizza/pabrikan osetida maatta..... xabala hatta..... hara gidikko qoncissa	☐ ☐ ☐ ☐ ☐
516	Koyro xanta maatta ne na'a xanttadii?	Ee Akkay.....	☐ ☐

☐

517	Issi galla apputo nena'a xantta xanttay ?	< 8..... >= 8	☐
518	Yeleti simmin appun saatiyaappe guyeeke hassayay?	ee..... akka.....	☐ ☐
519	Yeleti simmin ne na'a appun saate pe guyiyan meccadi?	koyro garsan..... 24 saateeppe guyiyan.....	☐ ☐
520	Ne yiiray yeleti simmiyorin abola nebolara gata wota agadi?	ee akkay.....	☐ ☐

Maaddido Gishaw Galatays

ANNEX V: DECLARATION

I, the undersigned, declare that this is my original work and has never been done in this or any other University and that all the source materials used for this thesis have been duly acknowledged.

Investigator:

Name: Tesfaye Yitna Chichaybelu (BSc.)

Signature: _____ Date: _____

The research thesis has submitted by approval of the following supervisors.

Advisor:

Name: Bazie Mekonnen (BSc, MSc.)

Signature: _____ Date: _____

Internal Examiner :

Name: Alemnesh Mandesh (BSc,MSc)

Signature: _____ Date: _____