ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES

SCHOOL OF ALLIED HEALTH SCIENCES

DEPARTMENT OF NURSING AND MIDWIFERY

ASSESSEMENT OF PREVALENCE OF PRELACTAL FEEDING AND ASSOCIATED FACTORS AMONG MOTHERS OF CHILDREN LESS THAN ONE YEAR OF AGE IN MIZAN-AMAN TOWN BENCHMAJI ZONE, SOUTH WEST ETHIOPIA

BY: MULUKEN AMARE (BSc)

A THESIS SUBMITTED TO SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSIT, DEPARTEMENT OF NURSING AND MIDWIFERY FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR DEGREE OF MASTER IN CHILD HEALTH NURSING

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This thesis by **Muluken Amare** is accepted by the Board of examination as satisfying thesis requirement for the degree of Master of Science in child health nursing.

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Acronyms and Abbreviations

ANC Antenatal care

ARI Acute respiratory illness

BPNI Breast Feeding Promotion Network of India

CS Cesarean section

CVD Cardiovascular disease

EDHS Ethiopian demographic health survey

FGD Focused group discussion

HEW Health extension worker

HIV Human immunodeficiency virus

IEC Information education and communication

MOH Ministry of health

OPD Outpatient department

PLF Prelactal feeding

PAS Proportional allocation to size

SNNPR South nation nationalities peoples region

SRS Systemic random sampling

UNICEF United nation international children's emergency fund

WHO World health organization

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Abstract

Back ground: Despite the importance of early initiation of breastfeeding and exclusive breastfeeding, the prelacteal feeding is widely practiced in Ethiopia. This study aimed to assess the prevalence of prelactal feeding and associated factors among mothers of children less than one year age in Mizan-Aman town, southwest Ethiopia.

Method: A community-based cross-sectional study with mixed method was employed. Four hundred eighty seven (487) mothers of children aged less than 12 months were selected by multistage randomized sampling technique. The quantitative data was collected by using Interview based structured questionnaire. Descriptive statistics, binary and multivariable logistic regression analysis were employed to identify the factors associated with prelacteal feeding practices. Variables with a p-value < 0.05 were identified as statistically significant factors. Qualitative data was collected by focus group discussion and analyzed using thematic frameworks.

Result: The prevalence of prelacteal feeding was (21.9%) in Mizan- Aman town. The common type of prelactal food was water with tenea adam/rue 49(10.1%). The major reason were; 49(10.1%) Cultural practice followed by 45 (9.3%) to clean infants bowel/throat/mouth. Mothers who did know on the risks associated with prelacteal feeding, multipara mothers, having ≥4 number of children and infant's birth order 4-6 were important positive predictors of prelacteal feeding practice.

Conclusion & Recommendation: Prelacteal feeding is commonly practiced in Mizan-Aman town. Mothers who did know on the risks associated with prelacteal feeding, multipara mother, having ≥4 number of children and infant's birth order 4-6 were important positive predictors of prelacteal feeding practice. Promotion of behavioral change communication activities on avoidance of prelactal feeding, Promotion of intensive nutrition education program by giving special emphasis to multipara mothers and should be implemented in the health facility and community based by health extension workers and researcher should consider further follow up study in prelactal feeding in Mizan-Aman town is recommended.

Key words: prelactal feeding, Children aged less than 12 months, Mizan-Aman

1. Introduction

1.1 Back ground of the study

Prelacteal feeding, defined as the administration of any foods or liquids other than breast milk to an infant during the first three days after birth (1). Globally, it is estimated that every day, as many as 4,000 infants and young children die worldwide because they are not breastfed (2). Of around three million neonatal deaths every year, two thirds occur in South-East Asia and sub-Saharan Africa (3). Sub-Saharan Africa, still with the highest mortality rates in the world(4). Ethiopia is among seven high-mortality countries which have already achieved the fourth millennium development goal with 67% reduction in under-five mortality between 1990 and 2012 although the proportion of neonatal deaths still remains high (5) . In Ethiopia 18% of infant deaths could be attributed to poor breastfeeding practices (6).

Breastfeeding is the first fundamental rights of the child and one of the most important determinants of child survival, prevention of childhood infections and optimal nutrition for early life. A beneficial effect of breastfeeding depends on correct breastfeeding practices like timely initiation, colostrums feeding and avoidance of prelacteal feeding (7). studies have estimated that up to 16% of all neonatal deaths could be saved if all infants were breastfed within the first day of life, and 22% if breastfed within the first hour after birth (also referred to as 'early initiation (8). Suboptimal breastfeeding is responsible for 45% of neonatal infectious deaths, 30% of diarrheal deaths and 18% of acute respiratory deaths in children under five (9).

Prelactal feeding (**PLF**) result in the baby receiving insufficient breast milk, lactation failure, diarrhea, convulsion and shortening of the duration of breastfeeding, insufficient weight gain, more susceptible to infection and infant botulism (10, 11). In addition, recent studies indicated that prelactal feeding increases in diseases such as diabetes, obesity, autoimmune disorders, and cardiovascular diseases are likely to be caused by a decrease in the practice of breastfeeding and increase PLF practice (12).

The Lancet's child survival series identified a package of proven nutrition interventions with the potential to avert up to 25 percent of child deaths if implemented at scale.

One of these interventions, early initiation of breastfeeding, could save up to 1.3 million children worldwide. This essential intervention involves the early initiation of Breastfeeding and ensuring that the mother gives only breast milk, and no other food or fluids, during the first 3 days of life or avoidance of prelactal feeding (13).

World health organization (**WHO**) and united nation International children's emergency funds (**UNICEF**) recommend initiation of breastfeeding within one hour after birth. Promotion of exclusive breastfeeding is the single most cost-effective intervention to reduce infant mortality in developing countries (14).

Despite the importance of early initiation of breastfeeding, prelacteal feeds continue to pose a barrier to optimal breastfeeding practices in several countries (1).

1.2. Statement of the problem

Globally, it is estimated that every day, as many as 4,000 infants and young children die worldwide because they don't breast feeding (2). Many of the world's infants are given liquids other than mother's milk in the first few days after birth, including those who eventually are breastfed exclusive (15).

prelactal feeding is common practice In Asian content: 77%,73%,49% and 26.5% in Bangladesh ,Vietnam ,India and Nepal respectively(1,16,17,18). Early breastfeeding, within the first hour of birth, is not the norm and is a major missed opportunity for breastfeeding in Africa (13).PLF prevalence ranging from 11% Up to 58 % In Burkina Faso and Egypt respectively (19,20).Although 52% of Ethiopian newborns benefited from within one hour of birth of breastfeeding, overall, nearly three children in every ten (27 %) are given prelacteal feeds within the first three days of life and among the regions from 10% up to 72.5% Deredewa and Somalia respectively (21)and 45.5%,12.5% in Harere and jimma (23,24).

Babies who are not exclusively breastfed in the early months have a higher risk of death, especially from infection (13). Non exclusive breastfeeding can also increase the risk of dying due to diarrhea and pneumonia among 0–5 month old infants by more than two folds (2). Prelacteal feeding was associated with having repeated infections, grows less well and is almost six times more likely to die by aged 2 to 28 days than children who receive early breast milk (2). Study done In West Gojam, Ethiopia showed that children who received prelacteal feeding were 1.8 times more likely to be stunted than children who were not subjected to prelacteal feeding (25). Study done in Ahmadabad district, Gujarat India showed that Occurrence of acute respiratory illness (**ARI)** was more in those children who started prelactal feeding (29.3%) as compared to (16.3%) who did not start prelactal feeding (26).Another study done in Ethiopia showed that Infants who received prelacteal feeding were more likely to be stunted and wasted (27). Prelacteal feeding also result hypoglycemia (28).

Many researches around the world showed that prelactal feeding predominantly associated with maternal health care factors(ANC, mode of delivery place of delivery and delivery attendant), child and maternal socio demographic factors(maternal age, education, occupation, income, child age,sex and birth order) ,maternal related factors like breast feeding problem, parity and maternal illness and culture factors (22).

Ethiopia has developed the National Infant and Young Child Feeding (**IYCF**) Guideline that discourages prelacteal feeding practices on newborns to achieve optimal breastfeeding and `breastfeeding is one of the components of Primary Health Care in Ethiopia. A wide range of harmful new born feeding practices are documented even after the implementation of infant and young child feeding line. Although prelacteal feeding is widely practiced in Ethiopia, the factors were not well studied in Ethiopia, particularly in Mizan-Aman Town**.**

Therefore, the purpose of this study was to assess the prevalence of prelactal feeding and associated factors among mothers of children less than one years of age in Mizan-Aman town, south west Ethiopia.

1.3. Significance of the study

Breastfeeding is the first fundamental rights of the child and one of the most important determinants of child survival, prevention of childhood infections and optimal nutrition for early life. Beneficial effects of breastfeeding depends on correct breastfeeding practices like timely initiation, colostrums feeding, avoidance of prelacteal feeding (8).

The problem of PLF (Prelactal feeding) has been the matter of concern for Ministry of health for years. Although prelacteal feeding is widely practiced in Ethiopia, the factors were not well studied in Ethiopia particularly in Mizan-Aman town, Therefore, this study attempted to fill this information gap and come up with recommendation on possible intervention for PLF and association factors in Mizan-Aman town, southwest Ethiopia.

The finding of this study would add to limited body of knowledge about the magnitude and associated factors with prelactal feeding in the study setting. The findings of the study would serve as source of information and hypothesis generation for the interested researchers in the area and might also help to influence the regional and national policy makers to develop appropriate plan and intervention program. This in turn, may helps to reduce the mortality and morbidity rate of infant in Ethiopia.

2. Literature review

2.1. The prevalence of prelactal feeding in global situation

It is estimated that every day, as many as 4,000 infants and young children die worldwide because they are not breastfed (2). Many of the world's infants are given liquids other than mother's milk in the first few days after birth, including those who eventually are breastfed exclusive. Study conducted in US immigrant showed that prelactal feeding practice culture has been seen in Migrant farm workers in northern Colorado Sugar water, water, juice, milk and Jamaica Sugar water, mint tea, castor oil drops (15). The study done in Honduras showed that prevalence of prelactal feeding was 19.1% and water based prelactal feeding was the most common 53 % (29).

According to across sectional study conducted in Asia continent like; - in11 provinces of Vietnam 73.3% of the newborns were fed prelacteals, 53.5% were fed infants formula and 44.1% were fed water (1).In Nepal demographic health survey showed that A sample of 3948 mothers were included in the study, A total of 841 (26.5%) weighted proportion of mothers reported of providing prelacteal feeds to their newborn infants. Plain water (n = 75), sugar/glucose (n = 35) infant formula (n = 96) and other milk other than breast milk (n = 556) were some of the types of prelacteal feeds reported (18). Study done In Bangladesh showed that prelacteal feeding was given to77% of the babies, and honey was given to 72% of them. The common methods o f prelacteal feeding was by finger 41% and spoon 40% (16).

The report of nationwide study by Breast Feeding Promotion Network of India (BPNI), the prevalence of prelacteal feed was found to be 49 % (17). A cross sectional study carried out in pediatric OPD and immunization clinic of BPKIHS in India showed that 33% mothers gave prelacteal feed (30). another study done in Rural Mothers of Maharashtra in India showed that 40.2% mothers gave some kind of prelacteal feed to the baby. More than eighty percent of the mothers had given pre lacteal feed either in the form of diluted milk (cow's milk mixed with water) or Ghutti 78% (31).The study done Among Infants of RS Pura Block of Jammu and Kashmir, India showed that giving prelacteal feed is almost universal with 88% of mothers feeding their children with

Prelacteal feed and Honey was most common prelacteal feed (32). Study done at immunization clinic of pediatric department, Medical college Jhalawar India showed that during period from September 2011to February 2012 In this study only 61 (10.2%) mothers were involved in giving prelacteal feed and honey was the most common type of prelactal feeding (33). In Wardha in rural population in India 45% babies were given prelacteal Feed, while in urban slums of Chandigarh 40% babies were given prelacteal feeds (34).study done in families of pavement and roadside squatter settlement in India found that prelactal feeding was given by 96.6% of mothers and plain water was the commonest type (35).

A cross sectional study was conducted in three adopted villages of Department of .S.M., S.R.T .R. Medical College, Ambajogai, Maharashtra in India showed that Out of these 306, 123(40.2%) mothers offered various prelacteal feeds to their children. Maximum i.e. 19 (15.45%) mothers gave cow' s milk as prelacteal feed followed by cow' s milk and honey (13.01%) and goat' s milk 10.57% (7).

The study done in African countries during 2006-2008 showed among 2579 mother-infant pairs The proportion of women who gave prelacteal feeds in the intervention and control arms were, respectively: 11% and 36%, in Burkina Faso, 13% and 44%, in Uganda and 30% and 33%, in South Africa (19). In Mansoura, Egypt study showed that about 58% of newborns received prelacteal feeds and the commonest PLF was sugar/glucose water (39.6%) as their first feed (20). A cross-sectional study done among lactating mothers in Benin City, Nigeria showed that the prevalence of prelacteal feeding was 11.7% ,Water only constituted the most common 44.3% pre-lacteal feed and Other feeds administered included glucose drink, 37.2%, and honey 4.6 % (36). Another study conducted among doctors and nurses in the state and teaching hospital in western Nigeria showed that 60 (96.8%) respondents (29 doctors and 31 nurses) routinely prescribed prelacteal feeds for healthy babies whose mothers were considered to have delay in lactation. The prelacteal feeds prescribed by 29 doctors were infant formula 15(51.7%), glucose drinks 11(37.9%) and plain water 3 (10.3%) respectively (37). In Ghana Where more than one in five children (18%) received a prelacteal feed (38). Another Case Study in the Upper East Region of Ghana showed that Risk of being exposing to prelacteal feed was 18% (39).

A Cross-Sectional Study of Pre-Lacteal Feeding Practice among Women Attending Kampala International University Teaching Hospital Maternal and Child Health Clinic, Bushenyi, Western Uganda showed that the rate of prelacteal feeding practice was 31.3% (40). Another study In Uganda Pre-lacteal feeding was given to 150 (64%) infants of the HIV-positive mothers and 414(57%) infants of general-population mothers (41).

2.2 The prevalence of prelactal feeding in Ethiopia situation

In Ethiopia Overall, nearly three children in every ten (27 %) are given prelacteal feeds within the first three days of life and among the regions Somalia was the highest(72.5%) and SNNPR (10%) the lowest (21) .A study conducted among mothers attending immunization clinic in Harare region government health institutions showed that Two hundred Seventy eight (45.4%) of mothers gave prelacteal liquids for their infants and the common pre-lacteal food includes sugar or glucose water 121 (43.5%) followed by milk other than breast milk 70(25.1%) (23).The use of prelactal feeding was significantly more common in Gondar (79%) than in Tigray (28.5%) and 67% and 12% gave butter to their new born infant respectively in Gondar and Tigray (22). The use of prelactal feeding in Jimma town neonate was 12.6% (24).study conducted in raya kobo, North Eastern Ethiopia showed that Of the 623 mothers who had ever breastfed their index child, 242 (38.8%) reported giving prelacteal feeds to their children and The most common prelacteal foods were sugar solution (38%) and raw butter 32% (42).

2.3 Factors associated with prelactal feeding

Many researches around the world showed that health care factors(ANC, mode of delivery place of delivery and delivery attendant), child and maternal socio demographic factors, maternal related factors like breast feeding problem, parity and maternal illness and culture factors are predominantly associated with prelactal feeding (22).

2.3.1 Maternal & child Socio-demographics factors

In Vietnam PLF was more commonly given in Female child 48.0 % (1).Women in rural areas Honduras were significantly more likely to feed water-based prelacteal feeds but less likely to feed milk-based prelacteal feeds and colostrums than women in urban areas (29).

PLF is more common in Nepal mothers who had no education 380 (31.1%), were not working 301 (37.1%), farmer416 (21.7%) and were from the middle wealth Quintile 334 (31.3%) and Mother's age 20–29 330 (24.0%), Female child 425 (28.6%), Birth order First child 329 (31.7%) and No previous birth 333 (32.0%) (18).

In India As far as education status concern 16.1% uneducated mothers gave pre-lacteal feed to babies (33). Another study In India showed that More number of illiterate mothers offered prelacteal feeds as compared to literate mothers and Prelacteal feeding was more prevalent in mothers of lower socioeconomic status than the upper ones (43).

In Egypt the study showed that PLF is significantly more reported in urban (75.2%) than rural areas (46.6%), Mothers secondary education (61.7%) and for higher education (60%), in low (55.9%), middle 62.6% and high social classes mother (77.7%) and PLF was given in Female 195 (65.2%) and Preterm 64 (70.3%) (18). In Nigeria Benin City, The younger the respondents (16-20) were, the higher the tendency to practice pre-lacteal feeding (40%) (36). In Uganda, PLF given 83 (79%) Reside in the villages, the non-catholic Christians religion 64.5 % and Young (age between 21-35 years) 74(71.2%) (38). In Ghana 22% of children in households in the middle wealth quintile received prelacteal feeding (39).

In Ethiopia PLF is slightly more common in rural areas 28 % than in urban areas 24 %(21).In Harare region Rural Residence 196 (70.5%) gave PLF than urban (29.5%) and orthodox Christian in Tigray and Gondar, 99% and 92% respectively (22, 23). In Harare region prelactal feeding practice among Family size ≤3 was 60 (21.6%) and ≥4 218 (78.4%) and in No_ of children PLF ≤3 was 160 (57.6%) and ≥4 118 (42.4%) according to birth order PLF among Birth order 1 was 76 (27.3%), birth order 2 - 3 97 (34.9%) , birth order 4 - 6 83 (29.9%) and above 7+ 22 (7.9%) and according to Monthly income 501 - 999 36 (23.4%), Primary education 43 (15.5%)(23).

2.3.2. Maternal Health care service utilization factor

In Vietnam prelacteal feeding increasing delivery by caesarean section (23%) or episiotomy38 % (1) and In Nepal PLF more encountered who had not attended four antenatal care visits 112 (25.2%) and 1–3 ANC visit 306 (31.9%) (18).

Study done in India Medical college of Jhalawar at immunization clinic pediatric department, found that 94.4% mothers attending ANC clinic did not give pre-lacteal feed to their babies while this was seen in 51.5% mothers who did not attended ANC clinic during pregnancy period and Only 7.6% mothers who delivered in this institution gave pre-lacteal feed while this was seen in 20.5% mothers whose delivery were conducted at others place (home) where they could not get proper education About breast feed (33). Another study In India Medical college of Maharashtra 81 (62.79%) of 129 home delivered mothers practiced prelacteal feeding as compared to 42(23.73%) of 177 hospital delivered mothers where chi square was significant (43).

CS or complicated delivery in the 3 African countries (Burkina Faso, South Africa and Uganda) associated with PLF and late initiation of breast feeding (19). In Nigeria Benin city, The highest proportion of respondents, 318 or 79.0% gave birth to their index children in hospitals (79.0%). However 58(14.4%), 16(4.0%) and 11(2.6%) delivered in churches/spiritual, homes and at traditional birth attendants' places respectively and pre-lacteal feeding is significantly associated with the route of delivery and Pre-lacteal feeding was commoner with surgical deliveries Twelve (23.1%) of the 52 respondents who had their babies through caesarian section practiced pre-lacteal feeding while only 35(10.3%) who had spontaneous vertex delivery did so (36).In Mansoura Egypt, PLF was significantly more encountered among women who received antenatal care at private clinics 275 (62.6%) and those who never received antenatal care 14 (77.8%), with delivery in private clinic/hospitals 263 (66.4%) , Caesarean section 156 (75.4%) and among infants admitted to ICU 59 (81.9%) and 48.5% mothers who never been educated by medical personals (20). In Uganda Giving prelacteal feeds was also common among mothers who attended ANC 101(6.2%) and those who delivered by caesarean section in the health facility 14.7% (40).

In Ethiopia Children whose mothers were assisted during childbirth by a traditional birth attendant are most likely to receive prelacteal feeds 34 %, while children whose mothers were assisted by a health professional are least likely 21% (21) .In Harare region about 26% of mothers with infants didn't receive ANC service at least once and 47% of them gave birth for their current child at home, Nearly half of the mother 46% didn't initiate breastfeeding immediately after delivery while(46%)of them were influenced to give

pre-lacteal feeding to their new born (23).study done in raya kobo, North Eastern Ethiopia showed that mothers who didn't receive ANC service at least once gave Prelacteal feeding to their infant 98 (42.1%) than 144 (36.9%) who did so and those mother who delivered at Home and delivered through Vaginal delivery gave Prelacteal feeding 224 (47.5%) and 239 (39.2%) respectively (42).

2.3.3 Maternal health related factor

Study done in Pakistan showed that 17.2% of mother give PLF to their babies due to medical reasons (44).Rural Mothers of Maharashtra in India 85 (36.96%) mother told The commonest reason of prelactal feeding as "no milk secretion" (31). another Study done in India showed that the reason of giving PLF is Inadequate milk production/as a substitute 220(40.0 %) and Maternal illness 22(4.0%) (45).In Vietnam Breastfeeding problems were reported by 10.6% of mothers, Compared to their counterparts who reported no problems, the odds were higher that these mothers fed prelacteals in general (1).

In the 3 African country Mulitipara mother gave PLF than primipara in Burkina Faso 145(23.4%), Uganda 154 (26.9%) and South Africa 154 (33.5%) (19). A cross-sectional study done among lactating mothers in Benin City, Nigeria showed that PLF was given due to no milk secretion 24(51.1%)(36). Study done in Uganda showed that Pre-lacteal feeding was given to 150 (64%) infants of the HIV-positive mother (41). In Egypt mothers gave PLF due to Lack of/delay in milk production 179(47.9%), Maternal exhaustion/illness 112(29.9%) and Breast problems (e.g., mastitis, engorgement, and soreness) 102(27.3%) (20). Study done in jimma town showed that 54 (8.9%) of the mother encountered the following breastfeeding problems ;Sore nipple 16 (29.6%),Engorgement 31 (57.4%) and "Not-enough" milk 7 (13.0%) this in turns leads to PLF(12.6%) (24).

2.3.4 Maternal knowledge on the risk associated with prelactal feeding

A study in a Singapore hospital said that around 80% of the mothers did not know that there exist a difference between colostrum and mature milk 'does imply strong PLF Practice while In India Benefits of colostrums and Meaning and disadvantage of prelacteal feed were known to 25% and 10.0% mothers respectively (46).

Prelacteal feeding practices among lactating mothers in Benin City, Nigeria showed that Majority 59.8% of the respondents asserted there were no disadvantages associated with pre-lacteal feeding, while 22(5.5%) claimed they do not know if there were any dangers associate with this practice. However, 140(34.7%) of the respondents were of the opinion that there were possible dangers inherent in the practice. Demerits or disadvantages of PLF as volunteered by the respondents included infection, 73(39.5%); diarrhea, 63(34%); poor growth, 35(18.9%) and vomiting, 14(7.6%) (36).

Study in Western Uganda Kampala International University Teaching Hospital Maternal and Child Health Clinic, Bushenyi, showed that Mother's poor level of information of breastfeeding gave PLF 51(52%) (40). In Ethiopia Harare region mother who had Good level of information of breast feeding gave PLF 207 (74.5%) than Poor level of information 71 (25.5%) (23). Study done In Raya Kobo Three hundred and ninety (62.6%) of respondents who had ever breastfed did not know of the risks associated with prelacteal feeding and Of the respondents who had practiced prelacteal feeding, (73%)mothers did not report any purported advantages of prelacteal feeding for infants (42).

In Vietnam mother's belief that Breastfed newborns will be thirsty if not given water before initiation of breast feeding 52.4% (1). In Bangladesh those who gave PLF thought that PLF Keeps mouth &throat moist 178 (55%), Keeps body warm44 (14%), Rapid growth30 (9%) and Clears bowel 23 7% (16). In Egypt mothers who gave PLF have the following attitude; Keeping mouth and throat moist 209(55.9%), to clean infant's gut/throat/mouth105 (28.1%), to calm/soothe the baby 94(25.1%) Colostrum is bad to baby (24.6%), Allowing stool to be passed 89(23.8%) and Keeping baby warm 16(4.3%) (20). In Ethiopia north Gondar kossoye Colostrum was said to cause abdominal problems (63 %) reported ritual prelacteal feeding, Prelacteal substances may be given for non-nutritional reasons, such as to 'clear the throat' or bowels (47). In jimma arjo mothers who gave PLF thought that my breast is too small 12(3.1%) Fluid is used to clean stomach 19(5%) (24).

2.3.5 Colostrum avoidance

Families of pavement and road side squatter settlements in Indian, 85.7% mother were discard colostrum and 96% of them gave PLF and belief that it is bad for child health (37). Another study in India showed that Colostrum was discarded by 66% of the respondents and 78% of them gave PLF to neonates because of it was believed to be impure and causes obstruction in the intestines of the neonates (33).In Ethiopia north Gondar kossoye, 79% of the respondents were discard colostrum and of them 63% gave PLF because of belief that colostrum may cause abdominal discomfort and diarrhea (48).

2.3.6 Cultural related factors

Hindu culture In Nepal and in India BPKIHS Dhahran provided PLF 710 (26.3%) and 196(98%) respectively (18, 30). In Bangladesh Reasons for giving prelacteal feeding 178(55%) was Social Custom (16). A study in a Singapore hospital said that it was common to separate babies from their mothers for 24 hours, the 'traditional Chinese rest period', and that 58% of the mothers did not touch their babies in the first 24 hours, which implies at least partial avoidance of colostrums and PLF (46). In India advance pediatrics center of PIGMER more than eighty percent of the mothers had given pre lacteal feed either in the form of diluted milk (cow's milk mixed with water) or Ghutti (78%) and The Ghutti was administered by an elderly female member of the family as it was believed that the infant will imbibe the same personality characteristics of the person who had administered the Ghutti (31).

The Reasons for PLFs was Tradition/culture 228(35.2%) and (6.4%) in Egypt and Nigeria respectively (20, 36).In Ethiopia the northern Gondar Kossoye traditional belief that colostrum may cause abdominal discomfort and diarrhea, therefore, 60% of people belief that providing PLF will clean the stomach (47).

2.3.7 Breast feeding initiation

A cross-sectional study done in North Eastern Ethiopia, Raya Kobo district, late initiation of breastfeeding was associated with prelacteal feeding practice. Prelactal feeding was more common among Mothers who initiated breastfeeding after one hour of deli very 100 (56.8%) than mothers who initiated breastfeeding within one hour of delivery 142 (31.8%).which were 2.7 times (42).

A cross-sectional study done in Eastern Ethiopia, Attending Immunization Clinic in Harari Region Public Health Facilities showed that those who initiate breast feeding Immediately were gave prelactal feeding 67 (24.1%), 101 (36.3%) hours and 110 (39.6%) days. Mothers who started breast feeding a few hours after birth were 5.3 times more likely give prelacteal liquids for their infants compared to those who started breast feeding immediately after birth (23).

A Cross-Sectional Study showed among Women Attending Kampala International University Teaching Hospital Maternal and Child Health Clinic, Bushenyi, Western Uganda Delay in initiating breastfeeding was the key factor promoting Prelactalfeeding. Among mothers who initiated breastfeeding within 24 hour 86(84.3%) gave prelacteal feeds. the number of prelactal feeding practice among mothers who initiated breastfeeding within one hour after birth equaled those who initiated after one hour (50% each)(40).

Conceptual frame work

Maternal and infant Sociodemographic character and culture are the distal variables which are affecting the proximal variables and dependent variable. The proximal variables like maternal health care utilization, Colosrum avoidance, breast feeding initiation, maternal knowledge on demerits of PLF affected each other and the outcome variable which is prelactal feeding.

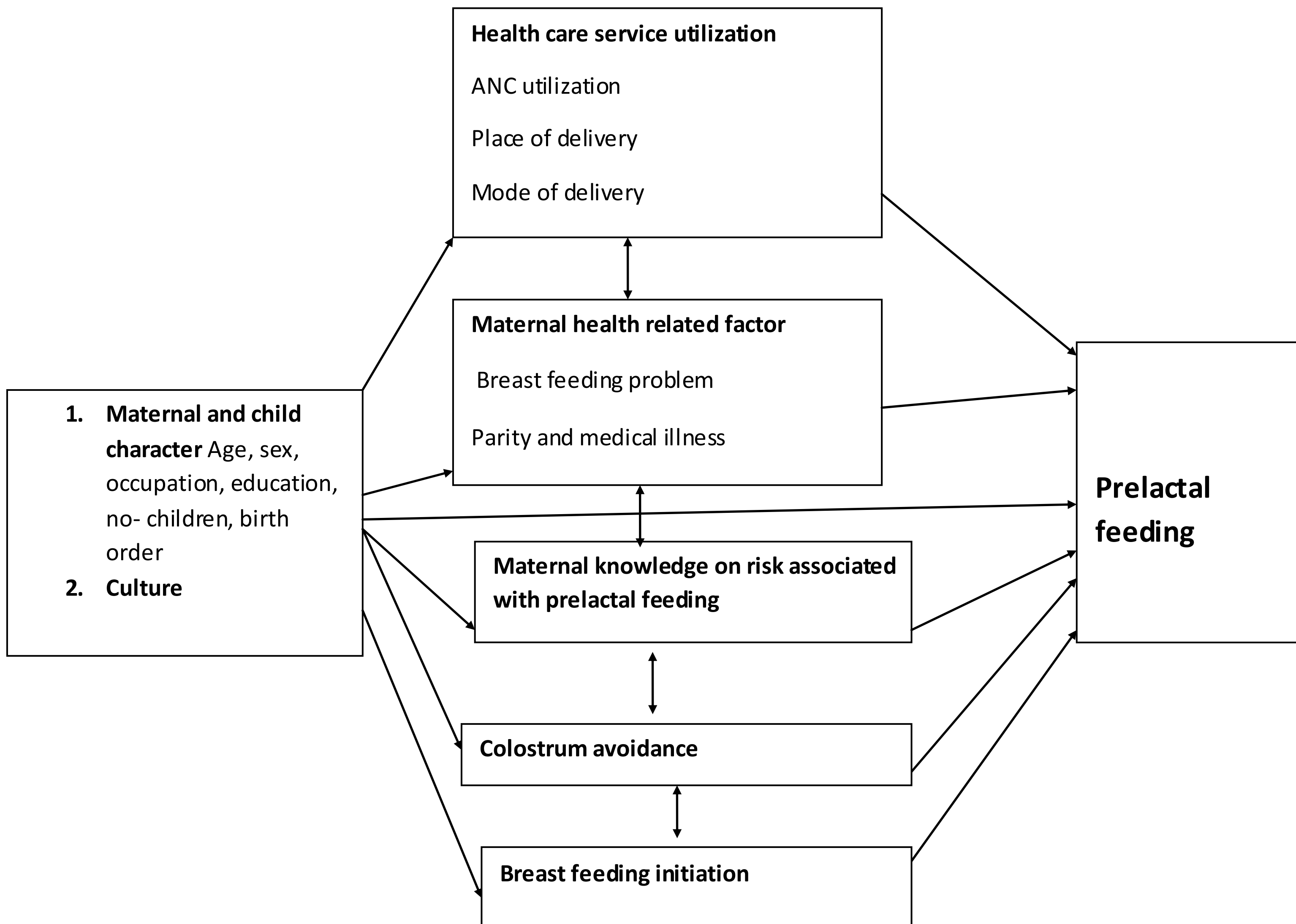


Fig1: conceptual frame work of prevalence of prelactal feeding and associated factors among mothers of children less than one years of age adopted and modified from literature review (1, 16, 18).

3. Objective

3.1 General Objective

To assess the prevalence of prelactal feeding and associated factors among mothers of children less than one years of age in Mizan-Aman town, south west Ethiopia

3.2 Specific Objectives

- To determine the magnitude of prelactal feeding practices.
- To identify factors associated with prelactal feeding practices.

4. METHODS AND MATERIAL

4.1 Study Area

This study was conducted in Mizan-Aman Town, Benchmaji Zone, one of the 13th Zone in the Southern Nations Nationalities and People's Regional Government (SNNPRG). The Zone has **11**woreda and one city administration and is located in the south west part of the region, bordering in northeast with Kaffa Zone, Sheka zone and Gambella region in the west and south west and south Sudan in the south and Omo zone in south east and has 6 native ethnicities' like: Bench, Sheko, Menit, Surma, Zulmame and Maje. The total population of Benchmaji zone is **804,868** and of them **26,462** are children less than one years of age. Cash crop agricultural product and gold mining are the main economic activity in the zone. **Mizan-Aman town** is the capital town of the zone, and is situated 561 Km, 832 Km from Addis Ababa and Hawassa (capital town of SNNPRG) respectively. The town is administratively structured by **5** kebeles and has a total population of **49,590** of which **26,392** are males and **23,197** are females. Out of all female population **11,554** of them are women in the reproductive age group (15-49yr). About (**1,582**) or 3.9% of the total population is accounted by children less than one years of age. The town has one hospital, one health centers, three health post, 10 private health institution and 17 drug stores.

4.2 Study Period

The study was conducted from April12 to May 12, 2015

4.3 Study Design

Community-based cross-sectional study with mixed methods was employed.

4.4 Source of population

Mothers or caregivers of children less than one years of age who are found in Mizan-Aman town were the source population.

4.5 Study population

Mothers/care givers of children less than one years of age that are living in randomly selected kebeles were considered as study population.

4.6 Eligibility criteria

4.6.1 Inclusion criteria

Mothers/caregiver of children less than one years of age who have been permanent residents of the Mizan-Aman town and willing to participate in the study in randomly selected kebeles were included in the study.

4.6.2 Exclusion criteria

Mothers who are seriously ill, mental problem or unable to communicate was excluded.

4.7 Sample Size Determination

The sample size was calculated using a formula for estimation of single proportion as follows: **Where Z**= Standard normal variable at 95% confidence level (1.96),even though Jimma town is near to Mizan-Aman town from all research done in Ethiopia related to prelactal feeding their population variety (ethnicity), health service access, culture and social custom are different and the prevalence of PLF in jimma Town was 12.6%(i.e. p value is <0.3) because of this it is difficult/not reliable to take as reference therefore, I used **p**= estimated proportion of prelactal feeding 50% **d**= 0.05 (5% margin of error),

$$n= \frac{(z/2\ a)^2\ p\ (1-p)}{d^2} = \frac{(1.96)^2\ o.50\ (1\ -o.50)}{(0.05)^2} = 384 \text{ and}$$

Since, the population was less than 10,000 I used correction formula as follows:

$$n\ \text{final} = \frac{n\times N}{n+N} \quad \frac{384\times 1582}{384+1582} = \frac{607488}{1966} = 309$$

Where, **N=**the target population **n=t**he sample size

And then 309×1.5 (design effect) = 464 and by adding 5% non response rate, the final sample size was **487.**

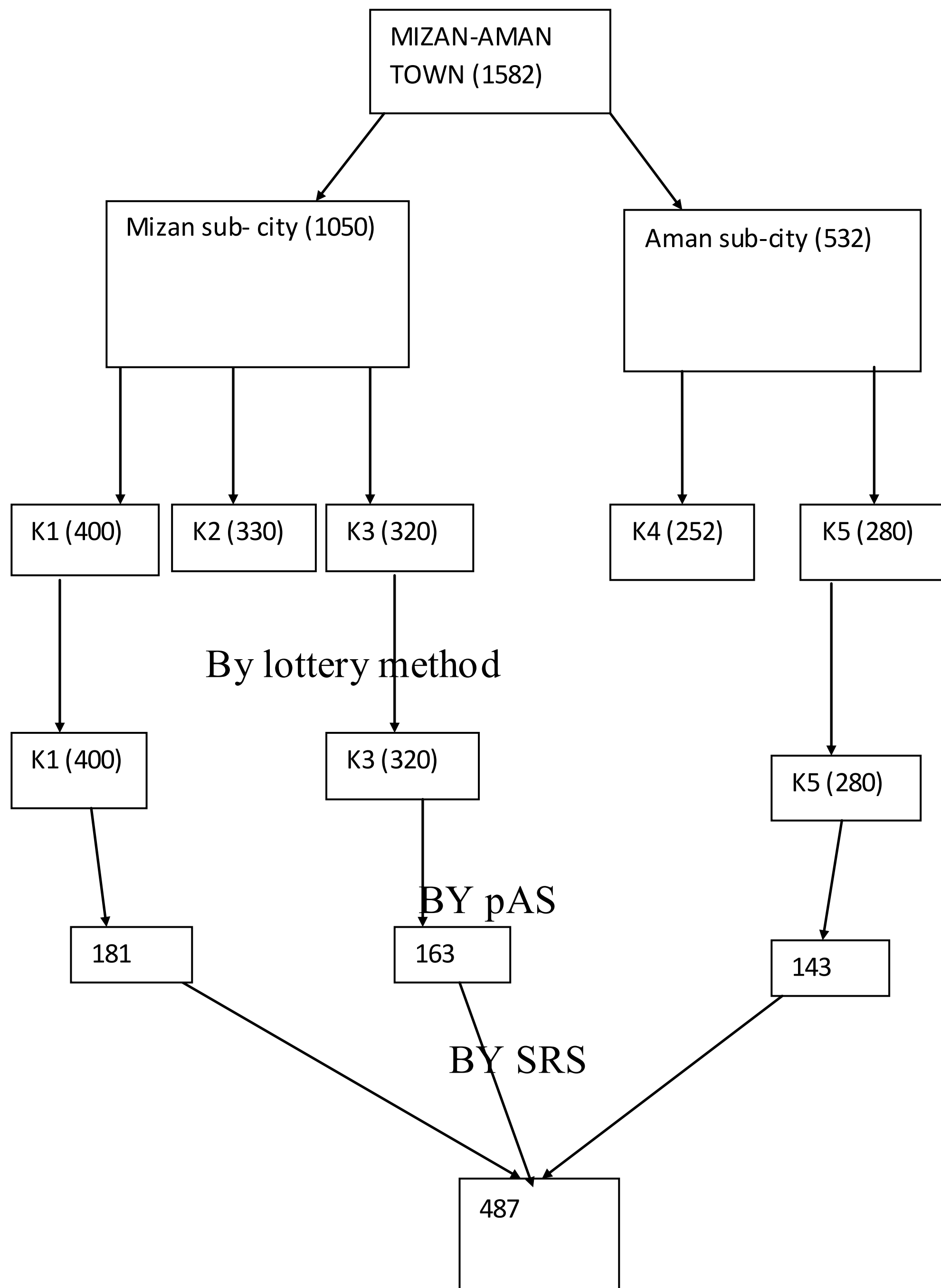
4.8 Sampling procedure/Technique

4.8.1 Quantitative part:

Multi-stage randomized sampling technique was used to capture the study participants. Mizan-Aman town has two sub-city and 5 kebeles. Mizan sub-city has 3 kebeles: among these, 2 kebeles were selected by lottery method and Aman sub-city has 2 kebeles: among these, one kebele was selected by lottery method. In order to obtain the sample size from each 3 kebeles proportional allocation to size was done. Then after obtaining the sampling fraction/interval, mother/caregiver child pair was selected from each household by using HEW family record book as a sampling frame using systematic random sampling technique (**figure two**).

4.8.2 Qualitative part:

Key informants like mothers/care givers with at least one under one year child, health professional, traditional birth attendants, grandmothers and health extension worker were involved. A total of 43 women were selected using purposive sampling for five focus groups, each comprising around 8-10 participants.



Key; - k= kebeles

Fig two: Sampling techniques and procedure of prevalence of prelactal feeding and associated factors among mothers of children less than one years of age in Mizan-Aman town, south west Ethiopia April 12 to May12 2015.

4.9 Study variables

4.9.1 Dependent Variable

- Prelactal feeding

4.9.2 Independent Variables

- Child and maternal demographic variable(child's sex,no_of children, birth order ,maternal age, educational status ,occupation, religion, marital status)
- House hold character(income, family size)
- Health care service utilization(ANC utilization, place of delivery and mode of delivery)
- Maternal related factors(parity, medical illness and breast feeding problem)
- Maternal knowledge on the risk associated with prelactal feeding
- Colostrum avoidance
- Cultural practice
- Breast feeding initiation

4.10 Operational definition

Prelactal feeding; is defined as giving fluid or semisolid before breast feeding to an infant during the first three days after birth.

Antenatal care utilization: having at least one visit of health institution for checkup purpose during the pregnancy of the index child

Colostrum avoidance; includes; pumping and discarding colostrum during the first five days after birth.

Breastfeeding problems; were defined as whether a mother had experienced one or more of the following: she has insufficient breast milk; the infant has difficulty attaching or suckling, and/or pain, engorgement, or cracked nipples.

Family size: everybody living permanently in the same house was counted as family members

Good level of information about Breast feeding;

Those mothers who told two or more components of breast feeding counseling during their ANC visit (1. Benefits of breast feeding 2.positioning of the baby 3.exclusive breast feeding 4.managements of breast problem 5.expression of breast milk)

Poor level of information about Breast feeding;

Those mothers who told one or none components of breast feeding counseling during their ANC visit (1. Benefits of breast feeding 2.positioning of the baby 3.exclusive breast feeding 4.managements of breast problem 5.expression of breast milk)

4.11 Data collection tool

The data collection tool was Adapted from EDHS and the national nutrition survey. Both of them used this tool for collecting **infant feeding practice** as the national level for many years. It had 3 parts, the first part contains sociodemograpical characteristics of mothers and children, the second part contains infant feeding practice to assess prelactal feeding practice and the third part contains factors influencing prelactal feeding to asses associated factors of prelactalfeeding. The adapted questionnaire was modified and contextualized to fit the local situation and the research objective. The questionnaire was prepared first in English, translated into Amharic, and then back into English by fluent speakers of both languages to check its consistency.

4.12 Data collection method

The data was collected through face to face interview using structured questionnaires which were adopted from Ethiopian Demographic and Health Survey and the national nutrition survey questionnaire. The pre-testing was conducted in 5% of the sample size of mother/caregiver child pair in similar area in not selected kebeles to establish accuracy of questions and clarity and to determine the length of interviews. During pre-testing an effort was made to check for consistency in the interpretation of questions and to identify ambiguous items. After review of the instruments all suggested revisions was made before being administered in the actual study.

Eight data collectors and two supervisors were recruited to participate in the study. The selection criteria for data collectors were those individual who had Diploma in nursing. The supervisors should have BSc degree in public health or nursing And have previous experiences. During data collection when the house was finding locked next time the house was revisited three times then if locked the next house was interviewed.

For qualitative, the data collection was employed with FGD exploration through probing questions prepared in Amharic language. Tape recorder was employed to the area where FGD was conducted and field note and observation also was undertaken. mothers/care givers with at least under one year child, health professional, traditional birth attendants, grandmothers and health extension worker were selected from each Selected Kebeles. FGDs guide questions containing the current situation of prelactal feeding practice, reasons and factors associated with prelactal feeding in the area were used to collect qualitative data through FGD . Participants were left to discuss each question actively with as little interference as possible from the principal investigator who was acting as a moderator, the principal investigator assisted by two degree nurses; one assistant was responsible for the tape recording while the other was taking field notes. Focus group discussions (FGDs) were conducted in two kebeles of Mizan-Aman town and in one health center; the Kebeles and the health center were purposely selected from a list of 5 Kebeles where the participants live and the health center was selected based on client flow. The Kebeles were selected based on population amount. FGDs' participants were recruited one week before the meeting for discussion, through the Kebeles health extension worker, health center head and Kebele leader who were informed of the criteria for selection of the FGDs participants. The discussions lasted between 60 and 90 minutes. At the end, participants were given an opportunity to ask general questions on various infant nutrition issues, and the principal investigator and one degree nurse assistant who was a clinician responded accordingly.

4.13 Data quality assurance

Training was given for data collectors for three days to ensure the completeness and consistency of information during data collection, the investigators and supervisors were made a thorough check before receiving the filled questionnaire from each data collector and in the mean time they are randomly select the questionnaire to crosscheck Its completeness and errors on spot and during data collection was cleaned and Coded before data entry. There was meeting at the end of data collecting time for discussion. Data analysis was started by sorting and performing quality control checkup on field. Data was checked in the field to ensure that all the information was properly collected and recorded. Before and during data processing the information was checked for completeness. The questionnaire was pre-tested before data collection.

4.14 Data processing and analysis

Data cleaning was performed to check for accuracy, consistencies, and values. The data undergo rigorous daily checking to identify and correct errors. The investigator with an experienced data clerk was enter the data using Epi Data version 3.02 and exported to SPSS 16 statistical package for analysis. Descriptive statistics (frequency and percentage) were used to describe socio-demographic and economic characteristics of the study population and the magnitude of prelactal feeding practices.

Then bivariate logistic regression techniques was done to see the crude association between the independent variables and the dependent variable and the strength of association was expressed in odds ratio (OR). Eventually, result from bivariate analysis of $p<0.2$ was moved to multivariate analysis and done through step wise multiple logistic regression technique to control the effects of confounding and to identify predictors of prelactal feeding practices. A P value of < 0.05 was used as the criterion for statistical significance.

The qualitative data that was obtained from FGD was auto taped, transcribed, translated and coded. The response was transcribed to Amharic and translated to English and the main response was categorized to its theme. The main responses from the respondents were reported using narrative and mentioned in direct quotation.

Inductive content analysis was used to process of analysis and systematically coding segment by segment based on the request questions. Finally the narrative qualitative information and the observation was organized and integrated according to emerging themes and concepts that were answered the research questions and the results were triangulated with quantitative finding.

4.15 Ethical Consideration

Ethical clearance was secured from Addis Ababa University, College of health science department of nursing and midwifery institutional ethical review Board to Mizan-Aman town health unit. Permission letters were obtained from Mizan-Aman town health unit and respective kebeles. After giving clear and deep understanding about the aim of the study, written consent was obtained from each respondent before the interview was conducted. Persons who were unwilling were exempted from the study. Anonymous data were taken and the confidentiality of participants'' information was secured.

4.16 Communication and dissemination of the Result

Result of this study would give to colleges of health sciences department of nursing and midwifery, Addis Ababa University. It would be disseminated to Mizan-Aman town health unit and respective kebeles, Benchmaji zone health office and to other concerned bodies. Furthermore, the paper would be presented on workshops, seminars, and on other professional gatherings. The paper would also be published in scientific journals.

5. Results

A total of 487mother-child pairs were included in the study, resulting in a response rate of 485(99.6%).

5.1 Sociodemographic characteristics of mothers and infants

Of the total respondents, 239(49.3%) had 4-6 number of family, 184(37.9%) were 20-24 years of age, 459(94.6%) married, 167(34.4%) had primary level of education(1-8 grade), 192(39.6%) orthodox in religion, 139(28.7%) were Amhara in ethnicity, 284(58.6%) were house wife in occupation, 317(65.4%) had gotten <500Birr/month, 238(49.1%) infants were female, 229(47.2%) were first order/first child for their family and were no previous birth and 424 (88.4%) had less than or equal to three children**(Table 1).**

Table1; Socio-demographic characteristics of mothers of children aged less than1 years in Mizan Aman town, south west Ethiopia, 2015 (N=485)

Demographic variable	Frequency(N=485)	Percentage (%)
Type of respondents		
Mothers	482	99.4
Care giver	3	.6
Family size		
<=3	194	40.0
4-6	239	49.3
>6	52	10.7
Age of mothers		
15-19	51	10.5
20-24	184	37.9
25-29	162	33.4
30-34	51	10.5

35-39	31	6.4
>39	6	1.2
Maternal marital status		
Single	20	4.1
Married	459	94.6
Divorced	5	1.0
Widowed	1	.2
Maternal educational level		
unable to read and write	106	21.9
able to read and write	36	7.4
Primary (1-8)	167	34.4
Secondary (9-12)	105	21.6
college and above	71	14.6
Maternal religion		
Orthodox	192	39.6
Protestant	179	36.9
Muslim	114	23.5
Maternal ethnicity		
Bench	112	23.1
Kaffa	107	22.1
Amhara	139	28.7
Oromo	48	9.9
Others	79	16.3
Maternal occupation		
private employee	8	1.6
government employee	58	12.0
daily laborer	7	1.4
Merchant	57	11.8

Farmers	49	10.1
house wife	284	58.6
Others	22	4.5
Mothers income level		
<500Br.	317	65.4
500-1000Br	80	16.5
1001-1500Br.	19	3.9
>1500Br.	69	14.2
Age of the infant		
<1mos	28	5.8
1-6mos	203	41.9
>6mos.	254	52.4
Sex of the infant		
Male	247	50.9
Female	238	49.1
Birth order of the infant		
First	229	47.2
2-3	197	40.6
4-6	51	10.5
>=7	8	1.6
Birth spacing of the infant		
No previous birth	229	47.2
<24mos.	34	7.0
>=24mos.	222	45.8
No of children in the family		
<=3	424	87.4
>=4	61	12.6

Others Ethnicity: Tigre, Dawro, yem, sheka other occupation: student, mothers living with their family

5.2 The magnitude of prelactal feeding practice in the study population

Of the total respondents 106(21.9%) was given PLF within three days before breast feed for their infants. The most common type of prelactal food was given **water** with "**tenadam**"/**rue** 49(10.1%); 33(6.8%), 10(2.1%), 9(1.9%), 5(1%) were plain water, glucose with water, formula milk, and others, respectively (**Table 2**).

Table 2: Type of prelactal food provided for infants, in Mizan-Aman town, 2015 (N=485)

Type of PLF	Frequency	Percentage (%)
Plain water	33	6.8
Glucose with water	10	2.1
Water and tenadam/rue	49	10.1
Formula milk	9	1.9
Others	5	1
Total	106	21.9

The reasons for PLF were; 49(10.1%) Cultural practice, 45(9.3%) to clean infants bowel/throat/mouth, 31(6.4%) due to Breast feeding problem, 19(3.9%) mothers believed that breast feed for new born will be thirsty, 14(2.9%) for infant health, 11(2.3%) due to Maternal medical illness and 9(1.9%) to calm/soothe the baby.

Regarding to influence/ advice to provide such type of PLF; their own decision was the dominant factor, 51(10.5%), followed by grandparents; 28(5.8%), their friends; 15(3.1%), lastly health professionals; 8(1.6%).

Regarding colostrum avoidance; of the total respondents, 460(94.8%) were feed colostrum for their infants within the first five days after delivery and 25(5.2%) was avoided colostrum (**figure: 3**).

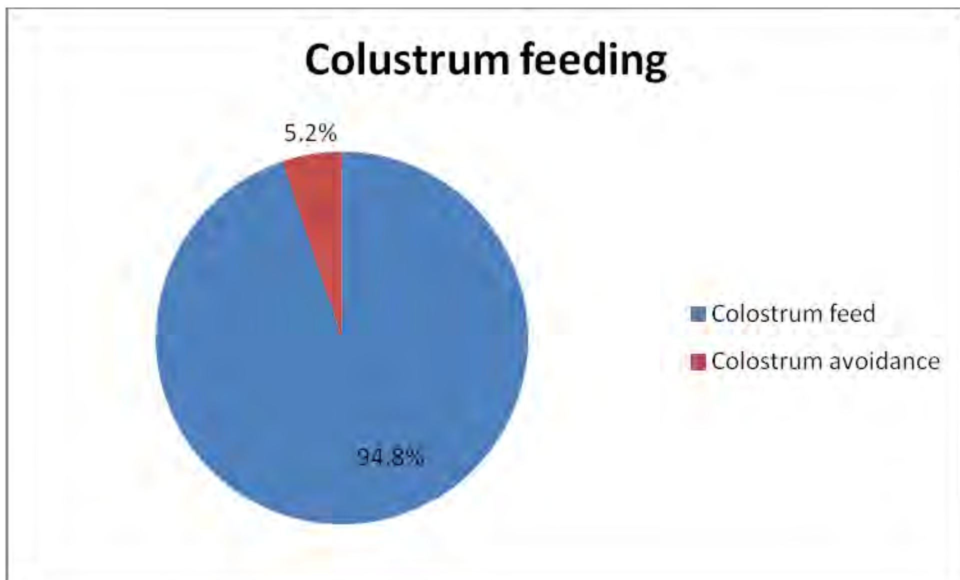


Figure 3: colostrum feeding among mothers of children's less than one years of age, Mizan-Aman town, 2015(N=485).

The main reasons for colostrum avoidance were maternal medical illness 5(1%), and breast feeding problem 19(3.9%). Out of those who gave colostrum for their infants, 297(61.2%) was initiate within one hour, 164(35.6%) were initiate of breast feeding more than one hour (**Figure: 4**).

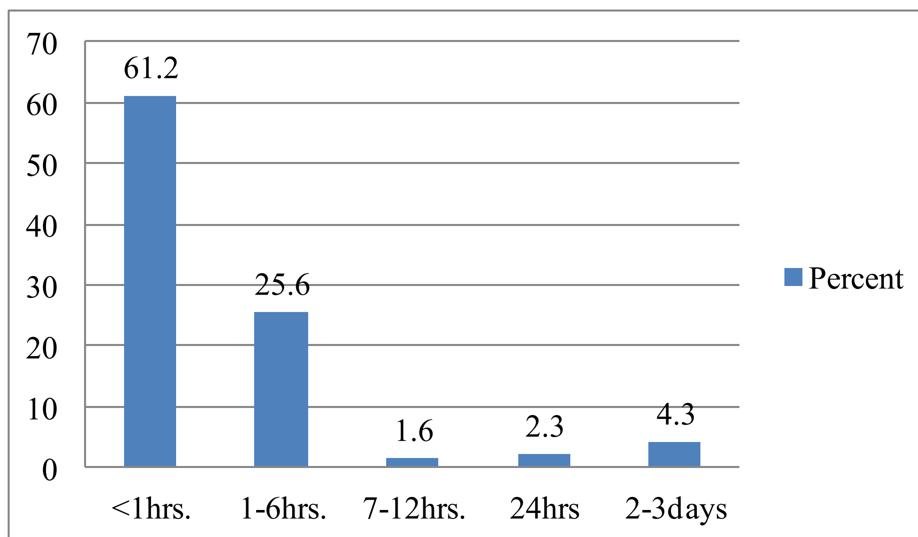


Figure 4: initiation of breast feeding among mothers of children's less than one years of age, Mizan-Aman town, 2015(N=485).

Regarding parity; of the total respondents 236(48.7%), 249(51.3%) were primipara and Mulitipara mothers, respectively (**figure: 5**).

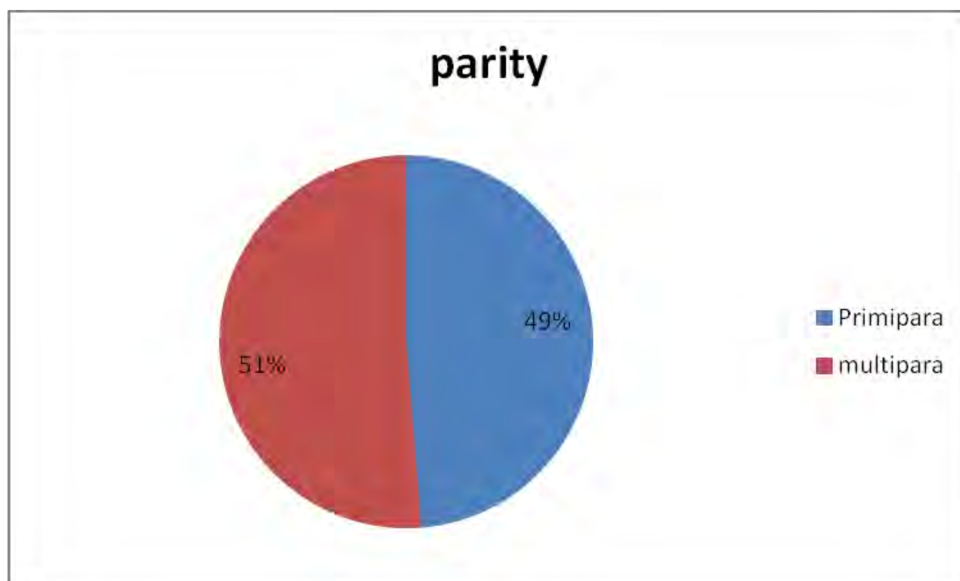


Figure 5: parity status among mothers of children's less than one years of age, Mizan-Aman town, 2015(N=485).

Regarding maternal health service utilization; of the total respondents 470(96.9%) mothers were attending ANC; 315(67%) utilized ANC four and more times, 280(59.6%) had gotten breast feeding Counseling at ANC Clinic, 434(89.5%) delivered their child at Gov't health facility, 435(89.7%) delivered through normal spontaneous and their delivery was assisted by health professional (**Table 3**).

Table 3; Distribution of mothers of children less than one years of age based on maternal health service utilization in Mizan Aman town, 2015 (N=485)

Variables	Frequency(N=485)	Percentage (%)
Attending Antenatal care(n=485)		
Yes	470	96.9
No	15	3.1
Utilization Of Antenatal care (n=470)		
1 times	11	2.3
2-3 times	144	30.6
>=4	315	67.0
Get breast feeding Counseling At ANC Clinic(n=470)		
Yes	280	59.6
No	190	40.4
Place Of Delivery(n=485)		
Gov't Health Facility	434	89.5
Private Clinic	2	.4
At Home	48	9.9
TBAs Place	1	.2
Mode Of Delivery(n=485)		
CS Delivery	49	10.1
Normal Spontaneous Delivery	435	89.7
Others	1	.2
Delivery Attendant(n=485)		
Health Professionals	435	89.7
Traditional Birth Attendants	50	10.3

Others; instrumental delivery

From those who had gotten Breast feeding Counseling at ANC Clinic196 (70%) had good level of information about breast feeding. Concerning knowledge on prelacteal feeding 356(73.4%) mothers were believed that PLF has no an advantage and 297 (61.2%) mothers did know the disadvantages of PLF (**Table 4**).

Table 4: Distribution of mothers of children less than one years of age based on Maternal knowledge on prelacteal feeding, Mizan-Aman Town, 2015 (N=485)

Variables	**Frequency(N=485)**	**Percentage** (%)
level of information about breast feeding(n=280)		
Good level of information	196	70.0
Poor level of information	84	30.0
Belief purported Advantage of PLF(n=485)		
Yes	129	26.6
No	356	73.4
Knowing Disadvantage of PLF(n=485)		
Yes	297	61.2
No	188	38.8

Demerits PLF as volunteered by the respondents included diarrhea, 269(55.5%); infection, 46 (9.5%); poor growth, 42(8.7%) and vomiting, 198(40.8%) (**Table: 5**).

Table 5: Distribution of mothers of children less than one years of age based on mothers Information on Disadvantage of PLF in Mizan-Aman, 2015 (N=297)

Information on Disadvantage of PLF	**Frequency(N=297)**	**Percentage** (%)
Diarrhea	269	55.5
Poor growth	42	8.7
Infection	46	9.5
Vomiting	198	40.8

5.3 BIVARIATE ANALYSIS AND MULTIVARIATE ANALYSIS

Table 6: Factors associated with prelacteal feeding practices among mothers of children aged less than 12month in Mizan-Aman town, may2015

Variable	Prelactal feeding		Crude OR (C.I: 95%)	Adjusted OR (C.I: 95%)
	Yes (%)	No (%)		
Age				
15-19 yr†	21(41.2)	30(58.8)	1	1
20-24 yr	40(21.7)	144(78.3)	**2.52(1.304,4.869)***	.626(.174,2.26)
25-29 yr	26(16)	136(84)	3.66(1.82,7.357)	.983(.237,4.071)
30-34 yr	13(25.5)	38(74.5)	2.046(.882,4.745)	.208(.032,1.351)
35-39 yr	6(19.4)	25(80.6)	**2.917(1.019,8.344)***	.856(.08,9.125)
Income				
<500 B/month†	77(24.3)	240(75.7)	1	1
500-1000 Br/month	18(22.5)	62(77.5)	1.105(.616,1.982)	.677(.223,2.061)
1001-1500 Br/month	5(26.3)	14(73.7)	.898(.313,2.575)	.25(.045,1.39)
>1500 Br/month	6(8.7)	63(91.3)	**3.369(1.403,8.088)***	1.224(.321,4.678)
Birth order of infant				
Birth order 1†	58(25.3)	171(74.7)	1	1
Birth order 2-3	41(20.8)	156(79.2)	1.291(.819,2.034)	2.568(.696,9.473)
Birth order 4-6	5(9.8)	46(90.2)	**3.12(1.183,8.23)***	**12.276(1.528,98.639)***
NO_ of children				
≤3†	98(23.1)	326(76.9)	1	1
≥4	8(13.1)	53(86.9)	1.992(.916,4.331)	**5.197(1.033,26.141)***
Parity				
Primipara†	61(25.8)	175(74.2)	1	1
Mulitipara	45(18.1)	204(81.9)	**1.58(1.023,2.441)***	**3.558(1.036,12.227)***
Delivery attendant				
Health professional†	87(20)	348(80)	1	1
Traditional birth attendant	19(38)	31(62)	**2.452(1.322,4.546)***	1.668(.436,6.379)
Mother knows demerits of PLF				
Yes	17(5.7)	280(94.3)	**14.807(8.398,26.108)***	**6.909(3.002,15.904)***
No†	89(47.3)	99(52.7)	1	1

The binary logistic regression analysis showed that mothers age group in 20-24 years and 35-39 years, mother's income **>**1500birr/month, infants birth order 4-6, Mulitipara mothers, mothers whose delivery assisted by traditional birth attendants and mothers who did know the disadvantage of PLF were significantly associated with prelacteal Feeding($p < 0.05$).

mothers whose age group in 20-24 years and 35-39 years were 2.53 (95%CI: 1.304, 4.869), 2.92 (95% CI: 1.019 – 8.344) times more likely to give prelactal feeding as compared to those mother who age group were 15-19 years, respectively. Mothers whose income >1500birr/month were 1.4 (95% CI: 1.403 – 8.088) times more likely to give prelactal feeding as compared to those mothers whose income were <500 birr/month. Infant whose birth order 4-6 were 3.12(95% CI: 1.183-8.23) times more likely to give prelactal feeding as compared to birth order 1. Mulitipara mothers were 1.58(95% CI: 1.023 – 2.441) times more likely to give prelactal feeding as compared to primipara. Mother who did know the disadvantage of PLF were14.8 times more likely to give prelactal feeding as compared to the counterpart (OR: 14.807; 95% CI: 8.398 – 26.108).

Mother whose delivery assisted by traditional birth attendants were 2.45(95% CI: 1.322 – 4.546) more likely to give prelactal feeding as compared to delivery assisted by health professional.

In multiple logistic regression analysis; Multipara mothers, Infants birth order 4-6, having ≥4 number of children and who did know the disadvantage of prelactal feeding were important positive predictors of prelactal feeding.

Multipara Mothers were 3.56(AOR: 95% CI: 1.036, 12.227) times more likely to give prelactal feeding. Mothers who did know the disadvantage of prelactal feeding were 6.91(AOR: 95% CI: 3.002, 15.904) times more likely to give prelactal feeding.

Infants who births order 4-6 were 12.28(AOR: 95% CI: 1.528, 98.639) times more likely to give prelactal feeding. Mothers who have ≥4 number of children were 5.2(AOR: 95% CI: 1.033, 26.141) times more likely to give prelactal feeding.

5.4 Qualitative result

A total of 43 women were participated in the five focus groups, each comprising around 8-10 participants. The Majority of the participants were women.

Regarding the reasons for prelactal feeding the majority participants were said that providing "Tenadam before starting breastfeeding protects the infant from the "evil eyes "of other people.

The following reasons were also illustrated by participants as follows;

A 32 years old mother said that "Every infant should be providing "Tenadam "before starting breastfeeding, because it protects the infant from the "evil eyes "of other people." (Discussants #FGD 1)

A 52 years old traditional birth attendant said that "we provide "tenadam" with water for infants for two basic reasons: the "tenadam" cleans their mouth and stomach and we give water because of the breast milk has salt in its content, thus, the baby will be thirsty." (Discussants #FGD 5)

A 54 years old grandmother said that "……..we provide water for infants not going to hail, if we don't give water immediately after delivery, we will accused in the sky." (Discussants #FGD 2)

A 29 years old mother said that "….providing water for baby is important to increase mother-baby affinity, if I don't give water before breast feeding; the baby will hate me in the future." (Discussants #FGD 1)

Regarding Breast feeding some of discussants did not counseled at ANC Clinic.

The discussants illustrated as follows;

> *A 23 years old mother said that "…………..most of the time the nurses didn't give us breast feeding counseling during pregnancy follow up at the hospital rather they give us vaccine dated card and trying to treat our illness." (Discussants #FGD 1)*

Regarding delivery attendant some of the discussants were assisted by traditional birth attendant.

The discussants illustrated as follows;

A 28 years old health extension worker said that "…..the mothers don't want to go to the health facility when their labour is coming at the mid night rather they seek the help of neighbored traditional birth attendants and assisted by them. They convinced the mothers that giving water with "tenadam" maintains their baby's health and therefore, the mothers give such kinds of food." (Discussant #FGD 3)

Most of the multipara mothers were believed that prelactal feeding is important for resolving infant's abdominal ache.

The discussants illustrated as follows:

A 35 years old mother said that "providing "tenadam" is very important, like previous Childs who abdominal ache was resolved for long time, therefore I recommend to other mothers to give "tenadam" before starting breast feeding." (Discussant #FGD 1)

Some of the discussants believed that prelactal feeding is dangerous for their infant but they gave it because of different reason.

The discussants *illustrated as follows:*

> *A 25 years old mother said that "……..my breast had no milk at the time of delivery until 2 days. The baby was hungry and so cried and I worried about my baby is he gone to be die? My husband convinced me to give sugar solution. Even though I did know the consequence I have no choice to avoid it." (Discussant #FGD 1)*
>
> *A 30 years old mother said that "……….I was delivered my child through surgical operation on my abdomen. I wake up after one hour and I became exhausted and feel stubbing pain on my abdomen and I couldn't afford breast feeding at that time. My mama gave water with sugar until the first day to my baby. Though I did know that anything is not given to the baby until 6 month, I didn't have a choice to give sugar solution because of exhaustion and surgical pain." (Discussant #FGD 1)*

Most of the discussants believed that giving prelactal feeding is culturally inherited and reluctant to accept information from health professional.

This finding was supported by FGD as follows as;

A 30 years old midwife nurse said that "…….we provide information about harmful infant feeding practice should be avoided but most of them are influenced by grandparents and cultural practice. Thus I recommend that our information delivery method should be focus on making behavioral change." (Informant #FGD 4)

A 63 years old male community leader said that "………..in our community mothers believed that providing water or "tenadam" brought no negative effect on the baby's health. Though the mothers informed by health professional about the disadvantage, they speak "nothing is coming new" and they thought that we grow well the previous Childs like this. For this reason, I recommend that the health professional shouldn't be convincing us orally rather it should be based on practical."(Informant #FGD 6)

A 36 years old mother said that "…….giving butter, water and "tenadam" are not problem to our babies, we used care the other elder children just like this. But our problem is lack of money to give variety of food to our babies after 6 months of age." (Discussant #FGD 4)

Some of the discussants believed that prelactal feeding is given because of having many children.

The discussants illustrated as follows:

*A 32 years old male environmental science professional said that "…..after giving many births, mothers believed that their breast milk amount is inadequate for their baby's growth. For this reason they give cow milk through "**tuto**" or bottle feeding side by side." (Discussant #FGD 4)*

6. Discussion

This study revealed that Breastfeeding practices were sub-optimal in the study setting due to the wide spread introduction of prelactalfeeding. The prevalence of prelacteal feeding in Mizan-Aman -town is found to be (21.9%). This figure is consistent with EDHS 2011 nationally was reported 27%; with significant regional disparities; (21.9%), (25.2%), (23.4%) and (25.6%) in Oromia region, Addisababa city, Benshangul Gumuze region and Tigray region, respectively [21]. And also it's consistent with studies done in different countries; (18%) in the Upper East Region of Ghana, (19.1%) Hondurans and (26.5%) Nepal [18, 29, 39]. While the prevalence of prelacteal feeding in Mizan-Aman town to be higher than the study done in jimma (12.6%) and (10%) in SNNP regional state [24, 21].The reported variation could be due to the difference in the population character, health service access, geographic distribution and culture. And also Prelacteal feeding practice was more prevalent in Mizan-Aman town as compared to (11.7%) in Benin City, Nigeria and (10.2%) at immunization clinic of pediatric department, Medical College Jhalawar India [36, 33]. This could be due to the difference in culture, study design and setting (studies were institution based). Higher rate of prelactal feeding practice were reported from Gondar district (79%) and among regions (72. 5%), (47.2%) and (43.5%) in Somali, Amhara, Harare regions were, respectively [21, 22].This could be due to the difference in the involved population (ethnicity), their culture (norm) and study setting i.e. the above studies were conducted both in rural and urban residents. And also prelactal feeding practice were high (73.3%), (77%), (49%) and (58%) in Vietnam, Bangladesh, India and Mansoura Egypt, respectively [1, 16, 17, 20]. This might be due to the religious and cultural practices plays a lion share to give PLF in the above areas. The other possible explanation is studies were conducted among rural residence in the above areas.

This study showed that those mothers who did know the disadvantage of prelactal feeding were 6.91(AOR: 95% CI: 3.002, 15.904) times more likely to give prelactal feeding. The report is contrary with study done in Raya Kobo district; North Eastern Ethiopia, Bushenyi; Western Uganda and jimma Arjo district [40, 42, 49]. This could be due to the difference in, though the mothers have knowledge on the disadvantage of

Prelactal feeding; maternal medical illness or exhausting, CS delivery and breast feeding Problem especially inadequate milk secretions during the first three days of new born delivery are challenged the mothers. For this reason they worried about their baby survival. This in turns leads to give prelacteal feeding for their babies.

The other possible justification might be that even though mothers got adequate information about breast feeding from health facility, community health worker and mass media, the influence of local community members especially the grandparents might be stress them to give prelactal feeding.

The other possible justification is that maternal knowledge about the risk associated with prelactal feeding is not enough to avoid prelactal feeding, their attitude and behavior (practice) towards prelactal feeding is important.

The study showed that an infant whose births order 4-6 were12.28 (AOR: 95% CI: 1.528, 98.639) times more likely to give prelactal Feeding. This is consistent with study from Mothers Attending Immunization Clinic in Harare Region Public Health Facilities, Eastern Ethiopia Harere region [23]. While contradicted with study from Nepal which was infant births order first [18]. This could be due to the difference in; mothers who gave birth 4-6 times are relatively elder in Mizan-Aman town. Relatively elder (35-39 years) mothers were more likely to give prelactal feeding as compared to younger (15-19 years) mother. The other possible explanation might be most of the Infants whose births order 4-6 were children's of Mulitipara mothers in the study area. Thus Mulitipara mothers were more likely to give prelactal feeding in the study area. The other possible explanation is that infants whose births order 4-6 mothers were relatively elder and might be have a tendency to influence by cultural practice. This in turns leads to give prelacteal feeding for their babies.

The study showed that multipara mothers were 3.56(AOR: 95% CI: 1.036, 12.227) times more likely to give prelactal feeding. The report is consistent with the 3 African countries in Burkina Faso, Uganda and South Africa [19]. This might be due to cultural similarity. Multipara mother's are relatively elder and might have a tendency to influence by cultural practice. This in turns leads to give prelacteal feeding for their babies.

The other possible explanation might be multipara mothers are reluctant to receive infant feeding information and unaware of infant harmful feeding because they might believe that they are enough experienced about infant care.

The study showed that mothers who have ≥4 number of children were 5.2 (AOR: 95% CI: (1.033, 26.141)) times more likely to give prelactal feeding. The report is consistent with study from Mothers Attending Immunization Clinic in Harare Region Public Health Facilities; Eastern Ethiopia Harere region [23].This might be due to cultural similarity. The other possible explanation is that the mothers have ≥4 number of children are relatively elder and reluctant to modify their behavior.

Findings from this study have substantial contribution in the promotion of optimal breastfeeding practices and the achievement of Infant and young child feeding practice (**IYCF**) in reducing child mortality in Ethiopia.

7. Strength and Limitation of the study

Strength of the study

It was included both quantitative and qualitative methods.

It employed community based study and used adequate sample size.

Limitation of the study

This study is cross- sectional so it doesn’t show the temporal relationship and might incur social desirability bias and recall bias.

8. Conclusion

Prelacteal feeding is commonly practiced among mothers of children less than one year of age in Mizan-Aman town. This makes breastfeeding practices sub-optimal in the town. The most common type of prelactal food was water with tenea adam/rue. The major reason for prelactalfeeding were; Cultural practice, to clean infants bowel/throat/mouth and due to Breast feeding problem and regarding to influence/ advice to provide such type of PLF; their own decision was the dominant factors, followed by grandparents. Mothers who did know on the risks associated with prelacteal feeding, multipara mothers, having ≥4 number of children and infant's birth order 4-6 were important positive predictors of prelacteal feeding practice.

Qualitative conclusion:

Majority of the discussants were given Prelactal feeding for their infants. Prelactal feeding protects the infant from the "evil eyes "of other people were the major reasons among the majority discussants. Most of the discussants believed that giving prelactal feeding is culturally inherited and reluctant to accept information from health professional. Some of discussants were given prelactal feeding because of they did not get breast feeding counseling at ANC Clinic, having many children and were assisted by traditional birth attendant.

9. Recommendation

The findings from this study are intended to inform policy makers, planners, other health professionals, mothers/care givers and community leader about the prelactal feeding practices. They can initiate policies and programs that respond to the community needs, which will in turn improve infant feeding practices as one of the components of the IYCF strategies aimed at reducing infant morbidity and mortality.

The study therefore makes the following recommendations aimed at avoiding prelactal feeding.

For MOH and Regional health bureau:

Effective information, education and communication (IEC) strategies should be implemented by the MOH and Regional health bureau to apply a behavior change strategy at all levels: household, community, health facility, district and national, focusing on avoidance of prelactal feeding is recommended.

The factors associated with prelactal feeding should be taken into account while designing an intervention and, targeted, specific, and community oriented promotion of avoidance of prelactal feeding including women empowerment through education is recommended.

For Mizan-Aman city administration:

should work on promoting behavioral change communication activities on disadvantages of prelactal feeding and Interventions should be aimed at not only multipara mothers, but also include their family members especially the grandparent and local cultural practice and should be implemented at all levels: household, community, health facility and community based by health extension workers.

For Health personnel:

Better to give intensive nutrition education program for those Multipara Mother's especially having ≥4 number of children and who did knows the demerit of prelactal on avoidance of prelactal feeding who attend health facility for delivery, immunization, and ANC and for other services.

For the researcher: researcher should consider further follow up study in prelactal feeding.

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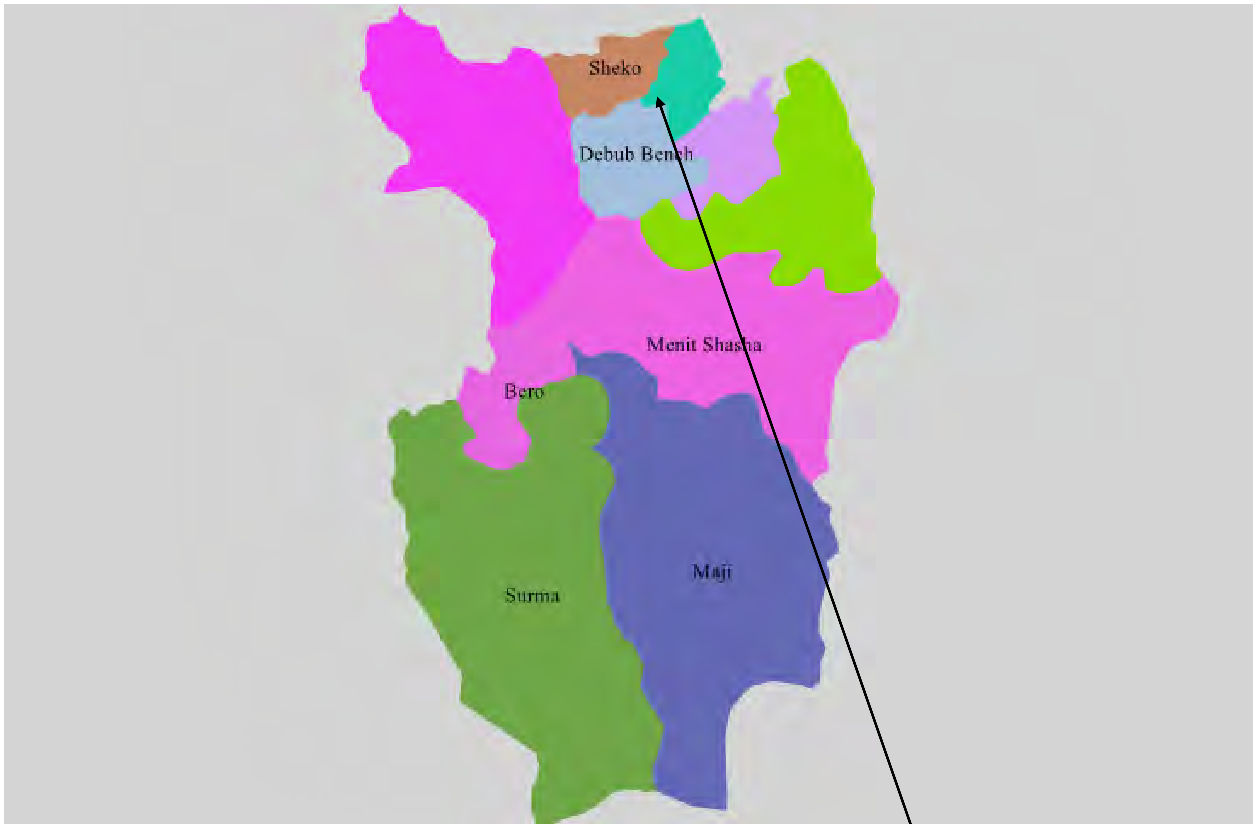
11. Annex

Annex one: map of Mizan-Aman town



Annex two: English version of questionnaires

Information sheet and informed consent

Questionnaire identification number -----

Study area: - Town…………

Keble…

House number …

My name is ……………, I am working in research team, which is conducted by the Addis Ababa university. We are interviewing mothers of children less than one years of age to assess the prevalence and associated factors of prelactal feeding. I am going to ask you some questions that are not difficult to answer. Your name will not be written in this format and never be used in connection with any of the information you are going to tell me. You are not obliged to answer any question that you do not want to answer and you may end this interview at any time you want to. However, your honest answers to these questions will help us in determine the prevalence and identifying the associated factors of prelactal feeding and improve optimal breast feeding practice in the future. We would appreciate your help in responding to these questions, and the interview will not take more than 30 minutes.

Are you willing to participate in the study? Yes….

No-----

Signature of Data collector ----------Name------------Date-------------

Signature of supervisor ------------ Name -----------Date-------------

Part one: Questioner for prelactal feeding

Addis Ababa University College of health science, school of allied health science, department of nursing and midwifery questioner to asses prelactal feeding prevalence and associated factors in Mizan-Aman town, southwest Ethiopia

Section 1: Demographic Data of Mother and child

S no	Questions	Answers	Code	Skip
1	Type of respondent	1'Mother 2.Caregiver	01 02	
			01 02	
2	Family size	1.<=3 2.4-6 3.>6	01 02 03	
3	How old are you?	1.15-19yr 2.20-24 3.25-29 4.30-34 5.35-39 6.> 39	01	
4	What is your current marital status?	1.Single 2.Married 3.Divorced 4.Widowed	01 02 03 04	
5	What is your level of education?	1. Unable to read and write 2. Able to read and write 3. Primary education 4. Secondary education 5. College and above	01 02 03 04 05	
6	What is your religion?	1. Orthodox 2. Protestant 3. Muslim 4. Other (specify)------------------	01 02 03 04	
7	Which ethnic group do you belong to?	1. Bench 2. Kaffa 3. Amhara 4. Oromo 5. Others (specify)-----------------	01 02 03 04 05 06	
8	What is your current occupation?		01	

		1. Private employee 2. Civil servant 3. Daily laborer 4. Trader 5. Farmer 6. House wife 7. Other (Specify)----- -----------	02 03 04 05 06 07	
9	What is the approximate household income from all the sources per month?	1.< 500 2.500-1000 3.1001-1500 4.>1500		
10	How old is your (the index) child?	1.<1 months 2.1month-6month 3.> 6month		
11	Gender of your (the index) child?	1. Male 2. Female	01 02	
12	Birth order of the index child	1. birth order 1 2. Birth order 2-3 3. Birth order 4-6 4. Birth order 7^+	01 02 03 04	
13	Birth spacing with the previous child	1. No previous birth 2. <24 months 3. >= 24 months	01 02 03	
14	No_ of children	1. ≤3 children 2. ≥4 children	01 02	

Section 2: INFANT FEEDING PRACTICES

So no-	Questions	Answers	Code	Skip
15	Did you give anything to drink and/or eat before breast milk within 3 days for your child, after delivery?	1.Yes 2.No	01 02	If ,no skip to ques 19
16	If question 16 is yes, what did you give? (Multiple responses is possible)	1. Plain water 2. sugar /Glucose water 3. Water and tenadam 4. butter 5. Formula milk 6. Other (specify)-------------	01 02 03 04 05 06	

17	Why did you give anything to drink and/or eat before breast milk after delivery? (Multiple responses Is possible)	1. Breastfed for newborns will be thirsty 2. for child growth 3. Breast feeding problem 4. Maternal medical illness 5. cultural practice 6. To calm/soothe the baby 7. To clean infant's bowel/throat/mouth	01 02 03 04 05 06 07	
18	Who advised you to provide your child with such type of food/ fluid?	1. My own decision 2. Grandparents 3. Traditional birth attendant 4. Husband 5. Friends 6. Health personnel 7. Others specify--------------	01 02 03 04 05 06 07	
19	Did you feed colostrum (the first yellow milk) for this index during the first five days after birth?	1.yes 2.no	01 02	
20	If yes, When did you initiate breast feeding (name of the index child) after birth?	1. <1 hour 2. 1Hr-6Hrs 3. 7-12 hour 4. 1 day 5. 2-3 days 6. Other (specify) -------------	01 02 03 04 05 06	
21	If question 20 is no, why you avoid colostrum for your child?	1. Maternal medical illness 2. for the child growth 3.My breast has no milk 4. Cause Abdominal discomfort and diarrhea 5.Other (specify)-------------------	01 02 03 04 05	

Section 3; FACTORS INFLUENCING PRELACTAL FEEDING PRACTICS

Sr no	Questions	Answers	Code	Skip
22	Did you attend the ANC clinic during your last pregnancy?	1. Yes 2. No	01 02	
23	If Yes, how many times did you attend ANC clinic during the last pregnancy?	1. 1 – times 2. 2-3 times 3. 4 times and above	01 02 03	
24	Did you get breastfeeding counseling at ANC clinic?	1. Yes 2. No	01 02	
25	If yes, what were you told about breast feeding?	1. Benefits of breastfeeding 2. Positioning of the baby 3. Exclusive breastfeeding 4. Management of breast problem 5. Expression of breast milk	01 02	
26	How many times do you give live birth?	---------------------------------		
27	Where did you give birth?	1. Gov't Health facility 2. Private clinics 3. At home 4. TBA's place 5. Other (specify)_________	01 02 03 04 05	
28	What was the mode of delivery?	1. CS delivery 2. Normal spontaneous delivery 3. Other specify__________	01 02 03	
29	Who delivered you?	1. Health professionals 2. Traditional birth attendant 3. Others specify__________	01 02 03	
30	Do you know purported prelacteal feeding advantage?	1. YES 2. No	01 02	
31	If yes, could you mention?	1. For child health 2. For child growth 3. Breastfed for newborns will be thirsty 4. To calm/soothe the baby 5. To clean infant'sbowel/throat/mouth	01 02 03 04 05	

32	Do you know the disadvantage of prelactal feeding?	1.Yes 2.No	01 02	
33	If yes, could you mention?	1. Diarrhea 2. Poor growth 3. Infection 4. Vomiting	01 02 03 04	

Annex: three Probing question for qualitative

Focus group discussion guideline and informed consent

I. Instruction for FGD

1. Greeting by saying:

Good morning /afternoon. I am thanking you, for waiting me by responding to your passed Message.

2. Introduce your self

My name is _______________________________ I came from AAU, Department of nursing

3. Explain the aim of the study by saying that: - The reason I came here is to discuss you on prelactal feeding .The aim of the interview is to share your thought, experience opinion that you got from past parent and you developed through infant feeding practice. This helps to designing acceptable intervention by the community to decrease childhood illness problems and other continuing researches.

I. Verbal informed consent

Read the following as it is:-After I and you share some of our experiences, I start to record and to take note on your experiences of prelactal feeding practice. The FGD question is simply to guide our discussion and to go with the subjects .I take more time depending on generating of new ideas by our discussion. Our relation is in friendly way and I am new for the information you would give me .I promise for you that your name should never used in summery materials and data are kept not to passed to the third person .Information that you provide are remain confidential .You have the right to stop the discussion whenever you want to stop.

Would you be willing to participate in the discussion?

If yes, proceed

If no, Thank and stop discussion

Signature_________________________________

(Signature of the moderator certifies that consent has been obtained verbally)

Section Two: probing question for FGD

1. From your point of view and experiences how do you define giving fluid or semi solid before breast milk within 3 days for your child, after delivery?

2. After give birth, did you given any fluid or semisolid before breast milk within 3 days for your child?

3. If yes, what did you give to the baby?

4. Why did you give?

5. Who advise/influence you to give such kinds of food?

6. What are the factors associated with prelactal feeding in your community?

Annex: four Amharic Version of questioner

አበባ ዩኒቨርሲቲ የጤና ሳይንስ ኮሌጅ የነርሲንግና የአዋላጅ ነርስ ትምህርት ክፍል በሚዛን – አማን ከተማ የሚገኙ ከአንድ አመት በታች ልጅ ያላቸው እናቶች ከወለዱ በኋላ ምን ያህሉ ከጡት በፊት የሚበላ ወይም የሚጠጣ ነገር ለህፃኑ እንደሚሰጡ ለዚህ ተያያዥ ምክንያቶች ለማጥናት የተዘጋጀ መጠይቅ

የመኖሪያ አድራሻ፡– ከተማ ________________________________

ቀበሌ ________________________________

የቤት ቁጥር________________________________

የመጠይቁ መለያ ቁጥር ________________________________

ጤና ይስጥልኝ ስሜ ________________________________ ይባላል፡፡ እኔ በአዲስ አበባ ዩኒቨርስቲ የጤና ሳይንስ ኮሌጅ የነርሲንግና የአዋላጅ ት/ት ክፍል የሚዘገፍ የድህረ ምረቃ የት/ት ምርምር ቡድን አባል ነኝ፡፡ አላማው በሚዛን አማን – ከተማ ወስጥ ምን ያህሉ እናቶች ከወለዱ በኋላ ምን ያህሉ ከጡት በፊት የሚበላ ወይም የሚጠጣ ነገር ለህፃኑ እንደሚሰጡ ለዚህ ተያያዥ ምክንያቶችን ለማወቅ ነው፡፡ ከእርስዎ የሚገኘው መረጃ በጣም አስተዋፅኦ ያለወና ሚስጥሩ የተጠበቀ መሆኑን ላረጋግጥልዎ እወዳለሁ፡፡ ጥያቄን ለመመለስ 30 ደቂቃ ያህል ከእኔ ጋር ሊያጠፉ ይችላሉ በጥናቱ ለመሳተፍ ፍቃደኛ ነዎት?

አዎ ____________________________

አይደለም________________________

መረጃወን የሠበሠበው ፊርማ _________ ስም _________________________ቀን ______________

የተቆጣጣሪው ፊርማ _________ ስም _________________________________ቀን ______________

በአዲስ አበባ ዩኒቨርሲቲ የጤና ሳይንስ ኮሌጅ የነርሲንግ የአዋላጅ ነርስ ትምህርት ክፍል በሚዛን - አማን ከተማ የሚገኙ ከአንድ አመት በታች ልጅ ያላቸው እናቶች ከወለዱ በኋላ ምን ያህሉ ከጡት በፊት የሚበላ ወይም የሚጠጣ ነገር ለህፃኑ እንደሚሰጡ ለዚህ ተያያዥ ምክንያቶች ለማጥናት የተዘጋጀ መጠይቅ

ክፍል 1፡- እናቶች እና ህፃናት ማህበራዊና አኗኗር ሁኔታዎች መረጃ

ተ.ቁ	ጥያቄዎች	ምላሾች	ኮድ	ዝለል
1	ምላሹን የሠጠው ሠው	1. እናት 2. እንክብካቤ ሰጪ 3. ሌላ /ጥቀሺ/-------------	01 02 03	
2	ጾታ	1. ወንድ 2. ሴት	01 02	
3	ቤተሰብ ብዛት?	-----------	01 02	
4	እድሜሽ ስንት ነው?	1. ___________ ዓመት 2. አላውቀውም	01 99	
5	የጋብቻ ሁኔታ?	1. ያገባች 2. ያላገባች 3. የተፋታች 4. የሞተባት	01 02 03 04	
6	የት/ት ሁኔታ?	1. ማንበብና ማፃፍ የማትችል 2. ማንበብና ማፃፍ የምትችል 3. የ1ኛ ደረጃ ት/ት የተማረች 4. የ2ኛ ደረጃ ት/ት የተማረች 5. የከፍተኛ ት/ት የተማረች	01 02 03 04 05	
7	ሃይማኖት?	1. ኦርቶዶክስ ተዋህዶ 2. ፕሮቴስታንት 3. ሙስሊም 4. ሌላ (ጥቀሺ) -------------	01 02 03 04	
8	ብሔር?	1. ቤንች 2. ከፋ 3. አማራ 4. ትግሬ 5. ጉራጌ 6. ሌላ (ጥቀሺ) -----------	01 02 03 04 05 06	
9	የስራ ሁኔታ?	1. ተማሪ 2. የግል ተቀጣሪ 3. የመንግስት ተቀጣሪ 4. የቀን ሠራተኛ 5. ነጋዴ 6. ገበሬ 7. የቤት እመቤት 8. ሌላ (ጥቀሺ)--------	01 02 03 04 05 06 07 08	
10	ወርሃዊ ገቢሽ ምን ያህል ነው?	___________የኢትዮ. ብር		

11	የህፃኑ እድሜ ስንት ነው?	__________ ወር		
12	የህፃኑ ፆታ?	1. ወንድ 2. ሴት	01 02	
13	ህፃኑ ስንተኛ ልጅ ነው?	--------ኛ	01 02 03 04	
14	ከዚህ በፊት ከተወለደው ህፃን ጋር ያለው የእድሜ ሚራቅ?	1. ከዚህ በፊት የተወለደ የለም 2. ከ24 ወር በታች 3. ከ24 ወር እና ከዚያ በላይ	01 02 03	
15	የልጆች ብዛት?	-----------	01 02	

ክፍል 2፡- የህፃኑ የአመጋገብ ሁኔታ

ተ.ቁ	ጥያቄዎች	ምላሾች	ኮድ	ዝለል
16	ህፃኑ ወዲያው እንደተወለደ ከጡት ወተት በፊት የሚበላ ወይም የሚጠጣ ነገር ሠጥተሽው ነበር?	1. አዎ 2. አይደለም	01 02	
17	ለጥያቄ ቁጥር 16 መልስሽ አዎ ከሆነ ምን ሠጠሽው	1. ውሃ 2. በውሃ የተበጠበጠ ስኳር 3. የላም ወተት 4. ቅቤ 5. የዱቄት ወተት 6. ሌላ ካለ (ጥቀሽ)--------	01 02 03 04 05 06	
8	ለምን ለህፃኑ ወዲያው እንደተወለደ ከጡት ወተት በፊት የሚበላ ወይም የሚጠጣ ነገር ሠጠሽው? (ከአንድ በላይ ምላሽ ይቻላል)	1. የጡት ወተት መስጠት ህፃኑን ስለሚጠማው 2. ለህፃኑ እድገት 3. ጡት የማጥባት ችግር ስለገጠመኝ 4. ህፃኑ ስለታመመ 5. እናት ህመም ስለገጠማት 6. በአካቢበው ባህል ስለሆነ 7. እንገሩ ለህፃኑ መጥፎ ስለሆነ 8. ህፃኑ እንዳይጮህ/እንዳያለቅስ 9. የህፃኑን አፍ፣ ጉሮሮና አንጀት እንዲያጠራው 10. ህፃኑን ሙቀት ስለሚሰጠው 11. ሌላ ካለ (ጥቀሽ)----	01 02 03 04 05 06 07 08 09 010 011	
19	ለህፃኑ ከጡት በፊት የሚበላ ወይም የሚጠጣ ነገር እንድትሠጪው ማን መከረሽ?	1. የራሴ ውሳኔ ነበር 2. አያቴ 3. የልምድ አዋላጅ 4. ባለቤቴ 5. ጓደኞቼ 6. የጤና ባለሙያዎች 7. ሌላ ካለ (ጥቀሽ)--------		

20	ህፃኑ በተወለደ በመጀመሪያዎቹ አምስት ቀናት እንገር (የመጀመሪያው እና ቢጫው የወተት ጡት) አጥበተሸው ነበር?	1. አዎ 2. የለም	01 02	
21	መልስሽ አዎ ከሆነ ከወለድሽ በኋላ ህፃኑን የጡት ወተት ማጥባት መች ጀመርሽ?	1. ከአንድ ሰአት በፊት 2. ከአንድ እስከ አምስት ሰዓት 3. አስራ ሁለት ሠዓት 4. በአንድ ቀን 5. ከሁለተኛው እስከ ሦስተኛው ቀን 6. ሌላ ካለ (ጥቀሽ)…………………….	01 02 03 04 05 06	
22	ለጥያቄ ቁጥር 20 መልስሽ የለም ከሆነ ለምን ለህፃኑ እንገር (የመጀመሪያውና ቢጫው የጡት ወተት) መስጠት ከለከልሽ? (ከአንድ በላይ ምላሽ ይቻላል)	1. የሆድ ህመም እና ተቅማጥ ስለሚያስከትል 2. ለህፃኑ እድገት ስለሚበጅ 3. ጡቴ በቂ ወተት ስላልነበረው 4. ጡት ማጥባቴ የሠውነቴን አቋም ስለሚያበላሽ 5. ሌላ ካለ (ጥቀሽ)----------	01 02 03 04 05	

ክፍል 3፡- ከጡት በፊት የሚበላ ወይም የሚጠጣ ነገርን መስጠት ተፅዕኖ የሚያደርጉ ሁኔታዎች

ተ.ቁ	ጥያቄዎች	ምላሾች	ኮድ	ዝለል
23	በእርግዝናሽ ጊዜ የቅድመ ወሊድ ክትትል በጤና ማዕከል ተከታትለሽ ነበር?	1. አዎ 2. አይደለም	01 02	
24	መልስሽ አዎ ከሆነ ምን ያህል ጊዜ የቅድመ ወሊድ ክትትል አደረግሽ?	1. አንድ ጊዜ 2. ከሁለት እስከ ሶስት ጊዜ 3. ከአራት ጊዜ በላይ 4. ሌላ ካለ (ጥቀሺ)------	01 02 03 04	
25	በቅድመ ወሊድ ክትትል ወቅት ስለ ጡት ማጥባት ምክር/ መረጃ አግኝተሽ ነበር?	1. አዎ 2. አይደለም	01 02	
26	መልስሽ አዎ ከሆነ ስለ ጡት ማጥባት ምን ተነገረሽ?	1. ስለ ጡት ማጥባት ጥቅም 2. የህፃኑ አቀማመጥ በጡት ማጥባት ጊዜ	01 02 03	

		3. ለ6 ወር የእናት ጡት ብቻ ስለመስጠት 4. ስለ ጡት ማጥባት ችግርና መፍትሄው 5. የጡት ወተት አልቦ ስለመስጠት 6. ሌላ ካለ (ጥቀሺ)-------	04 05 06	
27	በህይወት ያለ ህፃን ምን ያህል ጊዜ ወለድሽ?	____________________		
28	ልጅዎን የት ወለዱት?	1. በመንግስት የጤና ማዕከል 2. በግል ክሊኒክ 3. በቤት ውስጥ 4. የልምድ አዋላጆች ያሉበት ቦታ 5. ሌላ ካለ (ጥቀሺ)	01 02 03 04 05	
29	ልጅዎን የወለዱት በምን መልኩ ነው?	1. በሆዴ በኩል የቀዶ ጥገና ተደርጎልኝ 2. በማህፀን በኩል ያለምንም መሣሪያ 3. ሌላ ካለ (ጥቀሺ)---------	01 02 03	
30	ልጅዎን ማን አዋለድዎት?	1. የጤና ባለሙያዎች 2. የልምድ አዋላጆች 3. ሌላ ካለ (ጥቀሺ)---------	01 02 03	
31	ከጡት ወተት በፊት የሚበላ ወይም የሚጠጣ ነገር ስላለው ጥቅም የሚያውቁት ፍሬ ነገር አለ?	1. አዎ 2. የለም	01 02	
32	መልሱን አዎ ካሉ ሊጠቅሱ ይችላሉ? (ከአንድ በላይ ምላሽ ይቻላል)	1. ለህፃኑ ጤንነት 2. ለህፃኑ እድገት 3. ህፃኑ እንዳይጮህ /እንዳያለቅስ ለማድረግ/ 4. የህፃኑን አፍ፣ ጉሮሮና አንጀት እንዲያጠራው ለማድረግ 5. ሌላ ካለ (ጥቀሺ)---------	01 02 03 04 05	
33	ከጡት ወተት በፊት የሚበላ ወይም የሚጠጣ ነገር ሊያስከትለው ስለሚችል ነገር ያውቃሉ?	1. አዎ 2. የለም	01 02	
34	አዎ ካሉ ሊጠቅሱ ይችላሉ?	1. ተቅማጥ ያስከትላል 2. የህፃናኑን እድገት ያቀጭጫል 3. ኢንፌክሽን ያስከትልላል 4. ትውከት ያስከትላል 5. ሌላ ካለ (ጥቀሺ)--------	01 02 03 04 05	

Appendix: Declaration

I the undersigned, declare that this Msc. thesis is my original work and it has not been presented for degree in this or other university. All source materials used for the thesis have been fully acknowledged.

Investigator: **MULUKEN AMARE WUDU (BSc)**

Signature: ___________________________

Date of submission: _________________________

This has been submitted for examination with my approval as university advisor

Advisor: **ZURIASH MENGISTU (BSc, Msc N)**

Signature: ___________________________

Date of submission: _________________________