ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

DEPARTMENT OF NURSING AND MIDWIFERY

ASSESSMENT OF EXCLUSIVE BREAST FEEDING PRACTICE AND FACTORS AFFECTING IT AMONG MOTHERS WHO PROVIDED KANGAROO MOTHER CARE TO THEIR PRETERM INFANTS IN BLACK LION HOSPITAL, ADDIS ABABA, ETHIOPIA

BY

ASTER DAWIT

A THESIS SUBMITTED TO SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY FOR THE PARTIAL FULFILLMENT OF DEGREE OF MASTERS OF SCIENCE IN MATERNITY AND REPRODUCTIVE HEALTH NURSING

JUNE/2015, ADDIS ABABA

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LIST OF ACRONYMS

BFHI	Baby Friendly Hospital Initiative
KMC	Kangaroo Mother Care
LBW	Low Birth Weight
NICU	Neonatal Intensive Care Unit
UNICEF	United Nation International Children Emergency Fund
WHO	World Health Organization

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Abstract

Background

Kangaroo mother care is a universally available and biologically sound method of care for all newborns, particularly for premature babies. It facilitates longer duration of breast feeding and has great effect on improving the health of the neonate in babies submitted to KMC.

Objective:

This study was carried out to assess exclusive breast feeding practice, association between KMC and exclusive breast feeding and factors affecting it among mothers who provided kangaroo mother care to their preterm infants.

Methods and materials: A cross sectional study design was conducted among 297 preterm infants who were practiced exclusive breast feeding with their mothers who were under Kangaroo mother care in Black lion hospital high risk follow up clinic, Addis Ababa, Ethiopia. Data were collected using interviewer administered structured, pretested questionnaire and entry was made by Epidata vertion3.1 & analyzed using SPSS window version 20 soft ware. Logistic regression model was used to determine independent determinants of kangaroo mother care.

Results: In these study 297 mothers performed kangaroo mother care and the infants that practiced exclusive breast feeding were 166 (55.9%) and p=.000 at the time of hospital discharge.76.1% of the Mothers initiated KMC immediately. 73.1% were practiced KMC continuously in a day. The respondents who were started KMC immediately were 2.3 times increase in breast feeding by KMC.[AOR 2.303, 95% CI 0.871, 6.078] P <0.5. The respondents practiced KMC continuously at home were14.266 times increased to practice exclusive breast feeding,[(AOR 14.266, 95% CI (3.516, 57.878)] The mothers who got problem during their home stay were 0.222 times less to practice exclusive breast feeding KMC at home [AOR 0.222, 95%CI .076, .652].

Conclusion: The study shows the importance of KMC during the initiation of exclusive breast feeding immediately after delivery and continued at home for breast feeding duration. Hence, KMC has empowering effects on the process of breast feeding in preterm infants.

1. INTRODUCTION

1.1.Background

Kangaroo Mother Care (KMC) for low-birth-weight infants was first started in Colombia in 1978. Edgar Rey in Bogotá, Colombia initiated what became known as (KMC), as a response to both the lack of incubators, and the separation of mother and infant (1) KMC is ensured by placing infant in a strictly upright position on mother's chest (kangaroo position) and held in place by a cloth wrapped around the mother and baby (1) It facilitates frequent and exclusive breast feeding (1, 2) on demand and maternal - infant bonding and keeps the baby warm and decreased the number of hospitalizations(3). KMC can be started as soon as baby is stable (1, 3).

Kangaroo mother care (KMC) is a universally available and biologically sound method of care for all newborns, but in particular for premature babies, with three components: 1) Skin-to-skin Contact 2) Exclusive breastfeeding 3) Support to the mother infant dyad 1, 4). Kangaroo mother care is a skin–to–skin contact which is a part of revolution in premature infants care method (1,3,4) defined as continuous (as close to 24 h a day as possible) skin-to-skin contact between mother and her infant, ensured by placing infant in a strictly on mother's chest (kangaroo position). Nutrition is based on (but not limited to) breast milk (1,4, 5). KMC can be started as soon as baby is stable, and receiving oral feeds. Babies with severe illness, and those requiring special treatment must wait until recovery before KMC can be started.

Using kangaroo mother care is cost– effective, and has abundant advantages for mother, and infant. It promotes breast milk production is stimulated by skin to skin contact so baby gets all the benefits of breast milk (1). In a calm baby, food can be properly absorbed in the stomach, so the baby grows faster. The baby's temperature stabilizes (1, 4) much faster on the mother's chest than in an incubator (1, 5). KMC improves infant feeling by touch, and visual contact with mother breast sucking and odor (1). Ramanathan; reported that the number of mothers exclusively breastfeeding their babies at 6 week follow-up was double in the KMC group than the control group. Also, Sunman found that exclusive breastfeeding improved in KMC group (98% versus 79%) in control group (1, 4). In developing countries, KMC for low-birth weight

infants has been shown that it is beneficial for breastfeeding and appears to be improved for preterm infants who have received KMC during their hospital stay (4).

A recent study found that Swedish mothers who practiced KMC enjoyed having the close contact with their infant, but they regarded the support and practical information about KMC from the NICU staff as inadequate. Parents who discontinued the performance of KMC before their infants discharge from the hospital described the NICU environment as noisy or overcrowded and complained about inadequate privacy and lack of support from the staff which precluded a gratifying experience when performing KMC (4, 10).This study will be performed to assess exclusive breast feeding practice and factors affecting it among mothers who provided KMC (4, 12).

Breastfeeding is associated with a host of improved outcomes for preterm infants, covering domains from fine motor skills, communication, and intelligence to improved immunology and mortality. The research has shown that breastfeeding also confers emotional and physical advantages to mothers. Similarly, mother–child bonding and attachment may benefit from breastfeeding (4, 15). Breast milk is important for healthy growth and development of all babies, It contains all the essential nutrients a healthy infant needs. Several studies have demonstrated that the breast milk composition is unique and best suited for the growing infant. Feeding at the breast is emotionally satisfying and a healthy practice for both the mother and the preterm infant. A large proportion of pediatrician now strongly advocates exclusive breast feeding because of its health benefits especially for preterm infants (3, 9, 11, 12).

1.2.Statement of the Problem

Preterm babies tend to face complications that can be life-threatening and disabling such as feeding difficulties, poor weight gain, hypoglycemia, hypothermia and a higher rate of infection(4) .

Kangaroo care offers a cost-effective and easily implemented way to promote it only requires education, a willing parent and a cloth wrap or sling. Kangaroo care involves holding premature infants to the skin of the mother and providing exclusive breastfeeding. This method of caring for premature babies offers physiological and psychological benefits to both mother and baby. It has been shown to promote many health effects for both mother and baby increased breastfeeding, weight gain and mother-baby bonding (4, 5).

KMC implies placing the newborn baby in intimate skin-to-skin contact with the mother's chest and abdomen coupled with frequent and preferably exclusive breast-feeding. This is similar to marsupial care-giving, where the premature baby is kept warm in the maternal pouch and close to the breasts for unlimited feeding. KMC has emerged as a non-conventional low cost method for newborn care that provides warmth, touch, and security to the newborn and is believed to confer significant survival benefit. An updated Cochrane review has reported that KMC benefits breastfeeding outcomes and cardio-respiratory stability in infants without negative effects (5).

A major problem with such babies is their inability to control body temperature – a preventable cause of their morbidity and mortality. A World Health Organization (WHO) supported study in Nepal showed that hypothermia was common in newborn infants soon after birth; increased mortality was noted across all grades of hypothermia, and the risk was 12 times higher among preterm babies (5,)

Exclusive breastfeeding during the first six months after birth is not widely practiced in Ethiopia. Currently, mothers exclusively breastfeed are approximately half of children under six months (52%). Among sub-groups the percentage of young children who are exclusively breastfed decreases sharply from 70 percent of infant's age 0-1 month to 55 percent of those age 2-3 months and, further, to 32 percent among infants 4-5 months (6). Early initiation of breastfeeding is important for both the mother and the child. Early suckling stimulates the release of prolactin,

which helps in the production of milk, and oxytocin, which is responsible for the ejection of milk and stimulates the contraction of the uterus after childbirth. The first liquid to come from the breast, known as colostrums, is produced in the first few days after delivery and provides natural immunity to the infant. It is recommended that children be fed colostrum immediately after birth and continue to be exclusively breastfed even if the regular breast milk has not yet let down (6). KMC is associated with a longer duration of breast feeding, higher volumes of milk expressed, higher exclusive breast feeding rates and higher percentage of breast feeding at the time that preterm infants are discharged from hospital (4).

The long term clinical effects of KMC found that KMC improved successful breast feeding rates and infections were milder. Few studies have suggested that no study has documented the continued practice of KMC among mothers and babies once they return to their communities without active follow up (12).

1.3. Significance of the study

An important mainstay of kangaroo mother care is breast feeding encouragement. Although evidence shows countless benefits of breast feeding for preterm babies, the prevalence of breast feeding is still quit low. According to the WHO (2012a, p. 1), Kangaroo mother care promotes exclusive breast feeding (3, 6), bonding and attachment, and perhaps increases hope for mothers that they will be able to play an active role in rearing healthy, living children (2,7). KMC refers to skin to skin contact between mother and the baby thereby providing warmth,

Hellbauer et al. in South Africa studied that the factors influence a mother's choice regarding the form of feeding her baby after discharge from an NICU and observed that, among other factors, LBW and prolonged hospital stay had a negative effect on her decision to breastfeed.

On the other hand, studies carried out in settings where KMC is used show that mothers who establish a skin-to-skin contact with their preterm babies have a significantly higher milk production compared to the control group. Furthermore, these studies revealed that interruption of breastfeeding was more frequent among mothers who were not submitted to this method (7, 8, and 9).

The WHO estimates that around 220,000 children could be saved every year with exclusive breast feeding. It becomes essential to encourage and support mothers to initiate exclusive breast feeding up to 6 mo and continued breastfeeding up to 2 years (8, 9, 11). Exclusive breastfeeding is the most effective intervention to reduce infant mortality. The aim of this study is to assess exclusive breast feeding practice and factors affecting it among mothers who provided KMC to their preterm infants.

2. REVIEW OF LITERATURE

The World Health Organization (WHO) recommends exclusive breastfeeding up to 6 months and continued breastfeeding up to 2 years. Exclusive breastfeeding is the most effective intervention to reduce infant mortality and is estimated to prevent 13 % of under 5 child mortality in low income countries. However, rate of exclusive breastfeeding is alarmingly low in our country. UNICEF/World Health Organization, through Baby Friendly Hospital Initiative (BFHI), have recommended good health care practices that support breastfeeding and increase likelihood of optimum breastfeeding (8).

Breastfeeding is accepted as the natural form of infant feeding. For mothers to be able to breastfeed exclusively to the recommended six months, it is important to understand the factors that influence exclusive breastfeeding. It is a fundamental public health issue since it promotes health, prevents disease and helps contribute to reducing health inequalities. It provides the foundation for a healthy start in life and prevents disease in the short and long-term for babies and their mothers (6, 8).

Breast milk production is stimulated by skin to skin care so baby gets all the benefits of breast milk including the correct milk for human (1,9) It decreases infant crying (1). In a calm baby, food can be properly absorbed in the stomach, so the baby grows faster. The baby's temperature stabilizes much faster on the mother's chest than in an incubator (9). KMC improves infant feeling by hearing mother heartbeat, touch, and visual contact with mother breast sucking

Kangaroo mother care (KMC) is a simple, low cost method began in1978 in Bogota Colombia as a way to keep infants warm (1,9) and provide optimal nutrition (9), promoting exclusive breast feeding and facilitates early discharge(1,10) .KMC was proposed as an alternative conventional neonatal care for low birth infants(1,4). It is a anniversary available and biologically sound method of care for all premature babies(1).KMC is defined as continuous (as close to 24 hours a day as possible) skin-to-skin contact between mother and her infant, ensured by placing infant in a strictly upright position on mother's chest (kangaroo position) (1,9,10,11) and covered by a soft blanket. The duration of skin to skin contact usually lasts one to three hours. Compared to infants who are not offered KMC those who receive it were found to have improved growth and development, higher daily weight gain (1,9,10),exclusive breast

feeding(1,9,10.11,12) have better ability to maintain body temperature, have better physiological ability (1,9,10,12).

KMC has been rapidly accepted worldwide, in both high and low resource countries. It has also been introduced in countries such as Ethiopia, Ghana, Madagascar, Malawi, Nigeria and South Africa. The safety, feasibility, acceptability and cost effectiveness of KMC has been demonstrated in all these countries. (3).

Safety and effectiveness of kangaroo care

Despite the benefits of KMC, the first experiments conducted in industrialized countries demonstrated that KMC was safe in terms of physiological response of newborns and that the method brought benefits regarding the breastfeeding practice and decreased the number of hospitalizations, in addition to reducing infant crying at six months of life(4,8). It contributes to the humanization(1,2 3,6,8,12,) of neonatal care and stronger mother-infant bonding(5,6) In Brazil,Silva11 assessed the policies and routines defined by the Brazilian Ministry of Health and found the following mainstays: (1) individualized care, which is parent centered (family-centered intervention) (3), early skin to-skin contact (1,4,5), proper positioning(6) and breastfeeding enhancing (5,6,10).

A study done in Ethiopia showed that 32.8%mortality for LBW infants and many had hypothermia is a related cause of death .KMC is started as a way of reducing LBW mortality in black lion hospital. KMC is one of the interventions proven to be a safe alternative to conventional neonatal care in resource -limited settings (13).

Benefits related to the breast feeding

An important mainstay of kangaroo mother care is breast feeding encouragement. Hellbauer et al. studies in South Africa, shows that; the factors that influence a mother's choice regarding the form of feeding her baby after discharge from an NICU and observed that, among other factors, LBW and prolonged hospital stay had a negative effect on her decision to breastfeed. an NICU in Belo Horizonte, state of Minas Gerais, before and after the implementation of the Baby Friendly Hospital Initiative, found that, although the rates of exclusive breast feeding at hospital discharge increased from 36% (before implementation) to 54.7% (after implementation), these figures

show the necessity of other interventions in order to encourage the breastfeeding of these babies. Boo, in Malaysia Bicalho-Mancini et al (3) in a study about the risk factors of not exclusively breastfeeding LBW infants at, with the aim of determining the breastfeeding rate among babies weighing less than 1,500 g admitted to a high-risk neonatal unit, observed that, despite breastfeeding incentive programs adopted by the hospital, only 40.2% of these babies were being breastfed at the time of hospital discharge (3).

Other studies also carried out that; in settings where KMC is used show that mothers who establish a skin-to-skin contact with their preterm babies have a significantly higher milk production compared to the control group. Furthermore, these studies revealed that interruption of breastfeeding was more frequent among mothers who were not submitted to this method in a randomized controlled study conducted in Sweden with 71 preterm babies weighing less than 1,500 g, Whitelaw et al. found that babies submitted to KMC had a two times higher prevalence of breastfeeding than the control group at six weeks of life (55 *versus* 28%) (1,3).

Ramanathan et al., in New Delhi, India, found similar results in a study with 28 preterm babies, in which the frequency of breastfeeding at six weeks of life amounted to 85.7% for babies submitted to KMC *versus* 42.8% for control individuals. Charpak et al., in two studies carried out in Colombia (one in 1994 and the other one in 2001), revealed higher prevalence of breastfeeding at 1, 6 and 12 months of life in babies submitted to KMC compared with control individuals. In Brazil, Lima et al(3)and Silva (14) found similar results for breastfeeding rates. At six months of life, the prevalence rates of breastfeeding in these studies were respectively 63 and 60.3% for babies submitted to KMC. (3). Conde-Agudelo et al (3), have recently analyzed three randomized trials and concluded that KMC was a protective factor for exclusive breastfeeding at hospital discharge (RR 0.41; 95%CI 0.25-0.68).

On the other hand studies carried out between May 2008 and May 2009 in Alzahra University Hospital in Tabriz showed that The group who practiced KMC, had more exclusive breast feeding at the time of hospital discharge than the mother who did not practice KMC (62.5% vs. 37.5%) with a significant difference (P = 0.00). Exclusive breast feeding was compared in newborns that were divided into 3 different weight groups. In the weight group less than 1000g exclusive breastfeeding in KMC group was (72.4% vs. 53%) in CMC group with a significant

difference (P = 0.00). In the weight group between 1000-1500 g exclusive breastfeeding in KMC group was (42/8% vs. 24/4%) in CMC group with a significant difference (P = 0.00). In the weight group more than 1500g it was 3/7% vs. 3% with no significant difference (P = 0.63) respectively (1, 14).

The American Academy of Pediatrics recommended that; skin-to-skin contact as a strategy to increase breastfeeding success. In 2007, a Kangaroo care program for healthy infants and their mothers at the University of Louisville Hospital (ULH) was implemented. Breastfeeding initiation rates increased from 51% in July 2010, to 74% in July 2011. During this time the percentage of eligible infants who were placed in Kangaroo care at birth increased from 60% to 73%. The percentage of mothers and infants documented as participating in Kangaroo care in the mother–baby unit also increased from 35% to 51%. (4).

KMC is associated with a longer duration of breastfeeding, higher volumes of milk expressed, higher exclusive breastfeeding rates and higher percentage of breastfeeding at the time that pre-term infants are discharged from hospital (4, 11) and, mother–child bonding and attachment may benefit from breastfeeding (15). Lawn's study found that preterm babies cared for "skin to skin" had fewer complications than those in incubators. They also had better feeding and weight gain, stable temperatures and fewer infections (16).

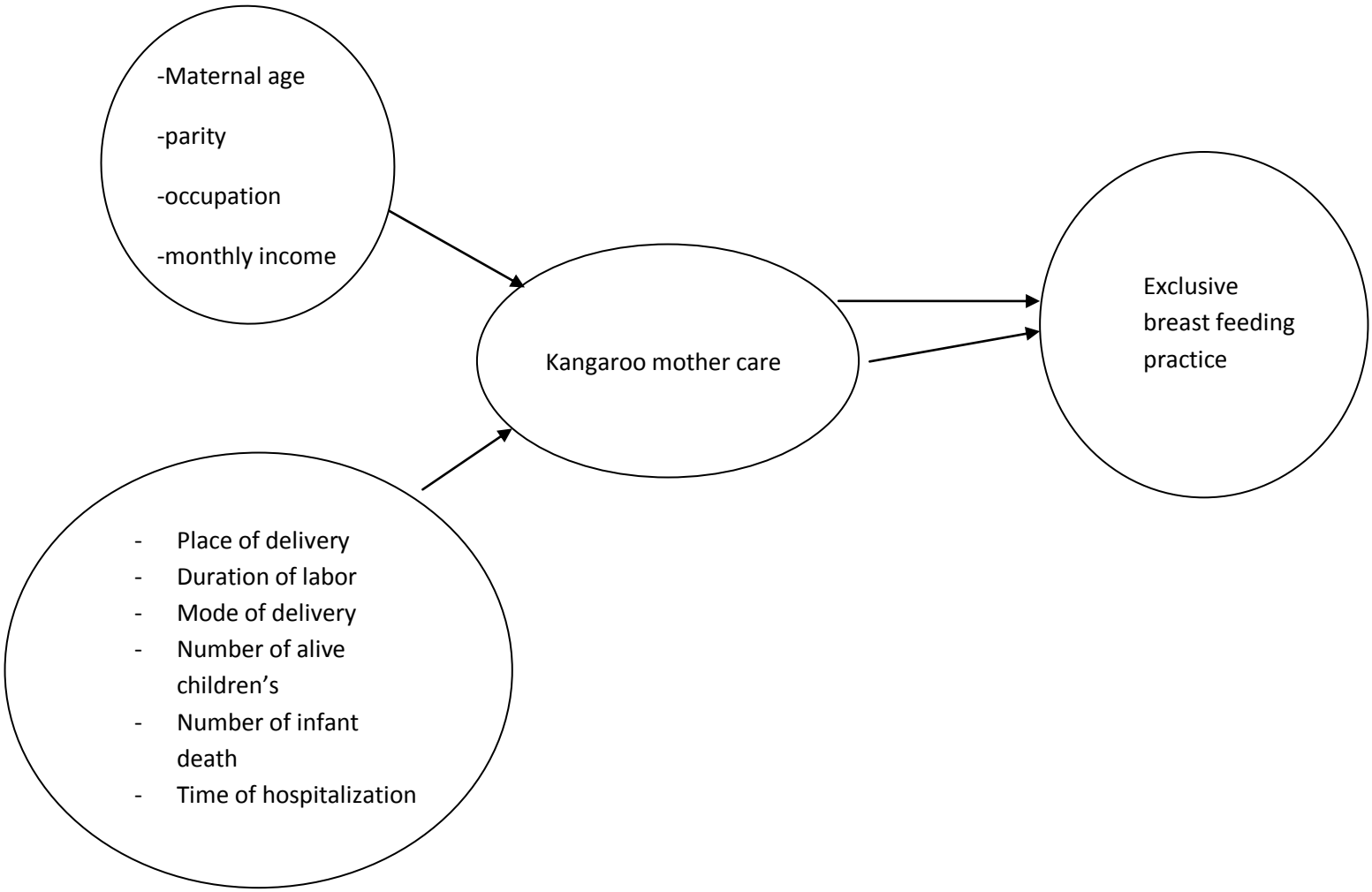
Early initiation of breast milk pumping before 12 hours postpartum may increase breastfeeding rates(17) KMC improves growth in low birth weight and preterm infants, and has a significant role to play in protecting them from hypothermia and sepsis, as well as promoting exclusive breastfeeding,(18).

Conceptual frame work

This inquiry is guided by the theory that skin-to-skin kangaroo mother care has a healing, physiologic effect on the pathology of prematurity in infants and promotes maternal-infant bonding, Skin-to-skin contact leads to enhanced bonding and improved maternal confidence, and this leads to longer exclusive breastfeeding duration(7).

Conceptual map

Conceptual map is adopted from related studies on KMC and exclusive breast feeding.



3. OBJECTIVES

3.1. General objectives

The general objective of this study is to assess exclusive breast feeding practice and factors affecting it among mothers provided KMC to their preterm infants.

3.2. Specific objectives

3.2.1. To identify the practice of exclusive breast feeding among preterm infants

3.2.2. To assess the association between KMC, and exclusive breast feeding

3.2.3. To describe factors affecting to discontinue exclusive breast feeding among mothers provided KMC.

4. METHODS AND MATERIALS

A cross-sectional study design was employed to assess exclusive breast feeding practice and factors affecting it among mothers provided KMC to their preterm infants in high risk follow up clinic , Black lion hospital.

4.1. Study area and period

The study was conducted in Black lion hospital, Addis Ababa town, region 14, Ethiopia. Black lion specialized general hospital which is a tertiary level referral and teaching hospital which delivers comprehensive care to sick neonates. It has a 40 beds neonatal and 10 bed KMC unit. All preterm neonates weighing less than 1500g born in black lion hospital or in other district hospitals were sent to KMC unit of black lion hospital. KMC consisted of skin to skin contact on the mother's chest 24 hours/day, nearly exclusive breast feeding, and early discharge with close ambulatory monitoring. The study was conducted from October 01 - June 2015.

4.2. Study design

A cross-sectional study design employed to assess exclusive breast feeding practice and factors affecting it among mothers provided KMC to their preterm infants.

4.3. Population

4.3.1. Source population

The source population for this study was preterm infants who have follow up in the high risk follow up clinic in black lion hospital between March to May 2015.

4.3.2. Study population

Among preterm infants who attended in Black lion hospital high risk follow up clinic were selected by convenient sampling technique from March to June 2015.

4.4. Sampling unit

This study unit was each preterm- baby who attended in Black lion hospital at high risk follow up clinic in black lion hospital during the study period.

4.5. Inclusion and exclusion criteria

Inclusion criteria were Preterm infants who attended high risk follow up clinic in Black lion hospital during the study period, age range between 1 to 12 months, alive, healthy mothers of babies and babies were received KMC.

Exclusion criteria: includes babies who have no mothers, babies with mothers with HIV sero-positive, babies who are less than 1 month and greater than 12 months and mothers who are not interested in the study.

4.6. Sample size and procedure

4.6.1. Sample size determination

The actual sample size for the study was determined using the formula for single population proportion by assuming 5% marginal error and 95% confidence interval (∂ (alpha)=0.05) and the prevalence for children desire is 50% or P=0.5 using the following formula

$$=\frac{\left(Z\frac{\alpha}{2}\right)^2 p(1-p)}{d^2}=\frac{Z^2 p(1-p)}{d^2}=\frac{(1.96)^2 X\,0.5(1-0.5)}{(0.05)^2}=384$$

And let us Assume non response rate (NR) around 10%=384X10%=38.4+384= 422 Correction formula n/1+n/N =1000/1+422/1000= 296.7 =297(sample size)

n = the required sample size

z = the value of the standard normal curve score corresponding to the given confidence interval=1.96

p = Assumed proportion of KMC= 50%

d = the permissible margin of error (the required precision) =5%

4.6.2. Sampling procedure

Convenient sampling technique was conducted. Data was collected from mothers who came with their babies for follow up visits at the time of their arrival continuously until the required sample size is obtained.

4.7. Study variables

4.7.1.Independent variables were Place of delivery and duration of labor, Mode of delivery, Number of Alive children, Number of infant death, Time of hospital stay, Duration of KMC and Maternal age.

4.7.2. Dependent variables: Exclusive breast feeding

4.8. Operational definition

Duration of exclusive breast feeding- A period (duration) the infant is fed exclusive breast milk as expressed by the mothers who provided KMC.

Kangaroo Mother Care (KMC) - is defined as early, prolonged and continuous skin- to- skin contact between the low birth weight infant and its mother, initiates exclusive breast feeding and support to the mother- infant dyad.

Exclusive breast feeding practice: The infant that practiced exclusive breast feeding for one month, six month or twelve month.

Age-the age of the newborn during delivery is defined as in months

Weight -the weight of the newborns defined in grams

Intermittently - The mother who practiced KMC two to three times in a day, but not included the night.

Continuously - The mother who practiced KMC continuously without any interruption, but the night was not included.

4.9. Data collection tool

A structured questionnaire was developed by reviewing literatures also adopted from different similar studies with minor modification that which includes the socio-demographic characteristics, social issues related to exclusive breast feeding practice and factors affecting it among mothers provided KMC**.**

Data collection method and period

The questionnaire initially was prepared in English and then translated to Amharic and back to Amharic for data collection to cheek the consistency of the questioner.

Data was collected from March to April by of using face to face interviewing method data collection. Two nurses (data collectors and supervisors) who were working in the neonatal intensive care unit and in the delivery room were appropriately trained for two days on the data collection such as on respondent Rights, informed consent, and technique of interview. They closely follow the data collection process throughout the data collection period along with principal investigator. All field questionnaires were reviewed each night and errors were corrected.

4.10. Data quality control and management

Pretest was conducted on mothers with preterm babies 5% of the total sample size. Mothers who were involved in the pre-test were excluded from the study, then the questionnaire was assessed for its clarity, length and completeness and the necessary correction was done accordingly.

10% of the data was verified by the principal investigator during the initial stage of data collection and appropriate instruction was given to the data collector and supervisor and also to ensure the data quality, procedure manual for data collection method was prepared and distributed for data collectors and supervisor. Supervisor and principal investigators were closely followed the data collection process.

4.11. Statistical data analyses procedure

All data was checked for inconsistency coded and entered into computer and analysis was made using IBM SPSS statistics version 20 statistical packages. The univariate analysis such as

proportion, percentage, ratios, frequency distribution, measure of central tendency and measure of dispersions were used for describing data.

Logistic regression model was employed to control confounding variable, variables included in the model was restricted to those significantly related odds' ratio and p-value was determined and to compare the variables and to measure their association .Some of the result was compared with results of other studies available.

4.12. Ethical statement

Ethical issue was considered in all stages of the research process, some of the most important are the following. Ethical approval of the research proposal was obtained from the ethical review committee of AAUMF and nursing and midwifery department.

A formal letter was written by the department of nursing to the concerned office. Permission was asked from the responsible Authorities of each KMC unit and explanation about the objective (purpose) and benefit of the study was described to the study population and their full cooperation, verbal and written consent was taken.

4.13. Dissemination of study findings

The study findings will be presented at Addis Ababa university college of Health science department of Nursing and Midwifery and a copy of the document will be given to all responsible body and efforts will be made to present the results of scientific conferences and peer reviewed journal publications will be considered.

5. RESULT

A total of 297 mothers with their preterm infants ranged 1-12 months of age voluntarily responded, making the response rate 100%. The mean age of the mothers was 28yrs (SD±5.47and ranges from15 to 49 years. The age range of preterm infants considered in this study was 1-12 months who were received kangaroo mother care during admission. Majority of the infants 158(53.2%) were female.

5.1. Socio-demographic characteristics

Table-1. Shows the socio-demographic characteristics of the respondents who participated in the study. All study participants were involved in kangaroo mother care. They came from different sub cities from Addis Ababa, and other regions to attend high risk follow up clinic for their preterm infants; but all the preterm infants were admitted primarily in black lion hospital. Of all respondents 105(35.4%) were between the age 25-29. Regarding the marital status, 224(75.5%) of the women were married. As to educational background, 98 (33%) had college level education. In addition, 132 (44.4%) were house wife. The house hold monthly income of the study participants ranges between 0 birr to 14,000birr. Of this 283 (95.3%) of the respondents had average monthly income >500birr. Regarding ethnicity, 72(24.2%) respondents were Amhara by ethnicity, in religion aspects, 144 (48.5%) of the mothers were Orthodox Christians. (Table .1)

Table 1: Socio-demographic characteristics of mothers practiced KMC (n=297), Black lion hospital, Addis Ababa, Ethiopia, 2015**.**

Variables	Numbers	Percent
Place of residences		
In Addis Ababa	272	91.5
Out of Addis	25	8.4
Marital status		
Unmarried	18	6.1
Married	224	75.4
Divorced	32	10.8
Widowed	23	7.7
Maternal occupation		
Student	25	7.7
Government	73	24.6
Merchant	67	22.6
House wife	132	44.4
Religion		
Orthodox	144	48.5
Catholic	24	
Protestant	60	8.1
Muslim	69	20.2
		23.2
Ethnicity		
Amhara	72	24.2
Oromo	71	23.9
Gurage	62	21.5
Wolayta	35	11.8
Tigre	57	19.2
Maternal age		
15-19	3	1
20-24	53	17.8
25-29	105	35.4
30-34	83	27.9
>35	53	17.8
Income	14	4.7
<500 birr	283	95.3
>500 birr		
Educational level		
Illiterate	22	7.4
Read and write	71	23.9
Grade(1-6)	28	9.4
Grade (7-12)	78	26.3
Certificate and above	98	33.0

5.2. Utilization of maternal health and related services

Three quarter 222 (74.7%) of the mothers had normal vaginal delivery, and 75(25.3%) cesarean section delivery. The highest length of labour ranged from 2-6 hrs for 114 (38.4%)of the participants . Most of the women 164(55.2%) delivered at governmental hospitals and 105 (35.5%) at the health center. Of all 95 (32%) were primigravida and 93(31.3%) were pregnant for the second time. The number of deliveries conducted 1-3 times were 97(32.7%) and 90 (30.3%) were delivred for the second time (table 2).

Table 2: The Reproductive health status of the mothers and the infants who provided KMC, Black lion hospital, Addis Ababa, Ethiopia, 2015.

Variables	Number	Percent
No. of pregnancy		
Once	95	32.0
Twice	93	31.3
Three	62	20.9
>three	47	15.8
No. of delivery		
1-3	97	32.7
4-6	142	47.8
>6	58	21.2
Duration of labour		
2-6hrs	120	40
>6hrs	111	37.4
0 (Elective C/S)	66	22.2
Mode of delivery		
Vaginal	222	74.7
Operation	75	25.3
No. of live birth		
1-3	262	88.2
4-5	35	11.8
No. of death		
No death	255	85.9
1-3	36	12.1
>3	6	2.0
Site of delivery		
Government hospital	164	55.2
Health center	105	35.4
At home	8	2.7
Private hospital	20	6.7
Sex		
Male	139	46.8
Female	158	53.2
Age during delivery		
8 months complete	167	56.2
7months complete	130	43.8
Age of the newborn		
1-3 months	112	37.7
4-6 months	108	36.4
7-12months	77	25.9

5.3. Characteristics of the preterm infants related to breast feeding practice

Majority (158, 53.2%) of infants were female. 167 (56.2%)of the women delivered at the age of 8 months,and 130 (43.8%) were at 7 months. The weight of the preterm infants ranges between 1000g and 1999. In the weight group 1000-1499g ,exclusive breast feeding (62.6%) was with significant difference (P=0.000). In the weight group 1500g-1999g was (37.4%) with no significant difference (P=.992). (37.4%) with no significant difference (P=.992). Those 166 (55.9%) were exclusively fed the breast milk at admission till discharge and 131(44.1%)of the infants were fed mixed with breast milk.Duration of practice of exclusive breast feeding after discharge only for 1 month 23 (7.7%), for 2 months 31 (10.4%) , 3 months 76 (25.6%), 4 months 67(22.6 %) ,6 months 84 (28.3%) and >6 months 16 (5.4%). The age of preterm infants who attended high risk follow up clinic during study period were betwen 1-3 months 112 (37.7%), 4-6 months 108 (36.4%) and 7-12 months 77 (25.9%).(See table 3).

Table 3: Distribution of breast feeding practice among preterm infant in black lion hospital , Addis Ababa, Ethiopia, 2015.

Varibles	Number	Percent
Type of feeding at discharge		
Exclusive breast feeding	166	55.9
Mixed	131	44.1
Durationof breast feeding after discharge		
1-3 months	130	43.8
4-6 months	167	56.2
Time of breast feeding		
On demand feeding	128	43.1
Every 2 hrs	82	27.6
3-6 hrs	87	29.3

5.4. Use of Kangaroo Mother Care

The preterm infants who started KMC emmediately after birth were 226 (76.1%) and after 24 hours 71(23.9%) . 100 (33.7%) used KMC from 1-7 days in their hospital stay and 223 (75.1%) continued KMC at home. 64 , (19.6%) accounts for the major factors that affect the use of KMC continuously at home mentioned by the respondants were maternal health problem, eager to work and no information given to the mother to continue KMC at home after the infant was discharged. 217 (73.1%) of the infants showed improvement in exclusive breast feeding after they used continuous KMC at home compared to the infants not used KMC at home. 128(43.1%)%)of the preterm infants who practiced on demand feeding . Twenty six (8.8%) 7.$\pm$7% of the preterm infants were admitted into the hospital for 1-2 times after discharge, and 7.7% were stayed 1-10 days in the hospital .The average time for beginning KMC in the hospital was 1-7 days after birth.(table 4.)

Table 4: Distribution of breast feeding practice among preterm infantswho obtained KMC in black lion hospital , Addis Ababa, Ethiopia, 2015.

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Variables	Number	Percent
Starting time of KMC		
Immediately	226	76.1
After 24 hrs	71	23.9
Duration of KMC practiced in hospital		
1-7 days	100	33.7
8-15 days	78	26.3
16-20 days	66	22.2
>20 days	53	17.8
KMC practiced at home		
Yes	223	75.1
No	74	24.9
Time of breast feeding		
On demand feeding	128	43.1
Every 2 hrs	82	27.6
3-6 hrs	87	29.3
Re-admission after discharge		
Yes	24	8.1
No	273	91.9
No. of re-admission		
1 time	21	7.1
2 time	5	1.7
Hospital stay		
1-10 days	23	7.7
No hospitalization	274	92.3

5.5. Factors affected practice of KMC at home

27 (9.1%) of the women were due to maternal health problem. 18(4.1 %) was no information told from the health professionals to use KMC at home., 6(2%) fear of addiction, 6(2%) pressure from mother in-law, 19(6.4%), eager to work and 18(4.1%) were not informed.

Table 5: Distribution of factors that affect practice of KMC at home in black lion hospital , Addis Ababa, Ethiopia, 2015.

Variables	Number	Percent
Women got problem to KMC	**33**	11.1
No problem	**264**	88.9

5.5.1. Association of socio-demographic factors and other variables with exclusive breast feeding practice among preterm infants who obtained KMC

In the bivariate and multivariate analysis, the factor that found to have an association of exclusive breast feeding with KMC at home, KMC immediately after delivery and factors affected KMC with a $P < 0.05$. It was found that socio-demographic characteristics and some of other variables were not found significantly associated with exclusive breast feeding. The variable which showed association in binary logistic regression was entered in to multivariate regression. This variable was considered potential predictors for exclusive breast feeding towards KMC in the multivariate logistic regression model. However, only KMC immediate after delivery and KMC at home towards exclusive breast feeding .As observed that the respondents who were started KMC immediately were 2.3 times more likely to practice exclusive breast feeding than those who practiced after 24 hours [AOR 2.303, 95% CI 0.871, 6.078]. Concerning duration of KMC; the respondents who were practiced KMC continuously at home were14.266 times more likely to practice exclusive breast feeding than those practiced KMC intermittently,[(AOR 14.266, 95% CI (3.516, 57.878) . According to factors affected KMC; the mothers who got problem during their home stay were 0.222 times less likely to practice exclusive breast feeding than those who had no problem to practice KMC at home [AOR 0.222, 95%CI .076, .652].

Table 6: Association of the selected variables on breast feeding practice among preterm infants who obtained KMC in Black lion hospital, Addis Ababa, Ethiopia, 2015.

Variables	Exclusive breast feeding		COR(95%CI)	Adjusted OR(95%CI)
	Yes	No		
Maternal age				
15-19	**45(52.9%)**	**40(47.1%**	1.111(.508,2.432)	1.073(.395,2.915)
20-24	**106(60.2%)**	**70(39.8%**	.825(.400,1.702)	.806(.345,1.883)
25-29	**55.6%)**	**16(44.4%**	1.0	1.0
Place of delivery				
Government	**88(53.7%)**	**76(46.3%**	1.295(.53,3.336)	1.233(.474,3.212)
Health center	**66(62.9%)**	**39(37.1%**	.886(.333,2.358)	.910(.337,2.458)
At home	**5(62.5%)**	**3(37.5%**	.900(.166,4.867)	.937(.160,5.500)
Private	**12(60.0%)**	**8 (40.0%**	1.0	1.0
Duration of labor				
2-6hrs	**70(58.3%)**	**50(41.7%**	.333(.177,.627)	.504(.127,1.993)
>6hrs	**80(72.1%)**	**31(27.9%**	.181(.093,.351)	.315(.079,1.248)
Elective C/S	**21(31.8%)**	**45(68.2%**	1.0	1.0
KMC at home				
Continuously	163(73.1%)	60(27.3%	33.120(12.152,90.271)	14.266(3.516,57.878)**
Intermittent	71(95.9%)	3(4.0)	1.0	1.0
Mode of delivery				
Vaginal	142(65.2%)	80(34.1%	.305(0.176,.526)	1.002(.281,3.574)
Operation	24(35%)	51(62%)	1.0	1.0
KMC start				
Immediately	**117(57.6%)**	**86(42.2%**	2.929(1.773,4.839)	2.30(0.871,6.078)**
After 24hrs	**54(57.4%)**	**40(42.6%)**	1.0	1.0
Factor affect KMC				
Got problem	**6(18.2%)**	**27(81.8%**	.133(.053,.334)	.222(.076, .652)**
Nothing	**165(62.5%)**	**99(37.5%**	1.0	1.0

No of alive child					
1-3	**146**	**111**	**86.5**	1.267(.638,2.576)	+1.506(.651,3.487)
4-5	**25**	**15**	**13.5**	1.0	1.0
No of infant death					
No death	**152**	**103**	**85.9**	.678(.134,3.423)	.734(.139,3.877)
1-3	**16**	**20**	**12.1**		1.537(.261,9.061)
>3	**3**	**3**	**2.0**	1.250(.222,7.051)	1.0
Time of hosp. stay				1.0	
1-10 days	**1**	**22**	**7.7**	35.962(4.776,270.768)	.033(.004,.255)
None	**170**	**104**	**92.3**	1.0	1.0

NB.* Referent group for each ** Significance at P<0.05

6. DICUSSION

The purpose of this study was to assess exclusive breast feeding practice and its association with KMC and factors affecting exclusive breast feeding among mothers provided KMC during the time of hospital discharge as well as at home.

This study indicated that 55.9% of the mothers who used KMC immediately in NICU during the time of discharge for their preterm infants had more exclusive breast feeding. This result is similar with Bicalho-Mancini et al. in South Africa, in his study, found that, the rates of exclusive breastfeeding practice at hospital discharge increased from 36% 54.7%. On the other study in Alzahra hospital in Tabriz, the mothers who performed KMC in NICU for their preterm infants had more exclusive breast feeding at the time of hospital discharge (62.5%) (1). In this study, 76.1% of the mothers initiated KMC immediately after birth and 23.9% were initiated KMC after 24 hours. A similar study also done in Kumasi Ghana, was that 84.6% of the mothers initiated KMC immediately after birth and 7.9% were initiated KMC after 24 hours .When we compare the study done in Kumasi with this study , the result was less may be the women may not be comfortable immediately after birth, feel pain and not ready psychologically.

Regarding use of KMC at home, 73.1% of infants practiced KMC continuously throughout a day and 71 % those that practiced KMC intermittently at home. So that 7.7% of the infants were exposed for hospitalization and 8.1% were readmitted. This study also adds to the fact that KMC is still very important intervention for survival after discharge. In an open journal of pediatrics, 2014, the study which was done in Northern part of Ethiopia in Gondar stated that, 84% of infants in their study continued KMC at home than those who used intermittently and those that continued KMC were more likely to survive (24). A study done in Kumasi, Ghana showed that infants who were on either continuous or intermittent KMC at home showed an optimal increase in weight (24). In Brazil, breast feeding was continued and sustained among most mothers exclusively on discharge and continued throughout the day during their follow up period (29, 30, 31).The difference may be due to lack of continuous information to the parents of infants at NICU and positive encouragement to continue KMC throughout a day for the sake of their infants. The other reason may be due to socio economic factors and most of the women work their house hold activities by their own so that, kMC may not be comfortable for them (24,31). There is lack of adequate researches to compare the present study findings and see how KMC

affects infants when it is done at home. Regarding the present study, Concerning factors affected KMC to continue after discharge in their home, showed that maternal health problem (9%), fear of addiction to breast milk(2%), pressure from mother-in -law(2%),need to return to work(6.4%),had no adequate information to continue KMC at home(4%). Similar study found by the Nigerian society was that mothers who practiced continuous KMC felt more isolated and lonely in their environment (10, 24, and 25). Other studies also suggested that the perception that babies continued to be hungry after breastfeeding (29%); maternal health problems (26%); fear of babies becoming addicted to breast milk (26%); pressure from mother-in-law (25%); pains in the breast (25%); and the need to return to work (24%) (25,31). In this study the result shows better compared to other results, even though needs close attention to bring behavioral change on breast feeding.

Accordingly, the multivariate regression statistics showed that there was significant relationship between starting KMC immediately after birth and with exclusive breast feeding. From this findings, the mothers who practiced KMC immediately after delivery were 2.3 times more likely to practice exclusive breast feeding than those who practiced KMC after twenty four hours ([AOR= 2.303, 95% CI: 0.871, 6.078]. This result were supported by study in medical university hospital "Alzahra hospital " in Tabriz, Estate of Eastern Azarbayjan, Iran reported that there was a 4.1 times increase in exclusive breast feeding by KMC at the time hospital discharge (1). Concerning duration of KMC; the respondents who were practiced KMC continuously at home were 14.266 times more likely to practice exclusive breast feeding than those practiced KMC intermittently,[(AOR 14.266, 95% CI (3.516, 57.878).In other studies ,in Kumasi ,Ashanti region , the mothers who practiced KMC continuously at home were 63.7% than those who practiced intermittently. The difference may be the women had a good information and awareness towards using KMC at home continuously rather than intermittently. Related to factors affecting KMC, the mothers who got problem during their home stay were 0.222 times less likely to practice exclusive breast feeding than those who had no problem to practice KMC at home [AOR 0.222, 95%CI .076, .652]. In other study Ylva Thernstrom Blomqvist stated that, a lack of information about KMC, how to use it into practice and other maternal problems also presented an obstacle to KMC (10).

7. STRENGTH & LIMITATION

7.1. Strength

This study is one among very few studies which assess the association between KMC and exclusive breast feeding.

The study is very initiative to improve KMC implementation in our setup.

Quality of data was maintained by giving training for data collector and supervisor, before the actual data collection and the questionnaires was pre-tested on the same source population.

7.2. Limitations of the study

- There was lack of adequate literatures in Ethiopian situations that prevents further elaboration.
- One hospital was selected during the study period hence; the sample population may not be representative of the target population.

8. **CONCLUSION**

The study was conducted among all women who obtained kangaroo mother care for their preterm infants' age ranging between 1-12 months. The study was conducted on preterm infants who were admitted in back lion hospital, and appointed after discharged into high risk follow up clinic at black lion hospital and from different regions. Exclusive breast feeding practice at hospital discharge increased 55.9%.Mothers who initiated KMC immediately after birth were 76.1%.The mothers practiced continuously KMC at home were 73.1%. It is necessary to develop studies about acceptability and applicability of the KMC method in Ethiopian context. Breastfeeding mothers are faced with multiple challenges as they strive to practice exclusive breastfeeding. Thus, scaling up of exclusive breastfeeding among mothers requires concerted efforts.

9. RECOMMENDATION

Based on the findings of this research, the investigator recommends that frequent follow-up for babies after discharge from the hospital is very crucial point. It also helps to follow the health status of the preterm infants and to detect any affecting factors that prevent the use of KMC at home.

The KMC unit should be available in all hospitals to prevent suffering of the mothers and their preterm infants during follow up visits.

The mothers should fully inform about continuous use of KMC that helps the baby to suck the breast closely and initiates exclusive breast feeding.

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ANNEX

Annex I

Information sheet

Title of the research project; assessment of exclusive breast feeding practice and factors affecting it among mothers provided KMC to their preterm infants in black lion hospital at Addis Ababa Ethiopia.

Name of principal investigator: Aster Dawit

Name on the organization: Addis Ababa University College of health science

Name the sponsor: Menilik Health Science College

Purpose of research project

The purpose of this research is to assess exclusive breast feeding practice and factors affecting it among mothers provided KMC to their preterm infants who were admitted in black lion hospital. The study is helpful in determining the prevalence of exclusive breast feeding among preterm infants in black lion hospital; it helps to determine the association between KMC and exclusive breast feeding. It will also helps to describe factors affecting exclusive breast feeding among mothers provided KMC. It also serves as subsequent studies in the country.

Procedure

To assess the prevalence of exclusive breast feeding among preterm infants, we invite you to take part in this project. If you are willing to participate in this project, you need to understand and give us your written consent. Then after, you will be interview by the data collector to give your response. You don't need to tell your name to the data collector and all your responses and the results obtained will be kept confidentially by using coding system whereby no one will have access to your response.

Risk / Discomfort

By participating in this project, you may feel it has some discomfort specially on wasting time about 10 minutes during interview with the data collection. We hope you will participate in the study for the sake of the benefit of the research result. There is not risk in participating in this research project.

Benefits

If you participate in this research proposal, there may not be direct benefit to you but your participation is likely to help us in assessing the prevalence of exclusive breast feeding on KMC in black lion hospital. Ultimately, this will help us to work on it.

Incentives

You will not be provided any incentives or payment for participation in this project.

Confidentiality

The information collected from this research proposal will be kept confidential and information about you that will be collected by this study will b stored in a file without your name, but a code number assigned to it and it will not be revealed to anyone except the investigator and will be kept locked with key.

Right to refuse or withdraw

You have full right to refuse from participating in this research. You can choose not to respond to some or all questions if you do not want to give your response. You have also the full right to withdraw from this study at any time you wish, without losing any of your right.

Persons to contact

In case you want to know more information about the research and its undertakings, you can contact the investigator and advisor through the address below.

Aster Dawit / Ato Berhanu Dessaleg (Advisor)

Tel. +251911883857 / 0911179703

E-mail; asterdawit20@gmail.com

1. Consent sheet

Code no_____

Addis Ababa University, Department of Nursing and Midwifery

Questionnaire for assessment on exclusive breast feeding and factors affecting it among mothers provided KMC to their preterm infants in black lion hospital, Addis Ababa, Ethiopia

Annex II.

English& Amharic consent sheet

Consent form

Good morning / afternoon

My name is _____, I am working as data collector in this study that assesses exclusive breast feeding practice and factors affecting it among mothers provided KMC to their preterm infants in black lion hospital Addis Ababa for an investigator during her thesis for the partial fulfillment of masters degree in maternity and reproductive health at A.A university , Ethiopian. It is my pleasure to notify you that you have been identified to participate in this study. I am doing the research on those mothers who used kangaroo mother care for the last six months. I am going to ask you few questions which are very important and related to kangaroo mother care and breast feeding.

Your name will not be written in this form and the information you will give to us is kept confidential. If you do not want to answer all or some of the questions, you do have the right to do so. However, your willingness to answer all of the questions would important to the organization and the mother be appreciated. It doesn't take more than 10 minutes.

Would you participate in study?

Yes _____

No _____

If the answer is yes, thanks! Conduct

If the answer is No, thanks! Transfer to the next respondent

Signature of participant _____

Name and signature of the data collector who sought the consent _____

Date of interview_____

Name and signature of the supervisor _____

Date _____

Annex III.

Amharic &English Quaternaries

Respected mothers, kindly requested to fill this questionnaire honestly. Your information will be used only for the purpose of the study.

The following questionnaires refer to identification of you

Ques. No	Question	Answer	code	Skip to question. No
1	Where are you living? a) Kfleketema b) Kebele	a)_____ b)_____		
	Socio -demographic characteristics			
2	How old are you? a) 15-19 b) 20-24 c) 25-29 d) 30-34 e) >35	Answer._____		
3	Are you married? a) married b) un-married c) divorced d) widowed	Answer._____		
4	What is your job? a) student b) government employee c) merchant d) house wife	Answer_____		

5	What is your religion? a) Orthodox b) Protestant c) Catholic d) Muslim e) other	Answer_____		
6	Monthly income a) <500birr b) >500birr	_____Birr		
7	Ethnicity a)Amhara d) Gurage b) Oromo e) Tigre c) wolayta f)other	Answer_____		
8	Educational level a) illiterate b) read and write c) grade comp(1-6) d) grade comp(7-12) e) certificate and above	Answer_____		

Part ll. Specific to the last pregnancy, labor and delivery that you had?

9	Number of pregnancy a)once only b) twice c) three times d) more than three	Answer____		
10	Number of delivery a)1-3 b)4-5 c) >6	Answer_____		
11	Number of live birth a) 1-3 b) 4-5 c) > 5	Answer_____		

12	Number of death a)1-3 b)>3	Answer_____		
13	Duration of labour a) 2-6hrs b) More than 6 hrs c)) Elective C/S	Answer_____		
14	Mode of delivery a) normal vaginal delivery b) operation	Answer_____		
15	Where did you deliver? a) Government hospital b) health center c) at home d) private hospital	Answer_____		
16	Sex of the newborn- a) male b) female	Answer_____		
17	Weight of the newborn at birth a) less than 1000g b) 1o00g-1499 g c) 1500-1999g d) 2000g 2500g	Answer_____		
18	Age of the newborn at birth a) 9 month complete b) 8 month complete c) 7 month complete d) Other	Answer_____		

19	When did you start kangaroo mother Care? a) Immediately after birth b) After 24 hours	Answer_____		
20	How many days did you use kangaroo mother care in the hospital? a) 1 to 7 days b) 8 to 15 days c) 16 to 20 days d) > 20 days	Answer		
21	How often did you use kangaroo mother care at home? a)Continuously b) Intermittently	Answer____		
22	**If you say no;** what are the factors that affect you do not continue to use kangaroo mother care at home? a) Maternal health problem b) Fear of addiction to breast milk c) Pressure from mother-in-law d) Pain in the breast e) The need to return to work f) Other____	Answer_____		

Specific to Breast feeding

23	The change in breast feeding after kangaroo mother care; a) Improved b) slightly improved c) Not improved	Answer_____		
24	The kind of infant feeding at discharge? a) Exclusive Breast feeding b) Formula or artificial feeding c) Mixed			
25	The duration of breast feeding after discharge a)1-3 month b)4-6 months	Answer____		
26	Is there any discomfort while the baby was sucking the breast? a) engorged breast b) baby was sick c) no problem d) Mother was sick	Answer____		
27	How often do you give the breast milk to your baby? a) On demand feeding b) Every 2 hours in a day c) 3-6 hrs	Answer___		
28	Was the baby admitted to the hospital after discharge for the second time? a) Yes b) No			

29	**<u>If you say yes</u>**; how many days did the baby stay in the hospital? a) 1-3 days b) 4-6 days c) 7-10 days d) >10 days			
30	How often the baby was admitted? a) one time b)2 times c)3 times d) not admitted any more	Answer		
31	The age of the newborn a) 1-3months b) 4-6months c) 7-12months	Answer		

ቃለ መጠይቅ

መመሪያ ፡- ከዚህ በታች የተዘረዘሩት መጠይቆች በጥናታዊ ፅሑፉ ውስጥ የተካተቱ እና በስነ -ጽሁፍ ዓላማ ላይ በመመርኮዝ የተጻፉ በመሆናቸዉ እርሶም የሚያዉቁትን (ተክክለኛ የሆነዉን) መረጃ በመሙላት እነዲተባበሩን በትህትና እንጠይቃለን፡፡

1. የመኖሪያ አድራሻ:- ሀ) ክፍለ ከተማ_____ ለ) ቀበሌ _____
2. ዕድሜዎ ስንት ነዉ ? ሀ) 15-19 ለ) 20-24 ሐ) 25-29 መ) 30-34 ሠ) >35
3. የቤተሰብ ሁኔታ:- ሀ) ያገባ ለ) ያላገባ ሐ) የፈታ መ) በሞት የተለየ
4. የስራ ሁኔታ ፡- ሀ) ተማሪ ለ) የመንግስት ሰራተኛ ሐ) ነጋዴ
   መ) የቤት እመቤት ሠ) ሌላ ……..
5. የሐይማኖት ሁኔታ:- ሀ) ኦርቶዶክስ ለ) ፕሮቴስታንት ሐ) ካቶሊክ መ) ሙስሊም
   ሠ) ሌላ
6. የገቢ ሁኔታ በወር፡- ሀ) <500ብር ለ) >500 ብር
7. ብሔር፡- ሀ) አማራ ለ) ኦሮሞ ሐ) ወላይታ መ)ጉራጌ
   ሰ)ትግሬ ረ)ሌላ
8. የትምህርት ሁኔታ/ደረጃ፡- ሀ). ያልተማረች ለ). ማንበብና መፃፍ የምትችል
   ሐ). ከ1-6 ያጠናቀቀች መ). ከ7-12ያጠናቀቀች ሠ. ሰርተፍኬትና ከዛ በላይ
9. ስንት ጊዜ አርግዘዉ ያዉቃሉ ? ሀ) ኣንድ ጊዜ ለ) ሁለት ጊዜ
   ሐ) ሶስት ጊዜ መ) ከሶስት ጊዜ በላይ
10. ሰንት ልጅ ወልደዋል ? ሀ) 1-3 ለ) 4-6 ሐ) ከ6 በላይ
11. በህይወት የተወለዱ ልጆች ብዛት ሀ) 1-3 ለ) 4-5 ሐ) ከ5 በላይ
12. የሞቱ ህፃናት ብዛት ሀ)1-3 ለ)ከ3 በላይ
13. ለስንት ሰዓት አማጥሽ? ሀ.)ከ2-6 ሰዓት ለ)ከ7-12 ሰዓት ሐ.)ከ12 ሰዓት በላይ መ.በኦፕሬሽን
14. የመጨረሻ ልጅሽን በምን ዓይነት ሁኔታ ወለድሽ ?
   ሀ) በተፈጥሮ /ያለምንም መሳሪያ ለ) በኦፕሬሽን
15. የመጨረሻ ልጅሽን የት ሄደሽ ወለደሽ? ሀ) ሆስፒታል ለ) ጤና ጣቢያ
   ሐ) ቤት መ) በግል ህክምና
16. የልጁ ጾታ፡- ሀ) ወንድ ለ) ሴት
17. የመጨረሻ ልጅሽ ሲወለድ ምን ያህል ኪሎ ነበር ?
   ሀ) ‹ 1000 ግራም ለ) ከ1000-1499 ግራም
   ሐ) ከ1500- 1999 ግራም መ) ከ2000-2500 ግራም

18. የመጨረሻ ልጅሽ ሲወለድ የነበረዉ ዕድሜ ምን ያህል ነዉ ?

ሀ) 9 ወር ጨርሶ ነዉ የተወለደዉ ለ) 8 ወር ጨርሶ ነዉ የተወለደዉ

ሐ) 7 ወር ጨርሶ ነዉ የተወለደዉ መ). ሌላ ካለ .....

19. የካንጋሮ እናት እንክብካቤ መቼ ጀመርሽ?

ሀ) ወዲያዉ እንደተወለደ ለ) ከ 24 ሰዓት በሁዋላ ሐ) ሌላ

20. በሆስፒታል ዉስጥ የካንጋሮ እናት እንክብካቤ ለምን ያህል ቀናት ተጠቅመሽ ነበር ?

ሀ) ከ 1-7 ቀን ለ) ከ 8-15 ቀን

ሐ) ከ 15-20 ቀን መ) ከ 20 ቀን በላይ

21. የካንጋሮ እናት እንክብካቤ ከሆስፒታል ከወጣሽ በሁዋላ እቤትሽ እንዴት ተጠቀምሽበት ?

ሀ) በተከታታይ ተጠቅሜበታለሁ ` ለ) አልፎ አለፎ ነዉ

22. የካንጋሮ እናት እንክብካቤ ከተጠቀምሽ በሁዋላ በልጁ የጡት ወተት የመጥባት ሒደት ላይ ምን አይነት ለዉጥ አየሽ?

ሀ) የመጥባት ሁኔታዉ በጣም ጨምሩዋል ለ) የመጥባት ሁኔታዉ በመጠኑ ጨምሩዋል

ሐ) የመጥባት ሁኔታዉ አልተሻሻለም

23. የካንጋሮ እናት እንክብካቤ ካልተጠቀምሽ ፤ እንዳትጠቀሚ ያደረጉሽ ምክንያቶች ምንድን ናቸዉ

ሀ) አሞኝ ስለነበር ለ) ጡት ከለመደ ያስቸገረኛል ብዬ

ሐ) እናቴ ጠረንሽን ከለመደ ያስቸግርሻል ስላለችኝ መ) ጡቴን ስላመመኝ

ሠ) ወደ ስራ ለመመለስ ስለፈለኩኝ ረ) ሌላ

24. ከሆስፒታል ስትወጪ ህፃኑ የጡት ወተት በተከታታይ ጠብቶ ነበር ?

ሀ) አዎን በተከታታይ ይጠባ ነበር ለ) የላም ወተት ነዉ የጠጣዉ/ ጡት አልጠባም

ሐ) የጡት ወተትና የታሸገ ወተት በመደባለቅ ይወሰድ ነበር መ) ሌላ

25. የመጨረሻ ልጅሽ ከሆስፒታል ከወጣ በሁዋላ ለምን ያህል ጊዜ የጡት ወተት ጠባ ?

ሀ)ከ1-3 ወር ለ) ከ4-6 ወር

26. ልጁ ሲጠባ ምን ችግር ገጠመዉ?

ሀ) ጡቴ ከመጠን በላይ ስለሞላ በደንብ መጥባት አልቻለም ለ) ልጁ ታሞ ስለነበረ

ሐ) ምንም ችግር አልገጠመዉም መ) ሌላ

27. በየ ስንት ሰዓት ልዩነት ልጅሽን ታጠቢዋለሽ ?

ሀ) ልጁ በሚፈልግበት ጊዜ ሁሉ አጠባዋለሁ ለ)በሁለት ሰዓት ልዩነት

ሐ) ከ3-6 ሰዓት ልዩነት

28. ልጅሽ ከሆስፒታል ከወጣ በሁዋላ ተመልሶ ሆስፒታል ተኝቶ ነበር?

ሀ) አዎን ለ) አልተኛም

29. ሆስፒታል ከተኛስ ለምን ያህል ጊዜ ቆየ ?

ሀ) ከ1-3 ቀን ለ) ከ4-6 ቀን ሐ) ከ7-10 ቀን መ) ሌላ

30. ምን ያህል ተመላልሶ ተኝቶ ነበር ?

ሀ) 2ጊዜ ለ) 3 ጊዜ ሐ) አልተኛም መ) ሌላ

31. የልጁ ዕድሜ አሁን ስንት ነዉ?

ሀ) ከ1-3 ወር ለ) ከ3-6 ወር ሐ) ከ6-12 ወር