

**KNOWLEDGE AND PRACTICE OF EXCLUSIVE BREASTFEEDING  
AMONG WOMEN WITH CHILDREN BETWEEN 9 AND 12 MONTHS OF  
AGE IN EL SABBAAH HOSPITAL JUBA-SOUTH SUDAN**

DR ELIZABETH BENJAMIN WARILLE

H58/79754/2012

**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
DEGREE OF MASTER OF MEDICINE IN PAEDIATRICS AND CHILD  
HEALTH AT THE UNIVERSITY OF NAIROBI**

**2015**

**DECLARATION**

This dissertation is my original work and has not been submitted elsewhere

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Dr Elizabeth Warille

**APPROVAL**

This dissertation is submitted for examination with our approval as university supervisors:

**Prof. Francis E. Onyango**

**Department of Paediatrics and Child Health**

Signature \_\_\_\_\_ Date: \_\_\_\_\_

**Dr. Bonface Osano**

**Lecturer, Department of Paediatrics and Child Health**

Signature \_\_\_\_\_ Date: \_\_\_\_\_

## **DEDICATION**

This dissertation is dedicated to my beloved husband Mr.Bakhiet Bayu who shoulders all the burden of my postgraduate studies, to my children, brothers and sisters for their continuous support and encouragement and my dear parents, Mama Hawa and the late Benjamin Warille.

## **ACKNOWLEDGEMENT**

All thanks and praises to my Almighty God for helping me through the difficult times, fulfilling my needs and for keeping me alive to conduct this study, surely he will see me through. I would like to appreciate and thank my supervisors Prof. Onyango and Dr. Osano for their guidance and support for this study and their patience. Also my gratitude to my colleagues who gave me all the good advice in regards to my proposal. Not forgetting my dear colleagues in State Ministry of Health, Central Equatoria for helping me with the information I needed.

## TABLE OF CONTENT

DECLARATION.....	i
APPROVAL.....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENT .....	iv
LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
ABBREVIATIONS .....	ix
DEFINITIONS .....	x
ABSTRACT.....	xi
BACKGROUND AND LITERATURE REVIEW.....	1
1.1 Background .....	1
1.2 Literature Review .....	3
2.0 PROBLEM STATEMENT, STUDY JUSTIFICATION AND OBJECTIVES.....	8
2.1 Problem Statement.....	8
2.2 Study Justification.....	8
2.3 Study Question .....	8
2.4 Objectives.....	9
2.4.1 Primary .....	9
2.4.2 Secondary .....	9
3.0 METHODOLOGY .....	10
3.1 Study Design .....	10
3.2 Study area.....	10
3.3 Study Population.....	11
3.3.1 Inclusion criteria .....	11
3.3.2 Exclusion criteria .....	11

3.4 Study Period .....	12
3.5 Sample size.....	12
3.6 Sampling procedure and data collection .....	12
3.7 Data analysis.....	13
4.0 ETHICAL ISSUES.....	15
4.1 Ethical approval approval to carry the study was sought from Kenyatta National. ....	15
4.2 Confidentiality .....	15
4.3 Study risk.....	15
4.4 Benefit from the study.....	15
4.5 Dissemination of the results .....	15
5.0 RESULTS .....	16
6.0 DISCUSSION .....	25
Conclusion.....	30
Recommendations .....	30
Study limitation .....	30
REFERENCES.....	32
APPENDICES.....	35
Appendix 1: Information form .....	35
Appendix 2: The Ten Steps to Successful Breastfeeding .....	38
Appendix 3: Questionnaire .....	39
Appendix 4 : WORK PLAN .....	46

**LIST OF TABLES**

Table 1: Characteristics of the Respondents ..... 16

Table 2: Practices of breastfeeding ..... 18

Table 3: Social Support ..... 199

Table 4: Knowledge on breastfeeding ..... 20

Table 5: Knowledge on definition of exclusive breastfeeding ..... 222

Table 6: Knowledge on recommended duration of exclusive breastfeeding ..... 22

Table 7: Univariate analysis factors affecting success of breastfeeding among  
mothers..... 233

Table 8: Multivariate analysis ..... 244



**LIST OF FIGURES**

Figure 1: Map of Juba Town..... 11

## **ABBREVIATIONS**

CES:	Central Equatoria State
DM:	Diabetes Mellitus
EBF:	Exclusive Breastfeeding
EBM:	Expressed breastmilk
KAP:	Knowledge, Attitude and Practice
MOH:	Ministry of Health
NEC:	Necrotizing Enter colitis
SIDS:	Sudden Infant`s Death Syndrome
UNICEF:	United Nations Children`s Fund
UoN:	University of Nairobi
URTI:	Upper respiratory tract infections
WHO:	World Health Organization
OPD :	Out patient department
IMC :	Immunization Clinic
PMTC :	Prevention of mother to child transmission

## **DEFINITIONS**

**Exclusive breastfeeding:** Mode of breastfeeding where by the infant only receives breast milk without any additional food or drink, not even water.

**Prelacteal feed:** Any food except mother's milk provided to a new born before initiating breastfeeding.

## **ABSTRACT**

**Background:** Breastfeeding is an significant tool of preventing childhood illnesses, obesity, and hypertension later on in life. In addition, it reduces the cost to the family and the entire country. South Sudan faces a great deal of challenges, particularly in the health sector. Appropriate practices that support exclusive breastfeeding in the 1st six months will cause a major impact on reduction of childhood morbidity and mortality in the young land.

**Objective:** To assess the knowledge and practices of exclusive breastfeeding in mothers with infants between 9 and 12 months of age attending the immunization and the outpatient clinics in El-Sabbah Hospital and to identify factors that affect exclusive breastfeeding.

**Study Design:** Cross sectional descriptive hospital based study.

**Study Area:** El-Sabbah Hospital, immunization and the outpatient clinics.

**Methodology:**Consequative sampling was used to select mothers with children aged 9 to 12 months in both immunization and the outpatient department were interviewed. A questionnaire was used to extract the information on the sociodemographical factors, practices that support the success of exclusive breastfeeding and basic knowledge on the advantages of breastmilk and breastfeeding. SPSS was used in data entry and analysis. Both univariate and multivariate logistic regression were used to analyze the factors that affect the success of exclusive breastfeeding.

**Results:** 384 mother, attending immunization and outpatient department were interviewed. The majority of the mothers interviewed were aged between 21 – 25 years (43.5%), had 2-4 children (55.5%) and had primary education (48.2%). The rate of exclusive breastfeeding was found to be 63.2%. The majority of mothers initiated breastfeeding in the first hour of delivery (76.8%).Mother`s skin to skin contact with their babies immediately after birth was reported in 70%,while 76.8% initaited breastfeeding in the first hour,and 98.1% roomed in with thier babies.59.4% of mothers did not offer prelacteal feed to their babies.While milk expreesion wasn`t practiced by most of the mothers. Breastmilk was reported to be nutritious (mean=1.15, SD=0.53).Knowledge on use of EBM when mother is away was found to be low (mean 3.15,Std 1.06).The majority of the respondents knew that the

definition of exclusive breastfeeding involved giving only breast milk and medicines if indicated (mean=1.39, S.D=0.54).

The Univariate analysis showed that parity and mother`s level of education were significantly associated with exclusive breastfeeding ( $p<0.05$ ). There was no statistical significant association between occupation, age of the mother, mode of delivery and exclusive breastfeeding ( $p>0.05$ ).

**Conclusion:** Most of the mothers had good knowledge on the benefits of exclusive breastfeeding and the definitions of exclusive breastfeeding.

The early practices supporting breastfeeding are well practiced with rate of exclusive breastfeeding reaching 63.2% at 6 months of age .Parity and mother`s level of education were the socio-demographic factors that significantly affected exclusive breastfeeding.

## **BACKGROUND AND LITERATURE REVIEW**

### **1.1 Background**

Breast milk is the optimal food for infants and its benefits are numerous (1). It contains bacterial and viral antibodies, including relatively high concentrations of secretory immunoglobulin (IgA) that prevents microorganisms from adhering to the intestinal mucosa. It also contains substances that inhibit growth of many common viruses such as rotavirus, norovirus and adenovirus. Antibodies in human milk are thought to provide local gastrointestinal immunity against organisms entering the body via this route (2). Macrophages in human milk may synthesize complement, lysozyme, and lactoferrin. In addition, breast milk contains lactoferrin, an iron-binding whey protein that is normally about one-third saturated with iron and has an inhibitory effect on the growth of *Escherichia coli* in the intestine. The lower pH of the stool of breast-fed infants is thought to contribute to the favourable intestinal flora of infants fed human milk in contrast to formula by containing more bifidobacteria and lactobacilli; fewer *E. coli*. This helps to protect against infections caused by some species of *E. coli*. Human milk also contains bile salt-stimulated lipase, which kills *Giardia lamblia* and *Entamoeba histolytica*. Transfer of tuberculin responsiveness by breast milk suggests passive transfer of T-cell immunity (2).

Breast-feeding is associated with fewer feeding difficulties, fewer incidence of allergy and intolerance to bovine milk. These include diarrhoea, intestinal bleeding, occult melena, colic, and atopic eczema (2). It also has well-established short and long term benefits, particularly the reduction of morbidity and mortality due to infectious diseases in childhood such as Otitis media, diarrhoea, upper respiratory tract infections, sudden infant's death syndrome SIDS, necrotizing enter colitis NEC (4) and decreased risk of obesity, hypertension, high cholesterol, type 1 DM later on in life. Also breastfeeding is associated with good performance in intelligent test (4,5). But of disadvantage is its association with maternal-to-child transmission of HIV, but the risk is influenced by duration and pattern of breast feeding and maternal factors, including stage and severity of HIV/AIDS, immunologic status and presence of mastitis (3).

Breastfeeding is important for mothers, families and communities. Compared to women who breastfeed, not breastfeeding may increase the risk of breast cancer, and some forms of ovarian cancer, hip fractures in older age. In addition, not breastfeeding

increases retention of fat deposited during pregnancy which may result in later obesity (6). When a baby is not breastfed there may be Loss of income through a parent's absence from work to care for an ill child, higher family expenses to purchase and prepare artificial feeds as well as extra time needed to give these feeds and the expense as a result of the child's illnesses. In addition, children who are not breastfed have increased illness, therefore increased use of health care services, and increased health care costs, both as infants and later. In addition, healthy infants grow to become healthy, intelligent adults in the workforce, contributing to the wellbeing of their community (6). So in respect to the proven benefits of breastfeeding, WHO has recommended that infants should be exclusively breastfed for the first six months of life and thereafter to start complementary feeding while continuing to breastfeed for a minimum of two years (7).

Proper early breastfeeding practices are very important for the success of exclusive breastfeeding. Campaigns are being done to spread the knowledge on importance of breast milk and breastfeeding to both infant and mother. Such campaigns also discuss the practices that support the initiation and maintenance of exclusive breastfeeding such as; initiation of breastfeeding within the first 1 hour of life, no offering prelacteal feeds and exclusive breastfeeding, skin to skin contact, rooming in and age appropriate weaning.

## 1.2 Literature Review

There are several practices that support the success of exclusive breastfeeding. Antenatally, giving mothers information about the benefits of breastfeeding might influence those who have not already made the decision to breastfeed or not. This also builds their confidence. Kistin et al in 1990, as cited by WHO, did a study on the effects of antenatal education on breastfeeding rates. In that study, it was found that mothers who attended the antenatal classes started breastfeeding more than those who did not attend the classes (45% compared to 22%) (8).

Another good practice that supports the success of exclusive breastfeeding is avoidance of prelacteal feeds. Giving prelacteal feeds increases the risk of infection in infants, and if given by bottle, may interfere with suckling (step nine of successful breastfeeding) (8). In a study done in Israel by Leefsus and Habafsky in 1980 as cited by WHO, it was found that infants who receive one or more prelacteal formula feeds were less likely to be fully breastfeeding at 6 weeks (8). Also Kurinij et al in 1984, USA, as cited by WHO, found that infants who received water in the hospital were significantly more likely to stop breastfeeding by 4 months of age than those who did not receive water (8).

Early skin to skin contact increases breastfeeding success both soon after delivery and two to three months later. It was established that as little as 15-20 minutes contact in the first hour will be beneficial. And it is in this first one hour that mothers should initiate breastfeeding. Mothers and infants should not be separated after birth unless for an unavoidable medical reason (8). In a study done in California, it was determined that the longer the mother practices early skin to skin contact in the first three hours, the more likely she will exclusively breastfeed (9). Similarly, in Sweden, it was found that kangaroo mother care was associated with the sustainability of breastfeeding. In that study, they also advocated for non separation between mother and infant (10).

Rooming in is another good practice. In a randomized controlled trials done in Malaysia investigating the effect of separate mother infant care versus rooming in, it was found that exclusive breastfeeding before discharge from hospital was significantly lower in the separate care group compared to the rooming in



group(11).In a study done in Emirates, it was found that 87.2% of mothers practiced rooming in and it was found to be significantly associated with breastfeeding(12).

Of equal importance is the support from peers and relatives.In a randomized control study done in Belguam,India on the effect of peer counselors on exclusive breastfeeding practices,it was found that the prevalence of exclusive breastfeeding at six months was 66.67% in the intervention group and 36.6% in control group.Also more number of mothers in the intervention group administered colostrum and initiated early breastfeeding(13).Similarly, in a study done in Malaysia on factors associated with exclusive breastfeeding, it was found that mothers with supportive husband were more likely to exclusively breastfeed compared to the ones with non supportive husbands(14).

As mentioned earlier, exclusive breastfeeding is recommended for the first six months of life. Progress in exclusive breastfeeding rates has been made since early 1990s.Based on data from 37 countries, the rate of exclusive breastfeeding for the first 6 months of life has increased from 34% to 41% across the developing world between 1990 and 2004 (15). Western and central Africa in particular experienced significant improvement with rates rising from 4% to 22 % (15).

Certain beliefs and practices in some African communities affect the success of exclusive breastfeeding, for example, in Chad the percentage of mothers who exclusively breastfeed their babies starting from the first hour is only 2-4% because the baby is usually taken away from the mother in the first few days and given hot drinks believing that this will warm up the intestines (16). While in Tanzania, about 86% of the rural mothers believe that water should be given to the new born just after the birth compared with 65% of the urban mothers (17).

In a study done in Ghana, breast milk during pregnancy was believed to be warm and could cause diarrhea to the baby. There was also the existence of pakopilla mago or the use of herbal concoction to bath the baby with.This herbal substance was also being given to the baby to drink. In that work it was demonstrated that infant feeding and for that matter exclusive breastfeeding was heavily influenced by families of the breastfeeding women (18).

In a study done in Mauritius, it was found that only 17.9% of women exclusively breastfed for 6 months, with mean duration of exclusive breastfeeding 2.1 months. Addition of water was the main reason for not exclusively breastfeeding (19). In Kenya, a study done by Daniel Ganu showed that 42% of mothers exclusively breastfed, 64% initiated breastfeeding within two hours of delivery, 66% strongly agreed that colostrums should be discarded and 28% agreed that breast milk alone is inadequate for their babies up to 6 months of age (20).

A similar study done in Sudan found that almost all mothers, 99.9% initiated breastfeeding on the first day mostly (83.2%) between 1-5 hours following delivery. The presence of sore or retracted nipples had a negative effect on the duration of breastfeeding. The majority (89.2%) thought that a new pregnancy contraindicated the continuation of breastfeeding and 67.1% reduced or stopped breastfeeding when the baby had diarrhea (21).

In a survey done in Somalia, it was found that knowledge; attitude and practices (KAP) on breastfeeding are mainly controlled by culture through maternal grandmothers and other elderly women in the community and are generally unsatisfactory. Most children are put on breast 2-3 days after delivery and the colostrum is not fed to the children by the majority as it is considered heavy, thick, coarse, dirty and toxic to the children's health. Pregnancy also was found to contraindicate breastfeeding, as the milk is thought to be red and poisonous to the breastfeeding infant. It was also thought to affect the unborn infant by making it weak. Breastfeeding is, however acceptable to all mothers and almost all children breastfeed on demand. Lack of knowledge, inappropriate beliefs, and very close birth spacing are the major obstacles to successful breastfeeding (22).

Literature has confirmed that breastfeeding knowledge positively affects the success of exclusive breastfeeding. In a clinical trial performed in Brazil to assess the knowledge of mothers and fathers about breastfeeding and its relationship to the frequency of breastfeeding, they found that the mothers with the highest level of knowledge had 6.5 times higher chance of exclusively breastfeeding to the end of the 3rd months and 1.97 times higher chance of continuing breastfeeding to six months compared to the other mothers (23). In the same regard, step three of the ten steps to successful breastfeeding advocates for provision of mothers with information about

the benefits of breastfeeding, as mothers` knowledge can influence their breastfeeding intension although it might not necessarily have much effect by itself (8). In Africa several studies were conducted to assess mothers` knowledge on exclusive breastfeeding. In Nigeria it was found that 71.35 of the mothers had good knowledge on breastfeeding. In that study, 46% of mothers reported that breastfeeding is a contraceptive method, while 76% knew that it promotes mother, baby bond and 70% knew that it maintains mothers` weight. (24). Another study done in a different state in Nigeria showed that only 18.2% knew that breastfeeding promotes bonding between mother and baby.,27% of mothers gave correct definition of EBF (25), while Ogbonnac in Jos, Nigeria found a higher response rate for the correct definition of EBF which was 82.3% (26).

Literature has confirmed that proper positioning of the baby positively affects the success of EBF.Studies were done to assess mothers` knowledge on proper techniques of breastfeeding.Ajibuah in his study(Nigeria,2013) reported that 52.8% of the mothers couldn`t properly position their babies to breastfeed(25).

Of importance is mother`s knowledge on mother to child transmission of HIV through breastfeeding because this determines the choice of baby`s feeding, whether EBF or formula feeding. M C Maputle et al in his study to assess pregnant women`s knowledge on MTCT of HIV found low levels of mother`s knowledge on MTCT (27).

Socio demographic factors were found to be associated with the success of exclusive breastfeeding in various studies. In a study done in Ethiopia, it was found that unemployment and age of an infant less than two months were independently associated with EBF, and the median duration of EBF was 3 months, so working mothers were found to be more likely not to exclusively breastfeed their babies compared to unemployed ones (28). While in Cape Coast, Ghana, it was found that infant feeding practice was associated with age of baby, marital status of the mother. Level of education and employment of mother, and the person who assists the mother in taking care of the baby were also found to influence the mother`s choice in infant feeding practice (29). Maternal education, age and marital status were found to be associated with exclusive breastfeeding (30,31). Violet Nannyu (Kenya 2008) also found that exclusive breastfeeding is more in mothers with higher age (32). Mode of

delivery also has an impact on exclusive breastfeeding. It was found that cesarean section has been associated with reduced rates of breastfeeding initiation and breastfeeding at six months (33), contrary to another study done in Kenya which found no associations between EBF and mode of delivery (32).

## **2.0 PROBLEM STATEMENT, STUDY JUSTIFICATION AND OBJECTIVES**

### **2.1 Problem Statement**

According to the 2010 Sudan household survey, only 45% of babies in South Sudan are exclusively breastfed for the first 6 months of life (34). Most mothers in South Sudan do not breastfeed their children exclusively because of inadequate information on the importance of early initiation and EBF, inadequate support from families and the community, lack of counselling and heavy work load that keeps them away from their children for a long time(35).In addition,ignorance about breast milk expression and proper storage of EBM all contribute to early weaning.

### **2.2 Study Justification**

Exclusive breastfeeding is an important strategy for prevention of childhood morbidity and mortality. WHO recommend exclusive breastfeeding for the first six months of life. Thus, WHO/UNICEF Baby Friendly Hospital Initiative developed the Ten Steps To Successful Breastfeeding to protect, support and promote breastfeeding.

Studies have been conducted on breastfeeding in different parts of the world in respect to knowledge, attitude and practices, but up to now no data have been reported on the level of awareness of mothers towards breastfeeding and the practices in regards to that in Juba. Infact,in a country like South Sudan with many ethnic groups and different culture, where there has been challenges with health sector and long civil war, it will be good to explore the different practices and level of knowledge of mothers on exclusive breastfeeding and factors affecting it. Such local information can be used to correct certain beliefs that adversely affect the practices which promote and support exclusive breastfeeding. This can easily be done during breastfeeding campaign and women groups meetings. This study is being done therefore to assess mothers` knowledge and practices that support exclusive breastfeeding, to compare them with the international standards, identify factors that affect breastfeeding and make suggestions on how to improve the practices and reduce breastfeeding obstacles.

### **2.3 Study Question**

What is the level of knowledge and practices which support exclusive breastfeeding among mothers of children between 9 and 12 months of age at El-Sabbah Hospital?

## **2.4 Objectives**

### **2.4.1 Primary**

The primary objective of the study was to assess the practices that support exclusive breastfeeding for the first six months in mothers with infants between 9 and 12 months of age attending the immunization and the outpatient clinics at El Sabbah Hospital.

### **2.4.2 Secondary**

The secondary objectives were to :

- i) Assess mother`s knowledge on exclusive breastfeeding.
- ii) Identify factors affecting the success of exclusive breastfeeding.

### **3.0 METHODOLOGY**

#### **3.1 Study Design**

Cross sectional descriptive study was used.

#### **3.2 Study area**

The study was conducted at El-Sabbah Hospital, Juba- South Sudan. Juba is the capital city of south Sudan, located in Central Equatoria State. It has two teaching hospitals, of Juba and El-Sabbah, a military and a police hospitals in addition to other seven public health facilities, private clinics and hospitals.

Established by the Kuwaiti government in 1983, El Sabbah hospital remains the only specialized facility treating children in South Sudan. In recent years, the hospital has undergone extensive renovation, with funding from UNICEF, the African Union and other donors.

Children suffering from malnutrition, malaria, pneumonia and diarrhoea make up the majority of the patients. With 100 beds now available including a new ward. The hospital treats up to 150 outpatients daily (35).

The immunization clinic is operational throughout the weekdays but not on Saturdays, Sundays and public holidays. The number of infants attending the clinic for vaccination has significant variation both weekly and monthly. Records for January, 2013 estimated total of 150- 200/month, February, 2013 was around 180-230 infants and October, 2013 estimated 150- 180/month. It serves children for BCG in early days of life. OPV and DTP/hep b/Hib at six weeks, 10 weeks and 14 weeks, then measles at 9 months of age.



**Figure 1: Map of Juba Town**

The red crosses indicate the hospitals in Juba, with El Sabbah located opposite Hai Malakal, few kilometers from Juba teaching hospital, just opposite All Saints` Cathedral.

### 3.3 Study Population

The study population was women with children between 9 and 12 months of age attending the immunization and the paediatrics outpatient clinics in El Sabbah hospital.

#### 3.3.1 Inclusion criteria

- Mothers with children aged 9 and 12 months attending immunization and the outpatient clinics.
- Mothers who gave consent to participate in the study.

#### 3.3.2 Exclusion criteria

- Children aged 9 to 12 months without the biological mother.



- Mothers who declined to participate in the study.

### 3.4 Study Period

The study was conducted from September 1<sup>st</sup>, 2014 to October 20th, 2014.

### 3.5 Sample size

#### Sample size formulae

The following notations was used in the formulae below to determine the sample size.

$Z^2$  = 95% of confidence level and equals 1.96

$P$  = expected prevalence of exclusive breastfeeding which equals 50%

$d^2$  = is the level of precision or sampling error and equals 5% (0.05)

So the sample size was determined as below :

$$\text{Sample Size} = \frac{Z^2 \times p \times (1 - p)}{d^2}$$

$$\text{Sample Size} = \frac{1.96^2 \times 0.5 \times (1 - 0.5)}{0.05^2} = 384.16 \approx 384$$

The required sample size for the study was 384

### 3.6 Sampling procedure and data collection

Mothers with children 9 to 12 months of age were targeted so that they can recall their exclusive breastfeeding practice and the early practices that support the success of exclusive breastfeeding for the first six months of life, and since the mothers normally come to the immunization clinic with babies at six,ten,forteen weeks and later at 9 months, age of 9 months was taken as the lower limit of age.

An interviewer administered questionnaire which was first tested for applicability and feasibility was used to obtain information on socio-demographic status, birth related events, knowledge, and practices related to breastfeeding during the first six months, sources of breastfeeding education and family support. The questions on knowledge were put in multiple choice form. Likert scale of one to five was applied to all, 1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree and 5=Strongly Disagree. .

Closed questions were used for the practices that support breastfeeding with explanation when necessary.

Consecutive sampling was done on mother/child pair who met the inclusion criteria from both immunization and outpatient clinic until the sample size was reached.

Due to disparity in patients' flow and target participants in the two clinics, the sample size was distributed proportionately to number of mothers attending the two clinics. With that 286 responses from the outpatient while the remaining 98 were from the immunization clinic.

Research assistants were recruited from the health staff and medical students, who were able to speak the local Juba Arabic language. Representation of the major tribes was also considered. Four research assistants were then trained by the principal investigator on sampling procedures, inclusion and exclusion criteria, data gathering, and management. They were also provided with the definitions of EBF, EBM and good attachment.

At the end of each day, data collection forms were reviewed by the principal investigator to identify omissions and errors and were corrected by the research assistants on the same day. The data were then entered into computer.

### **3.7 Data analysis**

#### **Variables**

The outcome variable (dependent) was exclusive breastfeeding (EBF), while the independent variables were the socio-demographic characteristics of the child and both parents, knowledge and the practices of EBF.

Statistical Package for Social Sciences (SPSS) version 19 was used for data entry and analysis. Descriptive analysis was done and presented in terms of mean, median. Frequency were reported in terms of numbers and percentages using tables.

Five point Likert scale was applied to all the questions on knowledge, ranging from strongly agreed to strongly disagreed, numbered from 1 to 5. The mean was calculated for each answer, so as to scale the mean to the nearest number given.

Univariate analysis was done, only two variable were found to be statistically significant. P value of  $<0.05$  was used as level of significance. Multivariate analysis was then conducted adjusted for mother's age.

#### **4.0 ETHICAL ISSUES**

**4.1 Ethical approval approval to carry the study was sought from Kenyatta National Hospital/University of Nairobi/Ethics and Research Committee and the Directorate of Research and Planning/Ministry of Health/Republic of South Sudan.**

Consent forms were signed by all mothers who agreed to participate in the study, after explanation of the study and the voluntary nature of participation. Both the questionnaire and the consent form were translated into the local Arabic language.

#### **4.2 Confidentiality**

Confidentiality was guaranteed, names did not appear on the questionnaire form, participants were only identified by codes only. Data is kept under lock, key and password protected. .

#### **4.3 Study risk**

No risk was encountered by the participants during the study.

#### **4.4 Benefit from the study**

The results of this study will be communicated to the women`s groups at the community level and to the health facilities to help improve mothers` knowledge and encourage the practice of exclusive breastfeeding.

#### **4.5 Dissemination of the results**

The study result will be presented during the annual breastfeeding campaign in Juba and to the women groups.

The study will be published in South Sudan Medical Journal.

A copy of the study will be handed to State ministry of health, CES, library, university of Nairobi and the department of paediatrics, University of Nairobi.

## 5.0 RESULTS

A total of 384 mothers with children aged 9-12 months were recruited in the study. Median age of the mothers was 23 years, IQR=20 - 26 .

**Table 1: Characteristics of the Respondents**

Information on the mother	Frequency	Percent (%)
Mothers age (n=340*)		
16 - 19 years	37	10.8%
20 - 29 years	263	77.3%
30 – 39 years	40	11.8%
Mode of delivery		
SVD	370	96.4%
CS	14	3.7%
Parity (n=353**)		
1	137	38.8%
2-4	196	55.5%
Above 4	20	5.7%
Level of Education		
None	53	13.8%
Primary	185	48.2%
Secondary	112	29.2%
Tertiary	34	8.9%
Occupation		
Housewife	324	84.4%
Salaried employee	34	8.9%
Self-employed	24	6.3%
Student	2	0.5%
Marital status		
Single	112	29.2%
Married	261	67.9%
Divorced	10	2.6%
Widowed	1	0.3%
Religion		
Christian	369	96.09%
Muslim	15	3.9%
ANC visit		
Yes	370	96.4%
No	14	3.7%
Number of ANC visits (n=348***)		
1	11	3%
2	30	8%
3	55	14.8%
≥ 4	252	72.4%
Place of delivery		
Hospital	225	58.6%
Health Centre	81	21.1%
Home	78	20.3%

\*does not include 40 missing information

\*\*does not include 31 missing information

\*\*\*does not include 36 missing information

Table 1 above shows that the majority of the mothers (77%) were in the age group 20-29 years, with the adolescents contributing a significant proportion of 10%. Forty-eight percent of the respondents had primary education with about a third having had secondary education, and only few respondents (8.9%) having had tertiary education. The majority (68%) were married, while 29% were single with only one (0.3%) widowed. Of the married, 84.4% were housewives. Most of the respondents were Christian (96.1%).

A large majority (96.9%) of the respondents visited ANC at least once, with 49% having visited ANC 3-4 times. The majority of the mothers (79.6%) delivered in a health facility with SVD constituting the most common mode of delivery (96.4%).

## Assessing practices supporting exclusive breastfeeding

**Table 2: Practices of breastfeeding**

<b>Practice in the first few days of life</b>	<b>Frequency</b>	<b>Percent</b>
Initiated breastfeeding in the 1 <sup>st</sup> hour of delivery (n=371*)		
Yes	285	76.8%
No	86	23.2%
Reasons for not initiating breastfeeding in 1 <sup>st</sup> hour(n=57)		
Colostrums is not good	4	7.0%
No milk	41	71.9%
Mother was sick	7	12.3%
Baby was sick	2	3.5%
Baby was separated from mother	3	5.3%
Had skin contact with baby immediately after birth (n=384)		
Yes	269	70.1%
No	115	29.9%
Did not offer prelacteal feed to your baby (n=384)		
Yes	156	40.6%
No	223	59.4%
Practiced rooming in (n=384)		
Yes	377	98.2%
No	7	1.8%
<b>Subsequent practices</b>	<b>Frequency</b>	<b>Percent</b>
Developed breastfeeding problem (n=384)		
Yes	68	17.7%
No	316	82.3%
Stopped breastfeeding because of the breast problem (n=68)		
Yes	3	4.4%
No	65	95.6%
Exclusively breastfeed upto six months (n=384)		
Yes	243	63.3%
No	141	36.7%
Reasons for not practicing exclusive breastfeeding for 6 months (n=141)		
No enough milk	74	52%
Resumed work	5	3.5%
Water should be given as weather is hot	30	21.1%
Others	32	22.6%
Continue to breastfeed even when the baby was sick (n=384)		
Yes	364	94.8%
No	20	5.2%
Did you ever express your milk (n=384)		
Yes	37	9.6%
No	347	90.4%
Age when complementary food was started (n=384)		
2 – 4 months	55	14.3%
4 – 6 months	65	16.9%
6 months	264	68.7%
If not breastfeeding, reasons for stopping breastfeeding (n=36)		
Child refused by himself	27	75.0%
Got pregnant	5	13.9%
Child is not feeding well	4	11.1%
Should mum express milk if going to work (n=384)		
Yes	49	12.8%
No	335	87.2%

The rate of EBF was 63.2%.The majority of the mothers had skin to skin contact with their babies immediately after birth( 70%),while76.8% initiated breastfeeding in the first hour,and98.1% roomed in with their babies .40.6% of mothers gave prelacteal feed to their babies.The majority didn't practice milk expression.Only few(36) were found not to be breastfeeding during that period,of which 75% stated that child refused by himself.Of the mothers who developed breast problems,only 4.4% stopped breastfeeding during that time.

**Table 3: Social Support**

<b>Social support</b>	<b>Frequency</b>	<b>Percent</b>
Family members supported breastfeeding(n=384)		
Yes	333	86.7%
No	51	13.3%
If employed, did you get the maternity leave (n=58)		
Yes	50	86.2%
No	8	13.8%
Duration for maternity leave taken (n=50)		
2	6	12.0%
3	36	72.0%
4	6	12.0%
≥6	2	4%
Was maternity leave enough (n=50)		
Yes	29	58.0%
No	21	42.0%
Employer supported breastfeeding by giving time for the mother to go and breastfeed (n=34)		
Yes	28	82.4%
No	6	17.7%

Most mothers got social support from both family members and the employers for those who were employed.Majority of the working mothers took 3 months maternity leave, with 42% of them reported that the leave wasn't enough.



**Table 4: Knowledge on breastfeeding**

Knowledge about breast feeding and breastmilk	n (%)					Mean	Std. Dev
	SA	A	E	D	SD		
Nutritious to the baby	357 (91.5%)	11 (2.8%)	20 (5.1%)	1 (0.3%)	1 (0.3%)	1.15	0.53
Increases mother baby bonding	324 (84.4%)	51 (13.3%)	8 (2.1%)	1 (0.3%)	0	1.18	0.46
Protects the baby from infections	329 (84.4%)	38 (9.7%)	10 (2.6%)	13 (3.3%)	0	1.25	0.66
Cheap and available	191 (52.8%)	126 (34.8%)	22 (6.1%)	23 (6.4%)	0	1.66	0.85
Contraception method	110 (28.3%)	121 (31.1%)	119 (30.6%)	39 (10.0%)	0	2.22	0.97
Helps maintain mothers body weight	97 (24.9%)	105 (26.9%)	142 (36.5%)	45 (11.6%)	0	2.3	0.98
May protect from maternal breast cancer	28 (7.4%)	34 (8.9%)	305 (80.5%)	12 (3.2%)	0	2.8	0.61
HIV can be transmitted through breastmilk	197 (50.8%)	162 (41.8%)	27 (6.9%)	1 (0.3%)	1 (0.3%)	1.6	0.66
Breastfeeding day and night	371 (95.9%)	15 (3.9%)	1 (0.3%)	0	0	1.0	0.22
Should use both breast at each feeding	372 (95.1%)	17 (4.4%)	1 (0.3%)	1 (0.3%)	0	1.1	0.27
Good attachment supports breastfeeding	286 (73.5%)	100 (25.7%)	2 (0.5%)	1 (0.3%)	0	1.3	0.48
Use of EBM when mother is away	29 (7.6%)	82 (21.5%)	93 (24.4%)	157 (41.1%)	21 (5.5%)	3.2	1.06
<b>How babies should be fed</b>							
Cup and spoon	98 (45.6%)	93 (43.3%)	8 (3.7%)	14 (6.5%)	2 (0.9%)	1.7	0.77
Bottle	43 (16.4%)	73 (27.8%)	8 (3.0%)	135 (51.3%)	4 (1.5%)	2.9	1.23
<b>Known dangers of bottle feeding</b>							
Can cause diarrhea	154 (39.7%)	193 (49.7%)	37 (9.5%)	4 (10.3%)	0	1.7	0.68

Nipple confusion	94 (24.4%)	134 (34.8%)	155 (40.3%)	2 (0.5%)	0	2. 2	0.80
------------------	---------------	----------------	----------------	-------------	---	---------	------

Key : SA=Strongly Agree, A=Agree, E=Equivocal, D=Disagree, SD=Strongly Disagree

The table above shows that majority of the respondents knew that breastfeeding is nutritious to the baby (mean=1.15, S.D=0.53), increases mother`s baby bond(mean 1.18,std 0.46).protects baby from infection(mean 1.25.std 0.66),the least information known was prevention of maternal breast cancer(mean 2.79,std 0.61).

The majority of the respondents knew that the disadvantage associated with breastfeeding was transmission of disease like HIV (mean=1.57, S.D=0.66).

Most of the respondents knew that the best technique for breastfeeding involved breastfeeding the baby day and night,use of both breast at each feed and good attachment (mean=1.04, 0.22Std),mean 1.06,Std 0.27 and mean 1.28,Std 0.4 respectively.Knowledge on use of EBM when mother is away was found to be low(mean 3.15,Std 1.06) .Most respondents knew that feeding babies should involve using cup and spoon (mean=1.74, Std Dev=0.77) compared 94, Std Dev=1.23)to using bottle . The most known danger sign of bottle feeding as per the respondents knowledge was that it could cause diarrhea (mean=1.72, Std Dev=0.68).

**Table 5: Knowledge on definition of exclusive breastfeeding**

Definition EBF	SA	A	E	D	SD	Mean	Std. Dev	Rank
To give only breast milk and medicines if indicated	192 (50.0%)	111 (28.9%)	2 (0.5%)	2 (0.5%)	0	1.39	0.54	1
To give breast milk and water	36 (9.4%)	37 (9.6%)	2 (0.5%)	3 (0.8%)	0	1.64	0.72	2

Key : SA=Strongly Agree, A=Agree, E=Equivocal, D=Disagree, SD=Strongly Disagree

Majority of the respondents knew that the definition of exclusive breastfeeding involved giving only breast milk and medicines if indicated (mean=1.39, S.D=0.54).

**Table 6: Knowledge on recommended duration of exclusive breastfeeding**

Characteristic	Frequency	Percent (%)
Recommended duration for EBF (n=358)		
1 month	1	0.3%
2 month	1	0.3%
3 months	5	1.4%
4 months	14	3.9%
5 months	21	5.9%
6 months	304	84.9%
8 months	11	3.0%
1 year	1	0.3%

Majority of the respondents knew that the best recommended duration for exclusive breastfeeding was six months (84.9%).

## Factors affecting success of breastfeeding

**Table 7: Univariate analysis factors affecting success of breastfeeding among mothers**

Variable	Category	Did you exclusively breastfeed				Chi square / *F	P value
		Yes		No			
		N	%	N	%		
Age	16-19 years	26	70.3%	11	29.7%	3.990	0.136
	20-29 years	219	83.3%	44	16.7%		
	30-39 years	34	85.0%	6	15.0%		
Level of Education	None	46	93.9%	3	6.1%	14.358	0.002
	Primary	142	82.1%	31	17.9%		
	Secondary	79	73.8%	28	26.2%		
	University	30	96.8%	1	3.2%		
Occupation	HouseWife	250	81.7%	56	18.3%	0.917	0.632
	Salaried Employee	28	87.5%	4	12.5%		
	Self Employed	19	86.4%	3	13.6%		
Marital Status	Single	95	88.0%	13	12.0%	3.408	0.182
	Married	202	80.2%	50	19.8%		
	Widowed	1	100.0%	0	0.0%		
Religion	Christian	285	82.1%	62	17.9%	1.074	0.300
	Muslim	13	92.9%	1	7.1%		
ANC Visit	Yes	289	83.0%	59	17.0%	1.155	0.282
	No	7	70.0%	3	30.0%		
Number of ANC visits	1	11	100.0%	0	0.0%	22.254	<0.0001
	2	30	100.0%	0	0.0%		
	3	51	92.7%	4	7.3%		
	≥4	122	72.6%	46	27.4%		
Mode of Delivery	SVD	281	82.2%	61	17.8%	1.736	0.784
	CS	12	92.3%	1	7.7%		
Place of Delivery	Hospital	176	82.2%	38	17.8%	0.249	0.883
	Health Centre	56	81.2%	13	18.8%		
	Home	64	84.2%	12	15.8%		
Parity	1	127	96.2%	5	3.8%	76.250	<0.0001
	2	65	69.1%	29	30.9%		
	3	47	97.9%	1	2.1%		
	4	16	42.1%	22	57.9%		
	≥5	13	72.2%	5	27.8%		

Table 7 above shows that mothers with less children were more likely to exclusively breastfeed than mothers with many children.

Mothers who had lower level of education were more likely to exclusively breastfeed than those who had higher education, although the majority of university mothers exclusively breastfed.

**Table 8: Multivariate analysis**

	Coefficient	Standard error of coefficient	P value	OR	95% C.I. for OR	
					Lower	Upper
Mother's age	-.057	.032	.072	.944	.887	1.005
Parity	.559	.121	.000	1.749	1.380	2.217
Education level	.483	.205	.018	1.621	1.085	2.423

Adjusting for mother's age, women with fewer children and those with lower level of education were more likely to exclusively breast feed.

## 6.0 DISCUSSION

The study focused on knowledge and practices of exclusive breastfeeding. The study managed to collect the data from the 384 respondents (100%) with majority of the respondents age being between 21-25 years (43.53%) and with 2-4 children (55.52%).

Sixty three percent (63.3%) of the mothers exclusively breastfed their infants for the first six months. This finding is slightly higher than the report that 45% of mothers in South Sudan exclusively breastfeed(30), and is also higher than the study that reported 19.9% and 30.5% in Mauritius and Nigeria respectively(19,36). This could be attributed to the fact that most mothers value the importance of exclusive breastfeeding, in addition economic instability can be a reason as to why some mothers opted to breastfeed longer, as they had no other feeding option. Milk insufficiency was the common reason given by the majority who failed to exclusively breastfeed for six months(36.7%), this reason was given by only 22.6% of mothers in Mauritius(19).

It was found that early practices that support the success of exclusive breastfeeding were done by most of the mothers. Seventy Six percent (76.9%) of the mothers actually initiated breastfeeding in the first hour of delivery, this is more or less comparable to 52% rural and 82% urban mothers in Tanzania who started breastfeeding in the first one hour(17), Daniel Ganu in Kenya found in his study that 64% of mothers initiated breast feeding in the first two hours of delivery(20), while in Ghana and Nigeria it was found that only 2-4% and 21.1% of mothers initiated breastfeeding in the first hour of delivery respectively(20,25). In our study, of those who didn't start breastfeeding in the first hour, 71.9% assumed that there was no milk immediately after delivery, instead they used formula or glucose water until full establishment of the breastmilk. This is similar to 70% in a study done in Somalia that lack of milk was a common reason for not initiating breastfeeding.(22). Also 7% of those who didn't initiate breastfeeding thought that colostrum was not good for the baby. This practice was also found in Somalia, that colostrum was thought to be harmful to the baby(22). This finding is much less than the one found by Ganu in Kenya that 66% of mothers agreed that colostrum should be discarded(20).

We also found that 70.1% had skin to skin contact after birth. This is more than the report in Leslie's study in California that 39.7% of mothers had skin to skin contact in

the first one hour of birth(9).This great difference can be due to different settings. It has been a custom to place the baby immediately after birth on mothers abdomen.Even mothers who delivered at home used to have their babies put on their bare abdomen even without any medical knowledge on the advantage of this.

58.14% didn't offer prelacteal feeds to their babies, this is close to 49% rural mothers in Tanzania(17). This is mostly as a result of the training they underwent during antenatal visits which in most cases do advise that nothing should be offered to the baby within the first 6 months.

Ninety eight percent (98.1%) roomed in with their babies compared to 87.2% in Emirate in a study done by Hadia(12). This high rate of rooming in in South Sudan is due to cultural belief and social reason that babies must accompany their mothers.

Of the women interviewed, only 68 had breast problems, but the practice of stopping breastfeeding only occurred in 3 mothers, those were the ones who developed breast abscess and were treated medically. Nipple sore, however, was not a reason to stop breastfeeding in all the mothers.However in Sudan it was also found that sore nipple had a negative effect on duration of breastfeeding(21) .

Due to vulnerability of the age group to infections, most of the children had some kind of sickness at some point in their lives, but only 20 mothers stopped breastfeeding during this period with the concept that mothers breast milk can change and cause diarrhoea aggravating child`s illness especially when the mother stays for a long duration without breastfeeding or when the breastfeeding mother takes rotten or chilly foods. This findings agrees with M A Salih et al study who also found that 67.1% of mothers stopped breastfeeding when their children had diarrhea(21).

The study found that most of the mothers did not express their milk for baby`s feeding. This practice is not accepted by most of the mothers, partly because they think that the milk will not be good by the time they will be giving their children, but mostly because they had no idea about EBM use. The small number who had heard about EBM use didn't practice it because of difficulty of storage. The small percentage who expressed their breastmilk did so not for feeding but to discard the foremilk after being away for hours, especially when the sun is hot, assuming that the milk will then be changed and can cause diarrhoea to the baby.

The majority of the mothers started complementary feeding after six months of age (67.7%) while only 16.93% started between 4-6 months. R Shirima in his study found that 75.2% of mothers started complementary food around 4-6 months(17). This difference could be attributed to South Sudan mothers` knowledge on the advantages of breast milk to the baby and WHO recommendation which makes them not to start complementary food early. In addition to financial constraints as stated above.

Only 41 mothers were found to have stopped breastfeeding at the time of the study. Child's refusal to breastfeed was the frequent answer given as the reason for stopping breastfeeding after six months. Some of the mothers (13.8%) also stopped breastfeeding because they got pregnant. This practice was also found commonly in Sudan and Tanzania(17,22). Four mothers stopped breastfeeding because they thought that by doing this child will feed well on family food.

The study revealed that 88.5% of mother had support in regard to breastfeeding, majority of which was from the husband. Eighty two percent (82.3%) of the employed mothers got support from their employers in regards to breastfeeding by letting them go home after midday so as to breastfeed their children. Casual labourers tended to carry their babies to their work place, although there were no designated place for breastfeeding at work place. Babies will be just around their mothers, as breastfeeding in public was not a major problem. These findings is different from Chidozie E et al study who noted that 38% of mothers agreed that work place provided designated areas for breastfeeding(24). Again this difference is due the different setup in the two populations.

The official maternity leave in South Sudan is eight weeks, so mothers tend to take their annual leave on top of the maternity leave, making total of three months for majority of working mothers (72%). which was reported to be not sufficient by more than half of the respondents. This is similar to Chidizei E et al study finding that 3 months maternity leave duration was insufficient to the mothers(24). Mothers who took more than three months were self-employed, so the length of their leave depended on their own decision.

The study also assessed mother's knowledge on key advantages of breastfeeding for both mother and baby. Majority of the mothers had good knowledge on the advantages of breastfeeding to the baby. This agrees with U AGU and M C Agu who



reported that mothers had good knowledge of exclusive breastfeeding(36).Also Chidozei E et al found in is study that 71% of the respondants had good knowledge on breastfeeding.Majority of the interviewed mothers had low knowledge on advantage of breastfeeding to the mother, only16.2% knew that breastfeeding prevents breast cancer,51.8% knew that breastfeeding maintains body weight and only 59.3% knew that breastfeeding protects againts another pregnancy .Chidozei E et al found that 46% of mothers knew that breastfeeding is a contraceptive method,and 70% knew that breast feeding maintains mothers wieght(24).This can be due to the fact that most mother in our study were with low educational backround and those facts about breastfeeding were not routinely taught during the ANC visits.

Transmission of HIV through breast milk was known by 92% of mothers, this is diffrenet from study of MC Maputle et al that revealed low level of knowledge on mother to child transmission of HIV through breastfeeding(27).This could be explained by the fact that mothers were being taught in ANC about HIV as mode of HIV transmission.

Knowledge on proper techniques of breastfeeding was found to be good which was comparable to Chidozei E study(24),in contrast to Ajibuah who reported that 52.8% of mother in his study could not properly position their babies to breastfeed(25) This can be due to the fact that most mothers live in extended families, so they were taught on good attachment.

As stated before EBM use was generally not accepted by the majority due to cultural beliefs and storage difficulties.

The majority of the respondents(78.9%) knew that the correct definition of exclusive breastfeeding involved giving only breast milk and medicines and that the recommended duration for exclusive breastfeeding was six months (84.92%). This was higher than 27% from Ajibuah Joel`s study in Nigeria(25), although Ogbonnac reported a higher rate of 82.3% in another different state in Nigeria(26). This higher rate of knowledge of definition of EBF in Juba can be due to high rate of ANC attendance ,although it can be variable in different towns in South Sudan,according to ANC coverage.Not all those who gave correct definition of EBF practiced it.

Most respondents knew that feeding babies should involve using cup and spoon (mean=1.74, Std Dev=0.77) compared to using bottle (mean=2.94, Std Dev=1.23). This is because most of the mothers knew the disadvantage of bottle feeding as it could cause diarrhoea (mean=1.72, Std Dev=0.68).

On the Socio-demographic factors affecting success of breastfeeding, the Univariate analysis showed that parity and mother's level of education were the significant socio demographic factors associated with exclusive breastfeeding.

Mother with less children tend to exclusively breastfeed more than the ones with many children, this can be because they are not driven away from their babies by the increasing responsibilities of the older ones. This is similar to Violet Naanyu's study that higher duration of exclusive breastfeeding are associated with first time parenthood (32).

Education level was found significantly associated with exclusive breastfeeding. The lower the level of education the more likely is the mother to exclusively breastfeed, although the majority of university mothers exclusively breastfed. This finding is different a study done by given by U Agu which stated that, maternal education was not associated with more exclusive breastfeeding. (36). This also contradicts Grummer-Strawn's study that lower maternal education is associated with not breastfeeding (31). This can be due to the fact tertiary education leavers constituted a small proportion. Again, mothers with lower education are either housewives or doing casual works so they have plenty of time to spend with their babies. The study didn't look for number of housewives who had university level of education, but generally the employment rate was low.

In this study age of the mother was found to not be significantly associated with EBF. This is similar to the study done in Nigeria which showed that maternal age was not associated with EBF (36). This can be because the success of breastfeeding depends on mothers willingness to breastfeed, whether young or old.

Studies had showed that the type of delivery affects the exclusivity of breastfeeding. Women who had vaginal delivery were more likely to breastfeed exclusively (33). In this study this relationship was not significant, this is similar to Violet Naanyu's study in Kenya which also found no association between EBF and

mode of delivery (32). Widespread use of spinal anaesthesia in cesarean deliveries could play a role in allowing mothers to be able to initiate breastfeeding within one hour of birth, also the myth that CS delivery will affect mothers' belly shape makes them work hard on EBF so as to ensure quick uterine involution and later on a small belly.

Mothers' occupation was also found to be insignificantly associated with EBF ( $p$  value  $> 0.05$ ), in contrast to the one found by Tesfeye in Ethiopia, that working mothers were more likely not to exclusively breastfeed their babies (28). This difference can be due to the fact that most of the working mothers in our study used to take their babies to their work place allowing them to continue breastfeeding while at work.

In contrast to a study in Cape Coast Ghana (18), maternal marital status was as well found not to be significantly associated with EBF. Extended family can be a cause, because even a single mother can still get support from the relatives and neighbours.

### **Conclusion**

Knowledge on breastfeeding was generally good, although use of expressed breast milk for infant's feeding was still very low. Early practices that support exclusive breastfeeding were done by the majority of the respondents and the rate of exclusive breastfeeding was 63.2%. Parity and maternal level of education affect the success of exclusive breastfeeding.

### **Recommendations**

1. More training and awareness campaigns should be done to be able to maintain a high rate of exclusive breastfeeding
2. House to house survey to be conducted to establish more in-depth and understanding on the practices and knowledge of exclusive breastfeeding in South Sudan
3. Use of EBM should be advocated.
4. More study to be conducted to ascertain the socio demographic factors associated with exclusive breastfeeding

### **Study limitation**

1. Recall bias, some of the mothers were not able to recall all the details of their practices in the first six months.

2. The clinical sample of women represented a group which might be more compliant and better informed about infant feeding than a random population sample of women.
3. Being more informed, mothers who come to the hospital might give the desired answers even if they don't practice.
4. The population studied might not represent the whole country, as representatives of some of the states were too minimal.

## REFERENCES

1. Thomas Green, Wayne Franklin, Robert R.Tanz.New York. *Paediatrics-Just the facts 2005*:2
2. Robert M. Kliegman et al, Philadelphia. Nelson`s textbook of paediatrics 19th edition, 2011:158.
3. William W.Hay et al, Current Pediatric Diagnosis and Treatment, 19th edition, 2008 chapter 10
4. Tom Lissanuer, Graham Clayden, Illustrated Texbook of Paediatrics,3rd edition,2007,ch 12,188-189
5. Bernardo L.Horta, and Cesar G.Victora. Long term effects of breastfeeding pg 1, universidade federal de Pelotas, Brazil, 2013
6. Unicef, baby-friendly hospital initiative Original BFHI course developed 1993: UNICEF, WHO.Jan 2009: 69
7. World Health Organization .Community-based strategy for breastfeeding promotion and support in developing countries, USA 2003:23
8. WHO, Evidence for the ten steps to successful breastfeeding, Geneva, Division of Child Health and Development, 1998, pg23,31,48
9. Leslie Bramson et al, Effect of early skin to skin mother contact during the first three hours following birth on exclusive breastfeeding during maternity hospital stay, California,J Hum Lact\_ 2010 May;26(2):130-7
10. Renne Flacking, Uwe Ewald and Lars Wallin, Positive effect of Kangaroo mother care on long term breastfeeding in very preterm infants, Sweden, J Obstet Gynecol Neonatal Nurs. 2011 Mar-Apr;40(2):190-7
11. Jaafar S H, Separate care for new mother and infant versus rooming in for increasing the duration of breastfeeding, Malaysia, Division of Child Health and Development 2012 Sep 12;9
12. Hadia Radwan, Pattern and determinants of breastfeeding and complementary feeding practices of Emirati mothers in the United Arab Emirates,Radwan BMC Public Health 2013,13 :171
13. P.R Gunagi, V.A Naik and M.O Mallapur, Effect of peer counselors on exclusive breastfeeding practices in Belguam district, India, Al Ameen J Med Sc ;2013,6(4) :381-383

14. Kok Leong Tan, Factors associated with exclusive breastfeeding among infants under six months of age in Peninsular, Malaysia, *International Breastfeeding Journal*, 2011, 6 :2
15. WHO, Indicators for assessing breastfeeding practice, Reprinted report of informal meeting 11-12 Geneva, Switzerland, June 1991
16. UNICEF, A successful start in life, improving breastfeeding in West and Central Africa August 2010
17. R Shirima, M Gebre and T Greiner, Information and socioeconomic factors associated with early breastfeeding practices in rural and urban Morogoro, Tanzania 2001
18. Iddrisu Seido, Exclusive breastfeeding and family influences in rural Ghana, *May 2013*:37,39.
19. Ashmika mote et al, An assessment of the breastfeeding practices and infant feeding pattern among mothers in Mauritius, 2013: Hindawi Publishing Corporation.
20. Daniel Ganu, Assessing exclusive breastfeeding knowledge and practices among mothers of Kajiado district of Kenya, Kenya 2013, American Public Health Association, 284120
21. M A Salih, H M el Bushra, S A Satti, Ahmed M , A kamil IA , Attitude and practices of breastfeeding in Sudanese urban and rural communities, Sudan, 1993 .US National Library of Medicine National Institutes of Health .
22. <http://ethnomed.org/clinical/paediatrics/Somalia21-22>, Somali KAPS infant and young child feeding and health seeking practices, Dec 2007
23. Susin LR et al. Does parental breastfeeding knowledge increase breastfeeding rates ?, Brazil, 1999, 26(3) :149-159
24. Chidozei E et al, Knowledge, Attitude and Techniques of Breastfeeding Among Nigerian Mothers From a Semi Urban Community, *BMC Research Notes* 2013, 6 :552
25. Ajibuah Joel, Appraisal of nursing mothers' knowledge and practice of exclusive breastfeeding in Yobe state, Nigeria, *Journal of Biology, Agriculture and Healthcare*, vol 3, No 20, 2013
26. Ogonnac, Daboerjc, Current knowledge and practice of exclusive breastfeeding among mothers in Jos, Nigeria, *Niger J Med* 2007 July-Sept ;16(3) :250-60

27. MC Maputle et al, Pregnant women`s knowledge about mother to child transmission of HIV infection through breastfeeding, Curationis March 2008,50
28. Tesfaye Sefegnet al. Factors associated with exclusive breastfeeding practices among mothers in Goba district, South east Ethiopia.2012
29. Solomon Sika-BRIGHT, Cultural factors influencing infant feeding practices of mothers attending welfare clinic Coast in Cape coast, ACCRA FRENCH EMBASSY. SMALL GRANTS PROGRAMME, January 2010
30. Meedy S, Fahy K and Kable A, 2010, Factors that positively influence breastfeeding duration to 6 months, women and birth, vol.23, no.4 135-145
31. Grummer-Strawn LM, Shewly K, Progress in protecting, promoting and supporting breastfeeding :1984-2009, Breastfeeding Med 2009 ;4 :S31-9
32. Violet Naanya , Young mothers, first time parenthood and exclusive breastfeeding in Kenya, African Journal of Reproductive Health, vol 12, no 3 Dec. 2008
33. Edye Kuyper, Binetti Vitta and Kathryn Dewey, Implication of cesarean section delivery on breastfeeding outcomes and strategy to support breastfeeding, Aand T Technical Brief, issues 8, Feb 2014
34. South Sudan Info.com 2013
35. Mercy Kolok. Breastfeeding is the cheapest and most effective life saver in history, unicef, South Sudan. www.unicef.org/esaro/544\_13132. August 2013
36. U Agu, MC Agu Knowledge and practice of exclusive breastfeeding among mothers in rural population in South Eastern Nigeria. Tropical Journal of Medical Research, vol 15 No2.2011
37. Oche MO<sup>1</sup>, Umar AS, Ahmed HK Knowledge and practice of exclusive breastfeeding in Kware, Nigeria, Afri Health Sci.2011, Sept :11(3) :513-523
38. Gudina Egata, Yemane Berhane and Alemayehu Worku, Predictors of non exclusive breastfeeding at six months among rural mothers in East Ethiopia, International Breastfeeding Journal 2013, 8 :8
39. Auukegbu, Determinants of breastfeeding patterns among mothers in Anambra, Department of community medicine, federal medical centre, Unuabia, Nigeria, 2011

## **APPENDICES**

### **Appendix 1: Information form**

Code \_\_\_\_\_ Date \_\_\_\_\_

The following information is to enable you understand the nature of this study, so that you can give your consent if you feel comfortable with it.

### **STUDY TITLE**

**Knowledge and Practice of exclusive breastfeeding in women with children aged between 9 and 12 months in El Sabbah Hospital, Juba South Sudan**

### **PURPOSE OF THE STUDY**

As part of the requirements for master degree at the University of Nairobi, I have to carry out a research study. The study focuses on knowledge and practices of exclusive breastfeeding in Juba.

You have been asked because you are specifically suitable to provide data for my study. I have a questionnaire with a set of questions that I you will be interviewed on.

### **BENEFITS OF PARTICIPATION :**

Your participation in this study is completely voluntary and you may refuse to answer any question or choose to stop participating at any time. There will be no financial benefit for you from the study. There will be no compensation for your participation in the study. If you participate, the information you will provide will help for the improvement of breastfeeding practices in our country, by knowing the practices among mothers and trying to improve on them if there is need. This will help in improvement of children`s health in South Sudan

### **RISK FOR THE PARTICIPANT :**

Apart from the time taken for the completion of the questionnaire (approximately 15minutes) that may take you away from other activities, no other risks are foreseen. Your personal information will be confidential and will be destroyed afterwards.



You are free to withdraw from the study at any time and without giving reasons for your withdrawal. Failure to participate in this study will not be used against you & will not affect your relationship with the researcher .

Please feel free to ask any questions about the study. If there is any part of this form that you do not understand, be free to ask questions about it. You can also contact me after the interview for any clarification or questions on the study.

**CONFIDENTIALITY :**

All information you supply during the research will be held in confidence and your name will not appear in any report or publication of the research. You will be identified only by a code and your personal information will be handled with a high level of confidentiality. Your data will be safely stored in a locked facility and only the researcher and her supervisors will have access to this information.

**Dr Elizabeth Benjamin Warille**

**Department of Paediatrics**

**U o N**

**Nairobi-Kenya**

Tel: +211956207530

E-mail: [warillee@yahoo.com](mailto:warillee@yahoo.com)

Or

**Chairperson,**

**KNH/UON Ethical review Secretariat,**

**P.O. BOX, 20723- 000202**

**Nairobi-Kenya**

Or

**Dr Felix Tuli**

**Consultant in Pediatrics**

**El Sabbah Hospital**

**P.O BOX 165 Juba, South Sudan**

**Tel:+211955727568**

**E-mail:fnyungura2002@yahoo.co.uk**

**Consent Form**

**Study Title:** Knowledge and Practice of Exclusive Breastfeeding in Women with Children Aged 9 to 12 Months in El Sabbah Hospital, Juba, South Sudan

I ..... agree to participate in this study, conducted by Dr. Elizabeth Warille.

I have understood the nature of this study and wish to participate. I am participating as a volunteer.

I have understood that I can withdraw from the study, without giving reasons, at any time, whether before it starts or while I am participating.

I have received answers to all questions that I asked the researcher.

My signature below indicates my consent.

Signature \_\_\_\_\_ Date \_\_\_\_\_

**Participant**

Signature \_\_\_\_\_ Date \_\_\_\_\_

**Researcher**

## Appendix 2: The Ten Steps to Successful Breastfeeding

### The Ten Steps to Successful Breastfeeding

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth.
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
6. Give newborn infants no food or drink other than breastmilk, unless *medically* indicated.
7. Practice rooming-in -- allow mothers and infants to remain together -- 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

**Appendix 3: Questionnaire**

**Study Title : Knowledge and Practice of Exclusive Breastfeeding in Women with Children aged 9 to 12 months in El Sabbah Hospital, Juba, South Sudan**

**Investigator : Dr.Elizabeth Benjamin Warille**

Abbreviations :

Strongly agree :SA

Agree :A

Equivocal :E

Disagree :D

Strongly disagree :SD

**Questionnaire No:\_\_\_\_\_ Facility Code \_\_\_\_\_**

**Date:\_\_\_/\_\_\_/\_\_\_\_\_**

**Patient`s clinic number :**

**General Information :**

**Residential address of mother :**

**Phone number of mother :**

**Information about the child**

1. Infants age : \_\_\_\_\_ in months :

2. Infant`s sex:

Male

Female

3. Birth order :

**Information about the mother :**

4. Mother`s age in years :

5. Partner's age in years :

6. Parity:

---

7. Level of education (completed)

None

Primary

Secondary

University

Other (*Specify*) \_\_\_\_\_

8. Occupation:

Housewife

Salaried Employee

Self-employed

Student

Other (*Specify*) \_\_\_\_\_

9. Marital status:

Single

Married

Divorced

Seperated

Widowed

10. Religion:

Christian

Muslim

Other (*Specify*) \_\_\_\_\_

11. Ethnicity \_\_\_\_\_

12. ANC visits : Yes  
No

If yes in Q11 above, please *specify* Number of visits \_\_\_\_\_

13. Mode of delivery:  SVD  CS  Forceps  Vacuum  
Others(specify)

13. Place of delivery:

- Hospital  
Health centre  
Home  
Others(specify)

**Knowlegde about breastfeeding :**

14. What advantages of breastfeeding do you know? (*tick all that apply*)

- i. It is nutritious to the baby  
SA  A  E  D  SD
- ii. Protects the baby from infections  
SA  A  E  D  SD
- iii. Mother baby bonding  
SA  A  E  D  SD
- iv. Cheap and available  
SA  A  E  D  SD
- v. Contraception method  
SA  A  E  D  SD
- vi. Maintains mothers body weight  
SA  A  E  D  SD
- vii. Prevents maternal breast cancer  
SA  A  E  D  SD

15. What are the disadvantages of breastfeeding?

- i. Transmission of diseases like HIV

SA  A  E  D  SD

Other (*Specify*) \_\_\_\_\_

**Knowledge on techniques of breastfeeding:**

16. Proper techniques of breastfeeding are:(Tick all that apply)

- i. To use both breast at each feeding

SA  A  E  D  SD

- ii. Breastfeed day and night

SA  A  E  D  SD

- iii. Good attachment (baby close, facing mum with wide opened mouth et

SA  A  E  D  SD

- iv. Use of EBM when mother is away

SA  A  E  D  SD

17. What is the definition of EBF?

- i. To give only breast milk and medicines if indicated

SA  A  E  D  SD

- ii. To give breast milk and water

SA  A  E  D  SD

18. What is the recommended duration of EBF?(Tick appropriately)

One month

Two months

Three months

Four months

Five months

- Six months
- Eight months
- One year
- Others(specif→y)

19. Have you ever expressed your milk ? if yes why ?

20. If mum goes to work, should she express her milk and leave for the child ?

Yes  No

21. How would babies be fed?

i. Cup and spoon

SA  A  E  D  SD

ii. Bottle

SA  A  E  D  SD

22. What dangers of bottle feeding do you know?

i. Can cause diarrhoea

SA  A  E  D  SD

ii. Nipple confusion

SA  A  E  D  SD

**Practices of breastfeeding :**

23. Did you initiate breastfeeding in the 1st hour of delivery?  Yes

No

24. (a) If No give reasons (*tick all that apply*)

- Colostrum is not good
- No milk
- Mother was sick
- Baby was sick



Baby was taken away from me

25. Did you have skin to skin contact with your baby after birth?  Yes  No

26. Did you offer Prelacteal feeds to your baby?(any food before initiation of breastfeeding)  Yes

No

Specify if answer is yes \_\_\_\_\_

27. Did you practice rooming in?  Yes  No

28. Did you develop breast problems?

Yes

No

If yes, what problem did you have? \_\_\_\_\_

29. How did you manage breastfeeding when you had the problem? \_\_\_\_\_

30. Did you stop breastfeeding during the breast problem?  Yes  No

31. Did you exclusively breastfeed for six months?  Yes  No

32. If **No** give reasons (*tick all that apply*)

I don't have enough milk

I resumed work

Water should be given as weather is hot

Our tradition says so

Other (*Specify*) \_\_\_\_\_

33. Has your child ever been sick? Yes  No

34. Did you continue to breastfeed even when the baby was sick ?

Yes No

a)If No give **reason(s)** \_\_\_\_\_

35. Do you express your milk for the baby to take when you are away?

Yes  No

36. At what age did you start complementary food?

<2 month

2-4 months

4-6 months'

>6 months

37. If you are not breastfeeding now, why did you stop breastfeeding?

Child refused by himself

I got pregnant

Child is not feeding well

Others

**Social support :**

38. Do you have support from your family members in regards to breastfeeding?

Yes

No

If yes, who gives you support?

39. If you are employed, did you get the maternity leave ?

Yes

No

40. How long was it ?

41. Do you think the maternity leave is enough ? ? Yes No

42. Does your employer support you in breastfeeding by giving you time to go to your baby? Yes No

**Appendix 4 : WORK PLAN**

ACTIVITY	TIME PERIOD									
	J	F	M	AP	M	JUN	JULY	S	O	N
Literature review and Concept development	XX									
Written Research Protocol and 1 <sup>st</sup> submission to KNH-REC		XX								
2 <sup>nd</sup> submission and corrections			XX							
Final submission and expected approval					XX					
Data collection							XX			
Data analysis								XX		
Report writing									XX	
Submission of draft report										XX

## الملحق 1

استمارة المعلومات :

الرمز: \_\_\_\_\_ التاريخ: \_\_\_\_\_

المعلومات التالية هي لتمكينك فهم طبيعة هذه الدراسة، بحيث يمكنك إعطاء موافقتك إذا كنت تشعر بالراحة معها.

### عنوان الدراسة

المعرفة وممارسة الرضاعة الطبيعية الحصرية في النساء مع الأطفال الذين تتراوح أعمارهم بين 9 و 12 شهرا في مستشفى الصباح، جوبا جنوب السودان

### الغرض من هذه الدراسة

كجزء من متطلبات درجة الماجستير في جامعة نيروبي، يجب اجراء دراسة بحثية. وتتركز الدراسة على معرفة وممارسات الرضاعة الطبيعية الحصرية في جوبا.

لقد طلبت منك لأنك مناسبة خصيصا لتوفير البيانات عن دراستي. لدي استبيان مع مجموعة من الأسئلة التي سوف اجري مقابلة معك.

### فوائد المشاركة:

مشاركتكم في هذه الدراسة هو طوعي تماما و يمكنك رفض الإجابة عن أي سؤال أو اختيار التوقف عن المشاركة في أي وقت. لن يكون هناك أي فائدة مالية لك من الدراسة. لن يكون هناك تعويض عن مشاركتكم في الدراسة. إذا كنت تشارك، فإن المعلومات التي سوف تقدم مساعدة لتحسين ممارسات الرضاعة الطبيعية في بلادنا، من خلال معرفة الممارسات بين الأمهات ومحاولة لتحسين عليها إذا كان هناك حاجة. وهذا سوف يساعد في تحسين صحة الأطفال في جنوب السودان

### مخاطر المشاركة

وبصرف النظر عن الوقت الذي يستغرقه لملء الاستبيان (حوالي 15 دقيقة) التي قد يأخذك بعيدا عن الأنشطة الأخرى، لا يوجد أي مخاطر متوقعة أخرى. معلوماتك الشخصية سوف تكون سرية وسيتم تدميرها بعد ذلك. أنت حر في الانسحاب من الدراسة في أي وقت ودون إبداء أسباب للانسحاب. لن تستخدم عدم المشاركة في هذه الدراسة ضدك وسوف لن يؤثر على علاقتك مع الباحث. لا تتردد في طرح أي أسئلة حول الدراسة. إذا كان هناك أي جزء من هذا النموذج غير مفهوم كن حرا في طرح الأسئلة حول هذا الموضوع. يمكنك أيضا الاتصال بي بعد المقابلة لأية إيضاحات أو أسئلة على الدراسة.

**السرية:** وسيتعمل بجميع المعلومات التي قمت بتقديمها خلال البحوث في الثقة ولن يظهر اسمك في أي تقرير لنشر البحوث. وسيتم تحديد لك من خلال رمز وسيتم التعامل مع المعلومات الشخصية الخاصة بك مع مستوى عال من السرية. سيتم تخزين البيانات الخاصة بك بأمان في منشأة مؤمن وليس هذا فقط الباحثة والمشرفين لها الحصول على هذه المعلومات.

د/ بيتي اليزبيث واريللي

قسم طب الأطفال  
جامعة نيروبي  
بيروبي - كينيا  
+211956207530

E-mail: [warillee@yahoo.com](mailto:warillee@yahoo.com)

أو

رئيس،

KNH / عشر المراجعة الأخلاقية الأمانة العامة،

ص ب BOX، 20723-000202

نيروبي كينيا

أو

الدكتور فيليكس تويلى

مستشار في طب الأطفال

مستشفى الصباح

ص . بريد 165 جوبا، جنوب السودان

**Tel:+211955727568**

**E-mail:fnyungura2002@yahoo.co.uk**

استمارة موافقة

عنوان الدراسة: المعرفة وممارسة الرضاعة الطبيعية الحصرية في النساء مع الأطفال الذين تتراوح أعمارهم بين 9 إلى 12 شهرا في مستشفى الصباح، جوبا، جنوب السودان.

أنا ..... اوافق على المشاركة في هذه الدراسة، التي أجرتها  
الدكتورة إليزابيث واريلى.

لقد فهمت طبيعة هذه الدراسة وارغب في المشاركة. أنا مشارك كمتطوع.

لقد فهمت أن أنا يستطيع الانسحاب من الدراسة، دون إبداء الأسباب، في أي وقت، سواء قبل أن تبدأ أو بينما أنا  
المشاركة.

لقد تلقيت إجابات على جميع الأسئلة التي سألت بها الباحث.

توقيعي أدناه يشير لموافقتي.

الامضاء : ..... التاريخ:.....

المشارك

الامضاء : ..... التاريخ:.....

الباحث

#### الملحق 4

#### الاستبيان:

عنوان الدراسة: المعرفة وممارسة الرضاعة الطبيعية الحصرية في النساء مع الأطفال الذين تتراوح أعمارهم  
بين 9 إلى 12 شهرا في مستشفى الصباح، جوبا، جنوب السودان

المحقق: د/ بيتى بنجامين واريلى

الاختصارات:

أوافق بشدة: SA

أوافق: A

غير واضح: E

نختلف: D

لا أوافق بشدة: SD

الاستبيان رقم: \_\_\_\_\_ رمز مرفق: \_\_\_\_\_ التاريخ: \_\_\_ / \_\_\_ / \_\_\_

رقم عيادة المريض :

معلومات عامة:

عنوان سكن الأم:

رقم هاتف الأم:

معلومات عن الطفل:

1- سن الرضيع: بي الأشهر :

2- جنس الرضيع:

ذكر

أنثى

3 - النظام الميلاد:

معلومات عن الأم:

4- سن الأم في السنوات:

5 - سن الشريك في السنوات:

6 التكافؤ:

7. مستوى التعليم (أنجزت)

لا شيء

الابتدائية

الثانوية

جامعة

أخرى (حدد) \_\_\_\_\_

8 المهنة:

ربة البيت

موظف بمرتب

لحسابهم الخاص

طالب

أخرى (حدد) \_\_\_\_\_

9 الحالة الاجتماعية:

وحيد

متزوج

مطلق

مطلق

ارمل

10 الديانة:

مسيحي

مسلم

أخرى (حدد) \_\_\_\_\_

11. العرق \_\_\_\_\_

12 زيارة ANC:

نعم

لا



إذا كانت الإجابة بنعم في سؤال 12 أعلاه، يرجى تحديد عدد الزيارات \_\_\_\_\_

13 طريقة التسليم:

SVD

CS

ملقط

فراغ

أخرى (حدد)

14 مكان التسليم:

مستشفى

المركز الصحي

منزل

أخرى (حدد)

المعرفة حول الرضاعة الطبيعية:

15. ما هي مزايا الرضاعة الطبيعية التي تعرف؟ (ضع علامة على كل ما ينطبق)

• هي مغذية للطفل

SA  A  E  D  SD

• يحمي الطفل من الإصابات

SA  A  E  D  SD

• الترابط بين الطفل و أمه

SA  A  E  D  SD

• رخيصة ومتوفرة

SA  A  E  D  SD

• طريقة منع الحمل

SA  A  E  D  SD

• يحافظ على وزن جسم الأم

SA  A  E  D  SD

- يمنع سرطان الثدي لأمهات
- SA  A  E  D  SD
16. ما هي عيوب الرضاعة الطبيعية؟

- i. انتقال الأمراض مثل فيروس نقص المناعة البشرية
- SA  A  E  D  SD

أخرى (حدد) \_\_\_\_\_

### المعرفة بشأن تقنيات الرضاعة الطبيعية

17 التقنيات المناسبة للرضاعة الطبيعية هي: (ضع علامة على كل ما ينطبق)

- 1 - استخدام كل من الثديين في كل رضاعة
- SA  A  E  D  SD
- 2- الرضاعة الطبيعية ليلا ونهارا
- SA  A  E  D  SD
- 3- التعلق الجيد (تقريب الطفل، تواجه أمي مع فتح الفم واسعة وآخرون
- SA  A  E  D  SD
- 4- استخدام من EBM عندما تكون الأم بعيدا
- SA  A  E  D  SD
- 5- ما هو تعريف EBF؟
- 1- اعطاء حليب الثدي و الأدوية فقط، إذا أشارت
- SA  A  E  D  SD
- 2- أن يعطي حليب الثدي والمياه
- SA  A  E  D  SD

18- ما هي المدة الموصى بها من EBF؟ (ضع علامة على النحو المناسب)

شهر واحد

شهرين

ثلاثة أشهر

- أربعة أشهر
- خمسة أشهر
- ستة أشهر
- ثمانية أشهر
- سنة واحدة
- الآخرين (حدد)

19- إذا ذهبت الام إلى العمل، ينبغي أن تشفط الحليب وتركه للطفل؟

- نعم  لا

20. كيف يمكن تغذية الرضع EBM؟

1- كوب وملعقة

- SA  A  E  D  SD

2- زجاجة

- SA  A  E  D  SD

21- هل تعرف ما هي مخاطر الرضاعة بزجاجة؟

1- يمكن أن تسبب الإسهال

- SA  A  E  D  SD

2- ارتباك حلمة الثدي

- SA  A  E  D  SD

### ممارسات الرضاعة الطبيعية:

22- هل بدء الرضاعة الطبيعية في الساعة 1 من الولادة؟

- نعم  لا

23- إذا لا قديم الأسباب (وضع علامة على كل ما ينطبق)

اللبأ ليست جيدة

لا يوجد حليب

كانت الام مريضة

كان الطفل مريضاً

تم أخذ الطفل بعيدا عني

24- هل لديك الاتصال الجلد الى الجلد مع طفلك بعد الولادة؟

نعم  لا

25- هل تقدم سابق للدر يغذي لطفلك؟ (أي طعام قبل الشروع في الرضاعة الطبيعية)

نعم

لا

حدد إذا كان الجواب نعم \_\_\_\_\_

26- هل قمت ممارسة المساكنة في؟

نعم

لا

27- هل حدثت لك مشكلات في الثدي؟

نعم

لا

إذا كان الجواب نعم، ما هي المشكلة التي التي كانت عندك؟ \_\_\_\_\_

28- كيف كنت تدير الرضاعة الطبيعية عندما كان لديك مشكلة؟ \_\_\_\_\_

29- هل توقف الرضاعة الطبيعية خلال مشكلة الثدي؟

نعم

لا

30- هل قمت بالرضاعة على وجه الحصر؟

نعم

لا

31- إذا لا اعطاء الأسباب (وضع علامة على كل ما ينطبق)

أنا ليس لدى ما يكفي من الحليب

أنا استأنفت العمل

وينبغي اعطى المياه والطقس حار

لدينا تقليد يقول ذلك

أخرى (حدد) \_\_\_\_\_

32- هل سبق مرض طفلك ؟

نعم

لا

33- هل قمت الاستمرار في إرضاع حتى عندما كان الطفل مريض؟

نعم

لا

(أ) إذا كان لا اعطاء سبب \_\_\_\_\_

34- هل تشفط الحليب للطفل لاتخاذ عندما كنت بعيدا؟

نعم

لا

35- في أي سن لم بدأت الأغذية التكميلية؟

< 2 شهر

2-4 أشهر

4-6 أشهر

> 6 أشهر

36- إذا لم تكن تمارس الرضاعة الطبيعية الآن، لماذا التوقف عن الرضاعة الطبيعية؟

رفض الطفل بنفسه

اصبحت حاملا

الطفل لا يتغذى جيدا

آخرون

**الدعم الاجتماعي:**

37. هل لديك دعم من أفراد عائلتك في ما يخص الرضاعة الطبيعية؟

نعم

لا

إذا كانت الإجابة بنعم، من الذي يوفر لك الدعم؟

38. إذا كنت موظفاً، هل حصلت على إجازة الأمومة؟

نعم

لا

39- كم من الوقت كان ذلك؟

40- هل تعتقد أن إجازة الأمومة كافية؟

نعم

لا

41- هل يدعم صاحب العمل الخاص بك في الرضاعة الطبيعية عن طريق إعطائك الوقت للذهاب إلى طفلك؟

نعم

لا