

**FACTORS CONTRIBUTING TO INADEQUATE EXCLUSIVE BREAST
FEEDING OF CHILDREN AGED 0-6 MONTHS IN TANZANIA:
A CASE OF MUHIMBILI NATIONAL HOSPITAL**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE
REQUIREMENTS OF THE DEGREE OF MASTER OF SCIENCE IN
ENVIRONMENTAL STUDIES (HEALTH) IN THE OPEN UNIVERSITY OF
TANZANIA**

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation titled: *“Factors Contributing to Inadequate Exclusive Breast Feeding Practices in Children Aged 0-6 Months in Tanzania: A Case of Muhimbili National Hospital”*, in Partial fulfillment of the requirements for the Degree of Master of Science in Environmental Studies (Health) of the Open university of Tanzania.

.....

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.....

Date

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DECLARATION

I, Kilimba Nasania Ulumbi, do hereby declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other college or University for a similar or any other degree award.

.....

Signature

.....

Date

DEDICATION

This work is dedicated to my belief and devotion to my Jesus Christ for his grace and strength he offered me to complete this study.

Dedication is also extended to my late parents Mr Kilimba Nasania Mtyulla and Ester Dillu Kilimba.

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I am thankful to God for giving me the ability and opportunity to start and complete this study.

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ABSTRACT

Adequate nutrition at early childhood is essential to ensure healthy growth and development of children, Breast feeding offer health benefits to mother and child when exclusively breast fed. Children aged less than 5 years are dying due to inadequate exclusive breast feeding practices. The objective of this study is to assess factors contributing to inadequate exclusive breast feeding to infant aged 0-6 months in Tanzania. Quantitative descriptive cross-section study design used, 284 nursing mothers admitted at MNH with their children aged 6- 60 months. Structured self administered were analyzed by SPSS version 20. Descriptive statistics were generated; Pearson Chi square and regression tests were employed to analyze the associations among the variables. Majority of the respondents, mean age was 29.8 (\pm SD 6.1) years. Over half (57.7%) of mothers did not practice exclusive breastfeeding. Pearson Chi-square suggested (education level of the mother ($p=0.021$), meals per day during breastfeeding ($p=0.004$) and influence from parents on mother's breastfeeding practices) were significant associated with mothers practicing exclusive breastfeeding ($p=0.000$). Multivariate regressions indicated, number of meals per day was more powerful for predicting mothers practicing exclusive breast feeding. Inadequate exclusive breast feeding practices could be attributed to Social- demographic factors (Inadequate meal intakes, family member influence and education level are attribute to inadequate exclusive breast feeding practices. It is recommended to empower skills and knowledge to health care providers who are at peripheral health care services dealing direct with nursing mothers who are on breast feeding practices.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency syndrome
BFD	Breast Feeding Duration
EBF	Exclusive Breast Feeding
HF	Health Facilities
HIV	Human Immune Virus
IYCF	Infant and Young Child Feeding
MNH	Muhimbili National Hospital
MOHSW	Ministry of Health and Social Welfare
MDG	Millennium Development Goals
NGO	Non-Governmental Organization
NPC	New Pediatrics Complex
TFNC	Tanzania food and Nutrition centre
TDHS	Tanzania Demographic Health Survey
TBA	Tradition Birth Attendants
UNICEF	United Nations Children's education Fund
W H O	World Health Organization

KEY DEFINITIONS

Breast

Breast of an adult, consists of mammary gland and between 15-20 lobes, where by the lobes gives the breast size and shape (Widmaier, et al., 2004).

Breast Milk

Milk is produced in the alveolus gland cells. Whereby these alveolus is made up of gland cells around a central duct. Breast milk is prepared and stored in female breasts (or mammary glands) for her infant offspring. Surrounding the gland cells are the myoepithelial cells which contract to cause milk ejection into the milk duct. Then it travels down the lactiferous ducts. It is nutritive food for infants and children soon after birth up to two years old. The milk produces, is consists of all required nutrients for child growth and development (Hale, 2007).

Breast Feeding

This is the process of breastfeeding a baby at least up to the two years old regardless of addition of other complimentary foods (UNICEF, 2012).

Exclusive Breast Feeding (EBF)

This is a process of feeding breast milk for 6 months of life since birth, without feeding any type of food, drinks, even water, except medicine like vitamin and minerals (WHO, 2004). UNICEF and WHO recommended exclusively breastfeeding for 6 months of life.

Inadequate Breast Feeding

This is when the New born baby does not obtain any or enough breast milk resulting to lose more calories than it gaining which leading to serious complication like cerebral edema, intracranial hemorrhage, disseminated intravascular coagulation (a life-threatening condition where there is excessive clotting or bleeding throughout the body), kidney failure, permanent brain injury and even death (Pelleboer, et al., 2009).

CHAPTER ONE

1.0 INTRODUCTION/BACKGROUND

1.1 Introduction

Milk is the primary source of nutrition for newborns before able being to digest other foods other than milk (UNICEF, 2006). Breast milk is the milk produced by the breast (or mammary glands) of the human female for her infant offspring. Breast feeding offer health benefits to mother and child when exclusively breast fed. Among the benefits of exclusive breastfeeding to Infants are lower risk of infant Death Syndrome, Increased intelligence, decrease, Cold and flu resistances, lower risk of childhood onset diabetes, risk of asthma and eczema, decrease like hood of contracting middle ear infection, dental problem, Obesity in life, risk of autism, risk of childhood leukemia developing psychological disorders, particularly in adopted children and exclusive breast feeding, reduces the risk of HIV transmission from mother to child (UNICEF, 2006).

Breastfeeding for a period of two years is more cost-effective than the alternative method of feeding the baby particularly in the first six months (WHO, 2010). Breastfeeding might even protect mothers against breast cancer as well as some types of ovarian cancers and used as natural method of family planning (Akbari, et al., 2011; WHO, 2011).

UNICEF recommended exclusive breastfeeding for 6 months of life and continued breastfeeding up to two years of age or beyond (UNICEF, 2006). An appropriate feeding practice is important in survival, growth and development of the child

(Kumar, 2006). Withdrawing the process of breastfeeding before the time recommended to children will be a high risk of infections to infant (AED, 2004). Stunting prevalence worldwide is about 52%, and indicated as one of the factor caused by inadequate exclusive breastfeeding for six months of life (UNICEF, 2008).

The Ministry of Health and Social Welfare (MOHSW) recommended that infants should exclusively breast feed for the first six months, thereafter followed with appropriate complementary foods while on breast milk, up to two year of age (MOH; 2004). Adequate nutrition at the stage of infant and early childhood is essential to insure the growth, health and development of the children to their full potential (WHO; 2009). The Millennium development goal described the exclusive breast feeding (EBF) for six months is among effective interventions to achieve Millennium Development Goal number 4 which is deal with reduction of the child mortality rate (Bryce. et al. 2006).

The Breast milk provides required nutrients to infants, the human milk is endogenous nutrient store contains all nutrients (WHO, 2011). It provides all the energy and nutrients that is needed for growth and development for the first months of life up to two years of age (WHO, 2011).

About 60% of under-five mortality is caused by malnutrition either directly or indirectly, whereby more than 2/3 of those associated with inappropriate breastfeeding practices during infancy (Gupta, 2006). Breastfeeding practice can save many as 1.5 million infants' lives every year as it provides significant protection

against diseases (WHO, 2003). Orphans child is more likely to die before reach age of two years than child whose mother survival (UNICEF, 2007, Sloan et al., 2008, WHO, 2011).

35% of infants worldwide are exclusively breastfeeding during their first four months of life although the rates differ from one country to another (WHO, 2009). Brazil 58%, Bangalore 40%, Iran 69%, Lebanon 10.1%, Nigeria 20%, Bangladesh 34.5%, and Jordan 77% (Batal et al., 2005). In Sub-Sahara and Africa countries exclusive breast feeding rate for six months is about 30% (UNICEF, 2006), 47% in Ethiopia, 13% in Kenya (Koima, 2010) and 50% in Tanzania (UNICEF, 2006. TDHS, 2010. Setegn *et al.*, 2012). Although the CDC reported that, the breastfeeding is rising by 2% (CDC, 2012). One of the study indicated that, the race, maternal age, maternal occupation, parent's educational level, social-economic status, insufficient milk supply, infant health problems, maternal obesity, smoking, parity, method of delivery, maternal interest, social culture, and lack of knowledge were among factors that cause inadequate exclusive breastfeeding (Roudbari, et al. 2009).

1.2 Statement of Problem

Tanzania is among the countries with high rate of infant death, inadequate exclusive breastfeeding being one of the cause factors. Efforts have been made by the Government, Donors, NGO and other stakeholder to protect, support and promote exclusive breastfeeding but still there is an inadequate practice of exclusive breast feeding, meanwhile only 49% of infant are breastfed within one hour of birth (TDHS, 2010). TDHS data report, indicated there are challenging factors that cause inadequate exclusive breast feeding practices, though the Tanzania Food and

Nutrition Center (TFNC) in collaboration with other partners have been implementing a National program on infant and young child nutrition initiatives in collaboration with Ministry of health and social welfare (MOHSW, TFNC, 2010), the goal was to empower lactating mother to breastfed their infant exclusively and introduce complementary food after six months.

Apart from the effort made by MOHSW, still there is a challenge of inadequate exclusive breastfeeding practice in Tanzania. Observation during clinical support supervision indicated majority of nursing mother admitted with their children less than six months of age have already started complimentary foods.

This study intends to add knowledge on assessing factors associated with inadequate exclusive breast feeding in Tanzania to support the MOHSW target, by the year 2015 the prevalence of exclusive breast feeding in children <6 months increased to 60 percent.

1.3 Rationale of the Study

This study was intended to find out factors contributing to inadequate exclusive breastfeeding in relation to child mortality rate to children aged from 0-5year old. Then this study expected to assist the Ministry of Health, Stakeholders, Policy makers as well as individual person in planning feasible intervention and strengthening the existing factors on exclusive breast feeding, and all others effect that related to exclusive breast feeding so as to support Millennium Development Goal 2015, by supporting exclusive breast feeding and reducing the morbidity and mortality rate to children aged from 0-5 years.

1.4 General Objective

The objective of this study is to find out the factors contributing to inadequate exclusive breastfeeding to infant aged 0-6 months in MNH Tanzania.

1.5 Specific Objective

- (i) To Determine The Demographic Factors Impending Breastfeeding In Children Less Than Six Months.
- (ii) To Assess Social –Cultural Factors That Influence Inadequate Breastfeeding To Children Less Than 6 Months Old.
- (iii) To Identify Child And Maternal Factors Associated With Inadequate Breast-Feeding In Children Less Than 6 Months.
- (iv) To Evaluate Exclusive Breast Feeding Knowledge To Nursing Mothers

1.6 Research Questions

- (i) What demographic factors contributing to inadequate exclusive breast-feeding to children aged 0-6 months?
- (ii) What are the social –culture factors that contribute to inadequate exclusively breast feeding to children aged 0-6 months?
- (iii) What are difficulties (obstetric and pediatric factors) associated with exclusive breast feeding to children aged 0-6 month's practices?
- (iv) Do nursing mothers have adequate knowledge on exclusive breast-feeding?

1.7 Study Limitations

- (i) Nursing mother with serious child excluded.
- (ii) Mothers with their children came for follow up.

1.8 Ethical Consideration

The researcher requested the permission to collect the data to Executive director of Muhimbili National Hospital through letter whereby the letter was briefly explained the aim of the study and reassured about confidentiality to participants.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Breast Feeding and Exclusive Breast Feeding Status in Tanzania

Breastfeeding in Africa is a norm and remains the cultural way of feeding infants but not exclusively. African mothers who do not breastfeed their infants are considered unusual. It is seen to be culturally acceptable mode of infant feeding (Dop, 2002). Africa countries especially Sub-Sahara, exclusive breastfeeding rate for six months is about 30% (UNICEF, 2006; TDHS, 2010). Countries like Ethiopia exclusive breastfeeding was recorded to be 47% (Setegn, et al., 2012), while Nigeria the rate of exclusive breastfeeding was 20% (Salami, 2006). Economic factors, mother's age, perception of mothers on sufficiency of breast milk and social cultural influence has been associated with inadequate breastfeeding in Tanzania (Lashabari, 2007).

Data from Tanzania Demographic Health Survey (2010), indicated that exclusive breastfeeding practices for the first six months of infant's life is not widely practiced, The National rate of exclusive breastfeeding in Tanzania being 50%, regardless of mother's HIV status (TDHS, 2010; UNICEF 2006; TDHS, 2010). Only 49% of children are breastfed within the first hour of birth (TDHS 2010). The mean duration of exclusive breastfeeding is 2.4 months (IYCF 2013). The major factors causing inadequate EBF in Tanzania identified were inadequate advice and support on how to feed their child (IYCF 2013).

A study done at Morogoro, Kilimanjaro, and Igunga district, shows that EBF is not widely practiced (Shirima, 2001. Agnarsson, 2001), only 9% of nursing mother

practice exclusive breastfeeding in Dar-es-salaam regional (Kulwa, et al., 2006). Whereby EBF practices among HIV positive mothers is high from birth to 2 months (80%), decreasing rapidly at age 3 to 4 months 34% and lowest among infants of six months 13.3% (Young, et al. 2010; Manji, et al. 2011). The percentage is below the National prevalence of 41% (Shirima, et al. 2001). Most factors identified were cultural beliefs which hinder exclusive breastfeeding whereby more than half of infants are supplemented early and the majority of mothers have inadequate knowledge on exclusive breastfeeding (Chuwa, et al. 2013).

2.2 Factors Influencing Exclusive Breast Feeding Practices

Many studies conformed that, there are common factors which are responsible for barrier of exclusive breastfeeding to the baby aged 0-6 months. These factors differ from one place to another. Studies in Nigeria investigated factors influencing exclusive breast feeding practices among women in Delta State, fear of loss of weight, nature of job, abstinence from certain foods and drugs, feeding problems of the baby, perception of breastfeeding as for rural and uneducated women, health of the nursing mother, the drooping of breasts, and lower abdominal pain were among the factors associated with inadequate breastfeeding.

The easy availability of baby-formula and the belief that small-sized breasts cannot produce enough breast milk were shown to be insignificant contributors to inadequate breastfeeding practice among some women (Abraka, 2009). Another research done in the same country to identify factors that involved in early cessation of exclusive breastfeeding. The most influencing factors identified were social-economic, demographics, cultural, obstetric and pediatric factors (Lawoyin et al.,

2001. Deaden et al., 2002). A study done by Setegn, *et al.* (2012) reported, unsupported working environment due to nature of the work to bankers nursing mother were not able to practice exclusive breastfeeding.

2.2.1 Social-Demographic Factors Influencing Exclusive Breastfeeding

A study done by Della, et al., (2001) investigated the social factors in relation duration of exclusively breast feeding, the study indicated, as the age of the mother increases also the duration of exclusive breast feeding increases, which means that the young mother lacking the breastfeeding experiences and might not be able to make their own decision on how to feed the babies the same study conducted in Turkey, identified the factors related to early stopping exclusive breast feeding, the investigator (Zekiye, 2006) reported that the mother with higher level of education were more likely to practice exclusive breastfeeding than those with middle level of education, also mother who employed breast feed exclusively longer than those mother who did not employed to about 68.8% and 47% respectively.

2.2.2 Mother's Knowledge on Importance of Exclusive Breastfeeding

High qualities of counseling improve an adherence and long duration of exclusive breastfeeding up to six months (WHO, 2006). The research carried out in Zambia at Nola area, under the program of PMTCT, reported that nursing mother who had received adequate counseling on exclusive breastfeeding had high rate of practicing exclusive breast feeding than those who do not, 56% to 70 % respectively (Silanda, et al., 2004). Mother who had the knowledge regarding the importance of exclusive breast feeding was likely to adhere to exclusive breastfeeding compared to those with limited knowledge on importance of exclusive breastfeeding. For example a study

conducted in South Africa, Zambia and Zimbabwe among HIV infected and HIV uninfected mothers indicated that consistent messages and high quality of counseling improved adherence and longer duration of exclusive breast feeding up to six months (Silanda, et al., 2004). About 75% of Nigerian mothers believed breastfeeding could not go beyond the first one year (Salami, 2006).

2.2.3 Social-Cultural Factors

Cultural practices and beliefs influences much mothers practicing exclusive breastfeeding especially in Sub Saharan countries. Due to cultural, beliefs and practices, Infants are given fluids or water a few days after delivery. West Africa studies reported the culture practice of giving infant mixture herbal for protection, and believe the milk is not satisfactory to growth because milk does not contain enough nutrients to infant (Adejuyigbe, et al., 2008). Pre-lacteal feeds are common in many parts of Sub Saharan Africa (WHO, 2001). In some societies colostrum is discarded because it believed to be dirty, “like a pus” and believed the colostrum is potential harmful to the infant (Davies, 1997). The same study at Morogoro, Tanzania, indicated 43% of mothers in the rural areas are discarding colostrums (Shirima, et al., 2001). A study in Zimbabwe reported the norms of introducing liquid and solid food at very early to an infant create the infant to the great risk (Iloff, et al., 2005). Study in Ethiopia reported the mothers are pressured by family member (mother-in-law) to introduce other liquid (Maru, et al., 2009).

Cross sectional study design done in Uganda, Aiming to identify the factors affecting the infant feeding. The study indicated most of nursing mother started early pre-lacteal feeding, mainly to wait the breast milk flow; also believed that, water used to

clean the baby throat, to reduce baby's hungry, About 51.1% infant were given water based liquids as pre-lacteal feeds within the first three days of their life (Engebretsen, et al., 2007). The same study in Tanzania at Morogorro, Igunga and Kilimanjaro reported, introducing of pre-lacteal is norm common in both rural and urban, believes water calms the crying baby (Shirima et al., 2001, Agnarsson et al., 2001).

De Paoli et al., 2001). The main reasons of giving the pre-lacteal feeds to their infant were include the mother did not have enough milk; babies were thirst or hungry and for cleaning the baby's stomach. The most pre-lacteal given were water, herbs and tea (Sachdev, et al., 1991). Such feeds can be source of contamination which increase the risk of infection and reduces the frequency of breastfeeding practices particular exclusive breastfeeding (WHO, 2006).

Early initiation of breastfeeding stimulates mothers to produce the first milk quickly known as colostrum. Pre-lacteal feeds inhibit a baby from receiving adequate protection from colostrums. The colostrum contains a high concentration of immunoglobulin which has protective role against viral and bacterial pathogen in the gut (Kengne, et al., 2007). Some of community believes that the colostrum are not good to their babies as result it is discarded.

2.2.4 Factors Related to Support During Breast Feeding Period

Early infant feeding practices is the role of the husbands, mothers, health professionals, village health workers as well as traditional birth attendants (Shirima, et al., 2001). Husbands who support breastfeeding had a significant increase total duration of breastfeeding and exclusive breastfeeding practices (Oayemi, et al.,

2007). About 165 breastfeeding mothers from low income in urban areas at Mexico investigated on factors associated to inadequate feeding. The study indicated the full breastfeeding up to four months postpartum was due to support and approval from male partner or mother (WHO, 1996). Gambia trained villagers in groups, mainly to support lactating mothers and to provide accurate information and helping the nursing mother to perform correct breastfeeding technique, the study found out 95% of the studied mothers who breastfed exclusively for 4 months had highly effective to Community supporter group, village supporter group and peer counselor encourage exclusive breast feeding (Semega et al., 2001).

Health care providers are primary source of accurate and helpful information. Study done by Shirima, et al., (2001) reported, the health worker information to nursing are valued and taken as the final word. Inadequate exclusive breastfeeding information from health care providers' is key factor to exclusive breastfeeding practices (Kramer, et al. 2001; Nita et al., 2003).

Place of the delivery is one of the factors that may lead to proper or improper exclusively breast feeding. Study conducted in Uganda at Rakai and Ghana has shown that exclusive breast eeding was significantly associated with delivery at hospital (Ssenyonga, et al. 2004; Aidam, et al., 2005). Guatemala studies, reported a place of delivery is associated with early initiation of breastfeeding, a mothers who gave birth at health facility initiate breastfeeding early (Dearden, et al. 2002).

While Ghana study indicated that, delivering at maternity homes, private clinics, at home, or with Traditional Birth Attendant (TBA) or spiritual leaders poses a risk for

not practicing exclusively breastfeeding within the first 6 months of life as different to delivering in government health facilities (Aidam, et al., (2005).

Mothers can experiences breast unhealthy conditions that discourages exclusive breast feeding varied from mastitis (35.3%), cracked and sore nipples (29.4%), abscess (17.6%) and fungus (17.6%) and all these are related to poor attachment. therefore good attachment during breast feeding is one of the factors that may course prolong of breastfeeding practice exclusively (Honan, 2001). A study from Canada conducted to investigate breast feeding outcome, the results of the study reported that, the babies were getting inadequate milk and having difficult in breast feed and development of sore nipple, which all of this are the factors for switching to formula feeding (Cernardas, et al., 2003).

Study concerning the attachment during breastfeeding conducted in Uganda and the results found that, many mother had the problems with positioning and attaching their babies at the breast (Nankunda, et al., 2006). Another study conducted at the same area in Uganda to identify the common breast feeding problems, the commonest problem were cracking of nipples, breast feeding engorgement, and mastitis (Cernardas, et al., 2003).

A study from Poland investigated the factors affecting exclusive breastfeeding in maternity hospital after first six months of birth. Two studies done the first study conducted in 1995 at maternity wards and the second study conducted in 1997 at primary care centers. The result of these two studies shown, the most meaningful factors in hospital care were cesarean section, breastfeeding initiation after 2 hrs,

lack of skin to skin contact, use of pacifiers, separation longer than 1h/24 hrs and health problems of infants. The study also identified after hospital discharge, mothers used pacifiers were unwilling to exclusive breastfeeding longer than four months. (Mikiel, et al., 1997).

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Study Area

This study was conducted at Muhimbili hospital, in Ilala municipal, Dar es Salaam region. The Muhimbili hospital is a referral hospital, with 1000 patients per day in 2009/2010; the total number of patients admitted per week is about 12,013. The main activities performed are clinical service, clinical support and diagnostic activities (MNH, 2009/2010).

Dar es Salaam is located along the Indian Ocean coast and covers a total area of 139.3 square kilometers. Administratively, the city is divided into three municipalities; namely Kinondoni, Temeke and Ilala. Dar es Salaam is the commercial city of the country; it is one of the fastest growing cities in Africa. It has a population of 4,364,541 with an inter-censal growth rate of 5.6% (URT 2012). Ilala municipal lies between Kinondoni and Temeke South and the west of Indian Ocean, stretching about 100km along the coast.

3.2 Study Population

The study population was nursing mother admitted with their children aged 6- 60 months at Pediatric wards in MNH. The population obtained from different units at Pediatric block.

3.3 Study Design

A quantitative descriptive cross-section study design whereby data was collected by using structured Questionnaire. Participants interviewed through closed and open-

ended questions based on evaluating the knowledge of exclusive breastfeeding, Maternal and pediatric factors in relation to exclusive breastfeeding, social-culture factors as well as demographic factors.

3.4 Sample size and Sampling Technique

Purposive sampling methods were used to select Muhimbili Referral Hospital because it is a biggest hospital in our country. A consecutive sampling method was used to select eligible participants, whereby all eligible nursing s admitted with their children aged 6- 60 months at Pediatric wards in MNH were enrolled into the study. The eligible participants were recruited consecutively into the study until the desired sample size was attained.

The Sample size obtained by using the formula

$$N = \frac{z^2 p (100-p)}{e^2}$$

Whereby;-

N=the desired

Z= (1.96)² confidence interval 95%

E=marginal error (6%)

P=41% of current proportion of nursing mothers breastfeeding exclusively (TDHS 04/05)

$$\frac{1.96^2 * 41(100-41)}{6^2}$$

Substituting these figures in the above formula gives the minimum sample size of $258 + 10\%$ of non-response = 284 subjects. Therefore the approximately sample size was 284. whereby; respondents were nursing mother admitted in NPC with their children aged 6-60 months old at MNH.

3.5 Data Collection and Analysis

3.5.1 Data Collection Tools

Tool used for data collection in this study were semi structure Questionnaires.

3.5.2 Data Collection Procedure

Data were collected using the structured interview schedule with closed ended questions. The questionnaire were developed in English and translated in Kiswahili. The questionnaires were made to capture various variables to answer research questions.

3.6 Research Variables

3.6.1 Dependent Variable

Exclusive breastfeeding is dependent variable and measured as a proportion of mothers' breastfed their infants exclusively for the first six months of life.

3.6.2 Independent Variables

The independent variables in this study were socio demographic characteristics (Age, education level, marital status, parity and occupation), social-culture (place of delivery, mode of delivery pre -lacteals, perception, culture believes/ beliefs customs, peers group, family support/ relatives support), other variable included

Maternal and Pediatric difficulties in relation to exclusive breast feeding as well as mother's breast feeding knowledge.

3.7 Research Assistants Training

Research assistants were provided with two days training on research objectives, administering research tools and research ethics. The selection of the research assistants were based on the previous experiences in data collection and post-secondary educations whereas two research assistants were hired for data collection in Muhimbili Referral Hospital at Pediatric ward.

3.8 Pre-Testing of Questionnaires

The questionnaires for data collection pre tested at Mwananyamala hospital to ensure questions were clear and well understood for gather all information required for the study. The questions showed uncertainty during pre-testing returned to and modified as per requirement.

3.9 Data Processing and Analysis

The accuracy, readability, consistence and competence of data were done to draw conclusions daily, to any queries identified, the correction made soon as possible. Data analyzed, coded and entered into a computer using software SPSS (Statistical Package for the Social Sciences) version 20.0. The validation, clearing and analysis done with assistance of experienced computer technician using SPSS computer software, objective 1-3 cross tabulation used to find out the factors associated to inadequate exclusive breast feeding while evaluation of level of exclusive breast feeding knowledge analyzed by using tabulation. Thereafter multivariate regression

mode was used to determine independent predictors of exclusive breast feeding to the variables shown significant associated with ($p < 0.05$) to the dependent variable (EBF) and data tested by using Chi-square. At last the coefficient correlation (95%) was used to determine the most influential contributing factors that had been seen positive to inadequate exclusive breastfeeding.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Socio-Demographic Characteristic of the Study Population

A total of 284 mothers were interviewed, age of the respondents range from 14 to 46 years, and mean age was 29.8 (\pm SD6.1) years. Table 4.1 show that 39.1 percent of the respondents were at the age between 28 years to 34 years at the time of survey.

Table 4.1: Socio-Demographic Characteristics of the Mothers

Characteristics	N=284	Percentage
Age		
≤ 20	21	7.4
21-27	81	28.5
28-34	111	39.1
≥35	71	25
Occupation		
Employed	121	42.6
Peasant	41	14.4
Businesswomen	88	31
Housewife	34	12
Education level		
Illiterate	78	27.5
Primary education	114	40.1
Secondary education	67	23.6
College	25	8.8
Marital status		
Married	177	62.3
Single	37	13
Divorced	23	8.1
Cohabiting	39	13.7
Widow	8	2.8
Parity		
First born	97	34.2
Second born	178	62.7
Third born	6	2.1
fourth born	3	1.1
Health facility		
Home	244	85.9
Other places	29	10.2
	11	3.9

Source: Field Data (2014)

Very few (7.4%) were below 20 years of age. Among the respondents 42.6 percent were employed while 12.0 percent were housewives. Relatively low proportion of the respondents (40.1%) possessed some primary education; Very low proportion (8.8%) had attended college or higher level education.

Over half (62.3%) of the respondents were married at the time of survey. Concerning parity, over half (62.7%) of the respondents has second born at the time of survey. Majority (85.9%) of the children in this study were born in health facilities, some were born in places other than health facilities like homes delivery (10.2%) and traditional birth attendant (3.9%). The hospital delivery has influence to early initiation breastfeeding compared to other areas due to baby friendly hospital initiation (BFHI) breast feeding program (Edmond et al, 2006).

4.1 Place of Delivery and Education Level of the Respondents

Table 4.2 shows that, majority of mothers' regardless of education level delivered at health facilities. Majority (96%) of mothers who had college education by the time of survey delivered their babies at health facilities, Findings shows that all mothers who reported to possess some formal education delivered at health facilities. Only 4 percent of the mothers with college education reported to deliver under traditional birth attendant. Slightly higher number of mothers who reported, had never attended formal education are delivered at traditional health attendant compared to those mothers with some primary education 6.4% and 3.5% respectively. Pearson Chi-square failed to confirm significant association between education level of the mother and place of delivery ($p=0.109$).

Table 4.2: Place of Delivery by Education Level of a Mother

Place of delivery	Education level (%)			
	Illiterate	Primary	Secondary	College
Hospital	80.8	82.5	94.0	96.0
Home	12.8	14.0	4.5	0
Traditional birth attendant	6.4	3.5	1.5	4.0
Total	100.0	100.0	100.0	100.0
				$\chi=10.388, p 0=109$

Source: Field Data (2014)

4.2 Proportion of Respondents Practicing Exclusive Breastfeeding

Table 4.3 show that, over half (57.7%) of the respondents did not practice exclusive breastfeeding. Only 42.3% had been practiced breastfeeding to their last born. These results are similar to findings from TDHS (2010) which indicated that, about 50 percent of Tanzanian women do not practices exclusive breast feeding. Regardless its importance exclusive breast feeding is not commonly practiced among women in most of the sub Saharan countries (UNICEF 2006)

Table 4.3: Respondents Practices Exclusive Breastfeeding

Breastfeeding	N=284	Percentage
Inadequate exclusive breastfeeding	164	57.7
Exclusive breastfeeding	120	42.3

Source: Field Data (2014)

4.3 Time Started Giving a Child Additional Foods/Drinks After Delivery

Table 4.4 shows that, 15.5% of the mothers gave their children other drinks and/ or food at less than one month age of the child. About 18.7% of mothers stated that, their children foods or drinks at very early stage of their lifetime (between 1 and 3

months). 23.6 percent of respondents indicated that they provided extra foods or drinks to their children between 4 to 5 months age. While 42.3% of the mothers reported to start giving their child other foods or drinks after 6 months of the child age, similar findings have been documented by Tanzania Food and Nutrition Centre (TFNC), which shows that 11% of mothers in Tanzania started giving their children extra foods apart from breastfeeding milk at the age of less than 2 months, while 64% at the age of 4-5 months (TFNC, 2013).

Table 4.4: Time Stated Giving a Child Additional Food/Drinks after Delivery

Child age	N=284	Percentage
< 1 month	44	15.5
1 to 3 months	53	18.7
4 to 5 months	67	23.6
6 ≥ months	120	42.3

Source: Field Data (2014)

4.4 Reasons Giving Child Extra Foods Before 6 Months

Respondents were asked to give out the reasons as to why they stated to give their children extra foods or drinks before the six months of age. As Table 4.5 shows, Majority (71.8%) of the mothers think that the breastfeeding was not enough for the baby hence they were supposed to give their baby extra food to complement the mother's milk.

Table 4.5: Reasons for Mothers Started Giving their Child Extra Foods Before 6 Months

Reasons for extra feeding before 6 months	N=284	Percentage
Mothers milk not enough	204	71.8
Wounds in the breast	31	10.9
Mother was sick	25	8.8
Child was sick	24	8.5

Source: Field Data (2014)

Some of the mother (10.9%) reported having wounds in the breast hence they decided to add some extra foods or drinks to minimize the pain. whereas (88.8%) of mothers reported illness and/or child sickness.

4.5 Demographic Factors Associated with Exclusive Breast Feeding to Children Aged 0-6 Months

The study revealed that, among the selected demographic variables, education level of mother was significantly associated with exclusive breastfeeding for the children aged 0 to 6 months ($p= 0.002$). This, concur with studies done by Shirima (2001) who found that maternal education influences breastfeeding practices. Other study conducted by Al Sahab *et al.*, (2010) in Tanzania reported that, the years in formal schooling are significant predictor of 6-month exclusive breastfeeding.

Some studies have been reported the exclusive breast feeding is positively associated with initiation, exclusiveness and duration of breastfeeding (Al Sahab *et al.*, 2010; Alemayehu *et al.*, 2009), while others have indicated the high level of maternal education has been associated with better exclusive breastfeeding practices (Venancio and Monteiro, 2006).

Mothers with high level of education have better decisions on infant feeding choices and accessibility to capture new information from different sources. The nature of work can predict exclusive breastfeeding practices to mother. Setegn, *et al.*, (2012) observed urban banker nursing mothers were not able to practice exclusive breast feeding due to nature of their work. Marital status and sex of a child are not significantly associated with EBF, ($p =0.058$) and (0.773) respectively.

Table 4.6: Pearson Chi-square Test for Demographic Factors Associated with Inadequate Exclusive Breastfeeding

Demographic Factors	Breastfeeding (%)	
	Inadequate	Exclusive
N=284		
Age		
≤ 20 years	7.3	7.5
21-27years	30.5	25.8
28-34years	38.4	40
≥ 35years	23.8	26.7
		$\chi=0.805, p= 0.848$
Mothers occupation		
Employed	40.2	45.8
Peasant	12.8	16.7
Businesswomen	32.3	29.2
Housewife	14.6	8.3
		$\chi=3.744, p= 0.290$
Education level		
Illiterate	32.3	20.8
Primary	43.9	35
Secondary	15.9	34.2
College	7.9	10
		$\chi=14.885, p=0.002$
Marital status		
Married	56.1	70.8
Single	12.8	13.3
Divorced	9.8	5.8
Cohabiting	17.7	8.3
Widow	3.7	1.7
		$\chi=9.133, p= 0.058$
Parity		
Fist born	32.3	36.7
Second born	64.6	60
Third born	1.8	2.5
Fourth born	1.2	0.8
		$\chi=0.867, p= 0.833$
Sex of the child		
Male	52.4	54.2
Female	47.6	45.8
		$\chi=0.083, p= 0.773$

Source: Field Data (2013)

Table 4.6 revealed that, mothers with higher age are more practice exclusive breastfeeding. However, Chi-Square failed to suggest significant association among mothers practicing breastfeeding ($p = 0.848$). Other studies in Turkey by Della (2001) indicated there is significant association of mother's age to exclusive breastfeeding, as the age of the mother increase the duration of exclusive breast feeding increase Della *et al* (2001). This might be due to young mothers lacking the breastfeeding experiences which enable them to make decision on how to feed their babies. About 70.8% of the mothers who reported to be married in this study, practiced exclusive breastfeeding compared to their counterpart not married mothers (13.3%). This happens in families to that family where the husbands provide support and companionship to their family. Oayemi, *et al.*, (2007) conducted a study in Nigeria and reported that husband's support had a significant association with exclusive breastfeeding practices.

4.6 Social –Culture Factors Associated with Inadequate Exclusive Breast-Feeding

Majority of mothers (92.5%) who delivered at health facility practiced exclusive breastfeeding compared to very few (0.8%) mothers who delivered at traditional birth attendant. Place of delivery was significantly associated with exclusive breastfeeding practices ($p = 0.014$). Hospital facilities provide proper information based on exclusive breast feeding practices before delivery, during and post-delivery.

However, most of urban nursing mother believes on healthcare provider advices. Tradition birth attendants, home deliveries and spiritual leaders cannot have proper information concerning exclusive breastfeeding. Knowledge has been documented to

be an important factor on influencing mothers practice exclusive breastfeeding. A study done by Dearden *et al* (2002) shows that, mothers who deliver at hospital has adequate and proper information concerning the importance of breastfeeding compared to others. This study was interested to understand if there is any significant association between number of meals taken by a mother per day and inadequate breastfeeding.

Table 4.7 shows number of meals per day during breastfeeding has significant association practicing excusive breastfeeding ($p= 0.003$). As the number of meals increases per day the, number of mothers practiced breastfeeding increases support from close relative to a mother being a parent to a nursing mother shows to have higher influence to mothers practicing exclusive breastfeeding compared to other relationships.

Findings show that nursing mothers who was supported by their parent (mothers) were more likely (48.5%) to practice exclusive breastfeeding compared to when the relationship husband (25%). Influences of health workers on practicing exclusive breastfeeding was significantly associated with mothers decision to practice breastfeeding ($p =0.000$).

Table 4.7 shows that over half of mothers (55.0%) who were support by health provide on the important of exclusive breastfeeding were practicing exclusive breastfeeding. A study done by Janneh (2001) in Senegal reported those mothers have power to make decision on infant feeding as long as proper information from Health workers has been provided.

Table 4.7: Pearson's Chi-Square Test for Social –Culture Factors Associated With Practicing Exclusive Breastfeeding

Socio-cultural factors		Breastfeeding (%)	
		Inadequate	Exclusive
Place of delivery			
	HF	81.1	92.5
	Home	12.8	6.7
	TBA	6.1	0.8
			$\chi=8.563, p= 0.014$
Do you drink alcohol?			
	Yes	36	36.7
	No	64	63.3
			$\chi=0.014, p =0.905$
Meals per day during breastfeeding			
	≤ 3 times per day	25.6	9.2
	At least 3 times per day	27.4	28.3
	≥ 3 times per day	26.8	32.5
	Frequently	20.1	30
			$\chi=13.605, p =0.003$
Who influenced your decision on your feeding practice?			
	Health worker	22.6	55
	Husband	10.4	14.2
	Mother/In-laws	6.1	8.3
	Other relatives	1.2	0
	My own decision	59.8	22.5
			$\chi=44.750, p =0.000$
Who supported you to practice breastfeeding?			
	Husband	24.4	25
	Mother	48.8	45.8
	Health worker	16.5	16.7
	Other relatives	10.4	12.5
			$\chi=0.419, p =0.936$

Source: Field Data (2014)

4.7 Child and Maternal Factors Associated with Inadequate Breast Feeding of Children Less than 6 Months

The study revealed the interval between the last child and the last but one birth space did not influence inadequate breastfeeding. There was no significant association among the two variables ($p = 0.628$). About one third of mothers (36.6%) who reported to have child space of two years as the interval between the last child and the last but one practiced inadequate exclusive breastfeeding.

Table 4.8: Child and Maternal Factors Associated with Inadequate Exclusive Breast-Feeding

Child and maternal factors	Breast feeding	
	Inadequate	Exclusive
Mode of delivery		
Normal delivery	71.3	71.7
Caesarean section	21.3	21.7
Assisted delivery	7.3	6.7
		$\chi^2=0.046, p= 0.977$
Experience any breastfeeding problems		
Yes	39.60	43.30
No	60.40	56.70
		$\chi^2=0.391, p =0.532$
Interval between the last child and the last but one		
First born	23.2	17.5
One year	29.3	28.3
Two years	36.6	40.8
Three years	11.0	13.3
More than three years	0.0	0.0
		$\chi^2=1.741, p =0.628$

Source: Field Data (2014)

Table 4.8 shows that over half (60%) of the mothers who mode of delivery were cesarean are likely to practice inadequate exclusive breastfeeding compared to those practiced exclusive breastfeeding, (21.3%) and (21.7%) respectively. Over half of the mothers who delivered normally (57%) practiced exclusive breastfeeding. Mode of delivery can have impact to mothers practicing exclusive breastfeeding.

These findings are supported by a study conducted by Sahab *et al.* (2010) which suggested that predetermined post-delivery pain and discomfort of abdomen associated with caesarean section prevent the mother from breastfeeding. Such mothers would usually take long to recover from anesthesia before thinking of recommended infant feeding practice. In addition in anesthetic effect post-delivery can course delay of initiation of breastfeeding to leading inadequate exclusive breastfeeding.

4.8 Mothers Knowledge on Exclusive Breastfeeding

The (65.8%) of the mothers interviewed in this study do not believe that, breast milk is sufficient for the first six months of the child age. Exclusive breastfeeding knowledge to mother is very important factors for decision making on infant feeding (de-Paoli. *et al.*, 2001; Shine 2008). A mother with proper knowledge on exclusive breastfeeding were likely to practice exclusive breast feeding compared to those with inadequate knowledge on exclusive breast feeding.

This study concur with the study done by Coovadia *et al.*, (2007), who reported that, mothers start early complementary feeding because of lack of breastfeeding knowledge particularly on the importance of exclusive breastfeeding for both mother

and a child. Another study in Zambia and Zimbabwe indicated that, mothers who have received adequate counseling on exclusive breast feeding had the high rate of practicing exclusive breast feeding than those who do not (Silanda, *et al.*, 2004).

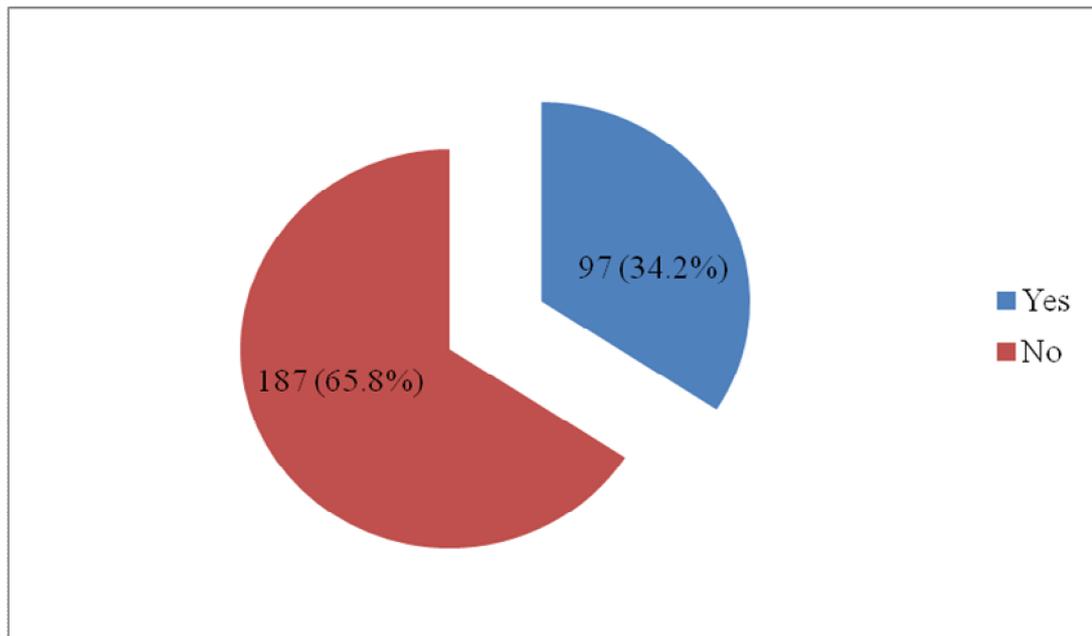


Figure 4.1: Proportion of Mothers who believe that Breastfeeding is Enough for Their Baby in the 6 First Months

Source: Field Data (2014)

4.9 Mothers who Responded to Have Heard Different Breast Feeding Information

Respondents were asked if, they have ever heard of exclusive breastfeeding; only 23.6 percent of them responded. Whereby 37.0 percent responded to hear about benefits of exclusive breastfeeding, 18.3% responded about positioning of the baby during breastfeeding, 20.1% heard some expression about breastfeeding and 1.0% of the mother interviewed heard about management of breast problem (Table 4.9). Generally, for these findings suggest that, knowledge and importance of exclusive breastfeeding for most of mothers is low.

Table 4.9: Mothers who Responded to have Heard Different Breastfeeding Information

What did you hear about	N=284	Percentage
Benefit of breast feeding	105	37.0%
Positing of the baby	52	18.3%
Exclusive breastfeeding	67	23.6%
Management of breast problem	3	1.1%
Expression of breast milk	57	20.1%

Source: Field Data (2014)

4.10 The Relationship Between Exclusive Breastfeeding and Some Selected Associated Factors Using Multivariate Regression

Further analysis of the data was performed by using multivariate technique in order to have further understanding on the factors related to inadequate breastfeeding. Under such intention, multiple regression analysis was employed to assess factors that predict mothers practicing exclusive breastfeeding.

Regression model contains exclusive breastfeeding variable as dependent variable. Before the application of the multiple regression analysis, the Chi-Square technique was performed between factors associated with exclusive breastfeeding. The results of the Chi-square indicated that education of the mother, place of delivery, inadequate of meals taken by mothers per day during the first six months of breastfeeding, and type person who influenced decision on mother's breastfeeding decision had significant relationship with exclusive breastfeeding.

Among the outputs that were obtained during the application of multiple regressions include that of Table 4.10 which shows the summary of the model. Table 4.10 shows

that about 20 percent of the factors for exclusive breast-feeding in this model can be predicted by a combination of the above independent variables of the models.

Table 4.10: Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
Exclusive breastfeeding	0.455 ^a	0.207	0.196		0.444

Source: Field Data (2014)

Table 4.11 shows that, education level of the mother ($p=0.021$; 95% CI [1.117-1.592]), meals per day during breastfeeding ($p=0.004$; 95% CI [0.025-0.128]) and family member who influenced mothers decision on breastfeeding practices ($p=0.000$; 95% CI [-.005- -.003]) are significantly associated with mothers practicing exclusive breastfeeding. However, with β coefficient value of 0.163, number of meals per day, this explanatory variable reveals that it is more powerful for predicting mother's exclusive breast feeding practice that education level with β coefficient value of 0.127 and person influenced mother's decision on breastfeeding practices, β coefficient value of -0.365. Nursing mothers should have adequate nutrition which is directly related to production of enough breast milk.

Table 4.11: Regression Analysis of Exclusive Breastfeeding and Some Explanatory Variables

Model	Un standardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	β	Std. Error	β			Lower Bound	Upper Bound
(Constant)	1.354	0.121		11.219	0.000	1.117	1.592
Education level	0.068	0.030	0.127	2.317	0.021	0.010	0.127
Place of delivery	-0.094	0.057	-.090	-1.650	0.100	-.207	0.018
Meals per day during breastfeeding	0.077	0.026	.163	2.944	0.004	0.025	0.128
Who influenced your decision on your breastfeeding practices	-.004	0.001	-.365	-6.816	0.000	-.005	-.003

Source: Field Data (2014)

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Main results occurred from this study have identified that factors contributing most to inadequate breast feeding are of the category of social-demographic group. These are education level, food and nutrition, place of delivery and source of information and influence on breastfeeding. Nursing mothers who had secondary and above levels of education, more than three times daily meals and those who delivered in health centers' as well as those who obtained information on breastfeeding from health workers practiced exclusive breast feeding frequent more significantly as compared to other groups of nursing mothers.

These results therefore suggest that inadequate food intake and poor nutrition as well as inadequate or lack of education and information on the need practice and skills on breast feeding are the most contributing reasons for inadequate breast feeding of children for the first six months of age. This implies therefore, that, there prevails a food insecurity situation in most households in Tanzania, which may range from insufficient food access, poor food distribution at household level, poor food habits and food and nutrition related cultural taboos concerning breastfeeding.

In addition, lack or inadequate education and information on the importance and practice of exclusive breast feeding for the first six months of the children's life, signal's a shortcoming on the part of the practice of providing reproductive and child care service in our designated National health services providing institutions. It

seems there is a need to revisit the way our health care centers, clinics and hospitals take care of mothers during pre-and for post natal clinic sessions.

5.2 Recommendation

In this study it was found the mothers were various challenges including eating less the 3 meals per day during breastfeeding period and inadequate knowledge on EBF. To promote exclusive breastfeeding practices. The study recommended that, the Health care providers should continuously provide information on breastfeeding education and eating behavior during breastfeeding period and reproductive mothers whenever they attend clinics for follow up with emphasis on exclusive breastfeeding to scale up its practice.

Encouraging the family member to provide adequate food security regarding to quantity and quality of the food, accessibility, affordable, and appropriate natural foods which intended to infant growth and development and beneficial to mother's health for provision of enough breast milk with high quality.

Generally, the MOHSW should revisit the way our health care services system done at the health centers, clinics and hospitals taking care of mothers during pre-and post natal clinics, then dominate the new system and strengthened system for the process of monitoring and evaluation of EBF practices at the RCH clinic services.

Then the MOHSW should empower skill and knowledge to health care providers who are providing RCH services direct dealing with nursing mothers, so that they will mental, couch perform support supervision to nursing mothers and to initiate

campaign on the importance of exclusive breastfeeding to community through social and developments women groups.

Also MOHSW collaboration with stockholder should empower and strengthen the social media to report regular information to a community on good eating behavior in relation to EBF information to increases the community awareness.

5.3 Area for further study

The researcher should conduct research to identify the gaps between MCH clinics services and exclusive breastfeeding practices. Furthermore there is a need to perform a study on food security in relation to exclusive breastfeeding.

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APPENDICES

Appendix 1: Factors Contributing to Inadequate Exclusive Breast Feeding Practices in Children Aged 0-6 Months In Tanzania: A Case of Muhimbili National Hospital

1. Date of interview ___/___/2012 2. Interviewer's initials _____
3. Questionnaire no. _____ 4. Respondents No _____

SECTION A: DEMOGRAPHIC INFORMATION

(Circle the correct answer/fill in space provided).

1. Mother's information.

1. How old are you? (Age in years) Years.....

2. What is your occupation?

- a) Employed
- b) Farmer
- c) Business
- d) None
- e) Others specify.....

3. What is your highest level education?

- a) No formal education
- b) Primary school
- c) Secondary school
- d) College and above

4. What is your marital status?

- a) Married
- b) Single
- c) Cohabiting
- d) Divorced
- e) Widow

5. Parity

- a) Primiparous
- b) Multiparous

2; Infants Information

6. How old is your child? (Months)

7. Sex of your child?

- a) Male
- b) Female

8. Where did you deliver this child?

- a) Hospital/Health facility
- b) Home
- c) Traditional Birth Attendant
- d) Others specify

9. What was the mode of delivery?

- a) Normal delivery
- b) Caesarean section
- c) Assisted delivery

10. When did you initiate breastfeeding your child for the first time after delivery?

Immediately after delivery

- a) Within 1 hour
- b) 2-3 hours
- c) Days (mention)

11. After delivery, did you give your baby anything to eat/drink before starting breastfeeding?

- a) Yes
- b) No

12. If “Yes”, what did you give your baby?

- a) Water
- b) Thin porridge
- c) Milk
- d) Others (specify).....

13. Why given such food/fluid?

14. When did you start introducing extra foods / drinks including water to your child?

- a) Less than 1 month
- b) 1 to 3 months
- c) 4 to 5 months
- d) 6 months

15. Why started at that time.....

SECTION B: SOCIAL-CULTURE INFORMATIONS

16. Do you like to drink an alcohol?

- a) Yes
- b) No

17. How much do you ate per day when the baby is less than six months.

- a) less than 3/day
- b) at least 3times/day
- c) more than 3/day
- d) on demand

18. What is the interval between the last child and the last but one?

- a) 1
- b) 2
- c) >3
- d) Other (specify.....)

19. Did you practice exclusive breast feeding to your child for first six months without giving any fluid /water?

- a) Yes
- b) No

20. If “YES” who influenced your decision on your feeding practice?

- a) Husband/spouse
- b) My mother
- c) Mother in law

- d) Health worker
- e) My own decision
- f) Others (mention)

21. Do you believe breast milk is sufficient for the first six months of the child?

- a) Yes
- b) No

22. If “NO” why.....

23. Do other relatives monitor and insist your exclusive breastfeeding practices?

- a) Yes
- b) No

24. If yes, who supported you? Mention.....

SECTION C: MARTENITAL AND INFANT FACTORS TO EXCLUSIVE BREAST FEEDING PRACTICES

25. Did you experience any breastfeeding problems?

- a) Yes
- b) No

26. If “Yes”, What was the problem

- a) Abscess
- b) Mastitis
- c) Sore/cracked nipples
- d) Others (mention).....

**SECTION D: SOURCES OF INFORMATION ON EXCLUSIVE
BREASTFEEDING AND KNOWLEDGE OF MOTHER ON EXCLUSIVE
BREASTFEEDING**

27. Did you hear about breastfeeding?

- a) Yes
- b) No

28. What did you hear about breast feeding?

- a) Benefits of breastfeeding
- b) Positioning of the baby
- c) Exclusive breastfeeding
- d) Management of breast problem
- e) Expression of breast milk
- f) Others (mention).....

29. At what time did you take to listen?

- a) <5min
- b) about10min
- c) >1 0min

30. Where have you heard about breastfeeding?

- a) hospital/clinics
- b) Other (specify).....

31. To whom you heard

- a) Healthcare provider
- b) Others (specify).....

32. What do you understand by the term exclusive breast feeding?.....

33. Do healthcare providers use to spend time to monitor your breast feeding practices?

- a) Yes
- b) No

34. How many times per day should the baby breastfeed?

- a) 3- 4 times
- b) 5-6
- c) On demand
- d) Other (mention).....

35. What is the appropriate time to start complementary foods?

- a) Less than 1 month
- b) 1 to 3 months
- c) 4 to 5 months
- d) 6 months

36. What were reasons for not practice exclusively breast feeding?

- a) Going back to work
- b) Breast milk was not enough
- c) Maternal problem (specify)
- d) Child problem (specify).....

**Appendix 2: Dodoso la Utafiti Juu ya Zababu Zinazo Zuia Unyonyeshaji wa
Maziwa ya Mama Pekee kwa Kipindi cha Miezi Sita ya Kwanza
Baada ya Mtoto Kuzaliwa**

1. Tarehe ya mahojiano_____/_____/2012 2. Kifupi cha jina la anahoji_____
3. Namba ya dodoso_____ 4.namba ya mhojiwa_____

Sehemu 1: Taarifa za kidemografia

Kipengele a: taarifa binafsi za mama na mtoto

1; Taarifa ya mama

1. Umri wako ni miaka mingapi_____ (andika miaka kamili)
2. Unafanya kazi gani?
 - a) Nimeajiriwa
 - b) Mkulima
 - c) Mfanya biashara
 - d) Kazi nyingine(taja)___
3. Kiwango cha juu cha elimu
 - a) Sijasoma
 - b) Elimu ya msingi
 - c) Elimu ya sekondari
 - d) Chuo
4. Je hali yako ya ndoa kwa sasa ikoje?
 - a) Nimeolewa
 - b) Sijaolewa
 - c) Nimeachika
 - d) Naishi na mwenza

- e) Mjane
- 5. Uzao wa ngapi?
 - a) wa kwanza
 - b) sio wa kwanza

Kipengele B: taarifa za mtoto

- 6. Mwanao ana umri gani? _____(miezi)
- 7. Jinsi ya mtoto?
 - a) Mme
 - b) Mke
- 8. Wapi lijifungulia huyu mtoto ?
 - a) Hospitali
 - b) Nyumbani
 - c) Kwa mkunga wa jadi
 - d) Kwingine (taja).....
- 9. Ulijifungua kwa njia gani?
 - a) Kawaida
 - b) Oparesheni
 - c) Kwa kusaidiwa
- 10. Baada ya muda gani mtoto aliaza kunyonya kwa mama yake ?
 - a) Mara baada ya kujifungua
 - b) Ndani ya saa la kwanza baada ya kujifungua
 - c) Saa la 2-3 baada ya kujifungua
 - d) Siku na zaidi baada ya kujifungua days (taja idadi ya siku)

11. baada ya ujifungua ulimwanzishia chakula chochote au maji kabla ya kuanza kumyonyesha mtoto?
- a) Ndio
 - b) Hapana
12. Kama “ndio” Je ulimpa nini mtoto?
- a) Maji
 - b) Uji mwepesi
 - c) Maziwa yasio ya mama
 - d) Kingine (taja).....
13. Eleza sababu ya kumpa chakula/maji,
14. Ni kipindi kipi ulimwanzishia mtoto vyakula vingine au maji?
- a) Umri chini ya mwezi
 - b) Mmoja –mitatu miezi
 - c) 4 to 5 miezi
 - d) 6 miezi
15. Ni sababu zipi izilizosababusha umwanzishiye mtoto vyakual vingine?
- a) Maziwa ya mama yalikuwa hayatoshi
 - b) Vidonda kwenye chuchu
 - c) Mama alikwa anaumwa
 - d) Mtoto alikuwa anaumwa

Sehemu C; Taarifa Za Kijamii Na Kimila

16. Je wewe unapendelea kunywa pombe?

- a) Ndio
- b) Hapana

17. Kwa siku unaweza kupata milo mingapi ya chakula hasa kile kipindi cha miezi sita ya mwanzo ya uzazi?

- a) milo chini ya mitatu
- b) Mitatu
- c) Zaidi ya mitatu
- d) Kila inapobidi

18. kati ya mtoto wa mwisho na wa pili kutoka mwisho wamekishana miaka mingapi.

- a) 1
- b) 2
- c) >3

19. Je uliweza kumpa ziwa la mama mtoto miezi sita ya mwanzo bila ya kumpa maji/

- a) Ndio
- b) Hapana

20. kama 'ndio' nani alikushauri kufanya hivyo.(TAJA).....

21. Je unaamini maziwa ya mama pekee yanamtosheleza mtoto kipindi cha miezi sita ya mwanzo?

- a) Ndio
- b) Hapana

22. kama , 'Hapana' kwa nini?.....

23. Ndugu wameshiriki vizuri na kukusaidia katika zoezi la unyeshaji wa mtoto miezi sita bila ya kumpa maji?

- a) Ndio
- b) Hapana

24. Kama “NDIO”(Taja anayekufuatilia kwa ukaribu).....

Sehemu ya c; - sababu zinzotokana na mama na mtoto

25. Ulipata matatizo ya kuumwa maziwa kipindi cha unyonyeshaji?

- a) Ndio
- b) Hapana

26. Kama jibu “ndio” ,ulipata tatizo gani

- a) Jipu kwenye ziwa
- b) Matiti kuvimbana kuuma(mastitis)
- c) Michubuko kwenye chuchu
- d) Mengine(taja).....

Sehemu ya D; Uelewa kuhusu ya unyonyeshaji maziwa ya mama tu.

27. Je uliweza kupata mafundisho au maelezea kuhusu unyonyeshaji sahihi wa mtoto kutoka kwa mtoa huduma wa afya?

- a) Ndio
- b) Hapana

28. Je alikufundisha nini juu unyonyeshaji?

- a) Faida za unyonyeshaji
- b) Jinsi ya kuweka mtoto wakati wa kunyonyesha

- c) Unyonyeshaji wa maziwa ya mama tu kwa miezi sita ya mwanzo bila ya kumpa chochote hata maji mtoto.
 - d) Huduma ya kwanza kwa tatizo la ziwa kipindi cha unyonyeshaji.
 - e) Ukamuaji wa maziwa ya mama
 - f) Nyingine (taja).....
29. Kipindi cha ufundishwaji kilichukuwa muda gani?
- a) Chini ya dakika 5
 - b) Dakika10
 - c) Zaidi ya dakika 10
30. Ni nani alitoa somo hilo?
- a) Muhudumu wa afya
 - b) mwingine(taja)
31. Je ulipatia wapi hii elimu?
- a) hospital/ clinic
 - b) sehemu nyingine
32. Je unaelewa nini kuhusu unyonyeshaji wa maziwa ya mama pekee kwa miezi sita ya mwanzo?
33. Je watumishi wa afya wanapata muda wa kufuatilia unyonyeshaji wako baada ya kuwafundisha?
- a) Ndio
 - b) Hapana
34. Unafikiri mtoto anatakiwa kunyonya mara ngapi kwa siku?
- a) 3- 4 kwa siku
 - b) 5-6kwa siku

c) kila anapohitaji

d) zingine taja.....

35. Muda gani mtoto anatakiwa kuanzishiwa chakula kingine pamoja na maji?

a) Chini ya mwezi

b) Mwezi wa 1-3

c) Mwezi wa 4 - 5

d) Miezi 6

36. Kwa maoni yako unafikiri nini sababu zinapelekea akina mama kutonyonyesha watoto maziwa yao tu kwa kipindi cha miezi 6 ya mwanzo baada ya kujifungua?

a) Kukosa elimu sahihi ya kunyonyesha

b) Kazi/ajira

c) Maziwa hayamtoshelezi mtoto.

d) Mila na destituli

e) Kuogopa kumwambukiza mtoto

f) Mengine (taja).....

Appendix 3: Informed Consent Form

Consent form

ID NO. _____

Consent to participate in study:

Hello, my name is, doing research on Factors contributing to inadequate exclusive breastfeeding practices in children aged 0-6 months in Dar-es- Salaam.

Aim of the study

To determine factors that contributes inadequate exclusive breastfeeding practices in children aged 0-6months attending Muhimbili National Hospital, Dar-es Salaam

What participation Involves

If you agree to participate in this study, you will be required to answer a series of question that have been prepared for the study through interview in order to obtain the intended information. You will be interview for 10-20 minutes.

Confidentiality

All information that will be collected will be kept in private and will be used only for this study. The form will not bear your name.

Rights to Withdraw and Alternatives

Participating in this study is completely voluntary. You can choose not to participate in this study and even if you have already accept to participated in the study you can quit at any time if you feel so. Refusal to participate or withdrawal from the study will not involve penalty or loss of any benefits.

Who to contact

If you ever have questions about this study, you should contact the study Coordinator or

the Principal Investigator ulumbi kilimba, from Open university of Tanzania, P.O. Box 75825, Dares Salaam, Mobile phone 0652435373.

If you have questions which need further clarification, as a participant you have a right

to call, call Prof. Aboud M, Chairman of the College Research and Publications Committee, P.O. Box 65001, Dar es Salaam, Tel: 2150302-6 and Dr. A.A RUKANTABULA

(0784 559 601) who is the supervisor of this study.

Do you agree?

Yes, I agree to participate in this study..... Signature:.....

I have read/ hear the contents read for me the contents in this form.

Signature of Participant _____ Date of signed consent

Appendix 4: Fomu ya Ridhaa (Kiswahili Version)

Namba ya utambulisho: _____

Ridhaa ya kushiriki kwenye utafiti

Habari? Naitwa....., ninakusanya takwimu kwa ajili ya utafiti kuhusu visababishi vya kutonyonyeshwa mtoto maziwa ya mama pekee kwa kipindi cha miezi sita ya mwanzo baada ya kuzaliwa.

Madhumuni ya Utafiti.

Utafiti huu ni kutaka kuainisha ni sababu zipi au vikwazo vipi hasa zinasababisha mama

ashindwe kunyonyesha mtoto wake maziwa yake pekee kwa kipindi cha miezi sita ya

mwanzo baada ya kuzaliwa bila kumchanganyia kitu chochote kwa miezi hiyo sita ya mwanzo.

Nini kinahitajika ili kushiriki.

Endapo utakubali kushiriki katika utafiti huu inabidi ujibu maswali toka kwenye muongozo wa maswali yaliyotungwa kwa ajili ya utafiti huu. Zoezi hili litachukua takribani dakika 10 hadi 20.

Usiri

Taarifa zitakazokusanywa kupitia dodoso hili zitakuwa ni za siri na hakuna mtu yeyote

atakayeambiwa ulichosema. Fomu hii haitahitaji jina lako.

Haki ya kushiriki au kujitoa au vinginevyo.

Ushiriki katika utafiti huu ni wa hiari. Kutoshiriki au kujitoa kutoka kwenye utafiti

hakutakuwa na adhabu yeyote na hutapoteza stahili zako, endapo utaona ni vema ku fanya hivyo.

Nani wa kuwasiliana naye

Endapo utakuwa na maswali kuhusiana na utafiti huu , unaweza kuwasiliana na Mtafiti

mkuu wa utafiti huu Ulumbi Kilimba wa Chuo Kikuu Huria Tanzania. SLP 75825, Dar es salaam, simu ya kiganjani 0652435 373. Kama una swali kuhusu staili zako kama mshiriki unaweza kumpigia Prof. Aboud M Mwenyekiti wa kamati ya utafiti na uchapishaji, S.L.P 65001, Dar es salaam, Simu 2150302-6 na msimsmizi wa huu utafiti Dr A.A.rukantabula wa chuo kikuu Huria Tanzania. Simu namba (0784 559 601).

Sahihi:

Je umekubali?

Mshiriki amekubali Mshiriki hajakubali

Mimi _____ nimesoma maelezo ya fomu

hii.Maswali yangu yamejibiwa. Nakubali kushiriki katika utafiti huu

Sahihi ya mshiriki.....

Sahihi ya shahidi (Kama Mshiriki hawezi kusoma/kuandika)

Sahihi ya mtafiti msaidizi.....

Tarehe ya kutia sahihi ya Kushiriki.....

Sahihi ya Mtafiti..... Tarehe.....