**UNIVERSITY OF NAIROBI**
**COLLEGE OF HEALTH SCIENCES**
**SCHOOL OF MEDICINE**
**DEPARTMENT OF PAEDIATRICS AND CHILD HEALTH**

# BREASTFEEDING EXPERIENCE AMONG HEALTH CARE PROFESSIONALS AT KENYATTA NATIONAL HOSPITAL

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**DECLARATION**

This dissertation is submitted as my original work and has not been presented for a degree elsewhere.

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DEDICATION

This dissertation is dedicated to:

To my dearest mother Charity, thank you for always being there for me.

**ACKNOWLEDGEMENT**

I thank God the Almighty for being my strength and rock, guiding me through this period successfully despite challenges I have encountered along the way. My appreciation goes to my supervisors Professor Rachel Musoke and Professor Francis Onyango for their support and guidance that led to the completion of the study.

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LIST OF ABBREVIATIONS

| | |
|---|---|
| **BF** | Breastfeeding |
| **BFI** | Baby Friendly Initiative |
| **EBF** | Exclusive breastfeeding |
| **GOK** | Government of Kenya |
| **KDHS** | Kenya Demographic and Health Survey |
| **KNH** | Kenyatta National Hospital |
| **MOH** | Ministry of Health |
| **SAQ** | Self-Administered Questionnaire |
| **SPSS** | Statistical Package for the Social Scientist |
| **UNICEF** | United Nation Children Fund |
| **WHO** | World Health Organization |

DEFINITIONS OF TERMS

**Exclusive breastfeeding**: Exclusive breastfeeding as defined by World Health Organization is the exclusive intake of breast milk by an infant from the mother with addition of no other liquid or solids with the exception of vitamins, minerals supplements or medicines. During this period of feeding the entire child's fluid, energy and nutrients are provided by breast milk.

**Almost exclusive breastfeeding**: This refers to the intake of breast milk by an infant from the mother and in addition to this, use of water or other non-nutritive liquids provided along with breast milk to the baby.

**Complementary food**: Complementary feeding is defined as any nutrient containing food or liquid given when breast milk alone is insufficient to meet the nutritional requirements of the infant and typically covers six to twelve months of age, although breastfeeding may go beyond this period.

**Weaning:** Refers to the complete cessation of breastfeeding. During this period the child only consumes the ordinary family foods.

ABSTRACT

**Background**: Breastfeeding is the single most life impacting gift that a mother can give her baby at birth. The benefits have been widely documented. It is the most important determinant of child survival and prevention of childhood infection. It allows mother and baby to bond in a special way that cannot be matched, since it meets both nutritional and nurturing needs. Although knowledgeable in the benefits of breast milk, health professionals have been identified as a high risk group for early cessation of breast feeding. In this regard, work has been noted to be the major factor that interferes with breastfeeding.

**Objective**: The purpose of this study was to find out the proportion of health professionals working at Kenyatta National Hospital who exclusively breastfeed for the first six months.

In addition to that, to find out the breastfeeding practices of health care professionals at Kenyatta National Hospital (KNH).

**Design:** Cross sectional descriptive study design.

**Method:** Survey of health care professionals with children below three years of age at K.N.H. was carried out using a semi structured self-administered questionnaire exploring their own experiences with breastfeeding.

**Results**: There were 139 study subjects obtained from the different departments within KNH; whereby 49 were residents and 90 were nurses. The proportion of female health professionals who exclusively breastfeed for the first 6 months of age was 29.2%. However, when asked about their intention to exclusively breastfeed for the same period, it was noted to be at 85% and furthermore, those that had a prenatal plan about breastfeeding were 82%.

Most of the respondents (69.5%) breastfed within the first hour of delivery implying that majority of the babies were initiated to breast milk almost immediately. Despite majority (94.3%) of the health care professionals recommending exclusive breastfeeding for 6 months to their colleagues, family and patients only 63% thought that this was actually practical. Majority of the respondents, 81.3% of the respondent said that there was a decrease in the amount of breast milk on returning to duty after maternal leave but 2/3 made some effort to ensure that their babies continued to get breast milk during this

period. Finally, 54% of the respondents said there was special consideration on allocation of duties due to the fact that they were exclusively breastfeeding when you went back to work.

**Conclusion**

Proportion of female health professionals who exclusively breastfeed is 29.2%. This is largely attributed to return to work and unavailability of supportive breastfeeding policy. There was little consideration on allocation of duties due to the fact that they were within the exclusively breastfeeding period after they went back to work from their maternity leave.

**Recommandations :**

To form a programme that supports breastfeeding health professionals when they return to work by taking into account their work schedule and providing nursing rooms and breast milk storage facilities.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background of the Study.

Breast milk is recommended as the exclusive nutritional source of feeding infants for the first six months of life and should be continued with complimentary feeds to 2 years of age and beyond [1,2] . WHO recommends exclusive breastfeeding for the first six months to achieve optimal growth, development and health [1].There are numerous benefits of breastfeeding and these are expected to be better understood by health professionals who also work as advocates for the same [3]. These benefits extend well beyond basic nutrition and health to include social and economic ones with other benefits lasting up to adulthood[4].Infants who have been exclusively breastfed have better growth, nutrition and immunity against diseases [4,5,9] . Among the long term benefits to the baby include better brain development [9], and lower risks of obesity and diabetes later on in their lives. A study by the National Institute of Environmental Science in the US showed that children who were breastfed had 20% lower risk of dying in their first five years compared to those who were not. Breastfeeding has thus been described as the corner stone of preventive medicine. There is a universal consensus about the fundamental importance of breastfeeding for children's adequate growth and development and their physical and mental health. No artificial feeding formula is capable of qualitatively replacing breast milk and its specific nutrients and protection against diseases[1].

Moreover, exclusive breastfeeding for the first six months of age has been shown to be the most effective preventive intervention for ensuring child survival and is estimated to save 13% of all deaths of children younger than five years of age [1]. Since the first global policy in 1990 promoting exclusive breastfeeding a survey by WHO in 2010 showed that worldwide only 35% of children are exclusively breastfed for the first 5 months. This correlates with studies that show despite demonstrated benefits of the breast milk, prevalence of exclusive breast feeding is lower than the international recommendations of exclusive breastfeeding[1.]

Failing to adopt exclusive breastfeeding and continuing the practice of formula feeding including the use of feeding bottles may have the negative impact on optimal infant

feeding practices in the society at large. The use of feeding bottles is known to be associated with high incidence of diarrheal disease. In addition there is a higher likelihood of contamination of the infant formula. Female health care professionals are seen as role models and their use of artificial feeding methods may be erroneously interpreted by members of society to imply that breast feeding is an inferior option for feeding infants[6].

The overall breastfeeding rates in developed countries have risen significantly over the past decade it has been noted that this has been minimal in the developing countries[1].

Measures actively taken on supporting breastfeeding especially at the work place have resulted to higher rates of breastfeeding. In spite of the many benefits of breast feeding it has been shown that there are barriers to the practice of six month exclusive breastfeeding. Some of these barriers include advertisement of breast milk substitutes and lack of support for breastfeeding mother[3]. Most working women identified employment as the top barrier to breastfeeding[8]. This was evident in a study on infant feeding practice among nursing personnel in Australia, where return to work was one of the main reasons women ceased breastfeeding with 60 percent of women intending to breastfeed when they returned to work but only 40 percent were actually able to breastfeed [8].

WHO recommends that breastfeeding should begin within an hour of birth and offered to the infant on demand, which is as often as the infant wants, day and night[1].Despite the recommendation to breastfeed exclusively for the first six months, most mothers introduce other foods early according to a report on infant and young child feeding[1]. Studies have ascertained that the first six months is a critical period in which all the baby's nutritional needs should be met optimally by giving the baby breast milk after which the baby will require additional source of energy hence need for complementary feeding [1].Furthermore, it has been shown that benefits of breast milk including protection from diseases increase with the duration of breastfeeding. Respiratory tract infections and otits media were higher in children exclusively breast fed for 4 months compared to those exclusively breastfed for 6 months[1].

## 1.2 Study Objectives

### 1.2.1 Main Objective

- To determine the proportion of female residents and nurses working in KNH who exclusively breastfeed for the first six months

### 1.2.2 Secondary Objective

- To establish the breastfeeding practices among female residents and nurses working in KNH.

## 1.3 Study Questions

i. What proportion of female residents and nurses working in KNH exclusively breastfeed for first six months?

**ii.** What are the breast feeding practices among female residents and nurses working in KNH?

## 1.4 Limitations

There was a recall bias, since some of female (workers and nurses) were unable to recall their breastfeeding experiences.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

Residents and nurses have to struggle with their unique work demands while trying to maintain exclusivity in breastfeeding [8, 9.] Breast feeding behavior among female health professionals has been studied widely as it impacts on their anticipatory guidance to their patients on breastfeeding[8]. It has been noted that these health care professionals initiate breast feeding more often than the general population but have lower continuation rates[8]. Among health professionals, return to work, lack of time and space to express milk and diminishing milk supply ranked top for cessation of breastfeeding [14]

Furthermore studies have shown that health care professionals with personal breastfeeding experience are more likely to actively promote breastfeeding and can continually assist breastfeeding women [13].These benefits of breastfeeding are related to the duration and exclusiveness of breastfeeding. Similarly, the benefits for the mothers are linked to the duration as well [6]. While it is almost certain that women who go back to work before six months will face challenges in adhering to the practice of exclusive breastfeeding , the use of commercial formula milk only adds to these challenges. There is therefore need to understand what working mothers and especially mothers in the medical field go through during lactation keeping in mind that they should be exemplary in promotion of breastfeeding.

As regards knowledge of health professionals on various aspects of breastfeeding (when to initiate breastfeeding, age of introduction of complementary feeds, recommended duration of breastfeeding) in many studies conducted show most respondents knew of the correct breastfeeding practices. However this did not necessarily translate to practice[8, 13]. In spite of their medical knowledge and experience, physician mothers had difficulties in breastfeeding as seen in a U.S. study and needed enhanced breast feeding support and services to overcome some of this difficulties.[8]Personal experience was noted to be important. Respondents in one survey conducted in 2004, revealed that those with positive personal breastfeeding experience were 2.3 times more likely to recommend

supportive breastfeeding practices compared to those with no experience. Therefore, studies conducted on knowledge of health professionals on correct breastfeeding practices have shown that most are aware of the recommended practices but this has not translated to their personal experiences.

There are a number of factors that have been identified as contributors to breast feeding behavior among the health care professionals. Work was noted to be a major contributor to breast feeding behavior in female health professionals. A cross sectional study done in Nigeria showed that though most respondents knew that babies should be exclusively breastfeed for six months, the exclusive breast feeding rate was at 11.1% and that these respondents had resumed work by then. Before their babies were six months old, about 75% of respondents had resumed work whilst over 50% had started taking calls. Most could not breast feed during working or call hours. Alternative feeds during working or call hours included expressed breast milk in 34.4% and infant formula in 21.9%. Feeding bottle was the major method (77.4%) for feeding these alternatives. Work schedule was rearranged to allow breast feeding in only 27.3% of respondents[13]. The study concluded that maternal employment that involves working more than 20 hours per week outside the home may adversely affect initiation of breastfeeding and has been associated with early cessation of breastfeeding.

In another cross sectional study conducted at Massachusetts U.S.A, it was noted that 80% of health professional mothers who delivered initiated and continued breastfeeding up to the end of their maternity leave but on return to work 50% discounted breast feeding. Most respondents again cited residency work as the most common reason for discontinuation. [14]It was therefore noted that working mothers have lower rates of exclusive breast feeding [9].

The Innocent Declaration in 1990 called for political will that would cultivate a breast feeding culture to encourage women to exclusively breastfeed their children for the first 6 months of life and continue up to 2 years of age [1]. It also stated that governments should create an environment enabling women to practice exclusive breastfeeding for the first six months. Breast milk supply meets demand in that, breast milk quantity increases as the frequency of breastfeeding or expressing milk increases [1]. It is therefore important

that even on resumption of work, the breastfeeding mother can continue to breastfeed the baby or express breast milk for storage and later consumption by her baby.

Recent studies have shown that most breastfeeding health professionals felt supported by their colleagues during this period and were able to cope better [13]. It has also been noted that these health professionals struggle with low milk production leading to early discontinuation of breastfeeding. On the other hand, the impact of physician and nurse encouragement on breastfeeding mothers is of great importance as shown by various studies done both locally and internationally[1, 10]. In one survey, 75% of women surveyed reported having been encouraged by their physicians or nurse on breastfeeding and out of this proportion 75% initiated breastfeeding compared to 43% of those who did not get any encouragement [10].The practitioners study also revealed that those who were encouraged were 4 times more likely to initiate breastfeeding than those without. Moreover, making plans for breastfeeding during the antenatal period has shown to have better breastfeeding practices after birth in comparison to those mothers who had no breastfeeding plan. Those who planned to bottle feed during the antenatal period reported more difficulties in breastfeeding compared to those who planned to breastfeed [7]. In a study that sought to compare breast feeding intention versus actual practice, 97% of the infants were breastfed at birth and the intention to breast feed exclusively for six months was 64% against those who actually breast fed which was at 41% for that period[8].

In another survey, 85% of the respondents said that a breast feeding policy was important as two thirds of them could not breast feed during work hours and had to offer an alternative feed (expressed breast milk, infant formula, water and other feeds) although these health professionals were expected to be buoyant enough to avoid artificial needs. In addition, the method of feeding these alternatives to the baby was by feeding bottle in over 75% of all the respondents[13]. Certain modifiable factors at the work place were identified that helped to promote breastfeeding. These include both physical and emotional factors. This was apparent in one programme called the breastfeeding promotion in pediatricians' office that yielded a positive impact on promotion of breastfeeding at other work places. The programme carried out in the U.S. involved provision of nursing rooms within the doctors clinics as a means of sensitizing the public on importance of these facilities[11].

Locally, according to 2003 KDHS although 99% of all children were breastfed at birth, the proportion declined with age: 60% of infants aged 4 to 5 months had been started on complementary feeds and only 13% of infants' breastfed exclusively for the first six months. This proportion of children exclusively breastfed for 0-5 months has gone up to about 61%, according to KDHS 2014 but still way below the desired rate. While the employment Act in Kenya provides a 3 month maternity leave, return to work is often associated with cessation of breastfeeding. Therefore, work is a major impediment to exclusive breastfeeding for six months in healthcare professionals whose personal experience also impacts on their practice. Pre-natal preparations on breastfeeding and supportive policy at the work place have been identified in improving the exclusive breastfeeding rate[14].

**2.2 Conceptual Framework**

This study applied a theory from an article derived from Hector and Lesley in 2005 that examined the use of a conceptual framework for assessing breastfeeding practices [12].It proposed three levels of factors that influence breastfeeding practices: individual, group and society. The framework was used to generate hypotheses about factors affecting breastfeeding and the types of interventions that might be used to address them.

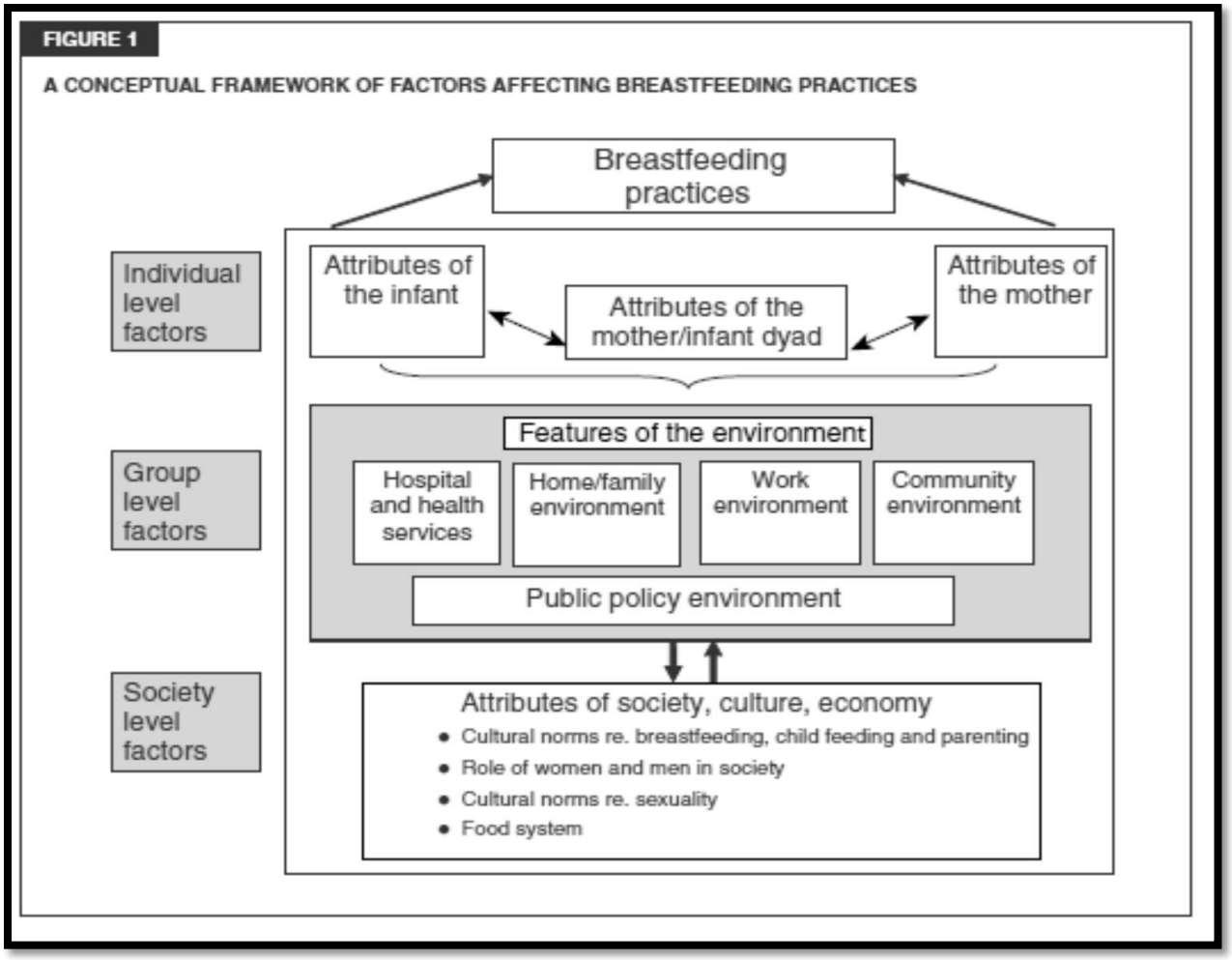
Individual level factors relate directly to the mother and infant. They include the mother's intention to breastfeed, her knowledge, skills and parenting experience, the birth experience, health and risk status of mothers and infants, and the nature of early interaction between mother and infant. Each of these can directly influence the initiation and duration of breastfeeding, and are frequently correlated with social and demographic variables.

Group level factors are the attributes of the environments in which mothers and infants find themselves in, the attributes that enable mothers to breastfeed. Environments with a direct influence on mothers and infants include: the hospital and health facilities environment, in which practices and procedures such as infants routinely rooming-in with mothers to allow on demand feeding, postpartum skin-to-skin contact and providing professional support with breastfeeding technique. At home, physical and social factors such as size of household, parity, family circumstances, partner attitudes and support, and

peer support affect the time, energy and resolve that mothers have for breastfeeding. At work, the policies, practices and facilities such as work hours and flexibility, facilities and policies that enable on-site expressing and storing of breast milk influence mother's ability to combine work and breastfeeding. Benefits such as maternity and paternity leave, childcare allowances and health insurance also have an influence in infant feeding decisions directly.

Societal level factors influence the acceptability and expectations about breastfeeding and provide the background or the context in which mothers' feeding practices occur. These include cultural norms regarding breastfeeding, child feeding, and parenting; the role of women in society, including how working outside the home is valued; the extent to which men's social role includes support for breastfeeding mothers; the extent to which exposing breasts for feeding is complicated by cultural norms regarding sexuality; and the economic importance of products such as breast milk substitutes and complementary foods in the food system. The framework is summarized in figure 1 below.

**Figure 1: conceptual framework.**




**Adopted from Hector and Lesley in 2005**

### 2.3 Justification of the Study

Health professionals have a unique opportunity to emphasize breast feeding education and support in their day to day activities. Encouragement from doctors has been shown to be an important factor in initiation and continuation of breast feeding to mothers [11]. However, their personal experience on breast feeding affects their advocacy role for the best breastfeeding practices. Provision of facilities to support breastfeeding at the work place should be encouraged as it optimizes breastfeeding [9]. Health professionals have the important role of promoting, protecting and supporting breastfeeding and can best do this from their own experiences.

A worker's morale can be enhanced to achieve the best expected output when the mental, economic, social needs are taken into account. International workers' rights and gender equality stipulate that the breastfeeding worker should be provided with the right to one or more daily breaks or a daily reduction of hours of work to breastfeed her child. She should have the right to interrupt her work for this purpose and such interruptions or reduction in daily hours of work should be counted as working times and remunerated accordingly. The female medical personnel by the virtue of their profession advocate for their patients in turn. By availing nursing rooms for breast feeding or expressing breast milk for storage the effect on women output will be enhanced. It has been show that provision of such support facilities should be encouraged so that maternal employment does not hamper breastfeeding[19]

Female resident doctors and nurses are among the future health administrators and will be in positions that affect policy such as baby friendly initiatives (BFI) in their respective health institutions and even nationally. Their participation in this study is expected to reveal hindrances to effective breastfeeding. The results of this study are expected to inform breastfeeding policy within this and other hospitals within the region. The choice of these study subjects is informed by the need to use the particular group who have direct contact and opportunity to counsel patients and who have themselves breastfed infants. Health care personnel are more likely to promote a practice that they have experienced and believe in.

Kenyatta National Hospital is a designated baby friendly hospital and inclusion of facilities such as nursing rooms and storage equipment to support breast feeding for its employees at work would further enhance this initiative. Currently, no studies have been done to evaluate the breastfeeding experience of health care professionals in Kenya and this study aims at shedding light on this.

# CHAPTER THREE

# 3.0 RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter present the specific steps and procedures that will be used to collect the data, analyze and interpret. It begins with the description of the area of the study, then discusses the study design. It then discusses the population of the study, the sample and sampling technique, then the research instruments and data management procedures. The chapter concludes with a discussion on the ethical considerations.

## 3.2 Study Area

This study was carried out at Kenyatta National Hospital (KNH). It is the largest teaching and referral hospital in the country which is utilized by the University Of Nairobi College Of Health Sciences for training of doctors and the Kenya Medical Training College for the training of nurses. KNH has about 200 female residents and 1000 female nurses. In addition, KNH has a total of 50 wards and 22 outpatient clinics.

The residents undergo training in various specialties and constitute the bulk of doctors working in the hospital (source: School of Medicine University of Nairobi 2014).

## 3.3 Study Design

This was a cross – sectional descriptive study design, which is also known as cross-sectional analysis or transversal or prevalence study. It involves the analysis of data collected from a population or a sample, at any specific time. It is commonly used in medical research and social sciences. In medical research, it aims to provide data on the entire population under the study. Cross-sectional studies are basically descriptive in nature, and can be used to describe certain characteristics of the population. They are usually used to define prevalence of certain activity or a characteristic of the population.

## 3.4 Study Population and Sampling

The population of this comprised of all female residents and nurses working in KNH meeting the inclusion criteria. The study was conducted from July to December, 2015.

**Inclusion Criteria**

Female residents and nurses working in KNH with children aged 3 years and below who consented to the study.

**Exclusion Criteria**

Female residents and nurses working in KNH who decline to participate.

Female residents and nurses who had medical contraindications to breastfeeding.

**Sample Size Determination and Calculation**

Estimated prevalence rate of exclusive breastfeeding for the first six months among all female health professionals was 10 %( from recent study done in Nigeria[12])**.** The total number of female residents is 210 while total number of female nurses working at KNH is approximately 990 giving a total of 1200.

Sample size using Fischer formula:

$$n = \frac{Z^2 p(1-p)}{d^2}$$

n = sample size

p = estimated prevalence of EBF among health professionals (estimated to be 10%)

Z = confidence level at 95% (corresponding to a standard Z value of 1.96)

q = 1- p

d = margin of error (0.05)

Therefore n = 138

**Sample procedure**

The respondents were identified within the various hospital wards as well as the clinics where they work. The sampling of the residents and nurses present in the ward and clinics was by stratified simple random sampling. This entailed recruiting eligible willing participants by obtaining a fixed number of respondents i.e. the first two residents and first three nursing officers (random) who were available at the time of recruitment

(convenience) from each ward and clinic (strata) as they work in their various shifts. The justification for this is that it ensured a well spread out sample from among the respondents in terms of different specialties sampled

**Approach and recruitment.**

Whereby in each ward or clinic, the subjects comprising of the female residents and nursing officers who had children aged below 3 years, and willing to participate were briefed at the time of reporting to work on the purpose of the study and any queries answered individually. They were informed on the importance of the study and its voluntary participation. Consent was then sought for those eligible and willing to participate and the questionnaire administered. Four research assistants, clinical officer interns from the pediatric wards, were recruited to assist in carrying out the data collection. The principal investigator trained the research assistants on approach, consenting, confidentiality and recruitment procedures. A pilot study comprising of five respondents was done at neighboring Mbagathi District Hospital to validate the study tool.

Dissemination of the questionnaire involved identification of eligible residents and nursing officers and issuing serialized semi structured self-administered questionnaires which were at their convenient time during work as well as according to availability of different groups of respondents in terms of work shifts.

**Recruitment plan**

As an ideal method to reach the target research subjects, their availability was considered. This involved distributing and administering questionnaires in two main ways i.e. targeting the residents and the nursing officers separately. The nurses operate in 3 shifts within 24 hours: morning, afternoon and night shifts. The investigator and research assistants were distributed to ensure that all the groups are sampled by being present during various times until the desired number of respondents was achieved in a particular ward.

Once issued, the questionnaire number was noted down including the place it was issued from. The completed questionnaires were then collected the same day or the following

day as was convenient to the respondent. The data collection was done systematically; ward to ward and clinic to clinic until the required sample size was obtained. Data collection was also done simultaneously from pre-identified areas of the hospital i.e. one research assistant per ward in a particular level in order to avoid missing out on respondents by the research assistants and worked expeditiously .

**3.5 Study Tool:** Appendix III:

The study tool was divided into two parts. The first part addressed demographics such as age, marital status, specialty or department and parity while the second addressed the breastfeeding plans and practices. This included any prenatal plan on breastfeeding, how soon breastfeeding was initiated and the duration they managed to exclusively breastfeed. The question on other feeds given before six months of age as well as major method of feeding was asked. Interference of work schedule due to breastfeeding and the perception of placing extra demands on colleagues due to breastfeeding was asked. Finally, the tool sought to find out if prior medical training was sufficient in preparation for breastfeeding.

**3.6 Data Management**

Data were checked for completeness. A data entry template was created and entry done in duplicate for validation (double entry) and cross checked for entry error and range checks. The data were cleaned and validated before analysis. Data analysis was done using SPSS version 17.0.Descriptive statistics including mean, standard deviation, frequency distribution and proportions was done for various variables. The characteristics of the respondents were described using means and medians for continuous variables. Access to the computer used for data entry and analysis was limited to the researcher only and the computer secured with a password. Completed questionnaires were kept in a locked cupboard in the researcher's room.

**3.7 Ethical Considerations**

**Protection of subjects and information**

The study was explained verbally to the respondents before being given the self-administered questionnaire which required a written consent to acknowledge

participation into the study by appending their signature at the first page of the questionnaire. Verbal explanation involved being informed on who was the principal investigator, on the study title, objective, and expected utility. Subjects were advised that their participation was much appreciated but not mandatory. They were informed on the anonymous nature of the study. Furthermore, respondents were assured that all data collected was handled with a high level of confidentiality and privacy. Only the principal investigator had access to data collected to ensure utmost protection of subjects and information

**Confidentiality**

The researcher maintained maximum confidentiality for all information and data presented by the respondents. All information collected on the respondents was considered confidential and treated as such. The instruments used for the research were void of the respondents' names to ensure confidentiality.

Documents containing respondents' confidential information were neither reproduced nor the names of the respondents or clinicians be recorded. The data along the questionnaire was accessible only to the principal investigator and all information collected on the respondents considered confidential and treated as such. At the end of the study raw data will be destroyed after six years.

**Ethical Approval**

Ethical approval to carry the study was obtained from Kenyatta National Hospital/University of Nairobi/Ethics and Research Committee. Informed written consent was gotten from the primary caregiver/guardian for enrollment to study. ~

# CHAPTER FOUR

# RESULTS AND DISCUSSIONS

## 4.1 Introduction

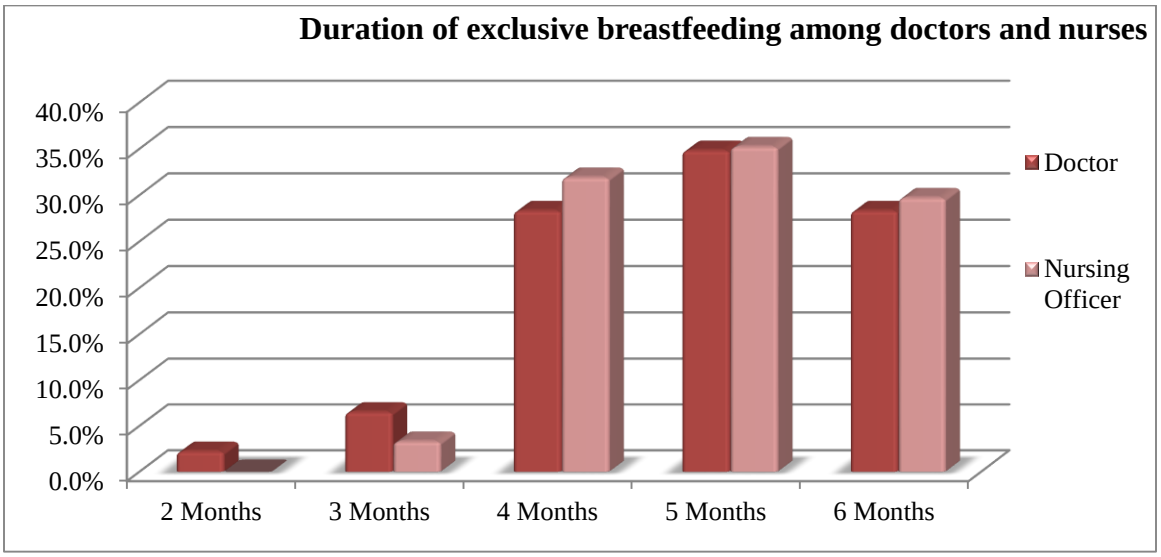
The aim of this research was to establish a proportional comparison among the breastfeeding residents and nurses working in KNH. The findings in this chapter are based on responses from both self-administered and guided questionnaires, observations and interviews from respondents who were female residents and nurses. Hence this chapter entails the presentation of data collected in the questionnaires, observation and interview. The findings were presented in the form of tables, graphs and narratives.

## 4.2: Data Presentation

Over the study period, 160 questionnaires were issued. Of these, a total of 139 valid completed questionnaires were obtained, 11 wrongly filled and 10 not returned. There were 49 residents and 90 nurses as valid respondents. The overall exclusive breastfeeding rate for 0-6 months was 29.2%. The median exclusive breastfeeding period was 5 months.

Minority of the respondent breastfed up to 3 months of age with majority 63.7% managing to breastfeed for five complete months.

**Figure 2: Duration of exclusive breastfeeding among doctors and nurses in percentage.**




Cumulatively, the total number respondents who exclusively breastfeed for 0-3 months was 99.3%, this proportion came down to 94.9% for the first four months and 64.2% for the total percentage who exclusively breastfed for the first 5 months. However, by the sixth month only 29.2% had managed to exclusively breastfeed for that period.

### 4.3 Demographic Characteristics

This section aimed at showing the basic characteristics of the respondents who were engaged in this study. The respondents provided information on their age and marital status. The first part of this section shows the results on the comparisons of the age and marital status. The background characteristics of the respondents are as shown below.

**Table1: Age and marital status distribution of the respondents.**

| Crosstab | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Age of the Respondent (Years) | | | | | Total |
| | | | 21-25 years | 26-30 years | 31-35 years | 36-40 years | 41-50 years | |
| Profession of the Respondent | Resident Doctor | Count | 2 | 17 | 25 | 3 | 0 | 47 |
| | | % within Profession of the Respondent | 4.3% | 36.2% | 53.2% | 6.4% | 0.0% | 100.0% |
| | | % within Age of the Respondent (Years) | 22.2% | 45.9% | 53.2% | 9.1% | 0.0% | 33.8% |
| | | % of Total | 1.4% | 12.2% | 18.0% | 2.2% | 0.0% | 33.8% |
| | Nursing Officer | Count | 7 | 20 | 22 | 30 | 13 | 92 |
| | | % within Profession of the Respondent | 7.6% | 21.7% | 23.9% | 32.6% | 14.1% | 100.0% |
| | | % within Age of the Respondent (Years) | 77.8% | 54.1% | 46.8% | 90.9% | 100.0% | 66.2% |
| | | % of Total | 5.0% | 14.4% | 15.8% | 21.6% | 9.4% | 66.2% |
| Total | | Count | 9 | 37 | 47 | 33 | 13 | 139 |
| | | % within Profession of the Respondent | 6.5% | 26.6% | 33.8% | 23.7% | 9.4% | 100.0% |
| | | % within Age of the Respondent (Years) | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 6.5% | 26.6% | 33.8% | 23.7% | 9.4% | 100.0% |

Among the doctors 89.3% age fell between (26-35) years and among the nurses 45.65% fell between (26-35) yrs. Most of the doctors 89.4% fell between ages 26 to 35 years compared to the nurses who had a widely spread out age difference. Most of the respondents; doctors 93.6% and nurses 80% were married.

**Figure 2: Bar graph comparing the ages of doctors and nurses.**

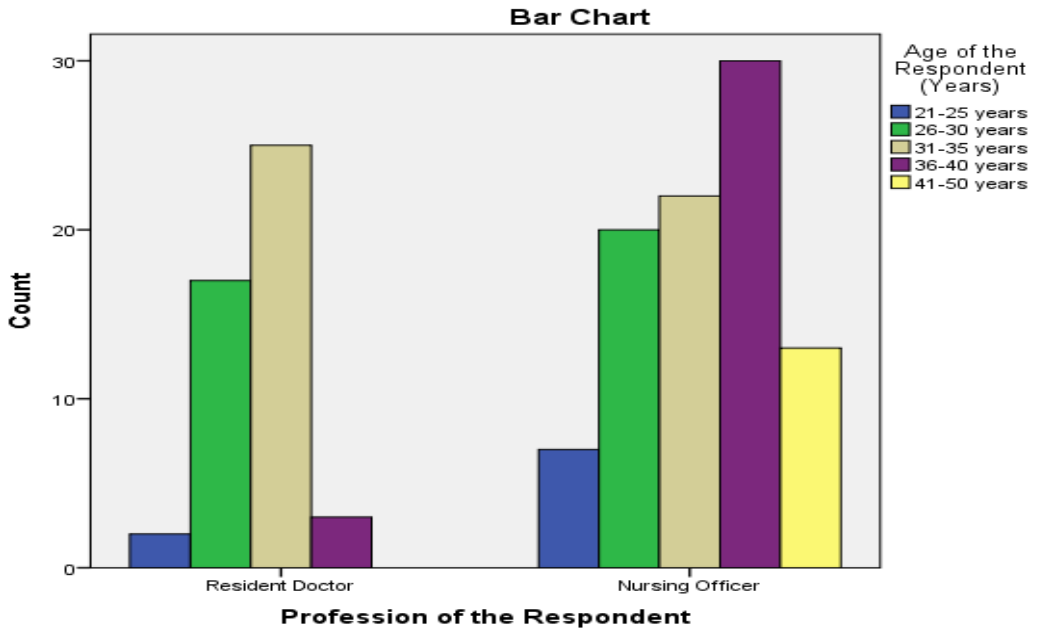
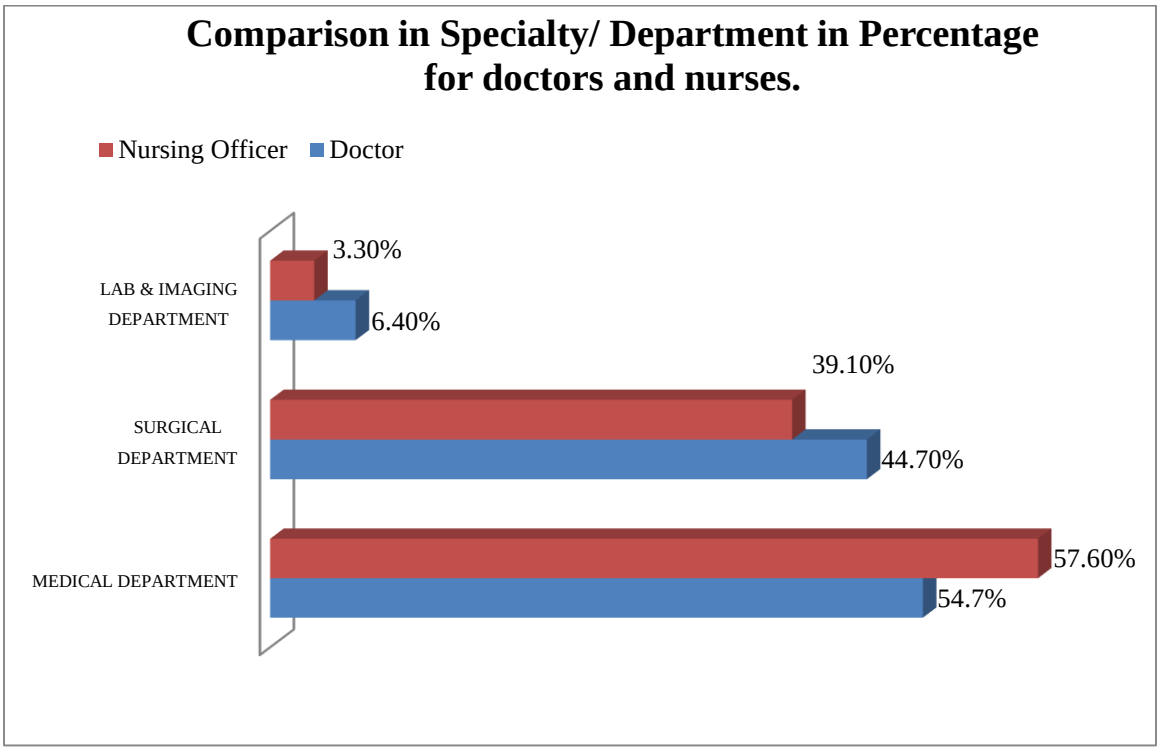
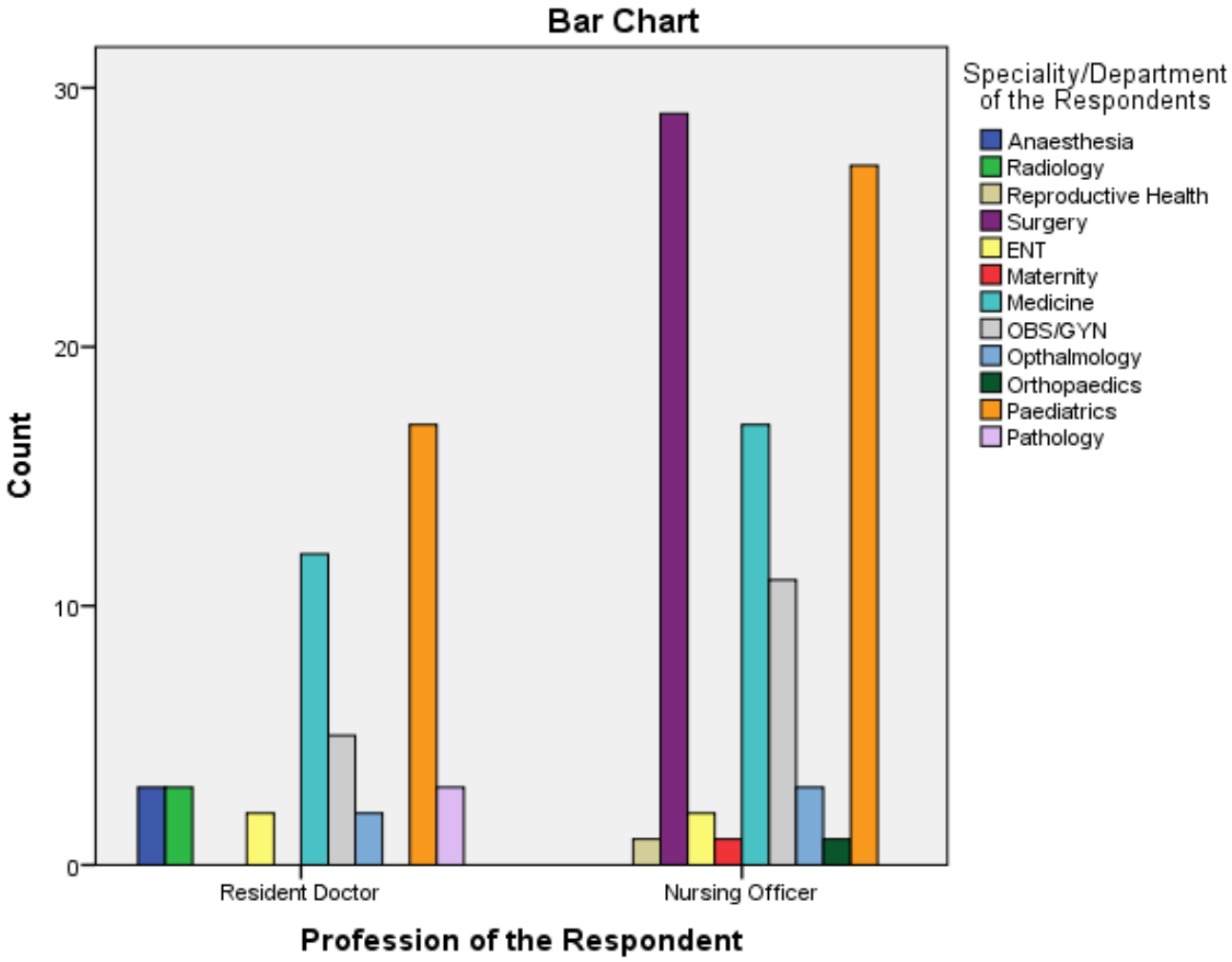



**Figure 3: Distribution of doctors and nurses in the major departments.**




Most of the responses were from the medical disciplines (Paediatrics and Internal Medicine) 54.7% with the least being from lab and imaging department with 4.3%

**Figure 4: Bar graph showing the various departments of doctors and nurses.**




From the graph, more nurses are employed in the surgery department while there was no female resident doctor in the same department. This was the same case in the departments of orthopaedics, reproductive health, maternity and orthopaedics. However in the medical departments ie paediatrics and internal medicine had a number of female resident doctors.

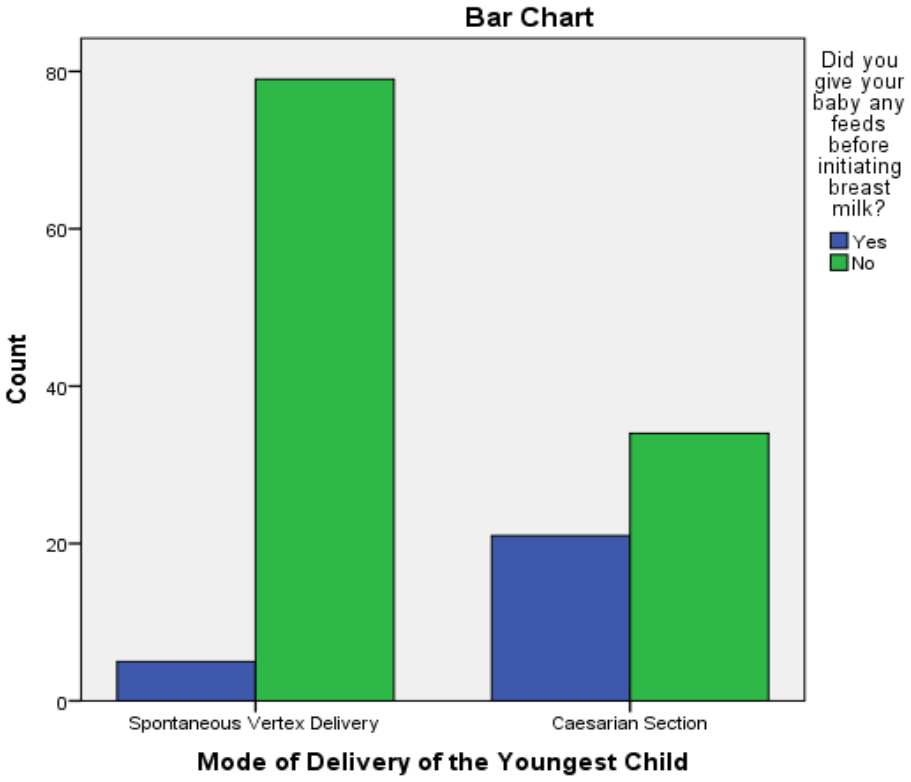
**Table 2 Comparison of mode of delivery of the youngest child with duration of onset of breastfeeding.**

| Mode of Delivery of the Youngest Child * How soon after birth did you start breastfeeding? Crosstabulation | | | | | |
|---|---|---|---|---|---|
| | | | How soon after birth did you start breastfeeding? | | Total |
| | | | Within the first one hour | After 1 hour | |
| Mode of Delivery of the Youngest Child | Spontaneous Vertex Delivery | Count | 74 | 10 | 84 |
| | | % within Mode of Delivery of the Youngest Child | 88.1% | 11.9% | 100.0% |
| | | % within How soon after birth did you start breastfeeding? | 76.3% | 23.8% | 60.4% |
| | | % of Total | 53.2% | 7.2% | 60.4% |
| | Caesarian Section | Count | 23 | 32 | 55 |
| | | % within Mode of Delivery of the Youngest Child | 41.8% | 58.2% | 100.0% |
| | | % within How soon after birth did you start breastfeeding? | 23.7% | 76.2% | 39.6% |
| | | % of Total | 16.5% | 23.0% | 39.6% |
| Total | | Count | 97 | 42 | 139 |
| | | % within Mode of Delivery of the Youngest Child | 69.8% | 30.2% | 100.0% |
| | | % within How soon after birth did you start breastfeeding? | 100.0% | 100.0% | 100.0% |
| | | % of Total | 69.8% | 30.2% | 100.0% |

With respect to the mode of delivery, 60.4% of respondents delivered via spontaneous vertex delivery while 39.6 % delivered through caesarian section. However, for those who delivered spontaneously, most of them (88.1%) breastfed their babies within the first one hour while only 11.9% took more than one hour to breastfeed their babies. For those who delivered through Caesarian section, it was noted that more than half (58.2%) took more than one hour to breastfeed their babies. However, the margin was not big range, as 41.8% of those who delivered through the Caesarian section breastfed their babies within the first one hour. In overall, 69.8% of the respondents breastfed their young ones within

one hour after birth, while only 30.2% of the respondents took more than one hour after giving birth to breastfeed their young ones. From the table, we can conclude this relationship to be the nature of delivery influences the time a baby will take the first breastfeeding. Most of babies delivered spontaniously are likely to take the first breast milk within a hour.

**Bar graph on mode of delivery and prelacteal feeds.**




Most babies given birth to through spontaneous do not require feeds before initiating the breast milk (see the figure above). Almost all the babies delivered spontaneously (94.0%) were not given any feeds before initiating the breast milk, while only 6% were given feeds before initiiting breast milk. The trend ws relatively similar for those babies delivered through Caesarian section delivery, but the range was lower compared to the spontaneous delivery: 61.8% of the babies delivered through Caeserian section did not require any feed before inititing the breast milk, while only 38.2% were given some feeds before initiating breast milk. In general, more babies (81.3%) were not given any feeds

before initiaiting breast milk while only 18.7% of the young ones delivered were given some feeds before initiating breast milk (see table 3 below).

**Table 3: Comparison between mode of delivery of youngest child and feeds given before initiating breast milk,**

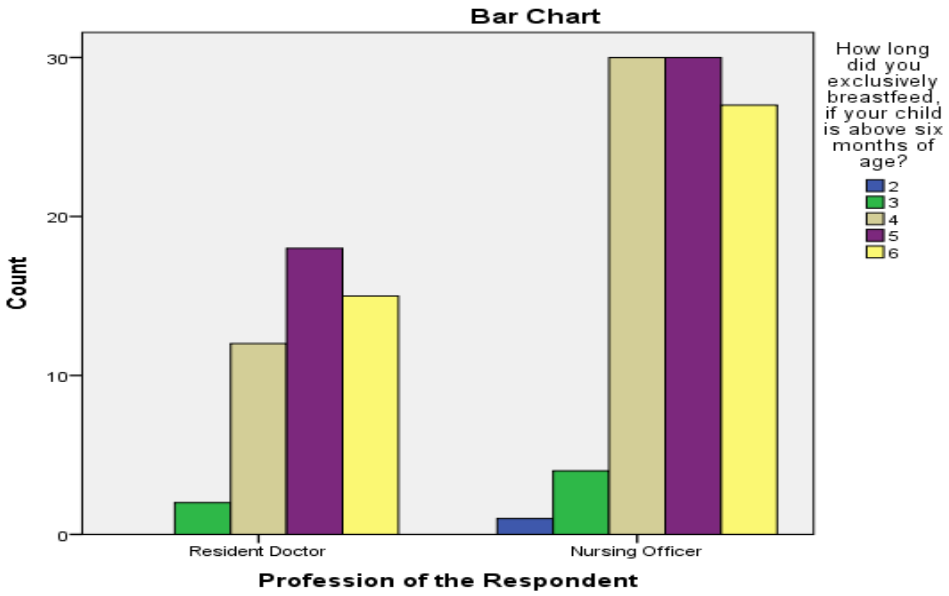
| Mode of Delivery of the Youngest Child * Did you give your baby any feeds before initiating breast milk? Crosstabulation | | | | | |
|---|---|---|---|---|---|
| | | | Did you give your baby any feeds before initiating breast milk? | | Total |
| | | | Yes | No | |
| Mode of Delivery of the Youngest Child | Spontaneous Delivery | Count | 5 | 79 | 84 |
| | | % within Mode of Delivery of the Youngest Child | 6.0% | 94.0% | 100.0 % |
| | | % within Did you give your baby any feeds before initiating breast milk? | 19.2% | 69.9% | 60.4% |
| | | % of Total | 3.6% | 56.8% | 60.4% |
| | Caesarian Section | Count | 21 | 34 | 55 |
| | | % within Mode of Delivery of the Youngest Child | 38.2% | 61.8% | 100.0 % |
| | | % within Did you give your baby any feeds before initiating breast milk? | 80.8% | 30.1% | 39.6% |
| | | % of Total | 15.1% | 24.5% | 39.6% |
| Total | | Count | 26 | 113 | 139 |
| | | % within Mode of Delivery of the Youngest Child | 18.7% | 81.3% | 100.0 % |
| | | % within Did you give your baby any feeds before initiating breast milk? | 100.0% | 100.0% | 100.0 % |

**Table 4 Comparison among doctors and nurses in duration for complete months achieved in exclusive breastfeeding.**

| Profession of the Respondent * How long did you exclusively breastfeed, if your child is above six months of age? Crosstabulation | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | How long did you exclusively breastfeed, if your child is above six months of age? | | | | | Total |
| | | | 2 | 3 | 4 | 5 | 6 | |
| Profession of the Respondent | Resident Doctor | Count | 0 | 2 | 12 | 18 | 15 | 47 |
| | | % within Profession of the Respondent | 0.0% | 4.3% | 25.5% | 38.3% | 31.9% | 100.0% |
| | | % within How long did you exclusively breastfeed, if your child is above six months of age? | 0.0% | 33.3% | 28.6% | 37.5% | 35.7% | 33.8% |
| | | % of Total | 0.0% | 1.4% | 8.6% | 12.9% | 10.8% | 33.8% |
| | Nursing Officer | Count | 1 | 4 | 30 | 30 | 27 | 92 |
| | | % within Profession of the Respondent | 1.1% | 4.3% | 32.6% | 32.6% | 29.3% | 100.0% |
| | | % within How long did you exclusively breastfeed, if your child is above six months of age? | 100.0% | 66.7% | 71.4% | 62.5% | 64.3% | 66.2% |
| | | % of Total | 0.7% | 2.9% | 21.6% | 21.6% | 19.4% | 66.2% |
| Total | | Count | 1 | 6 | 42 | 48 | 42 | 139 |
| | | % within Profession of the Respondent | 0.7% | 4.3% | 30.2% | 34.5% | 30.2% | 100.0% |
| | | % within How long did you exclusively breastfeed, if your child is above six months of age? | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 0.7% | 4.3% | 30.2% | 34.5% | 30.2% | 100.0% |

Most of the respondents (34.5%) exclusively breastfed for five months after birth, while only 30.2% exclusively breastfed for four and six months respectively, 4.3% exclusively breastfed for three months and only 0.7% exclusively breastfed for two months. Of the total female residents, 31.9% breastfed exclusively for six months while only 29.3% of the female nurses breastfed exclusively for six months. Over a third of female residents (38.2%) breastfed exclusively for five months while 32.6% of the female nurses breastfed exclusively over the same period of time. 25.5% of the female residents breastfed exclusively for four months, and 4.3% for three months, while 32.6% of the female nurses exclusively breastfed for four months, 4.3% months and 1.1% for two months (see table 4 above and the figure below)

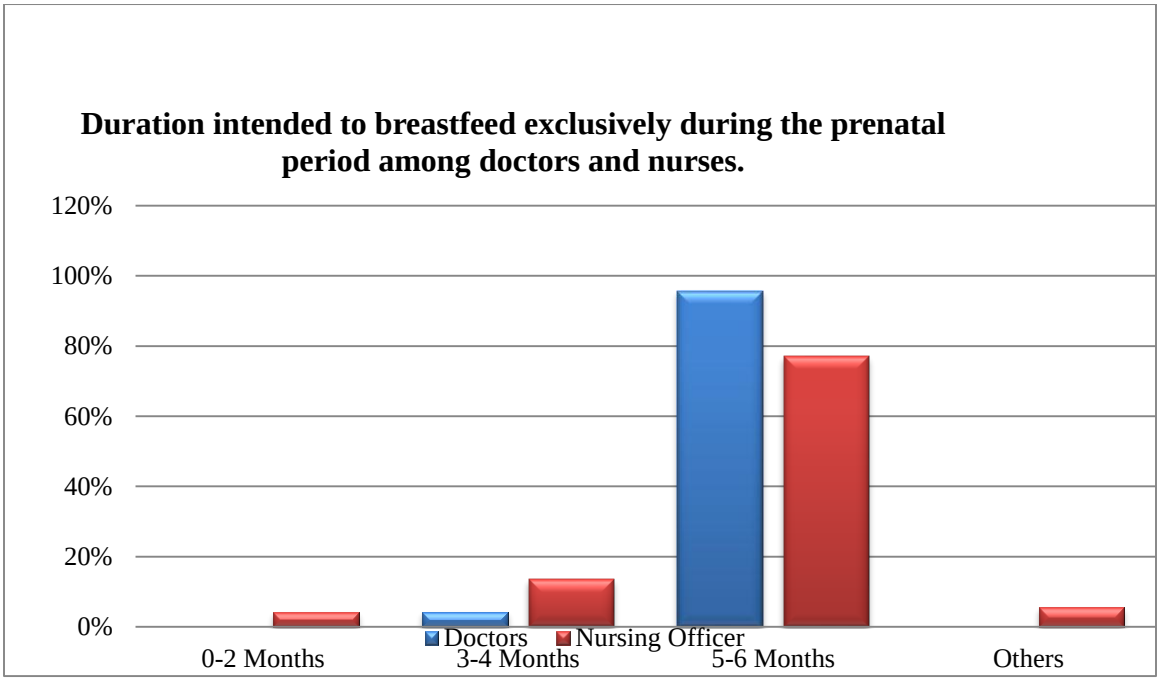
**Figure 5 Comparison among doctors and nurses in duration for complete months achieved in exclusive breastfeeding.**



| Table 4a: Descriptive Statistics | | | |
|---|---|---|---|
| How long did you exclusively breastfeed, if your child is above six months of age? | | | |
| Resident Doctor | N | Valid | 47 |
| | | Missing | 0 |
| | Median | | 5.00 |
| | Mode | | 5 |
| Nursing Officer | N | Valid | 92 |
| | | Missing | 0 |
| | Median | | 5.00 |
| | Mode | | 4[a] |
| a. Multiple modes exist. The smallest value is shown | | | |

In general, the median age for exclusive breastfeeding for both female nurses and residents was found to be five months (see table 4a above)

**Figure 6: Intention to breast feed among doctors and nurses.**



Most respondents intended to breastfeed exclusively for a duration of 5-6 months (85%) and the least being those who intended to breastfeed for just 0-2 months exclusively.

**4.2.2 Breastfeeding practices among female residents and nurses working in KNH**

**Table 3: Summary of breastfeeding practices.**

| **Did you breastfeed your baby** | **Frequency(n)** | **Percentage (%)** |
|---|---|---|
| **Yes** | **139** | **100%** |
| **No** | **0** | **0** |
| | | |
| **Duration of exclusive breastfeeding** | <2 months | 0.7 |
| | 2-3 months | 4.3 |
| | 3-4 months | 30.2 |
| | 4-5 months | 34.5 |
| | 5-6 months | 30.2 |
| **Prenatal plan on breastfeeding** | | |
| Yes | 114 | 82.7 |
| No | 24 | 17.3 |
| **Do you think that it is possible to practice exclusive breastfeeding for 6 months?** | | |
| Achievable | 88 | 66.3 |
| Not achievable | 51 | 36.7 |
| **Recommended six month exclusive breastfeeding to others.** | | |
| Recommended | 131 | 94.2 |
| Not recommended | 8 | 5.8 |
| **Other feeds given before baby attained six months.** | | |
| Cereals | 15 | 10.9 |
| Cow's milk | 12 | 8.8 |
| Water | 9 | 6.6 |
| Formula Milk | 49 | 35.8 |
| Did not give any feed | 52 | 38 |

**4.2.2 Breastfeeding practices among female residents and nurses working in KNH**

**Table 3: Summary of breastfeeding practices.**

| **Reasons given for introducing other feeds before 6 months.** | | |
|---|---|---|
| Did not introduce any feed before 6 months | 42 | 30.2 |
| Baby seemed hungry | 50 | 36.0 |
| Thought the baby was old enough | 10 | 7.2 |
| Wanted the baby to sleep long enough | 16 | 11.5 |
| Advised by friend or relative | 14 | 10.1 |
| Others | 7 | 5.0 |
| **Measures taken to ensure baby has breast milk when unavailable.** | | |
| Yes | 92 | 66.7 |
| No | 46 | 33.3 |

| | | |
|---|---|---|
| **Special consideration given on allocation of duties during breastfeeding at work.** | | |
| Yes | 63 | 46 |
| No | 74 | 54 |
| **Outcome of breast milk supply on returning to work** | | |
| Decreased | 113 | 81.8 |
| Remained the same | 22 | 15.9 |
| Increased | 4 | 2.8 |
| **Adjusted work schedule to accommodate breastfeeding** | | |
| Made adjustments | 84 | 60.5 |
| Did not make adjustments | 55 | 39.5 |
| **Colleague support during breastfeeding** | | |
| Offered support | 105 | 75.5 |
| Did not support | 34 | 24.5 |
| **Importance of prior medical training in breastfeeding** | | |
| Beneficial | 117 | 84.2 |
| Not beneficial | 22 | 15.8 |
| **Need for a policy supporting breastfeeding at the hospital** | | |
| Yes | 131 | 94.2 |
| No | 8 | 5.8 |
| **Attended a special course on breastfeeding after medical training** | | |
| Yes | 45 | 32.3 |
| No | 95 | 67.6 |

**Figure 5. Reasons given for introducing other feeds before baby attained six months of age.**

| Why did you feel you had to introduce these other feeds before the baby attained six months | | | | | | |
|---|---|---|---|---|---|---|
| Profession of the Respondent | | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Resident Doctor | Valid | Not Applicable | 8 | 17.0 | 17.0 | 17.0 |
| | | Baby seemed hungry | 25 | 53.2 | 53.2 | 70.2 |
| | | Thought the baby was old enough | 2 | 4.3 | 4.3 | 74.5 |
| | | Wanted baby to sleep longer | 5 | 10.6 | 10.6 | 85.1 |
| | | Advised by a friend or relative | 2 | 4.3 | 4.3 | 89.4 |
| | | Others | 5 | 10.6 | 10.6 | 100.0 |
| | | Total | 47 | 100.0 | 100.0 | |
| Nursing Officer | Valid | Not Applicable | 25 | 27.2 | 27.2 | 27.2 |
| | | Baby seemed hungry | 25 | 27.2 | 27.2 | 54.3 |
| | | Thought the baby was old enough | 8 | 8.7 | 8.7 | 63.0 |
| | | Wanted baby to sleep longer | 11 | 12.0 | 12.0 | 75.0 |
| | | Advised by a friend or relative | 12 | 13.0 | 13.0 | 88.0 |
| | | Others | 11 | 12.0 | 12.0 | 100.0 |
| | | Total | 92 | 100.0 | 100.0 | |

NB.

- Not applicable comprise of those that were able to breastfeed for six complete months.
- Others refers to those that had other reasons except the ones listed.

The most common reason given for introducing foods during the first six months by both professionals was that the baby seemed hungry at 53.2%.

## 4.4 Discussion

### Duration of breastfeeding

The proportion of female health professionals who exclusively breastfeed for 0-6 months was 29.2% which is almost half of the national rate according to KDHS 2014 (61.4%) and below the global target of 80% [1]. However, in this study we found that the 5 month breastfeeding rate stood at 64% indicating that introduction to complementary foods for many mothers was during the fifth month.

All respondents initiated breastfeeding after birth but this rate declined especially after the third month. This was also seen in a study done on breastfeeding intentions of female physicians whereby 97% initiated breastfeeding at birth but this dropped by more than half by the fifth month[8].

Despite most (94.2%) respondents recommending the practice of six month exclusive breastfeeding to family, friends and patients, only two thirds of the respondents said that it was actually possible to do so showing lack of confidence in a practice they preached. This discrepancy suggests that suboptimal personal breastfeeding experience among health professionals may compromise the effectiveness of their advocacy role in promoting exclusive breastfeeding for six months.

Closer home, a study done at Nigeria by Sadoh *et al* which was assessing the breast feeding practices of health professionals that showed a mismatch between high intention to breastfeed versus low rates achieved at the end of the first six months[12].

In this study, the intention to practice exclusive breastfeeding during the prenatal period was at 82.7%. The reasons advanced for this discrepancy were also similar to the ones noted in the other studies[8,10,12,14.]; largely attributed to return to work and unavailability of supportive breastfeeding policy at their respective work places.

**Social Demographics.**

Most of the female residents worked in the medical department (paediatrics and internal medicine) as was the case in a study on female residents and breastfeeding intentions done in the U.S. with less than 10% working in the surgical departments [12].

With respect to the mode of delivery, 57% of respondents delivered via spontaneous vertex delivery while 37% delivered through caesarian section similar findings to a study done by Ayaba Wor Joloh et al in 2010 in a large East African Hospital in Tanzania which placed caesarian section rate at 39%.

Using cross tabulation it was noted that most mothers who initiated breastfeeding within the first hour are the ones who delivered naturally. Furthermore it was apparent that fewer babies who were delivered via spontaneous vertex delivery were given pre-lacteal feeds compared to those delivered by caesarian section.

81.3% said that the breast milk reduced on return to work; a similar finding to other studies.

The most common reason for giving other feeds to baby before six months was that the baby seemed hungry 36%. Most respondents used formula 35.3% milk as an alternative feed before the first 6 months compared to cereals 10.8% and cow's milk 18.6% and water 6.5%. Recent closely related studies [1, 5, 12, and 13] similarly noted that formula milk is the most preferred alternative to breast milk during the first 6 months. This could be due to the knowledge that formula milk was nutritionally closest to breast milk.

Three fourths of the respondents said that they were encouraged by their colleagues during breastfeeding and this closely compared with a survey done to examine the influence of encouragement on breastfeeding women [10].Practically all references used in this study identified return to work as the major hindrance to EBF a finding that was reflected in this study at 94.8%.

Majority of the respondents 81.8% reported a decrease in milk supply when they returned to work and two thirds took measures to ensure that their baby had breast milk when they returned to work a finding that was also seen in recent studies on breastfeeding [8,10,12,14.]

Over half of the respondents had to adjust their work schedule to accommodate breastfeeding on returning to work as was the case in a study where respondents recommended workplace strategies and programs to promote breastfeeding at work.

Almost all respondents said that it was important to have a breastfeeding policy within the hospital 94.2% and mentioned provision of nursing as the rooms and breast milk storage facility as the major supporting factor. This was echoed recently in two other recent studies; Breastfeeding Practice among Physicians and Breastfeeding practices among resident physicians both done in the U.S. that noted need for this supportive facilities.

# CHAPTER FIVE

# CONCLUSION AND RECOMMENDATIONS

## 5.1 Introduction

Chapter five is the final chapter of this study. It reviews the purpose of the study.

It also summarizes the study, and discusses the research findings presented in chapter four. It highlights some similarities with results of previous findings noted in chapter two, and deals with the interpretation and implications of significant research findings. It concludes the study, keeping readers abreast of the events in the field of exclusive breastfeeding of the female health professionals. In light of the above, this chapter is therefore divided into summary and discussions, conclusions and recommendations.

## 5.2 Summary and Discussion

The proportion of female health professionals who exclusively breastfeed for the first six months was 29.2%. Most mothers who delivered naturally breastfed their babies within the first hour after birth 87.9% while most who delivered via caesarian section took longer to initiate breastfeeding and majority 58.1% of them gave pre lacteal feeds. Most mothers 81.3% reported a decline in breast milk supply on returning to work.

## 5.3 Recommendation

A breastfeeding policy at Kenyatta National Hospital that in cooperates adjusting work schedule to optimize breastfeeding for lactating mothers, provision of nursery rooms and breast milk storage areas. Capacity building among the health professionals by ensuring special courses on breastfeeding after the basic training.

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APPENDICES

APPENDIX I: CONSENT FORM

**PART A**

**Introduction.**

Dr Gituma Muriithi of the Department of paediatrics, University of Nairobi is conducting a study concerning the breastfeeding experience among healthcare professionals in KNH and wants to offer you the opportunity to be part of it.

**The purpose of this study.**

The purpose of this study is to find out what proportion of our healthcare professionals manages to exclusively breastfeed for the first six months as well as to find out the breastfeeding practices of health care professionals at Kenyatta National Hospital.

**Study Procedure.**

Once you understand the study and if you agree to take part, you will be asked to sign on this form. It is important you know that your participation in this study is entirely voluntary.The study will involve filling out a self-administered questionnaire after which it will be collected for analysis. It is a survey of healthcare professionals with children below three years at K.N.H. exploring their own experiences with breastfeeding. If you agree to participate in the study, you will be asked to sign a consent form to show that you have understood the information about the study and it will act as evidence that you have granted permission to take part in the study. The information that you will give will be confidential and you will not be identified as no names will be written on the study instruments but only code numbers. Those study instruments with responses will be destroyed at the end of the study. Results will be presented in a group not as individuals. On this form, there are contact details for the researcher in case you may want to ask him anything concerning the study.

**If I take part what will happen to me?**

You will be given a questionnaire to fill on your own after which you will return the filled in form to the research assistant.

**What are the possible benefits of taking part in this study?**

There are no direct and immediate benefits to you as an individual from the study. This means that there are no financial or material benefits as a result of your participation in

the study however the knowledge and results that will help to formulate beneficial policies on breastfeeding to the healthcare professionals within the hospital. Refusal to participate will involve no penalty or loss of benefit.

**What are the possible risks for taking part in this study**?

There is no physical risks associated with this study and carries no any risks because there will not be any collection of specimen (body samples) for the sake of the study. What will happen if you chose to decline your participation in the study?

Participation in this study is completely voluntary and there is no penalty for non-participation and withdrawal from the study. You are at liberty to decline participation or withdraw at any time even without giving reasons for doing so.

**How will your privacy and confidentiality be maintained and protected?**

Any information that will be generated will be kept private and confidential. Your signature will appear only on the consent form which will be kept away from the data collection instruments. Identification numbers will be given to you instead of writing your name. Filled data collection instruments will be kept in a locked cupboard and will be accessible to only the research team members. Results will express group information and there will not be identification of any individual information. In addition, all filled data collection instruments will be destroyed after data analysis and report writing

**Investigator**: Dr Gituma Adrian Muriithi

**Cell Phone no**: 0722 389 473 Email: muriithiadrian@yahoo.com

Pediatrics and Child Health Department

**Or**

**Chairman,**

**KNH/UON Ethical review Secretariat,**

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

**Nairobi-Kenya**

**PART B: CONSENT**

Please read the information sheet (PART A).

**CONSENT FORM PLEASE READ AND SIGN THIS FORM IF YOU ARE PARTICIPATING IN THIS STUDY**

I have read the attached information sheet for the study and have understood the purpose of the study. I know that I do not have to suffer any injury or harm during the research process. The information that I will give will not be used against me in future in any way. I understand that I am free to withdraw at any time without giving reasons for withdraw and this will not affect me at all. I understand that my information will be kept confidential and will only be accessed by the researcher or those directly concerned with this study. I understand that I will not benefit financially. I have been given a chance to ask questions or raise any complaint pertaining to the study and I know who and how to contact the researcher if I need to. I agree to voluntarily participate in the study without any form of coercion, be questioned and provide responses to the best of I agree to voluntarily participate in the study.

Participants Name..... Signature..... Date.....

.....

Researchers Name..... Signature..... Date .....

.....

THANK YOU FOR TAKING PART IN THIS STUDY

APPENDIX II: QUESTIONNAIRE

**Study Title: Breastfeeding experience among health care professionals at Kenyatta National Hospital**

**Questionnaire No. _____**

**Date**:_____

**A. Social demographic characteristics:**

1. Profession( tick appropriately) Resident(doctor) ☐ Nursing officer ☐

2. Age (years) ☐

3. Marital Status ☐

   1= Married 2= Single

   3= Divorced 4=Widowed

4. Specialty/ Department……

5. Number of children……

6. Age of the youngest child……

7. Mode of delivery of youngest child ……

   1= Spontaneous Vertex Delivery 2= Caesarian Section ☐

B. **The breastfeeding Plans**

8. Did you have any prenatal plan on breastfeeding (Code yes=1, no=2) ☐

9. If yes to above, how long did you intend to exclusively breastfeed

   i. 0-2months Why……

   ii. 3-4 months Why……

   iii. 5-6 months Why……

   iv. Other(specify with reason)……

10. How soon after birth did you start breastfeeding

    1= within the first one hour ☐ 2= after 1 hour ☐

11. Did you give your baby any feeds before initiating breast milk)? (Code yes=1, no=2)

    ☐

12. If yes to the above question, what feeds did you give your baby?

    ……

    ……

    ……

13. Are you currently breastfeeding 1= Yes 2= NO ☐

14. If yes to above how long do you intend to breastfeed?

    i. 6-9 months ☐

    ii. 9-12 months ☐

    iii. 12-18 months ☐

    iv. 18-24 months ☐

    v. Above 24 months ☐

vi. Other (specify)……

15. How long did you exclusively breastfeed, if your child is above six months of age?

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16. Do you think that it is possible to practice exclusive breastfeeding for 6 months ?

1= Yes 2= NO ☐

17. If yes to the above question, how is this possible?

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18. If no to the above question, why do you think so?

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19. Have you recommended exclusive breastfeeding for 6 months to any of your friends or relatives? 1= Yes 2= NO ☐

20. What other feeds apart from breast milk did you give before baby attained six months, if baby is above six months?

i. Cereals ☐

ii. Cow milk ☐

iii. Water ☐

iv. Formula Milk ☐

v. Did not give other feeds ☐

vi. Other (Specify)…….

21. Why did you feel you had to introduce these other feeds before baby attained six months?

i. Baby seemed hungry ☐

ii. Thought Baby was old enough ☐

iii. Wanted baby to sleep longer

iv. Advised by friend or relative

v. Other( specify)

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22. What happened to your breast milk supply when you returned to work?

i. Increased

ii. Decreased

iii. Remained the same

23. If the breastmilk supply decreased, what did you do about it?

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24. Have you done anything to ensure that your baby continues to have breast milk when you are unavailable? (code yes =1, No=2)

25. If no to the above question, what are the reasons for not ensuring that baby continues to have breast milk?

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26. If yes to the above, what measures have you taken to ensure that your child has breast milk when you are unavailable?

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27. Was there any special consideration on allocation of duties due to the fact that you were exclusively breastfeeding when you went back to work?

(Code yes=1, no=2) ☐

28. If yes to the above question, what special considerations and by whom?

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29. Did you have to make any changes in your work schedule in order to breastfeed?

(Code yes=1, no=2) ☐

30. If Yes, how frequent did you have to make these changes

1. More than half the time ☐
2. Half the time ☐
3. Less than half the time ☐

31. What are the extra demands you place on your colleagues due to breastfeeding ?

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32. Do your colleagues offer support to you in breastfeeding?

☐

1=Yes 2=No

33. If yes to the above question, what support do they offer?

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34. How would you rate the following as a motivator to the practice of exclusive breastfeeding?(Tick appropriately)

| | Very strong | Strong | Moderate | Mild | Poor |
|---|---|---|---|---|---|
| Family and friends support | | | | | |
| Perceived benefits to the baby | | | | | |
| Exemption from calls/ duties | | | | | |
| Provision of nursing rooms and breast milk storage facilities | | | | | |
| Longer maternity leave | | | | | |

35. How would you rate your self-confidence in effectively counseling breastfeeding mothers?

i. Highly confident ☐

ii. Average ☐

iii. Lowly confident ☐

36. Did medical training prepare you in breastfeeding?

Yes=1, no=2 ☐

37. If yes to above, how well did previous medical training prepared you for breastfeeding?
    i. Strongly prepared
    ii. Moderately Prepared
    iii. Mildly Prepared
    iv. Poorly Prepared
38. What was covered for breastfeeding during basic medical training?

    ……

    ……

    ……

    ……
39. Have you had any special courses on breastfeeding e.g. IYCF offered in KNH or any other institution after your basic training?

    (Code yes=1, no=2) ☐
40. If yes to the above question, how has this training influenced your current Breastfeeding practice?

    ……

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    ……

    ……
41. What are the hindrances towards exclusive breastfeeding that you have as a healthcare professional working at K.N.H?

    ……

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    ……
42. Do you think that there is need for a policy supporting breastfeeding at hospital?

    (Code yes = 1, no=2) ☐
43. If yes to above, what are some of the supportive measures you think would assist you in breastfeeding your child?

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44. If no to the above question, why do you think a supportive policy is not important?

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APPENDIX III: BUDGET

The study is expected to cost approximately Kshs. 78,277.50. The cost of conducting the study will be met by the principal investigator .The bulk of the expenses will go towards personnel expenses during data collection. The estimated direct expenses will be Kshs 9550. The estimated travel cost for the research assistants during data collection will be Kshs 8400. A five percent overhead will also be include in the budget for any unforeseen costs. This amount being broken down to;

| | **BUDGET ITEM** | **AMOUNT** | **SUBTOTAL** |
|---|---|---|---|
| **a)** | **Personnel** | | |
| | 4 research assistants daily stipend @ Ksh.300 for 30 days | 36,000/- | |
| | Statistician/ technical assistance | 10,000/- | |
| | Cell phone charges Airtime | 1,000/- | |
| | **Total** | **47,000/-** | **47,000/-** |
| **b)** | **Direct Expenses/Stationery** | | |
| | 150 Questionnaire forms @ Ksh.20 | 3,000/- | |
| | Proposal submission fee | 2,000/- | |
| | Poster | 500/- | |
| | 10 proposal booklets @ Ksh. 200 | 2000/- | |
| | 5 research books@ Ksh.300 | 1500/- | |
| | 5 size A4 writing pad@80 | 400/- | |
| | 10 writing pens@ Ksh.15 | 150/- | |
| | **Total** | **9,550/-** | **9,550/-** |
| **c)** | **Transport Cost** | | |
| | 4 assistants @ 100 for 30 days | 12,000/- | |
| | **Total** | **12,000/-** | **12,000/-** |
| | | **TOTAL** | **68,550/-** |

| | | | |
|---|---|---|---|
| | **Overhead 5%** | | **3,427.5/-** |
| | | | |
| | **GRAND TOTAL** | | **71,977.50/-** |

APPENDIX V: TIME PLAN

| **Activity** | **Jan-April 2014** | **May-Aug 2014** | **Sept-April 2015** | **July 2015** | **Aug 2015** | **April 2016** |
|---|---|---|---|---|---|---|
| Proposal development | ◆ | | | | | |
| Departmental clearance | | ◆ | | | | |
| Ethical clearance | | | ◆ | | | |
| Data collection | | | | ◆ | | |
| Data entry and analysis | | | | | ◆ | |
| Report writing & submission | | | | | | ◆ |