

**DETERMINANTS OF BREASTFEEDING PRACTICES AMONG WOMEN
WITH CHILDREN AGED 6 - 12 MONTHS ATTENDING WELL-BABY
CLINIC AT NAIROBI WOMEN'S HOSPITAL, KENYA**

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REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE
IN NURSING OF
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DECLARATION AND APPROVAL

Declaration by the student

I affirm that this thesis is my original work and has never been submitted for an award of a degree at any institution.

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DEDICATION

This work is dedicated to my family for their emotional support and encouragement throughout the period of this work.



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I express my sincere gratitude to God who has been so faithful to me in all areas of life especially during this period. Special thanks to my lecturer, and supervisor, who have guided me tirelessly throughout the study period. My greatest thanks to my respondents, who were women with children aged 6 - 12 months attending Well-Baby Clinic at the Nairobi Women's Hospital during the period of data collection, for their patience, cooperation in giving me data for this thesis to be successful. I also extend my sincere gratitude to my entire family members who have supported me socially, spiritually and financially. I also express my gratitude to the entire MKU fraternity for giving the place and ample ground for me to complete my studies. Thank You.



ABSTRACT

There are several advantages for women, families, and communities when breast milk is the only source of nourishment for new-borns. Among mothers with infants between the ages of 6 and 12 months, the study's goal was to discover what influences their decision to breastfeed. The study's goal was to identify the variables affecting breastfeeding among mothers of children between the ages of 6 and 12 months who visited the Well-Baby clinic at Nairobi Women's Hospital. The specific objectives of the study were as follows; To establish the influence of maternal knowledge on breastfeeding practices among mothers attending Nairobi Women's Hospital's Well-Baby Clinic with children aged 6 to 12 months, to establish the influence of socio-demographic characteristics on breastfeeding practices among these mothers, and to evaluate the impact of cultural factors on breastfeeding practices among these mothers. Self-care theory of Dorothea Orem was applied in the study. 206 volunteers in all were needed for the study. The study used a cross-sectional survey design with 206 moms who visited the Well-Baby Clinic at the Nairobi Women's Hospital. 82.6 percent of infants were exclusively breastfed at 6 months, while 17.4 percent received a mix of foods. Significant Chi squared results ($p < 0.05$) were found for maternal age ($X^2 = 10.78$), education level ($X^2 = 11.42$), employment ($X^2 = 14.23$), and family income ($X^2 = 12.03$). In logistic regression, it was discovered that age above 30 (AOR = 1.89; 95 percent CI [1.12, 4.02]) and tertiary education level (AOR = 2.02; 95 percent CI [1.06, 2.06]) were both favourable predictors of exclusive breastfeeding. Optimal breastfeeding practices are influenced by socio-demographic factors, maternal awareness, and information access. Nairobi private hospitals need to boost knowledge and access to information for nursing mothers who frequent well-baby clinics in order to encourage exclusive breastfeeding. To avoid stigmatizing mothers who breastfeed, the Ministry of Health should support and encourage community-based initiatives that engage religious leaders. The study concluded that; socioeconomic characteristics of mothers such as age, level of education, occupation and household income are determinants of exclusive breastfeeding among mothers attending Well-Baby Clinic of Nairobi Women's Hospital. The following recommendations were made that there is need to involve private hospitals in national breastfeeding campaigns so as to share some of the lessons learned in promotion of exclusive breastfeeding.

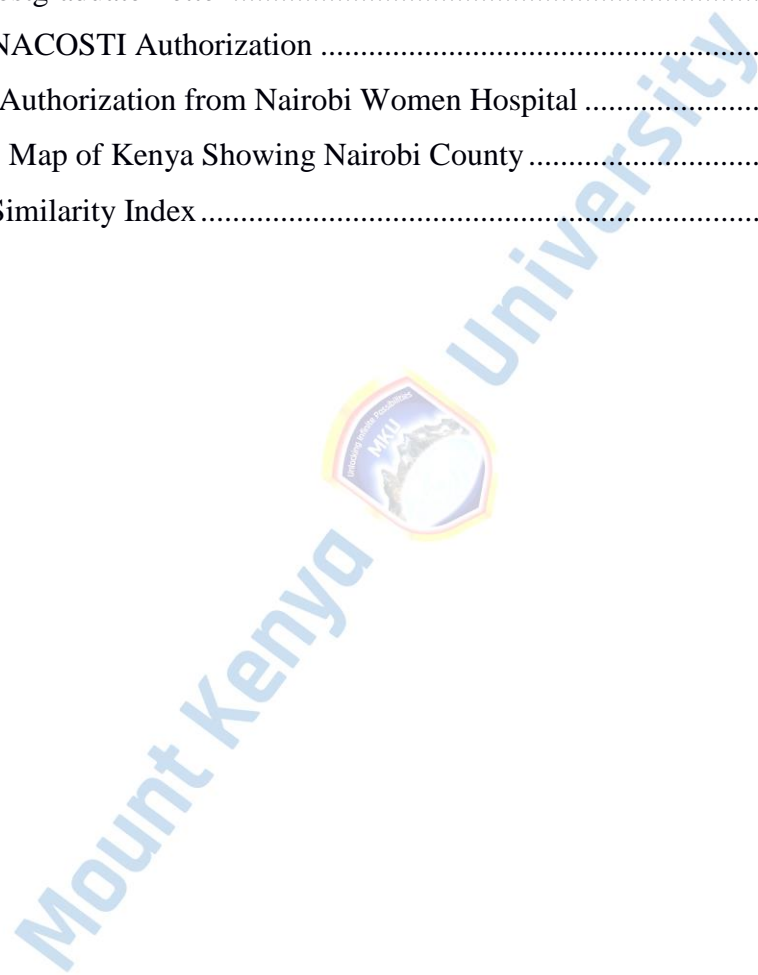
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LIST OF ABBREVIATIONS AND ACRONYMS

ACOG	:	American Congress of Obstetricians and Gynecologists
ANOVA	:	Analysis of Variance
APHRC	:	African Population and Health Research Centre
CDC	:	Centers of Disease Control
WBC	:	Well-Baby Clinic
CVD	:	Cardiovascular Disease
FGD	:	Focus Group Discussion
HIV	:	Human Immunodeficiency Virus
KDHS	:	Kenya Demographic and Health Survey
KNBS	:	Kenya National Bureau of Statistics
NWH	:	National Women's Hospital
SPSS	:	Statistical Package for Social Sciences
TBA	:	Traditional Birth Attendant
UN	:	United Nations
USA	:	United Nations Children's Education Fund
WBC	:	Well-Baby Clinic
WHO	:	World Health Organization

CHAPTER ONE

INTRODUCTION

The section offers background, statement of the problem; objectives, hypotheses as well as purpose of the study are presented in this section. Significance, limitations and scope are also part of this subdivision.

1.1 Background of the Study

Early initiation of breastfeeding is recommended by leading international and national health organizations and has been shown to have numerous health benefits for both infants and mothers (Chapman et al., 2013).

Breast milk is inexpensive, easy, and sanitary, and it has a high concentration of growth and immunity-promoting nutrients. Infants who are breastfed up to the age of two years in underdeveloped nations have been reported to have a lower risk of morbidity from infectious illnesses than those who are not (Kramer. 2004). Breast feeding has also been shown to have long-term advantages once the baby is born. High IQ levels, reduced overweight/obesity and type-1 diabetes as well as a reduction in childhood cancer are some of the benefits of exercising regularly (WHO, 2007). The mother's return to fertility can be delayed by exclusively nursing her child and her weight can be returned to pre-pregnancy levels more quickly. It also provides protection against breast and ovarian cancers, according to the World Health Organization (WHO, 2003). (Riman et al., 2004). Mothers and infants benefit from the physical nursing relationship in other ways as well, including as increased bonding and attachment, which contributes to the child's improved social development.

The World Health Organization (WHO) argues that when well done, breast-feeding may avert more than 800,000/year under 5 deaths globally (WHO, 2019).

Breast milk is regarded the best diet for infants because of the numerous health benefits it provides to women, families, and communities. Breastfeeding is beneficial not only to a child's survival, growth, and development, but also to the health and well-being of the mother (Motee & Jeewon 2014).

According to the World Health Organization (WHO), the importance of breastfeeding is numerous including its nutritional value, its safety, and boosts immunity. In addition, breast milk fights preventable neonatal morbidity and mortality like diarrhoea and other diseases (WHO, 2015; UNICEF, 2015).

Experts advise that breast feeding should be done exclusively for the first 6 months before complimentary feeding is introduced for the next two years or more. Additionally, provision of safe, nutritionally balanced, complementary feeding starting in the 6th month of life have been found to reduce neonatal morbidity and mortality (Radha *et al.*,2015).

Breast-feeding decrease has become a severe public health concern in the twenty-first century. Approximately 40 percent of toddlers under the age of six months are now exclusively breastfed internationally, including 30 percent in Sub-Saharan Africa (WHO, 2009). Inappropriate breast feeding and new-born and early child feeding habits have resulted in undernutrition, which is responsible for at least 35 percent of deaths in children under the age of five worldwide, either directly or indirectly (WHO, 2010).

Studies show that women in developing countries engage in mixed feeding of their babies due to a number of reasons including perceived lactation insufficiency and the thought that EBF is unhealthy for babies. In Nigeria for instance, exclusive breastfeeding (EBF) is low with the infants reported to be fed on formulary feeds, water and in some cases herbal tea, (Nkwanko & Brieger, 2002) while in Malawi, only 19% of the infants were exclusively breastfed.

The findings of a recent study by Tororei (2012) in Nigeria indicate that lower level and rural area facilities were disproportionately underequipped, with only 36% of delivery services delivering public health facilities having all of the necessary infrastructure and basic delivery room equipment.

According to the World Health Organization (2014), an imbalanced diet for the baby and the mother's refusal to breastfeed are connected with stunted growth, obesity, and death in children under the age of five. The rate of childhood obesity has recently increased in developing countries, according to the World Health Organization. This was found to be connected with the infants' inability to nurse (Evans, 2009).

Women generate colostrum during pregnancy and during the first several weeks of breastfeeding, according to La Leche League International (2018). Therefore, it is critical to begin breastfeeding as soon as possible after delivery. It is excellent for newborn babies because it provides a rapid amount of critical nutrients due to the presence of zinc and calcium, as well as low fat content and high quantities of carbs, proteins, and antibodies.

In Kenya's public health facilities, according to Mokua (2014), inadequate equipment, inadequate infrastructure, and understaffing have long been a feature of the system. According to Nicole (2013), increasing the health care budget line is necessary to ensure appropriate equipment, sufficient infrastructure, and sufficient employees to strengthen healthcare systems and efficiently implement universal free maternal healthcare coverage.

Over the years, Kenya as a country has experienced great socio-economic changes among the women population. In recent times, women have been more enlightened and can access education at young ages. This has led to women having higher chances for

getting a formal job leading to self-reliance that has been linked to poor breastfeeding practices, (APHRC, 2015).

Understanding the factors that influence breastfeeding practice, as well as the role played by health-care facilities, the family unit, the workplace, and the community in acting as promoters or barriers to appropriate breastfeeding practices, is critical in addressing the issue of inconsistencies in breastfeeding practice.

1.2 Problem Statement

Despite good scientific evidence of the importance of breastfeeding, the rates remain low than the recommended. There have been however, increased global sales of formula infant feeds by \$35.6 between the year 2003 and 2013, from \$22.4 to \$58, (Radha, Alessandro, Arun, Smith. & Dadhich, 2015).

Though breastfeeding rates have remained high globally, the prevalence of exclusive breastfeeding in developing countries is approximated to be 39%. The global organization estimate that that slightly more than half (58%) of 20-23-month-old babies' benefit from continued breastfeeding after 6 months though there have been much improvement in recent times with twenty-five countries showing an increase of breastfeeding rates by 20% or more (UNICEF, 2015).

Breastfeeding practices in many African societies including Kenya are influenced by various biological cultural and socioeconomic factors. According to the Kenya Demographic Health Survey (KDHS) 2014 report, approximately 60% of children aged below 6 months are exclusively breastfed. Breastfeeding has been found to drop to 61% percent by the age of 18-23 months while 15% of children below 6 months of age are fed complementary foods, with approximately 10% consuming plain water. The KDHS report also show a prevalence of 11% in bottle-feeding among children below 6

months of age and 37% of those aged 6-9 months using a bottle with a nipple, (KNBS, 2014).

Nairobi Women s Hospital Adams & Hurlingham records show a high number of mixed feeding practices among clients attending Well-Baby clinic (WBC) before six months post-delivery as shown in the table below:

Table 1: Infant Feeding Modes in the First 12 Months After Birth

Exclusively breastfed for six months	85	82	84	90	341	32.9%
Mixed-feeding before six months	86	82	83	75	326	31.5%
Complimentary feeding only	96	88	92	92	368	35.6%
Total	267	252	259	257	1035	100.0%

Source: NWH Well-Baby Clinic Statistics (2017)

The table shows the distribution of infant feeding practices in a sample of 1,035 infants. The first row indicates that 341 infants were exclusively breastfed for six months, accounting for 32.9% of the total sample. The second row shows that 326 infants were fed with a mix of breast milk and other foods before six months, representing 31.5% of the sample. The third row indicates that 368 infants were fed only with complementary foods, and not breast milk, accounting for 35.6% of the sample. The last row represents the total number of infants in the sample for each category.

In light of these breastfeeding statistics, this study attempted to highlight the breastfeeding practices among women with children aged 6 - 12 months attending Well-Baby clinic at Nairobi Women’s Hospital and the factors that influence exclusive breastfeeding.

1.3 Objectives

1.3.1 Broad Objective

To determine the factors influencing breastfeeding among mothers with children aged 6 - 12 months attending Well-Baby clinic at Nairobi Women's Hospital.

1.3.2 Specific Objectives

- 1) To determine the influence of socio-demographic characteristics on breastfeeding practices among mothers with children aged 6 - 12 months attending Well-Baby Clinic at Nairobi Women's Hospital.
- 2) To establish the influence of maternal knowledge on breastfeeding practices among mothers with children aged 6 - 12 months attending Well Baby clinic at Nairobi Women's Hospital.
- 3) To assess the influence of cultural factors on breastfeeding practices among mothers with children aged 6 - 12 months attending Well-Baby clinic at Nairobi Women's Hospital.
- 4) To examine the influence of contextual factors on breastfeeding practices among mothers with children aged 6 - 12 months attending Well-Baby clinic at Nairobi Women's Hospital.

1.4 Research Questions

1. What is the influence of socio-demographic characteristics on breastfeeding practices among mothers with children aged 6 - 12 months attending Well-Baby Clinic at Nairobi Women's Hospital?

2. What is influence of maternal knowledge on breastfeeding practices among mothers with children aged 6 - 12 months attending Well Baby clinic at Nairobi Women's Hospital?
3. What is the influence of cultural factors on breastfeeding practices among mothers with children aged 6 - 12 months attending Well-Baby clinic at Nairobi Women's Hospital?
4. What is the influence of contextual factors on breastfeeding practices among mothers with children aged 6 - 12 months attending Well-Baby clinic at Nairobi Women's Hospital?

1.5 Hypothesis

1. **H₀₁**: There is no significant relationship between socio-demographic characteristics and breastfeeding practices among mothers with children 6-12 months old attending Well-Baby clinic at Nairobi Women's Hospital.
2. **H₀₂**: Maternal knowledge level on breastfeeding has no significant influence on breastfeeding practices among mothers with children aged 6-12 months attending Well Baby clinic at Nairobi Women's Hospital.
3. **H₀₃**: Cultural factors have no significant influence on breastfeeding practices among mothers with children 6-12 months old attending Well-Baby clinic at Nairobi Women's Hospital.
4. **H₀₄**: Contextual factors have no significant influence on breastfeeding practices among women with children aged 6-12 months attending Well-Baby clinic at Nairobi Women's Hospital.

1.6 Justification of the Study

The WHO recommends that infants be exclusively breastfed for the first six months of life meaning as it is important in achieving optimal growth, development and health (WHO, 2015).

This study provides critical information regarding the practices associated with breastfeeding among women with children aged 6-12 months and the factors that influence and inform these practices. These results are important to policymakers and other stakeholders involved in developing programmes directed towards promoting Infant and Young Child Feeding practices in the local population.

The information is very useful in the Nairobi Women's Hospital Well-Baby clinic as it will play a role in promoting the implementation of good breastfeeding program. The study serves as a very critical academic significance to the researcher since it is a partial requirement for the award of a Master of Science degree in Nursing (Midwifery) of Mount Kenya University.

1.7 Limitations and Delimitations

1.7.1 Limitations

Non-cooperation and reluctance from some respondents to respond to the questionnaires might be a number of the limitations which the study might have experienced.

The study purposed to examine a representative sample of the population in order to generalize the results to the entire population. Even though the sample was determined using legitimate scientific procedures, generalizations to the total population cannot be guaranteed to be accurate. However, the error of high inaccuracy is reduced through scientific sampling.

1.7.2 Delimitations

Delimitations refer to the factors or limitations that may impact the study's scope, generalizability, or validity. In this study, several delimitations were identified. Firstly, the study was limited to women with children aged 6-12 months who were enrolled in the Well-Baby Clinic at the Nairobi Women's Hospital. This means that the findings cannot be generalized to women who did not attend the clinic or those who seek care in other health facilities.

Secondly, the study was conducted in an urban private hospital serving clients of medium and high economic status. This may limit the generalizability of the findings to other hospitals or healthcare facilities in different settings, such as rural or low-income areas.

Thirdly, the research design was cross-sectional, which means that the information gathered only provides a snapshot of the reported new-born feeding behaviours at one point in time. As a result, it may not reflect changes or variations in feeding behaviours over time.

Finally, the study's sample size was relatively small, which may limit the study's statistical power and affect the ability to make definitive conclusions.

1.8 Operational Definitions of Key Terms

Contextual Factors: Among these characteristics include the location of childbirth, the kind of delivery/mode of delivery, nursing assistance from the family, and breastfeeding support programs/counselling.

Cultural Factors: operationalized to mean beliefs, norms and community myths about breastfeeding and/or infant feeding practices in a particular population.

Exclusive Breastfeeding: feeding an infant only on breast milk including expressed milk and allows for medicine.

Maternal Knowledge: Knowledge on breastfeeding practices.

Socioeconomic Factors: refers to occupation of a mother, income of the mother household, and other indicators such as ownership of property.

Mixed Feeding: feeding an infant with both breast milk and any food or liquids including animal milk and formula.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is an objective, critical summary of past published research literature on breastfeeding practices. The literature is subdivided into global, regional and Kenya's picture on status of breastfeeding. This is followed by factors influencing the practice of breastfeeding; socio-economic and demographic factors: knowledge on breastfeeding; contextual factors affecting breastfeeding and lastly the cultural factors affecting breastfeeding.

Early beginning of breastfeeding is defined as feeding new-born babies via their mother's breast milk during the first hour of their birth. When it comes to exclusive breastfeeding, new-borns are solely given breast milk, with no extra nutrients such as oral rehydration salt solution, vitamin or mineral supplements, or medications being given to the mother. Globally, it is estimated that effective breastfeeding has the potential to avert over 800,000 under-five deaths every year. In particular, it is predicted that babies who are breastfed during the first hour after delivery have a 22 percent chance of surviving (Nkoka et al., 2019).

2.2 Global Picture on Status of Breastfeeding

Despite the advantages of early start and exclusive breastfeeding (EBF) over the world, the rates remain low, with just 50 percent of infants under two years of age being nursed within one hour of birth. Furthermore, estimates suggest that just 37 percent of babies less than six months are exclusively breastfed in low- and middle-income nations, according to the World Health Organization (Victora et al., 2016).

2.3 Status of Breastfeeding in Kenya

The demographic and health survey of 2014 showed that 40% of children below six months are not exclusively breastfed with more than half of the children aged 2 years no longer breastfeeding painting a picture of poor breastfeeding practices despite the documented scientific evidence on the benefits of good breastfeeding practices (Kenya National Bureau of Statistics, 2014).

2.4 Empirical Literature

2.4.1 Socio-demographic Factors

Different studies have yielded different results as far as socio economic status and breast feeding is concerned. According to Ajami et al. (2018), there was a significant association between socioeconomic status and the duration of breastfeeding. Specifically, the study found that individuals with middle socioeconomic status had significantly longer periods of breastfeeding compared to those with low or high socioeconomic status. Heck and colleagues discovered that lower-status employment and not working were both related with never nursing for both mothers and their partners, according to their findings (Heck et al., 2006). In their nationwide survey conducted in Brazil, Higa, Vale, and Campos (2015) found that around 70% of mothers engaged in effective breastfeeding, while approximately 30% did not comply with recommended guidelines by introducing other feeds earlier than recommended.

The 30% of the women did not practice effective breastfeeding stated that they were practicing it. This showed that breastfeeding mothers do not understand the concept of the mode of breastfeeding. The findings showed that there should be promotion of breastfeeding as a practice to both working and non-working mothers.

According to Murage (2015), a survey found that breastfeeding is practiced by 55 percent of mothers in Wajir County, according to the findings. Further research found that the primary factors that impact breastfeeding are parents, the mother's personal choice, her husband, and health care professionals.

In Peninsular Malaysia, mothers who have supportive husbands tend to practice breastfeeding more than women who do not have supportive husbands, (Tan, 2011).

Age

In a study done in China, maternal age was found to have a direct impact on breastfeeding Practices (Kaneko, Kaneita, & Yokoyama, 2005; Guo, Fu, & Scherpbier, 2013). A study by Liu, 2013 also found that early cessation of breastfeeding is more common among younger women as compared to the older ones, (Hauck, 2011; Liu, 2013). Women breastfeeding for the first time tend to need more support from health workers and peers as compared to women who already have some breastfeeding experience (Liu, 2013).

According to research done in several low-income and middle-income countries, babies of women aged below 19 years had a 30 to 40 percent higher risk of malnutrition (Harshpal, Singh Sachdev; Caroline, & Clive, Osmond, et al., 2015) young mothers were found to be having low breast-feeding rates with reasons given including maternal inexperience, lack of autonomy in decision-making which contribute to poor feeding practices, compounded by poor health-seeking behaviours. He further noted that children of young women have increased morbidity and mortality, increasing with the child's age due to effects of the poor postnatal environment No previous research has assessed maternal age in relation to breastfeeding in Kenya.

Religion

Amy and Natasha (2012), notes that very few studies have been done to assess the influence of religion to breastfeeding behaviours. The study however showed that there is a positive association between church attendance and health with higher rates of breastfeeding initiation among women attending church services frequently.

Optimum breastfeeding practices have been reported among the Hindu communities where it's been shown to continue for most children beyond infancy. According to Kathleen and Rani's (2012) review of evidence from Asian countries, some Muslim communities practice prolaternal feeds by rubbing a crushed date or honey into the infant's upper hard palate before initiating breastfeeding, as a way of transferring positive attributes from a respected family member to the new-born.

Among the Muslims, breastfeeding is believed to be a God-given right of the child as per the Islamic Law. In addition, the Quran guides the religious laws regarding breastfeeding, which gives parents a degree of flexibility and choice (Shaheda, 2015).

Education level and Occupation

The findings of a research conducted by Ajami et al. in 2018 found that holders of an associated degree or a bachelor's degree, as well as university students, were 73 percent less likely to not have 6-month EBF. Furthermore, people with median socioeconomic status were shown to be around 40% less likely to not have 6-month EBF.

In a study in Malawi, it was found that high proportion of women from northern region of Malawi where more women are educated were less likely to exclusively breastfeed compared to their counterparts in the central region (Nationally statistical office, 2019).

The findings of a research conducted by Heck et al. (2006) revealed that mothers with lower educational levels and poorer incomes were more likely to never breastfeed their

children. Never breast-feeding was also more prevalent among those whose partners had lower educational levels, or among those who did not have any information about their spouses' educational levels.

Jordanian women with lower education levels were more likely to breastfeed than Jordanian women with higher education levels, a study by Poreddi, Susheela, and Mythili found (Poreddi, Susheela and Mythili, 2015).

Fein and Roe on the other hand described employment as an obstacle to breast feeding since it leads to daily separation of the mother and her baby. They found full-time employment impact to be higher compared to part-time employment that provides adequate time for the mother to bond with the baby. The two Women in lower-status occupations were on the other hand found unable to express breast milk at work due to lack of safe facilities for storing the expressed milk (Fein & Roe, 2012).

2.4.2 Knowledge on Breastfeeding

The breastfeeding behaviour depends on the knowledge of experiences and experiences of women according to the economic situation of each culture, social support networks and own scientific knowledge of each historical and cultural time (Kalyne, Monica, Regina, Paul, & Lorena, 2013).

The study by Kalyne et al. (2013) examined the relationship between maternal education and breastfeeding duration, specifically exclusive breastfeeding, through a survival analysis. The analysis involved observing a group of mothers over time and noting the point at which they stopped exclusive breastfeeding. The results of the study indicated that mothers with higher levels of education were more likely to continue exclusive breastfeeding for a longer duration compared to those with lower levels of education. This suggests that maternal education may have a positive effect on

exclusive breastfeeding practices. Additionally, the study found that maternal education was also associated with longer overall breastfeeding duration. These findings support the idea that maternal education plays a significant role in promoting and supporting breastfeeding practices.

Knowledge on Expression of Breast Milk

In a qualitative study carried out in the coastal part of Kenya, inadequate knowledge among the young mothers was found to be a hindrance to breastfeeding among the rural mothers (Talbert et al., 2018). In a study carried out among mothers in Western Maharashtra, knowledge about methods of breast milk expression and storage was found to be not satisfactory with only 17% being knowledgeable (Priya et al., 2016).

Expressed breast milk should be used to feed the infants in scenarios where direct breastfeeding from the mothers' breast is impossible. Mothers with a known temporary contraindication to breastfeeding should be offered the option of feeding their babies using expressed breast milk to sustain milk production. (Scott et al., 2006).

High-risk infants including premature babies, can either breastfeed directly and/or be fed by cup and spoon with the mother's own expressed milk. A research by (Prime et al., 2012), found that breast milk expression can encourage professional mothers to exclusively breastfeed their baby's. According to Win et al. (2006) and Prime et al. (2012), milk expression can have a positive effect on breastfeeding duration, particularly for working mothers after their maternity leave. In a cohort study, Win et al. (2006) found that mothers who expressed breast milk were more likely to continue breastfeeding for a longer duration than those who did not express breast milk. Similarly, Prime et al. (2012) reported that mothers who gave birth to preterm infants and used milk expression to initiate and maintain lactation had higher milk outputs than

mothers of term infants. These studies suggest that milk expression can be an effective strategy to support and prolong breastfeeding, particularly for working mothers who may face barriers to breastfeeding after returning to work.

According to Scott et al., (2015), despite near-universal rates of breastfeeding initiation in Australia, only 17% of neonates are breastfed exclusively in the first 6 months. There is low utilization of expressed breast milk for feeding infants amongst Australian women which is negatively associated with poor breastfeeding practices among the employed women (Scott, Binns, Oddy, & Graham, 2006; Cox, Giglia, & Binns, 2015). Wainaina (2015), through a study done in Kenya, found that this is however different in a few developing countries where mother's return to their work by expressing breast milk for feeding the infants during the day (Wainaina, 2015).

2.4.3 Contextual Factors Affecting Breastfeeding

Place of Delivery

In a study done in Ghana, the odds of practicing EBF among mothers who delivered in at a government hospital was found to be high (Tampah-Naah & Kumi-Kyereme, 2013). The same results were also found in a study by Seid et al. (2013), in which mothers who delivered in a hospital setting were found to breastfeed exclusively compared to those who delivered at home (Seid, Yesuf, & Koye, 2013).

The antenatal period is the most ideal time to initiate promotion of breastfeeding and offer nutritional guidance to expectant women. It provides an opportunity to ensure nutritional interventions targeted to ensuring maternal and foetal well-being, optimal breastfeeding practices (Sinshaw, Ketema, & Tesfa, 2015) and birth preparedness, (Biks, Tariku, & Assefa, 2015). According to Biks et al. (2015), hospital delivery provides a good opportunity for the neonates to start bonding with their mother

immediately after birth through skin-to-skin contact. This practice increases the likelihood of early initiation of breastfeeding.

Type of Delivery

Experts advise that childbirth should occur naturally according to plan and in a safe environment while breastfeeding should begin immediately following the satisfying outcome after birth (La Leche League International, 2011).

In a community based cross-sectional study, among other factors that were found to predict breastfeeding practices, mode of delivery was found to be a strong predictor (Liben et al., 2016).

In a study done by Ekhtiari and Emami (2008), no direct link between the delivery mode and the mothers' breastfeeding practices was found. The results concurred with another study done in England in which caesarean section delivery was found not to affect the breastfeeding practices (Forster & McLachlan, 2007). This was supported further by Rabie, Hamidiazar, & Sadeghi, (2017), in their study done in Iran that found no direct link between the delivery mode and the choice of neonatal feeding among nursing mothers.

However, in a meta-analysis study involving 31 countries by Prior et al., 2012, breastfeeding rates were found higher in mothers who gave birth through caesarean section than those who delivered vaginally having gone through labour (Prior, Santhakumaran, Gale, Philipps, Modi, & Hyde, 2012).

Breastfeeding Support

Breastfeeding problems in the early postpartum period are relatively common. Family support has been shown to encourage breastfeeding, breast milk expression which

promote breast milk production. Col-Araz et al. (2013) in their study showed that midwives play a critical role in promoting optimal breastfeeding practices (Hellings & Howe, 2000; Col Araz, Aydin, Tasdemir, & Parlar-Kilic, 2013). Promotion of breastfeeding coupled with supportive hospital systems and health education done by healthcare workers improves the timing of breastfeeding initiation as well as the duration (Taveras et al., 2004; Col-Araz, Aydin, Tasdemir, & Parlar-Kilic, 2013).

Employers should play a bigger to promote good breastfeeding practices. According to Ogbuanu, Glover, Probst, Liu. & Hussey (2011), the duration of the maternity leave is a major contributing factor to early cessation of exclusive breastfeeding. Wainaina (2015) concurs with this in his research, which found out that the 3 months given for maternity leave to women after delivery in Kenya are inadequate for proper recovery. This affects mainly the mothers with preterm babies, those who delivered via CS and those who get postpartum complications (Wainaina, 2015). This leads to early cessation of breastfeeding with mothers introducing complementary feeding for their infants in the fourth-month post-delivery.

2.4.4 Cultural Factors Affecting Breastfeeding

Some of Kenya's impediments to healthy breastfeeding have been identified as cultural beliefs, myths, and misunderstandings (Wanjohi et al., 2017). Studies have also shown that cultural beliefs, myths and misconceptions are the probable cause of poor breastfeeding mostly in the urban slums (Watson BM, 2012).

Those interested in promoting breastfeeding must have a thorough understanding of the cultural influences on breastfeeding, as stated in the Global Strategy for Infant and Young Child Feeding resolutions (WHO, 2014).

Beliefs and Cultural Breastfeeding Practices

Social norms were shown to encourage breastfeeding but not EBF in research to examine breastfeeding habits and attitudes in low resource communities in Mexico (Swigart, 2017). In a study in India, respondents opined that the initial breastmilk is not healthy for the neonate (Patil & Yadavannavar, 2011). According to a study conducted by Ochola (2008) in Kenya, the belief that breast milk was insufficient for providing optimal nutrition to infants was a common reason for introducing supplementary feeds before the end of the initial 6 months. The study examined infant feeding practices and nutritional status in a pastoral community and found that many mothers perceived breast milk to be inadequate and supplemented with other foods, such as porridge and cow's milk, in addition to breastfeeding. This practice of early introduction of complementary foods is associated with an increased risk of malnutrition, infections, and mortality among infants. The study highlights the need for increased education and support for exclusive breastfeeding practices in this community.

Studies conducted by Mitra et al. (2014) and Celi et al. (2015) have shown that disparities in breastfeeding rates among different races and ethnicities are often due to unmeasured socioeconomic differences within these groups. However, the influence of race and ethnicity on breastfeeding practices has not been extensively studied in Kenya. This gap in knowledge highlights the need for further research to identify factors that may be contributing to disparities in breastfeeding rates among different racial and ethnic groups in the country. By better understanding these factors, targeted interventions can be developed to promote equitable access to and support for breastfeeding among all women in Kenya.

A study done in Delhi by Subbiah and Jeganathan (2012), showed that 25.4% of mothers said that native medicines such as ginger juice is given to the baby to increase

appetite and prevent nausea and vomiting, 24.9% said that a breastfeeding woman is not supposed to eat salty food or drink when the baby has ailments like fever.

According to Sibeko et al. (2005), mothers throw breast milk away before feeding their babies to get rid of any spirits they may have encountered. For fear of injuring the infant, mothers cease breastfeeding when they get pregnant and give new-borns water shortly after birth (Shirima, Gebre-Medhin and Greiner, 2001).

Breast-feeding alone is thought to be insufficient for infants under the age of six months in Kenya (MOPHS, 2007). As a result, 36 percent of new-borns under the age of six months are given supplemental meals, most likely mushy or semi-solid food (KDHS, 2008/2009).

Personal judgments of the mother (Calen et al, 2004) and spouse engagement were also identified as sociocultural influences in research (Garfield & Jsacco, 2006). Breastfeeding duration has also been linked to maternal variables such as maternal education, maternal age, and maternal smoking (Kristiansen, 2010). As a result, these ideas and misconceptions regarding breastfeeding must be addressed, notably through antenatal and mother and child health clinics.

2.5 Theoretical Framework

Experts argue that the process of becoming a mother is often challenging due to the experiences that women go through such as physical, emotional and psychosocial changes. According to Bollen, mothers at this stage need a lot of support since they are adapting to changes and new responsibilities. Maternity nurses, parents, partners and friends play a critical role in support of the mother and the new born (Bollen, 2015).

According to Dorothea Orem's self-care theory, maternity nurses are very important as they provide expert knowledge with women which helps in facilitating the transition to

parenthood. Dorothea Orem established this big nursing philosophy between 1959 and 2001, and it is still in use today. As stated in the theory, "Individuals with impairments may be helped by nurses who specialize in their care" in addition to intellectually participating in the medical care the individual gets from the physician." (Wayne, 2014).

Three kinds of self-care needs have been developed to classify them: general, developmental, and health deviation self-care requirements. In addition to maintaining enough intake of oxygen, water, and food, providing care connected with excretion and faeces processes as well as maintaining a healthy balance between activity and relaxation are all instances of universal self-care requisites (ADLs). Human life, functioning, and well-being are all covered in this definition, as well as the encouragement of human functioning and growth (Basavanthappa, 2009).

Developmental self-care requisite entails those self-care purposes associated with developmental processes or events during life cycle changes for example birth (Watson, 2016).

According to the Orem's theory, breastfeeding can be considered as a developmental self-care requisite since it is a developmental stage in life of the mother and baby. The responsibility of the midwife is to assist the mother in self-care as much as possible in achieving breastfeeding competence.

Nursing systems may be divided into three categories: fully compensatory, somewhat compensatory, and supportive-educational. Support from the nurse range from nursing performing most or all of the care to nursing just being there for support, education and knowledge (Basavanthappa, 2009).

Studies have shown that peer support/counsellors to be effective on increased levels of early initiation of breastfeeding and exclusive breast feeding (EBF) (Haider *et al.*, 2000).

Additional support, both informal and formal, has been shown in other studies to increase the duration of breastfeeding overall and of EBF specifically (Asma *et al.*, 2011).

Nurses play key role when it comes to breastfeeding including demonstrating proper techniques like appropriate breastfeeding, positioning of the baby to suck and taking baby off the breast. The assistance can also be through guiding and encouraging them by giving positive feedback.

The teaching entails providing the mother with knowledge on breastfeeding and answering questions. There is need for a conducive environment for learning in order to promote breastfeeding success. The goal of supportive education is to assist the mother to resume self-care by breastfeeding more independently.

2.6 Conceptual Framework

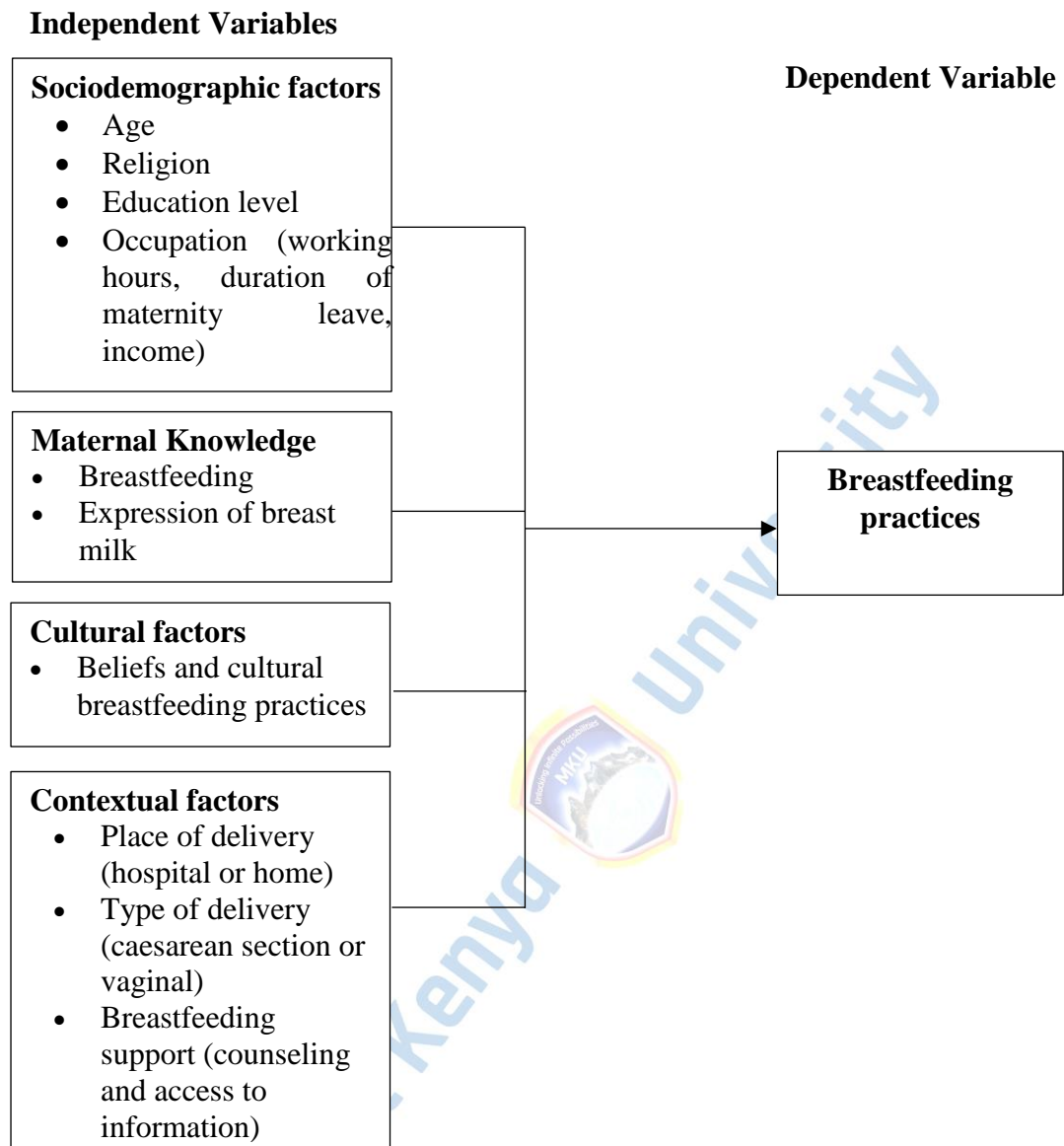


Figure 1: Conceptual Framework

Breastfeeding is a complex process guided by both physiological and psychological factors. These factors are affected by several environmental, socio-demographic and cultural factors. Conceptual framework will be used as a guide to investigate the maternal sociodemographic characteristics (age, Religion, Education level, Occupation, and income), knowledge on breastfeeding practices, contextual factors including (type of delivery, place of delivery & breastfeeding support provided), and Cultural

breastfeeding practices. Change in the attitude of the mother towards breastfeeding as well as the maternal physiological factors are assumed to occur as a result of the interaction of these factors which in turn affect the breastfeeding practices.

2.7 Research Gaps

Infant feeding is essential for health during the early ages of life. World Health Organization (2014) recommends that mothers should initiate their babies to breastfeed soon after delivery, breastfeed exclusively and continue with breastfeeding for at least two years. Colostrum contains antibodies which improve the infants' natural immunity, (Masson et al., 2013).

A study conducted in Japan found that early introduction of supplemental foods was often due to delayed and insufficient milk production (Terrant, McManaman, & Biehler, 2010). However, physiologic studies suggest that only a small percentage of women (1% to 5%) actually have true issues with milk production and supply (Inch & Renfew, 1995). It is therefore crucial that mothers be educated on the basic physiology of milk production and assured that breast milk alone is sufficient to meet their babies' nutritional needs. Similarly, a study conducted in South Africa found that mothers often turned to breast milk replacements due to a perceived poor supply of breast milk and a desire to augment it. These findings underscore the importance of providing accurate information and support to mothers to promote exclusive breastfeeding and discourage unnecessary introduction of supplemental foods or breast milk replacements.

Breast milk contains antibodies that help in the prevention of diseases like respiratory infections and diarrhoea. Breast milk also boosts the infant's immunity and response to vaccination and also has cognitive benefits as well, (Utoo et al., 2012).

There was a 49% reduction in mortality rate for children between the times of delivery to six months of age from women who practiced breastfeeding, (Natchu et al. 2012).

This study was done in Tanzania.

Premature weaning of breastfeeding is mainly due to insufficient milk production which contributes to risks of diarrhoea and less weight gain. Not practicing exclusive breastfeeding is a common practice as mothers introduce their infants to additional feeding like water, milk, milk substitutes, porridge and fruit juice, (Campos et. al 2015) and (Cai, et. al, 2012).

Mothers obtained their knowledge on nursing from friends and family, according to L.J Abdumalek (2018), with just 22 percent having no such information. Facilities and health centers were found to be less informative (15 percent), which may be related to mothers' lack of knowledge, inexperienced health staff offering guidance, and a shortage of baby-friendly hospitals in Libya, among other factors.

As Sachs, Ravidra, and Dholoka (2012) reported, such health-system inputs as healthcare staff, funds, and supplies result in immediate healthcare outputs such as childbirth or service supply in South Africa. Improvements in services are, therefore, a result of increased effort. In Kenya's public health facilities, according to Mokuu (2014), inadequate equipment, inadequate infrastructure, and understaffing have long been a feature of the system. According to Nicole (2013), increasing the health care budget line is necessary to ensure appropriate equipment, sufficient infrastructure, and sufficient employees to strengthen healthcare systems and efficiently implement universal free maternal healthcare coverage. The findings of a recent study by Tororei (2012) indicate that lower level and rural area facilities were disproportionately underequipped, with only 36% of delivery services delivering public health facilities having all of the necessary infrastructure and basic delivery room equipment.

According to UNICEF & WHO, (2017), only 44% of new-borns are breastfed within the first hour while only 40% are breastfed up to the age of two years, globally. 23 countries worldwide, have achieved 60% of breastfeeding babies who are less than two years. There is a concern whereby only, 6% of the counties in America have an exclusive breastfeeding rate above 60%.

According to McAndrew et al. (2012), the rate of breastfeeding decreases throughout the first two months. Exclusive breastfeeding rates in Kenya were recorded as 61.4% in 2014, according to the World Bank's collection of development indicators.

According to Rachel, Sheila and Diane, (2014), women's breastfeeding practices were socially influenced. Women who had challenges in initiating breastfeeding felt embarrassed about it as they were unable to breastfeed in public places making them not to enjoy breastfeeding.

Initiation, frequency and duration of breastfeeding are influenced by maternal knowledge, (Alemayehu et al., 2009).

In Goba Ethiopia, the health workers stated that despite the health education that women are given on the benefits of breastfeeding, some of the mothers did not practice breastfeeding adequately, (Setegn et al., 2012).

In Thika, 72 percent of the youngsters had had meals and other liquids other than breast milk while 28 percent had not got anything. The prevalence of breastfeeding was consequently 28 percent. Mothers indicated that early introduction of feeds assist in calming stomach discomfort was the most prevalent cause at 48.8 percent followed by treating baby's hunger at 19.5 percent and mother not producing enough milk at 19.5 percent. Advice offered by health care experts was at 4.9 percent and advice given by family or neighbours was at 7.3 percent, (Makena 2014).

This study indicated that the level of education that mothers gain about breastfeeding is of importance as they mostly adhere to what the health workers and relative share.

A study done in Nairobi Kibera by Kamau (2016), showed that breastfeeding practice is related to the level of knowledge the mother has on breastfeeding. The mothers who had high knowledge practiced breastfeeding at a prevalence rate of 54.3% compared to the others who had average and low knowledge.

According to a study done in Rongo, Migori County by Wapang'ala (2013), the study found that 64.5% of the mothers had ever breast fed their infants while only 5.5% initiated infants to breastfeed. Frequency to breastfeed differed with the responses. A total of 55.6 percent reported having nursed their infants on demand whereas, 11.1 percent breastfed 4 times or fewer and 33.3 percent breastfed at least 5 times a day. Only 40.6 percent practiced exclusive breastfeeding. This is indicated that complementing meals were provided early than WHO & UNICEF (2010) suggested time.

A study done in Delhi by Subbiah and Jeganathan (2012), revealed that 50.1 % of breastfeeding mothers said that they breastfeed whenever the baby cries while 24.7% said the breastfeed on babies' demand. 46% said that breastfeeding needs to be practices on baby's demand and milk needs to be expressed and discarded so as to avoid breast engorgement.

A study done by Motee et.al. (2013) showed that 35.7% of mothers had knowledge on the definition of breastfeeding. The study also showed that 56.5% of the participants said that they only breastfeed for five minutes as longer breastfeeding duration and frequency causes sore nipples. Colic was the main cause of not breastfeeding at 42.5%. 16% said that exclusive breastfeeding is possible while 50.1% said it is not possible, as it will not meet the feeding requirements of the baby.

According to Kimani Murage et, al. (2015), the mother's perception on insufficient milk was the main reason for not practicing effective breastfeeding. Others included, perception about one's health, the baby's health (breast milk causes fever, abdominal colic and diarrhoea) and one's body image (physical appearance).

2.8 Summary of Reviewed Literature

Reviewed literature will enlighten this study in the following ways. It will clarify the empirical foundation of the study. The literature review presented both independent and dependent variables of the title. It further looks at the empirical literature in terms of social demographic factors, Cultural practices and maternal knowledge factors as the objectives of the study. It will explain the theoretical framework of this study. It will describe the variables under investigation from research work done by other scholars. These empirical reviews will expose information gaps. Research findings generated from this investigation will bridge the identified knowledge gaps. Reviewed literature will point the study towards the most suitable research methodology to use.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology the study used to address the study objectives and specifically comprised the research design, target population, sampling and sample size, data collection techniques, validity and reliability, pre-testing, data analysis methods, and ethical considerations.

3.2 Research Design

The study was a health facility-based and utilized a descriptive cross-sectional survey design where women with children aged 6 - 12 months were sampled from the Well-Baby Clinic. This design is less time intensive and does not require follow-up which makes it less costly compared to other designs. This design allowed the researcher to solicit self-reported information directly from respondents.

3.3 Study Area

The study was conducted at Nairobi Women's Hospital (NWH) – Hurlingham & Adams branch. The NWH - Hurlingham branch is located along Argwings Kodhek road; about 4 kilometers from Nairobi City Centre. Nairobi County, Kenya. The Adams branch is located on Kileleshwa road off Ngong road and is approximately 2 kilometers from the Hurlingham branch. The two are part of the Nairobi Women's Hospital group. There are three other branches of the hospital at OngataRongai, Kitengela and Nakuru. The hospitals have a bed capacity of 160 beds and serve patients from all the districts in the Nairobi County.

Nairobi has a population of approximately 3,138,369 individuals distributed in four districts that is Nairobi West, Nairobi East, Nairobi North, and Westlands.

3.4 Target Population

Women who attended the Well-Baby Clinic at the Nairobi Women's Hospital with children aged 6 to 12 months were the study's target group. This population was selected so as to assess the breastfeeding practices of the neonates within the first 6 months of age.

3.5 Inclusion Criteria/Exclusion Criteria

3.5.1 Inclusions Criteria

All women over the age of 18 with babies between the ages of 6 and 12 months who voluntarily agreed to participate in the study while visiting the Well-Baby Clinic at the Nairobi Women's Hospital.

3.5.2 Exclusion Criteria

The exclusion criteria comprised all women aged above 18 years who failed to give consent to participate in the study. All mothers under the age of 18 who attended the Well-Baby Clinic at the Nairobi mothers' Hospital with babies aged 6 to 12 months were also excluded. Also, not included in the study were women with medical-surgical conditions like HIV/AIDS, breast abscess among others affecting breastfeeding. The study also excluded all women with adopted babies attending the Well-Baby Clinic.

3.6 Study Variables

3.6.1 Dependent Variable

Breastfeeding habits among mothers visiting the Well-Baby Clinic with infants aged 6 to 12 months served as the study's dependent variable.

3.6.2 Independent Variables

The study included several independent variables, such as maternal socioeconomic and demographic data, which included age in years, level of education, marital status, employment, and income sources. Other independent variables included maternal sources of breastfeeding information and knowledge of nursing practices, as well as cultural factors such as attitudes, conventions, and nursing habits. Contextual variables were also taken into account, including the mother's delivery history, which comprised the mother's delivery location (at home or in a health facility) and birth type (normal or caesarean).

3.7 Sampling Procedures

Using records from Nairobi Women's Hospital Well-Baby Clinic covering January 2017 to December 2017, the researcher established that 444 women had brought their children for Well-Baby services. This formed the sampling frame.

The researcher used systematic random sampling whereby the study units were chosen at regular intervals from the sampling frame. This reduced the potential for bias in selecting of the women to be considered in the population sample. The systemic random sample provided a representative sample of the target population under study. To arrive at the interval of selecting the study participants, the researcher divided the

estimated population of women with children 6 - 12 months attending Well-Baby Clinic at Nairobi Women's Hospital as per the 2017 data by the sample size as follows:

$$K = \frac{N}{n}$$

Where k is the sampling interval

N = the target population

n = the sample size.

$$K = \frac{444}{206} = 2.16$$

This means that every 2nd woman with a child aged 6-12 months attending the Well-Baby Clinic was sampled until a total of 206 participants were issued with a questionnaire. All women seeking Well-Baby Clinic services for their children were targeted for the data collection. The researcher sought consent from those selected to fill the questionnaire.

3.8 Sample Size Determination

The sample size for this study was estimated using the formula recommended by Fischer's (1967). An estimate of 50% based on the population of women with children less than 12 months attending Well-Baby Clinic at Nairobi Women 's Hospital was used.

$$n = \frac{Z^2 pq}{e^2}$$

Where Z represents the relevant confidence level (e.g., 1.96 for 95% confidence), e represents the margin of error (e.g., 0.05 = 5%), and p is the estimated percentage of a sample that has the condition of interest. 0.5 = P

$$n = \frac{1.96^2 \times 0.5 \times 0.05}{0.05^2} = 384.16$$

Since the target population for this study was 444 which was less than 10,000, the sample size was adjusted using the equation developed by Yamane *et al.* (1967):

$$nf = \frac{n}{1 + \frac{n-1}{N}}$$

Where;

nf = desired sample size (when the population is less than 10,000)

n = calculated sample size of 384

N = estimate of population in the study area

$$nf = \frac{n}{1 + \frac{(n-1)}{N}}$$

$$nf = \frac{384}{1 + \frac{(384-1)}{444}}$$

$$nf = \frac{384}{1 + \frac{(383)}{243}}$$

$$nf = \frac{384}{1 + 1.86}$$

$$nf = 206$$

The total participants required for the research was 206.

3.9 Data Collection Tools and Methods

The data was collected through researcher-administered questionnaires that elicited for quantitative data from the women with children 6-12 months attending Well-Baby Clinic at Nairobi Women's Hospital. The questionnaires had structured questions and contained four sections: the first was designed to collect data on socio-economic and

demographic characteristics, maternity knowledge, contextual factors, socio/cultural factors and breastfeeding practices.

3.10 Pre-Testing of the Data Collection Tool

In order to pre-test the questionnaire, eleven respondents (5 percent of the total sample) were issued with the questionnaires. Before the visits to collect data, the research questionnaires were piloted using drops and pick method. Pre-testing was done at Nairobi Women's Hospital Ongata Rongai branch which share similar characteristics with the Adams & Hurlingham branch. The researcher reviewed the pre-tested questionnaire and made necessary amendments. The pilot sample size entailed 1% of the sample size drawn from a population that was not part of our study. This was in line with findings of Mugenda and Mugenda (2009) that a pilot sample should be 1% of the sample size.

Piloting was vital in order to clarify any ambiguity, identify wrongly phrased items and incidences of insufficient space to write responses as well as clustering of questions. According to Orodho (2012), the process of piloting involves testing of the instruments before the actual collection of data from the selected sample in the field. The piloting exercise helped the researcher to identify ambiguous questions and gauge the appropriateness of the techniques to be used in the analysis of the data.

3.11 Validity and Reliability of the Questionnaire

3.11.1 Validity

Validity is important because it determines whether a researcher can draw meaningful and useful conclusions from scores on a particular instrument. Validity is a quality technique that allows it to measure what it claims to be measuring. It tackles the

question of whether appropriate concept indicators are being assessed, as well as the accuracy of the findings in relation to what is meant to be measured (Gay and Airasian) (2000). The validity of instruments was ascertained by discussing the questionnaire with the researcher's two supervisors and other education experts who are highly knowledgeable about the themes of the study. Responses from the pilot sample provided an indication of reliability and aptness of the questions since they assisted in identifying existing flaws. Modifications to vague instructions, ambiguous questions and any major topic omissions were made accordingly. Time required to complete questionnaires was also established. If the Content Validity Indices for both questionnaires were greater than 0.5, then it suggested that both were Valid (Amin, 2005). Validity, according to Mugenda and Mugenda (2009), is the correctness and significance of effects based on study findings.

3.11.2 Reliability

Reliability measures the degree of a research instrument producing constant outcomes after repetitive tests (Mugenda & Mugenda, 1999). A tool is reliable if it is able to quantify a variable precisely and attain comparable outcomes over a duration of period. Reliability refers to inside reliability of research tools; it is the capability of research tools to give comparable outcomes all the time under similar conditions. The reliability of the questionnaire was ascertained through internal consistency of items. Cronbach alpha coefficient was used to establish the reliability of the scales used in the study. Two alternative Cronbach's Alpha statistics were generated to test the internal consistency of the constructs employed in the investigation, as shown in Table 2.

Table 2: Reliability Analysis

Scale	No. of Items	Cronbach's Alpha (α)
Maternal Knowledge	14	0.791
Cultural factors	7	0.845

Source: Researcher (2019)

The table presents the reliability analysis results for two scales: Maternal Knowledge scale with 14 items and a Cronbach's alpha (α) value of 0.791, and Cultural factors scale with 7 items and a Cronbach's alpha (α) value of 0.845. These values indicate that both scales have good internal consistency and the items within each scale are highly related to each other. Therefore, these scales can be considered as reliable measures for future research.

Denscombe (2007) states that reliability refers to the consistency of a particular instrument giving the same outcomes over a number of repetitive trials. The importance of dependability in this research is critical since there can be no legitimate results without it (McMillan & Schumacher, 2001). In the same way as, independent administrators provide related outcomes, reliable instruments produce consistent findings (Saunders et al, 2007). Kombo and Tromp (2006), define reliability in an instrument as a measure of the degree to which a research instrument yields similar results being repeatedly subject to this same phenomenon. Data obtained in the pilot was used to compute the internal consistency of the instruments using Cronbach's formula to test reliability. This method is the most convenient as it requires a single administration of the instrument. The dependability of the instruments was found to be satisfactory, with a correlation coefficient of 0.73. This result exceeds the minimum threshold of acceptability recommended by Hair, Black, Babin, Anderson, and Tatham

(2006), which is between 0.60 and 0.70. All constructs demonstrated Cronbach's Alpha coefficients greater than the minimum threshold of 0.70, as depicted in Table 2. This finding indicates that the inter-items of the scales were strongly related and that all structures were deemed reliable for future investigations.

3.11.3 Establishment of Credibility

When determining whether a study is accurate and correct, credibility is used to establish trustworthiness through data examination, analysis, and conclusions. Adoption of appropriate, well recognized research methods was employed as well as Random sampling of individuals serving as informants. By using triangulation method in the data analysis, multiple data sources, investigative methods and or literature steered the meaning of data across the settings and populace. This type of data triangulation meaningfully increased credibility (Creswell, 2003). Trustworthiness was based more on subjective factors, but also included objective measurements such as established reliability.

3.11.4 Establishment of Dependability

Dependability shows consistency of findings. The researcher ensured the dependability (qualitative) of the instruments by collecting information from a sample of the same respondents using the same instruments at a different time. According to Avizienis et al. (2004), dependability is the system's capacity to provide services that can be justifiably relied. They also stressed the need of minimizing service failures that are more frequent and severe than is necessary.

3.12 Data Management

3.12.1 Data Cleaning and Storage

The researcher double-checked the completed surveys for accuracy before following up to confirm that all of the questions had been answered correctly. The obtained data was structured systematically to enable analysis when the surveys were finished. Only the chief researcher had access to the storage, which was kept under lock and key. Sorting and cleaning were achieved manually whereby the investigator assessed the completed questionnaires for wholeness. However, since incomplete questionnaires may end up altering the statistical significance of the information obtained, the researcher did a follow-up to ensure the respondents completed them fully. When this was done, systematic arrangement of the questionnaires was done to facilitate analysis. All data relating to my study is stored in my personal computer which has restricted access as it is protected by a password.

3.12.2 Data Analysis

Statistical Package for Social Sciences (SPSS) software version 20 was used to code, input, and clean the gathered data. The research goals were addressed using descriptive and inferential statistics. Means, standard deviations, frequencies, and percentages were utilized to characterize the research variables using descriptive statistics. The link between socioeconomic variables and babies' exclusive breastfeeding was investigated using Pearson's Chi-square tests. Logistic regression analysis was used to establish the influence of socioeconomic characteristics and contextual factors on exclusive breastfeeding of infants among mothers. Simple linear regression analysis was used to examine the relationships between maternal knowledge and cultural factors and exclusive breastfeeding among mothers.

3.12.3 Training

Two research assistants were selected from among the respondents who were familiar with the local languages and were working in the department.

They were trained and orientated in the requirements of the research for one week.

3.12.4 Dissemination Plan

The study findings will be presented in Mount Kenya University, school of nursing during the defense forum and at the school of postgraduate in the same campus.

A copy of the report will be forwarded to the Mount Kenya University Ethics Review Committee and to NACOSTI.

The research study will be published in one of the health international peer reviewed journals.

3.13 Ethical Considerations

Both the theft or misappropriation of protected invention as well as the generous unattributed literary replication of another's work are considered copyright infringement in certain jurisdictions. The unapproved utilization of concepts or one-of-a-kind strategies obtained by a specific correspondence, for example, an award or an original copy audit, is included with the burglary or misappropriation of protected innovation. All of the authors cited in the inquiry have been acknowledged in the material and have also been referenced.

In order to facilitate fair and free interactions, the researcher provided the participants with conditions that were both free and fair, which helped to put them at ease. The researcher encouraged people to share information freely and expressed appreciation for their sentiments if they were unable to reveal some sensitive details. By

encouraging participants to provide information freely and willingly, the researcher was able to provide them with specifics on the tactics that will be employed throughout the information gathering process. Before taking part in the study procedure, the participants were required to read, comprehend, and sign a permission form. It was ensured that all of the participants were 18 years old or older based on the information on their national identity cards. It was only after they had completed a permission form that information about them was acquired.

The respondents were assured by the researcher that the information they provided would be handled with the strictest confidentiality. The researcher reassured them that the information would be utilized only for the purposes outlined in the study and that no uninvited individuals would come into contact with it in any way at any point in time. As a result, the participants were able to provide honest and comprehensive information since their names and institutions were not shown anywhere on the data collecting instrument, save for a coded system that could only be deciphered by the researcher, who built and understood the system.

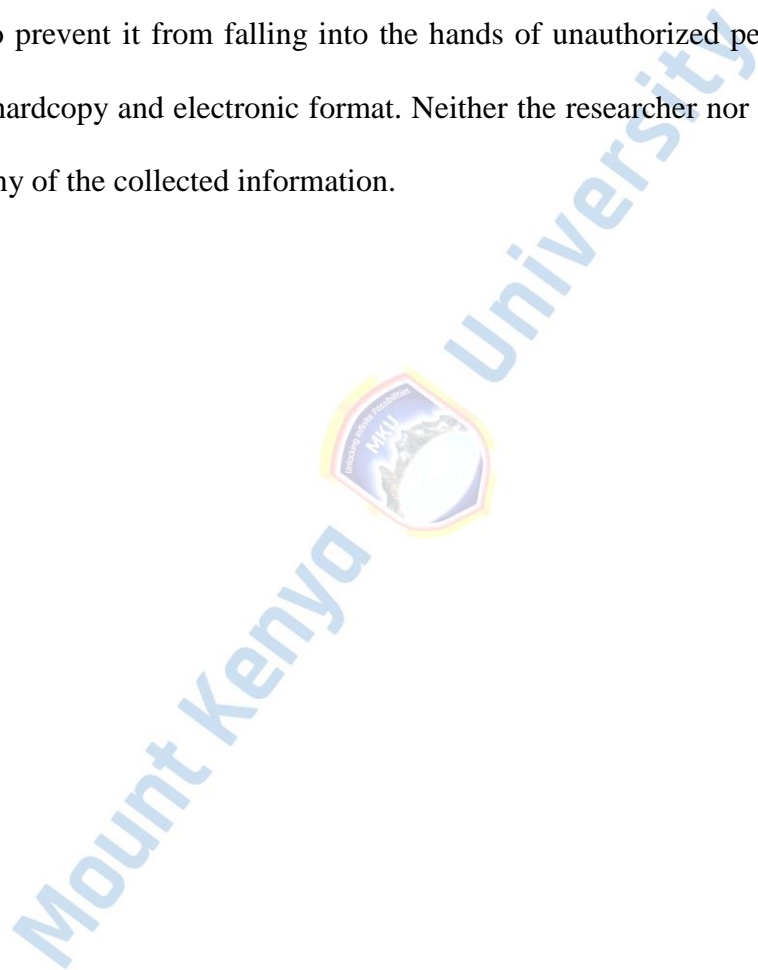
It was recommended that respondents read and comprehend the permission form before signing it to indicate that they are voluntarily taking part in the study. The overall impact of all of these procedures is to guarantee that no one gets insulted as a result of their willingness to participate in the research.

According to the study, the respondents were requested to provide information on data collection tools without disclosing their identity. The contributors to this research were classified using secret codes, which were employed in this investigation. There was no exposed information on the participants, no information in black and white, and no other kinds of communication regarding the events between the researcher and the

respondents were used. Because of this, the researcher was much more successful in avoiding biased replies from the respondents.

Respondents were told that they had the option of declining to participate in the research if they so desired. They were asked to provide information about their personal time schedule.

The information gathered from the respondents was processed and placed with great care in order to prevent it from falling into the hands of unauthorized persons. It was stored in both hardcopy and electronic format. Neither the researcher nor anybody else had access to any of the collected information.



CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

In this chapter, data is presented based on the specific objectives of the study starting from the overall questionnaire response rate, followed by the biographic characteristics of the respondents i.e. their ages, marital statuses, and ethnicity, followed by infants' biographic data i.e. ages in months, gender and position of birth in the family.

The researcher then presents the breastfeeding practices of the respondents followed by the socio-demographic factors influencing breastfeeding practices. The socio-cultural practices that influenced breastfeeding and finally the facility related factors that influenced breastfeeding practices.

4.2 Response Rate

The survey was conducted on 206 participants attending Well-Baby clinic at Nairobi Women's Hospital whose children were aged 6 - 12 months. After discarding 22 unusable questionnaires on the basis of incompleteness, 184 useful ones were coded for analysis accounting for 89.3% response rate.

At least half of the completed surveys must be accessible for data analysis, according to (Mugenda & Mugenda, 2003). This questionnaire response rate choice was made in accordance with the findings of Babbie (2007), who concluded that a fifty percent return rate was sufficient for any data analysis, but that a return rate of seventy percent or more was considered extremely excellent. Because of this, the researcher determined that this was an exceptional return rate that was sufficient to proceed with the investigation. After coding and cleaning of the data, some of the questionnaires had some areas which had not been filled particularly those major research variables where

midpoint in the scale was assigned as the response to those specific items as recommended (Sekeran, 2013).

4.3 Breastfeeding Practices among Mothers Attending Well-Baby Clinic

Table 3 presents the results of the breastfeeding practices among mothers attending Well-Baby clinic at Nairobi Women’s Hospital.

Table 3: Breastfeeding Practices among Mothers Attending Well-Baby Clinic

Feeding practices	Frequency	Percent (%)
Currently breastfeeding	142	77.2
Early initiation of breastfeeding	171	92.9
Offer colostrum to baby after delivery	165	89.7
Exclusive breastfeeding under 6 months	152	82.6
Continuous breastfeeding at 1 year	156	84.8
N = 184		

Source: Field Data (2021)

As reported, the current nursing rate among the participants was 77.2 percent. Almost all of the mothers (92.9 percent) initiated breastfeeding within two hours after delivery, and nearly all (90.0 percent) provided colostrum to their newborns. The rate of exclusive breastfeeding for infants under 6 months was 82.6 percent, and the proportion of continued breastfeeding at 1 year was 84.8 percent.

4.3.1 Type of complimentary feed introduced to the children

The study found all the 31% of the respondents who introduced complimentary feeding within 6 months, used only formula feed. None used glucose or water.

Table 4: Age at which Complimentary Feeding was Initiated

Age in months	Frequency	Percent (%)
0 - 3 months	14	7.6
4 - 6 months	18	9.8
7 - 9 months	152	82.6
10 - 12 months	0	0.0

N = 184

Source: Field Data (2021)

Only 17.4% of the infants aged below 6 months were introduced to complementary feeding with 7.6% of these having been introduced to complimentary feeds aged less than 3 months. All babies were on complimentary feeds by the age of 9 months.

4.4 Socio-demographic Characteristics

This section presents the results of socio-economic characteristics and their influence on exclusive breastfeeding of infants less than 6 months among mothers. The socio-economic characteristics comprise age, marital status, religion, occupation, level of education completed, and household's total income per month. Results are presented in Table 5. More than half (62.0%) of mothers were aged less than 30 years. The majority of mothers, 156 (84.8%) were married WITH 50.5% OF THEM BEING Protestants. The majority of mothers (90.2%) had completed tertiary education (college and/or University). Nearly half (47.8%) the mothers were in formal employment and their total household income ranged between KSh 60,001 – 80,000.

Table 5: Socio-demographic Characteristics

Variables	Category	Frequency	Percent (%)
Age in year	≤30	114	62.0
	>30	70	38.0
Marital status	Single	18	9.8
	Married	156	84.8
	Divorced	10	5.4
Religion	Catholic	74	40.2
	Protestant	93	50.5
	Muslim	17	9.2
Level of education completed	Secondary	18	9.8
	Tertiary	166	90.2
Occupation	Housewife	65	35.3
	Student	26	14.1
	Self-employed	5	2.7
	Formal employment	88	47.8
Household Income	20,000-40,000	26	14.1
	40,001-60,000	20	10.9
	60,001-80,000	83	45.1
	>80,000	55	29.9

Source: Field Data (2021)

4.4.1 Who determines the choice of feeding practice

The study found majority of women (89%) had discretion of the feeding practice, although 7% were influenced by their spouse and 4% by their extended family members.

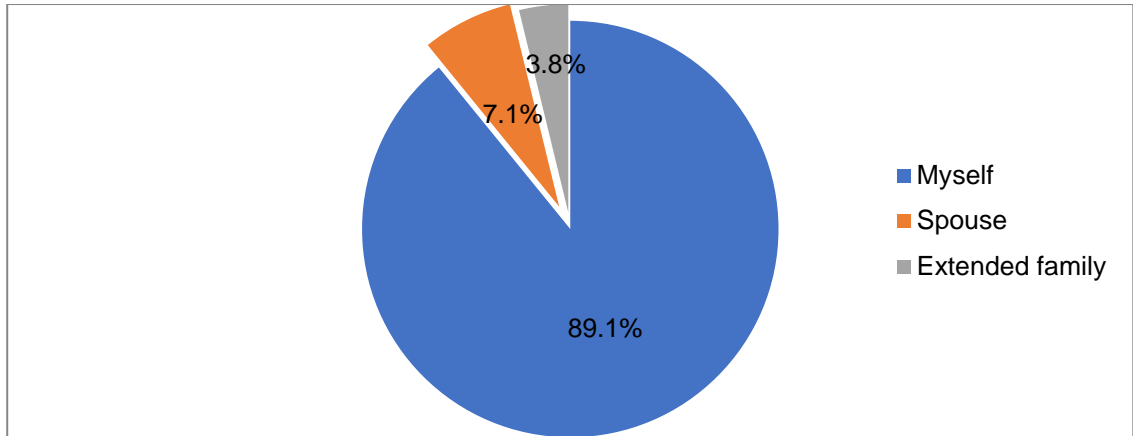


Figure 2: Who Determines Choice of Feeding

4.4.2 Association between socioeconomic and breastfeeding practices

A chi-square test of independence was performed to examine the relation between socioeconomic characteristics of mothers and breastfeeding practices of infants below 12 months. Results are presented in Table 6. As indicated, the relationships between, age $X^2(1) = 10.78, p < 0.05$, level of education $X^2(1) = 11.42, p < 0.05$, occupation $X^2(3) = 14.23, p < 0.05$ and household income $X^2(3) = 12.03, p < 0.05$ were significant factors in influencing breastfeeding practices. However, marital status $X^2(2) = 11.23, p > 0.05$ and religion $X^2(2) = 10.01, p > 0.05$ were not significantly associated with differences in breastfeeding practices of infants below 12 months.

Table 6: Association between Socioeconomic Characteristics and Breastfeeding Practices

Exclusive Breastfeeding of Infant below 6 months					
Socioeconomic characteristics		Yes	No		
Variables	Category	% (n)	% (n)	X²(df)	p-value
Age in year	<30	42.8 (30)	40 (57.2)	10.78 (1)	0.041*
	≥30	85.9 (98)	14.1 (16)		
Marital status	Single	38.9 (7)	61.1 (11)	11.23 (2)	0.064
	Married	64.7 (101)	55 (35.2)		
	Divorced	80.0 (8)	20.0(2)		
Religion	Catholic	59.5 (44)	40.5 (30)	10.01 (2)	0.061
	Protestant	66.7 (62)	33.3 (31)		
	Muslim	41.2 (7)	58.8 (10)		
Level of education completed	Secondary	44.4 (8)	55.5 (10)	11.42 (1)	0.014*
	Tertiary	78.9 (131)	21.1 (35)		
Occupation	Housewife	92.3 (60)	7.7 (5)	14.23 (3)	0.011*
	Student	46.2 (12)	53.8 (14)		
	Self-employed	80.0 (4)	20.0 (1)		
	Formal employment	81.8 (72)	18.2 (16)		
Household Income	20,000-40,000	76.9 (20)	23.1 (6)	12.03 (3)	0.047*
	40,001-60,000	81.8 (9)	11 (18.2)		
	60,001-80,000	27.7 (23)	72.3 (60)		
	>80,000	20.0 (11)	80.0 (44)		

Notes: CI = Confidence Interval, $p < 0.05$

Source: Field Data (2021)

4.4.3 Socioeconomic characteristics on breastfeeding practices among mothers

Tests for H_{01} that suggested no significant relationships between the socioeconomic characteristics (age in year, marital status, religion, level of education, occupation, and household income) and breastfeeding practices of infants among mothers attending Well-Baby clinic were conducted using multivariate logistical regression analysis (Table 7). Mothers younger than 30 years old were more likely to exclusively breastfeed their babies, according to the study results (AOR 1.89, 95 percent CI 1.12, 4.02). Breastfeeding was more common among mothers with university education than those with secondary education, according to a new study (AOR 2.02, 95 percent CI 1.06, 2.06).



Table 7: Socioeconomic Characteristics and Breastfeeding Practices Among Mothers

Socioeconomic characteristics		COR [95%CI]	AOR [95%CI]	p value
Variables	Category			
Age in year	<30	1	1	
	≥30	2.17[1.16, 4.21]	1.89[1.12, 4.02]	0.000
Marital status	Single	1	1	
	Married	0.78[0.78, 1.03]	0.67[0.69, 1.01]	0.078
	Divorced	0.36[0.69, 0.89]	0.31[0.54, 0.75]	0.064
Religion	Catholic	1	1	
	Protestant	1.23[0.89, 1.20]	1.12[0.78, 1.23]	0.091
	Muslim	1.02[0.84, 1.12]	0.99[0.78, 0.95]	0.074
Level of education completed	Secondary	1	1	
	Tertiary	2.23[1.12, 2.23]	2.02[1.06, 2.06]	0.000
Occupation	Housewife	2.65[0.89, 1.84]	2.23[0.78, 1.95]	0.000
	Student	1.89[1.12, 1.45]	1.71[1.14, 1.56]	-
	Self-employed	1.75[0.99, 1.56]	1.62[0.87, 1.32]	-
	Formal employment	1	1	
Household Income	20,000-40,000	2.31[1.36, 2.30]	2.03[1.21, 2.10]	0.000
	40,001-60,000	1.15[0.69, 1.96]	1.10[0.78, 2.03]	
	60,001-80,000	1.12[0.87, 1.84]	1.08[0.78, 2.23]	
	>80,000	1	1	

Source: Field Data (2021)

Mothers who were housewives were more likely to practice better exclusive breastfeeding than their counterparts who were in formal employment (AOR 2.23, 95% CI 0.78, 1.95). Likewise, mothers who were students and self-employed were more

likely to practice exclusive breastfeeding than those formerly employed. With regard to household income, mothers earning between KSh 20,000 to 40, 000 were more likely to practice exclusive breastfeeding compared with those earning above KSh 40,000 (AOR 2.03, 95% CI 1.21, 2.10).

4.5 Maternal Knowledge and Breastfeeding of Infants

4.5.1 Mode of Infant Feeding 2 Days after Delivery

Mothers were asked to indicate the mode of feeding they used with the first 2 days after delivery. Frequencies and percentages are presented in Table 8. As presented, results revealed that the majority of mothers (66.3%) fed their infants through exclusive breastfeeding.

Table 8: Mode of Feeding Within First 2 days

	Frequency	Percent
Breast milk only	122	66.3
Breast milk and fluids	49	26.6
Formula feeding only	13	7.1
Total	184	100.0

Source: Field Data (2021)

4.5.2 Descriptive Results of Maternal Knowledge about Breastfeeding Infants

Means and standard deviations of maternal knowledge on breastfeeding were performed and results are presented in Table 9. Results indicated that mothers knew that breastmilk has all the important nutrients needed by an infant ($M = 4.21$, $SD = 0.891$) and that it is more affordable than formula feeds ($M = 4.10$, $SD = 0.678$). The mothers also knew that digestion of breastmilk is better than that of formula feeds ($M =$

4.03, SD = 0.821). In addition, mothers knew that breastfeeding benefits were not limited to a specific period (M = 2.68, SD = 0.754) and that formula and breastmilk do not have similar nutrients (M = 2.75, SD = 0.715).

Table 9: Descriptive Statistics of Maternal Knowledge about Breastfeeding

Variables	M	SD
Breastfeeding benefits limited to specific period	2.68	.754
Formula feeding convenient than breastfeeding	3.05	1.234
Formula feeds gain weight than breastfeeding	3.05	1.234
Breastfed infants healthier than formula fed	3.53	1.024
Most ideal food for baby is breast milk	4.01	.803
Women who do not breastfeed miss mother to child bonding	3.39	1.330
Breast milk more affordable than formula	4.10	.678
Breast milk enhance bond between mother and baby	3.93	.866
Formula feeding better for employed mothers	3.06	1.229
Breastfeeding more convenient than formula feeding	3.53	1.024
Breastmilk digestion better than formula	4.03	0.821
Breastfeeding helps loose pre-pregnancy weight	3.25	1.023
Formula and breastmilk have similar benefits	2.75	0.715
Breastmilk has all important nutrients	4.21	0.891

Notes: N = 184, M = Mean, SD =Standard Deviation

Source: Field Data (2021)

4.5.3 Influence of Maternal Knowledge on Breastfeeding practices among Mothers

The study sought to establish the relationship between maternal knowledge and breastfeeding practices among mothers. A null hypothesis (H_{02}) was used and suggested a non-existence of significant relationship between the variables. A simple linear regression was used to investigate the relationship between the two variables. Results presented in Table 10 revealed a significant relationship between maternal knowledge and breastfeeding practices of infants among mothers ($p < 0.001$). The coefficient of determination value (R^2) was 0.231 meaning that 23.1% of the variation in practicing exclusive breastfeeding among mothers could be explained by the regression model containing maternal knowledge.

Table 10: Regression Coefficients of Maternal Knowledge on Breastfeeding Practices

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	0.84	0.511		2.13	0.00
Maternal Knowledge	1.01	0.052	1.09	1.23	0.00

- Dependent Variable: Breastfeeding practices
- Coefficient of determination (R^2) = 0.231 (23.1%)
- Results significant at 0.01 level

Source: Field Data (2021)

Table 10 indicates that the constant had a statistically significant impact ($B = 0.54$, $t = 2.13$, $p < 0.001$). The simple linear regression model demonstrated that exclusive

breastfeeding of infants (y) was positively correlated with maternal knowledge ($\beta = 1.01$, p-value < 0.05), with a constant of 0.84. Additionally, workplace factors were identified as influential in determining exclusive breastfeeding practices among infants. The study found, 50.5% (93) of the women had formal employment, but none of their work place had a designated place to breast feed or express breast milk. Also, none of the workplace had a fridge to store expressed milk to feed children. A chi-square test of association revealed a significant association exists between exclusive breast feeding and whether a woman is employed or not ($X^2 (1) = 5.239$, p 0.022). The odds ratio revealed the odds of working women achieving exclusive breast feeding were 0.484 less compared to unemployed (OR: 0.485 (CI: 0.260-0.905), p 0.023).

4.6 Hospital Factors Affecting Exclusive Breastfeeding Practices

The findings revealed 15.2% (n=28) of women were not offered any help by healthcare workers in feeding their babies while in the hospital.

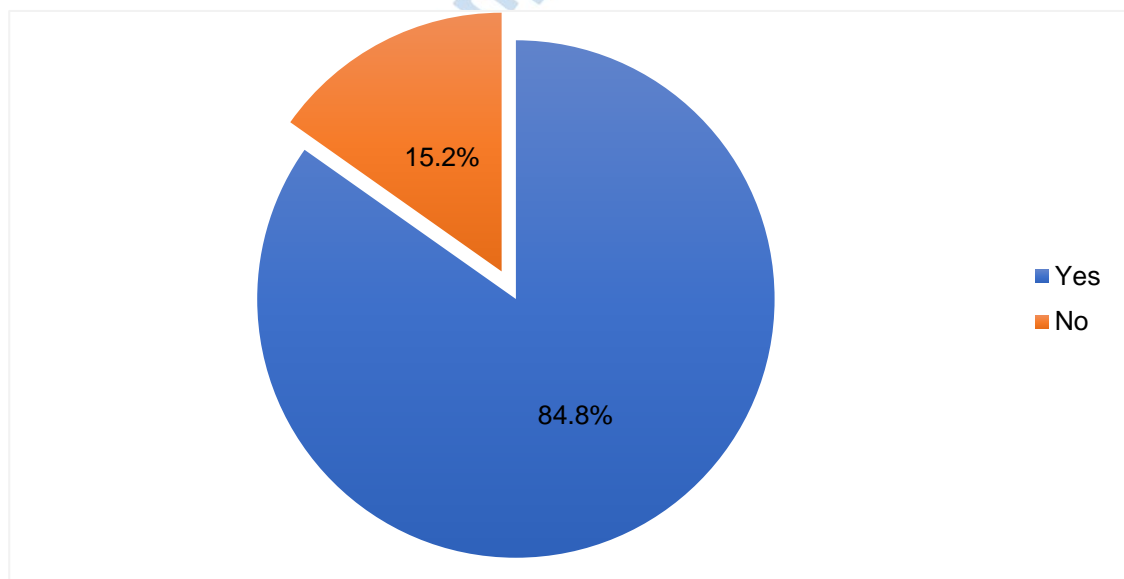


Figure 3: Did hospital staff offer any help regarding feeding your baby

The results revealed 69% (n=127) of women who reported healthcare workers were very useful in feeding infants and 9.2% (17) reported they were not useful. It was also found that, the HCWs did not provide free formula samples to any woman after discharging them from the hospital.

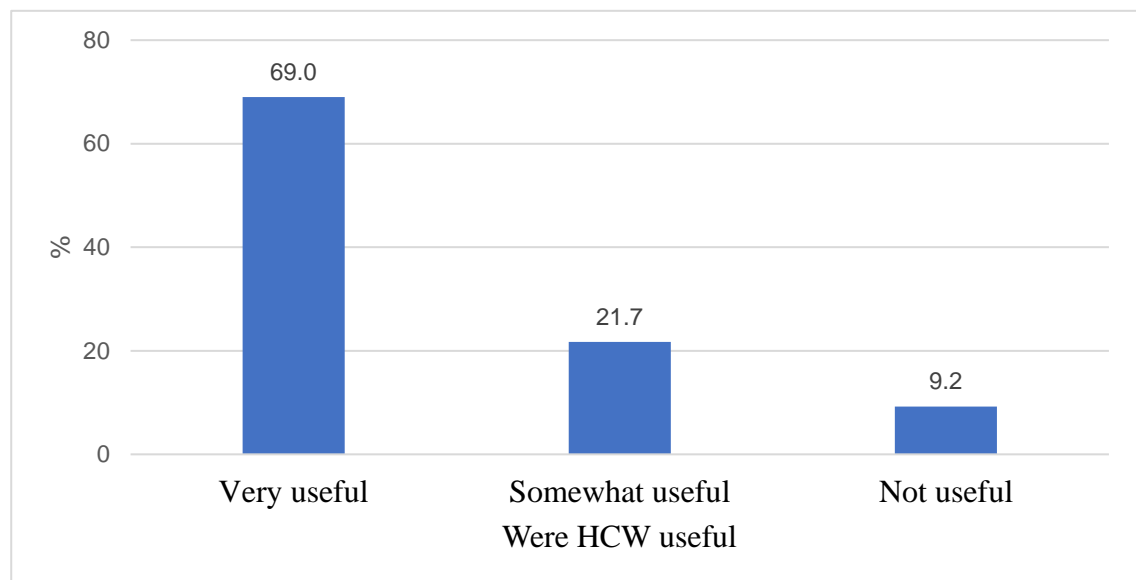


Figure 4: HCWs useful in feeding your infant

4.7 Cultural Factors and Breastfeeding Practices of Infants

Table 11 demonstrates the means and standard deviations on the analysis of data collected on cultural factors. As presented, the means of all items used in this construct ranged between 1.22 to 3.05. The women indicated that according to their culture, breast milk should not be discarded ($M = 1.22$, $SD = 0.716$). They also indicated that supplementary water was not necessary to quench infants' thirst ($M = 1.30$, $SD = 0.728$) and that there were cultural beliefs that prohibited breastfeeding in public areas ($M = 1.45$, $SD = 0.910$). In addition, mothers indicated that there were no cultural beliefs on lack of breastmilk secretion in the first 3 days following birth ($M = 2.20$, $SD = 0.951$).

Table 11: Descriptive Statistics of Cultural Factors

Variables	M	SD
First breast milk should be discarded	1.22	.716
Supplementary water necessary for baby thirst	1.30	.728
Supplementary feeds enhance growth	2.68	.754
No milk secretion in the first 3 days of birth	2.20	.951
Formula fed babies gain weight faster	3.05	1.234
Breastfeeding should not be done in public places	1.45	.910
When woman breastfeeds, father feels isolated	2.59	.791

Notes: N = 184, M = Mean, SD =Standard Deviation

Source: Field Data (2021)

4.7.1 Influence of Cultural Factors on Breastfeeding Practices of Infants

The study sought to establish the relationship between cultural factors and breastfeeding practices among mothers. A null hypothesis (H_{03}) was used and proposed a non-existence of significant relationship between the variables. A simple linear regression was used to examine the relationship between the two variables. Results presented in Table 12 revealed there's no significant relationship between cultural factors and breastfeeding practices of infants below 12 months old attending wellbaby clinic at NWH ($p > 0.05$). Thus, H_{03} was not rejected.

Table 12: Regression Coefficients of Cultural Factors on Breastfeeding Practices

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.02	0.251		1.89	0.276
1 Cultural factors	1.19	0.412	1.21	2.03	0.512

- Dependent Variable: Exclusive breastfeeding of infants

Source: Field Data (2021)

4.8 Contextual Factors and Breastfeeding Practices of Infants

Table 13 presents results of the analysis of mothers' contextual factors and breastfeeding practices of infants. Contextual factors comprised infant birth weight, mode of delivery, sex of baby, number of children, place of delivery, and availability of feeding information.

Table 13: Contextual Factors Associated with Breastfeeding among Mothers

Variables	Category	n	%
Infant birth weight	< 2.5 Kg	25	13.5
	2.5 – 4 Kg	153	83.2
	> 4 Kg	04	3.3
Mode of delivery	Vaginal birth	153	83.2
	Caesarean section	29	15.8
Sex of baby	Male	79	42.9
	Female	105	57.1
Number of children	1	55	29.9
	2	85	46.2
	> 3	42	22.9
Place of delivery	Health facility	182	98.9
	Home	2	1.1
Access to breastfeeding information	Yes	155	84.2
	No	29	15.8

Notes: n = 184

Source: Field Data (2021)

Results indicated that infant birth weight, mode of delivery, sex of baby, and place of delivery did not have significant influence on breastfeeding practices of infants among mothers attending well baby clinic at NWH. However, mothers who had two children were more likely to breastfeed when compared with those with 1 child (AOR = 2.02, 95% CI = 1.03, 4.03). Those with more than three children were even more likely to breastfed their infant more than those with 2 children and 1 child (AOR = 2.12, 95% CI = 1.11, 3.20). Mothers who had access to breastfeeding information were more likely to exclusively breastfed their infants compared to those who had no access (AOR 2.21; 95% CI 1.03, 2.69).



Table 14: Contextual Factors Associated with Breastfeeding among Mothers

Contextual factors	COR [95% CI]	AOR [95% CI]
Infant birth weight		
< 2.5 Kg	1.21[0.45, 2.03]	-
2.5 – 4 Kg	1.77[0.62, 5.02]	-
> 4 Kg	1	
Mode of delivery		
Vaginal birth	1	
Cesarean section	0.68[0.45, 1.23]	-
Sex of baby		
Male	1	
Female	0.89[0.84, 1.54]	-
Number of children		
1	1	1
2	1.56[0.78, 2.01]	*2.02[1.03, 4.03]
> 3	1.89[1.02, 3.06]	*2.12[1.11, 3.20]
Place of delivery		
Health facility	1	
Home	1.67[0.35, 1.42]	-
Access to breastfeeding information		
Yes	1.31[0.85, 2.01]	*2.21[1.03, 2.69]
No	1	1

Notes: COR = Crude Odd Ratio, AOR = Adjusted Odd Ratio, CI = Confidence Interval, * $p < 0.05$

Source: Field Data (2021)

4.9 Association between Mode of Delivery and Breast-feeding Initiation

There was a significant association between mode of delivery and breast feeding initiation ($X^2(1)=37.399$, $p 0.000$). The odds ratio revealed women who delivered via vagina mode were 11 times more likely initiate breastfeeding within 2 hours of delivery compared to CS delivery mothers (OR: 11.33 (CI: 4.889-26.262), $p 0.000$).

Table 15: Association between Mode of Delivery and Breast-feeding Initiation

		Breastfeeding Initiation				
		After 2 Hour	within 2 hour	X^2	<i>df</i>	<i>P</i>
Mode of delivery	CS	49	8	37.4	1	0.000
	Vaginal	40	74			

Source: Field Data (2021)

4.10 Association between Breastfeeding Practices and Breastfeeding Information

The results revealed a significant association between breastfeeding initiation, belief of either formula or breast milk is healthier and having received breastfeeding information from the hospital staff ($p < 0.001$). There was significant association between exclusive breast feeding and having received breastfeeding information from the hospital staff ($p < 0.001$). When compared, women who received breastfeeding information from the hospital staff had lower odds breastfeeding within one hour after birth than those who did not (OR: 0.248 CI: 0.099-0.621). They also had lower odds of believing Breast milk is the best for a child (OR 0.383 CI 0.163-0.901).

Table 16: Association between Breastfeeding Practices and Breastfeeding Information

		Received breastfeeding information from the hospital staff			
		No	Yes	X ²	p-value
Exclusive Breastfeeding	Not exclusive	7	55	1.118	0.290
Breastfeeding Initiation	Exclusive	21	101		
	After 2 Hour within 2 hours	7	82	9.814	0.002
Formula is healthier than breast milk	Agree	28	59	36.822	0.000*
	Disagree	0	97		
Breast milk is healthier than formula fed	Agree	28	59	36.822	0.000*
	Disagree	0	97		
Breast milk is the best for a child	Agree	17	125	5.079	0.024
	Disagree	11	31		

The p-value is based on fisher's exact test and (-) odds ratio cannot be calculated due to presence of zero in a cell.

Source: Field Data (2021)

4.11 Employment and Exclusive Breastfeeding

The results revealed that none of the workplaces had a place to express/feed breast milk or have a fridge. The findings showed only 74.2% (n=69) of working women had exclusive breast feeding and 53.4% had breast feeding initiation within one hour. However, the results revealed working women were 2.06 times more likely exclusive breastfeed compared to women not working (OR: 2.06, CI (1.11-3.85), p 0.023). This

can be attributed to the fact more educated women were more likely to exclusive breast feed.

Table 17: Employment and Exclusive Breastfeeding

Breastfeeding	Employer supporting BF	not working	X²	df	p
Not exclusive	24 (25.8%)	38 (41.8%)	5.239	1	0.022
Exclusive	69 (74.2%)	53 (58.2%)			
Initiation After 2 Hour	41 (46.6%)	48 (57.8%)	2.162	1	0.141
Initiation Within 2 hour	47 (53.4%)	35 (42.2%)			

Source: Field Data (2021)

4.12 Discussion

4.12.1 Breastfeeding Practices among Mothers

Breastfeeding of infants is very imperative and an economical way of feeding globally. This study revealed that a 77.2% of mothers were currently breastfeeding their babies and a 92.9% initiation rate of breastfeeding which is similar to studies conducted in India (Chudasama, Amin, & Parikh, 2009), Egypt (Al Ghwass & Ahmed, 2011), South Africa (Ghuman, Saloojee, & Morris, 2009), and Ethiopia (Alemayehu, Haidar, & Habte, 2009; Setegn, Belachew, Gerbaba, Deribe, Deribew, & Biadgilign, 2012). This high rate of breastfeeding could be attributed to community acceptance and involvement, private and public stakeholders concern, health facilities participation and the increased efforts to ensure the government health agenda is achieved. A study conducted in Nigeria by Ogunlesi, Oduwole, and Ogundeyi (2010) examined the factors influencing breastfeeding practices among mothers in a tertiary health institution. The study revealed a 70.6% rate of exclusive breastfeeding among mothers

with infants under 6 months. The factors that influenced exclusive breastfeeding included maternal age, educational status, parity, and antenatal care attendance.

Appiah, O'Leary, and Lee (2017) examined the prevalence and risk factors for exclusive breastfeeding among women in a rural community in Ghana. According to the survey, moms of babies less than 6 months exclusively breastfed their children at a rate of 69.2%. Age, education, and employment of the mother were all significantly linked to exclusive breastfeeding.

The study also revealed a 82.6% exclusive breastfeeding rate of infants under 6 months, which supported results of the studies conducted in Jordan (Oweis, Tayem, & Froelicher, 2009), South Africa (Aidam, Perez-Escamilla, Lartey, Aidam, 2005), Ghana (WHO, 2003) and Ethiopia (Setegn et al., 2012) where rates were 70.0%, 76.5%, 79.0%, and 81.0% respectively. A contrasting finding was observed in a study conducted in India by Chudasama, Amin, & Parikh (2009), where the rate of exclusive breastfeeding was reported to be 62.0%. This variation could be attributed to differences in maternal awareness, access to information on infant breastfeeding, access to health facility, culture, socioeconomic factors, and health professionals' involvement.

Chong et al. (2014) looked at the incidence of and variables affecting mothers' decisions to exclusively breastfeed in a rural community in Malaysia. The research found that moms of babies less than six months exclusively breastfed at a rate of 43.4%. Maternal age, educational attainment, and work position were all determining variables in the decision to exclusively breastfeed.

A study conducted in Iran by Mohammadpour, Sharifzadeh, and Mousavinasab (2013) examined the factors influencing exclusive breastfeeding among mothers in a rural community. The study revealed a 51.7% rate of exclusive breastfeeding among mothers

with infants under 6 months. The factors influencing exclusive breastfeeding included maternal age, educational level, and income level.

Khowaja, Qureshi, and Sheikh (2011) examined the prevalence and risk factors for exclusive breastfeeding among women in a rural community in Pakistan. According to the survey, 37.8% of moms with babies less than 6 months exclusively breastfed their children. Age, education, and employment of the mother were all significantly linked to exclusive breastfeeding.

4.12.2 Socioeconomic Factors associated with Breastfeeding of Infants

Results indicated that mothers' age, level of education, occupation and household income were all associated with breastfeeding of infant below 12 months. The Chi-square results for these variables were $X^2 = 10.78$, $X^2 = 11.42$, $X^2 = 14.23$, and $X^2 = 12.03$ respectively and significant ($p < 0.05$). The logistic regression analysis showed that older mothers (>30 years) were more likely to practice exclusive breastfeeding (AOR = 1.89; 95% CI 1.12, 4.02) than their counterparts aged < 30 years of age. This could be attributed to the fact that as the mother's age increased, infant management experiences also increase. Mothers with tertiary education were more than two times likely to exclusively breastfeed their babies than those with secondary school education (AOR = 2.02; 95% CI = 1.06, 2.06). The findings of this study are consistent with previous research conducted by Mascarenhas et al. (2006), WHO (2003), and Setegn et al. (2011), which demonstrated that mothers with lower levels of education had insufficient scientific knowledge and experienced difficulties in comprehending written messages and antenatal care related to exclusive breastfeeding. Thus, such mothers would introduce supplementary feeding to their infants at earlier time by assuming that it is important compared to those with tertiary education.

In the case of occupation, mothers who were housewives were more likely to practice exclusive breastfeeding than those who were students, self-employed or formally employed (AOR = 2.23; 95% CI 0.78, 1.95). This finding is in agreement with a study that was conducted in Saudi Arabia (El-Gilany, Shady, Helal, 2011) and Ethiopia (Alemayehu, Haidar, Habte, 2009). The reason could be that employed mothers may be relatively overloaded with their office obligations or school obligations (in case of student mothers) thus limiting time with their infants. Lack of adequate breastfeeding facilities at workplace may also have an influence on breastfeeding practices of employed women. The influence of household income on exclusive breastfeeding practices was found to be significant, with mothers earning between KSh 20,000 to 40,000 being more likely to exclusively breastfeed their infants compared to those earning more. This association was observed with an adjusted odds ratio (AOR) of 2.03 and a 95% confidence interval (CI) of 1.21 to 2.10. These findings highlight the importance of considering the role of socioeconomic factors, such as household income, in promoting exclusive breastfeeding practices among mothers. This result supported empirical evidences from Ethiopia, (Alemayehu, Haidar, Habte, 2009). The reason could be that mothers with low income may not have enough finances to purchase formula.

According to a research done in Pakistan, exclusive breastfeeding behaviors were substantially correlated with mother socioeconomic status, employment, and education levels (Shaikh et al., 2017). Another research done in Nigeria discovered that moms who had more education had a greater likelihood of exclusively breastfeeding their children than mothers who had less education (Okolo et al., 2017). Similar findings were made by an Iranian research (Ghiasvand et al., 2016), which revealed that mother education was a strong predictor of exclusive breastfeeding behaviors.

According to a research done in Uganda, women who worked had a lower likelihood of exclusively breastfeeding than mothers who did not (Nankumbi et al., 2020). According to a research from Iran, independent women are more likely to exclusively breastfeed than working mothers are (Moeini et al., 2018).

4.12.3 Influence of Maternal Knowledge on Breastfeeding of Infants

Results indicated that majority of mothers (66.3%) were exclusively breastfeeding their babies. Regression analysis results revealed a coefficient of determination (R^2) equivalent to 0.231 demonstrating that 23.1% variation in exclusive breastfeeding could be attributed to a regression model with maternal knowledge. The regression coefficient for maternal knowledge was significant ($B = 1.01$, $t = 1.23$, $p < 0.001$), indicating that it was a significant predictor of exclusive breastfeeding of infants. These results corroborated well with those of a study conducted in Ethiopia by (Central Statistical Agency [Ethiopia], 2006).

According to a Nigerian research by Ogbuanu et al. (2011), exclusive breastfeeding habits were substantially correlated with mother awareness of breastfeeding. Compared to mothers with less breastfeeding expertise, those with greater knowledge were more likely to exclusively nurse their babies.

According to Rajaei et al.'s (2012) research, exclusive breastfeeding habits were favorably correlated with mother awareness of breastfeeding. Compared to mothers with less breastfeeding expertise, those with greater knowledge were more likely to exclusively nurse their babies.

Hasan et al. (2018) observed that exclusive breastfeeding habits were substantially correlated with mother understanding of the advantages of exclusive breastfeeding. Compared to mothers with less expertise, those who were more knowledgeable about

the advantages of exclusive breastfeeding were more likely to nurse their babies exclusively.

According to a South African research by Varga et al. (2003), exclusive breastfeeding habits were favorably correlated with mother awareness of breastfeeding. Compared to mothers with less breastfeeding expertise, those with greater knowledge were more likely to exclusively nurse their babies.

Anwar et al.'s (2018) research in Indonesia discovered a substantial correlation between exclusive breastfeeding habits and mother understanding of the value of exclusive breastfeeding. Compared to mothers with less understanding, those who understood the value of exclusive breastfeeding were more likely to nurse their babies exclusively.

4.12.4 Influence of Cultural Factors on Breastfeeding of Infants among Mothers

Results revealed that mothers disagreed with items measuring cultural factors related to breastfeeding of infants. Linear regression analysis model was not significant, indicating that the model could not be used to predict breastfeeding practices among mothers in this study. These findings contrasted those of studies in Brazil, Ghana, and South Africa.

In Brazil explored the impact of cultural factors on breastfeeding practices among mothers. Results showed that cultural beliefs, practices, and norms had a significant impact on breastfeeding practices, with some cultural practices acting as barriers to exclusive breastfeeding. For instance, mothers who adhered to the traditional Brazilian belief that colostrum (the first milk produced after birth) was dirty and should not be fed to infants were less likely to practice exclusive breastfeeding (Giugliani et al., 2016).

Similarly, a study conducted in Ghana examined the cultural factors influencing breastfeeding practices among mothers. Findings showed that cultural beliefs and practices, such as the belief that breast milk alone is not enough to satisfy an infant's hunger, could negatively impact exclusive breastfeeding practices. Other cultural factors such as traditional beliefs about maternal body size and composition also played a role in breastfeeding practices (Aidam et al., 2005).

In South Africa, a study explored cultural factors influencing exclusive breastfeeding practices among Xhosa-speaking mothers. Results showed that cultural beliefs and practices, such as the belief that breast milk alone was not enough to satisfy an infant's nutritional needs, were among the barriers to exclusive breastfeeding practices. Cultural practices such as giving pre-lacteal feeds (feeding the infant with fluids other than breast milk before initiating breastfeeding) also hindered exclusive breastfeeding practices (Doherty et al., 2006).

4.12.5 Contextual Factors Associated with Breastfeeding of Infants among Mothers

Mothers with two, three, or more children were more likely than those with one to exclusively breastfeed their infants, according to the findings. Mothers who had access to breastfeeding support and information were more likely to exclusively breastfeed their children than those who did not (AOR = 2.21, 95% CI, 1.03, 2.69). Breastfeeding information may have been provided by midwives and nurses at health institutions, which might explain this finding. Health professionals' findings on breastfeeding during their visits to hospitals are in agreement with this outcome (Aidam, Perez-Escamilla, Lartey, Aidam, 2005). According to Oche, Umar, and Ahmed (2011), younger mothers

tend to rely on their more experienced counterparts for advice on exclusive breastfeeding.

Breastfeeding is an important factor in infant nutrition and development, and various studies have been conducted to understand its practice and benefits. One study conducted in Nigeria found that mothers with two or more children were more likely to exclusively breastfeed their infants compared to those with only one child (Oche, Umar, & Ahmed, 2011). The study involved 425 mothers and found that mothers with multiple children were more experienced in breastfeeding and had developed greater confidence in their ability to breastfeed exclusively.

Another study conducted in Ghana also found that access to breastfeeding support and information was associated with an increased likelihood of exclusive breastfeeding (Aidam, Perez-Escamilla, Lartey, Aidam, 2005). The study involved 491 mother-infant pairs and found that mothers who received information on breastfeeding from health professionals, such as midwives and nurses, were more likely to exclusively breastfeed their infants.

Similarly, a study conducted in Brazil found that prenatal and postnatal breastfeeding education and support significantly increased the likelihood of exclusive breastfeeding (Venancio, Saldiva, Escuder, Giugliani, & Bortolozzi, 2012). The study involved 2,011 mother-infant pairs and found that mothers who received such education and support were more likely to exclusively breastfeed their infants for the recommended six months.

In a US research, it was shown that women were more likely to exclusively breastfeed their kids when they got breastfeeding assistance from a lactation consultant than when they did not (Merewood, Mehta, Chamberlain, Philipp, & Bauchner, 2005). In a research involving 1,000 mother-infant pairs, it was shown that moms who got lactation

assistance were more likely to nurse their children exclusively for the advised six months.

In conclusion, the practice of exclusive breastfeeding is influenced by various factors, including maternal experience, access to breastfeeding support and information, and education and support from health professionals. These findings suggest that efforts to promote exclusive breastfeeding should focus on providing prenatal and postnatal breastfeeding education and support, especially for younger and first-time mothers.



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of key findings, conclusions, and recommendations for practice, policy, and further research.

5.2 Summary of Findings

The study was a health facility-based and utilized a descriptive cross-sectional survey design where women with children aged 6 - 12 months were sampled from the Well-Baby Clinic at Nairobi Women's Hospital. The study findings have revealed several key major findings.

1. Maternal age, level of education, occupation and household income had significant influence on breastfeeding practices. A high rate of exclusive breastfeeding of infants, 82.6%, was revealed among mothers attending Nairobi Women's Hospital. The rate of continuous breastfeeding with complimentary feeds after 6 months was 77.2%.
2. Maternal knowledge was a significant predictor of exclusive breastfeeding and alone could account for 23.1% variation in infant breastfeeding. Those mothers who got health education from health facilities are more likely to practice optimum breastfeeding practices compared to their counterparts with lesser knowledge. Mothers with tertiary level of education were more likely to exclusively breastfed infants compared with those that had completed secondary education.

3. Cultural factors had no significant influence on breastfeeding practices among predictors of breastfeeding among women with children aged less than 12 months attending Well-Baby Clinic at NWH.
4. Contextual factors such as number of children per mother and access to breastfeeding information were significant predictors of exclusive breastfeeding practices. Mothers with more than 2 older children were more likely to breastfeed exclusively as compared to those with their first child.

5.3 Conclusions

Several conclusions are made from the study findings:

1. Socioeconomic characteristics of mothers such as age, level of education, occupation and household income are determinants of exclusive breastfeeding among mothers attending Well-Baby Clinic of Nairobi Women's Hospital. Mothers who were housewives were more likely to practice better exclusive breastfeeding than their counterparts who were in school, self-employed or in formal employment. those in formal employment are more likely to practice complimentary feeding of babies. Exclusive breastfeeding is higher amongst the older mothers aged above 30 years. those with higher household income are more likely to introduce complimentary feeds before 6months due to their ability to afford formula feeds. Mothers with tertiary education are more likely to exclusively breastfeed their babies for the first 6 months due to their understanding of advantages of breastfeeding.
2. Mothers who have access to breastfeeding information are more likely to exclusively breastfed their infants compared to those who had no access. The maternal level knowledge is a key predictor of exclusive breastfeeding for the first

6 months of the child's life. The duration of breastfeeding was also influenced by maternal knowledge of the benefits of breastfeeding.

3. There's no significant relationship between cultural factors and breastfeeding practices of infants below 12 months old attending wellbaby clinic at NWH.
4. Contextual factors like infant birth weight, mode of delivery and sex of baby did not have significant influence on breastfeeding practices of infants among mothers attending well baby clinic at NWH. However, mothers with more children practiced more exclusive breastfeeding than those with only 1 child due to their past experience. Access to breastfeeding information from health care workers had a positive influence on exclusive breastfeeding of mothers.

5.4 Recommendations for Practice

On the basis of the study conclusions, the following recommendations are made.

5. There is need for the Ministry of health to work closely with the ministry of labour to revise employment laws to ensure all employers put in place measures of promoting breastfeeding at the work place. Employers need to provide breastfeeding facilities within the work premises to enable mothers to breastfeed their babies in between work breaks or express breast milk and store it safely for feeding their babies. Health facilities need to improve breastfeeding support amongst young mothers to ensure a smooth transition from pregnancy to motherhood thus promoting optimum breastfeeding practices.
6. Since breastfeeding mothers benefit most from health education given in health facilities, there is need to involve private hospitals in national breastfeeding campaigns so as to share some of the lessons learned in promotion of exclusive breastfeeding. This will promote universal optimum breastfeeding promotion

practices in all health facilities. More efforts need to be put aimed at improving mothers' knowledge and access to information.

7. Nairobi Women's Hospital and other private hospital in the same category need to incorporate breastfeeding health education & promotion to all pregnant mothers during antenatal clinics, delivery, postnatal clinics and well-baby clinics. Nutrition counseling for breastfeeding mothers as part of the postnatal clinics and well-baby clinics. This will play a key role in improving maternal knowledge on breastfeeding.

5.5 Recommendations for Further Research

This study was conducted among mothers attending Well-Baby clinic of Nairobi Women's Hospital, thus results can only be generalized to mothers in private hospitals only. The researcher recommends;

1. A comparative study on the breastfeeding practices between private and public hospitals to assess the differences & similarities in breastfeeding practices.
2. Investigate the effectiveness of workplace policies and facilities in promoting exclusive breastfeeding practices among employed mothers.
3. Examine the impact of involving private hospitals in national breastfeeding campaigns on promoting exclusive breastfeeding practices.
4. Explore the effectiveness of different approaches to improving maternal knowledge and access to information on exclusive breastfeeding practices.
5. Evaluate the impact of incorporating breastfeeding health education and promotion to all pregnant mothers during antenatal clinics, delivery, postnatal clinics, and well-baby clinics on exclusive breastfeeding practices.

REFERENCES

- ACOG. (2000). Breastfeeding: a mother's and a child's perspective Educational Bulletin. 258.
- Aidam, B. A., Perez-Escamilla, R., Lartey, A., & Aidam, J. (2005). Predictors of exclusive breastfeeding among mothers in Accra, Ghana. *Journal of Paediatrics and Child Health*, 135(7), doi: 10.1038/sj.ejcn.1602141
- Ajami, M., (2018). There is a direct correlation between breastfeeding and newborn anthropometric parameters.
- Al Ghwass, M. M., & Ahmed, D. (2011). Prevalence and predictors of breastfeeding in a southeastern region of Saudi Arabia: a community-based cross-sectional study. *BMC Public Health*, 11(1), 1-8.
- Alemayehu, T., Haidar, J., & Habte, D. (2009). Factors influencing mothers' decisions to breastfeed exclusively in Ethiopia. *Journal of Paediatrics and Child Health*, 23(1), 12-18.
- American Academy of Paediatrics. (2012). It is a policy statement that breastfeeding is encouraged and that human milk is used. Peds.
- Amy, M. B., & Natasha. V. P. (2012). Breastfeeding start and duration, as well as maternal religious participation. *PMC*, 102 (10), 1865-1868.
- Anwar, F., Alhamid, M. F., Nurhaeni, I. D., & Sandjaja. (2018). Factors associated with exclusive breastfeeding in Indonesia: A national representative study. *Food and Nutrition Bulletin*, 39(3), 399-406.
- APHRC. (2015). Nursing women in Kenya have a number of problems when it comes to breastfeeding while working. Retrieved November 1. 2016, from <http://aphrc.org/brcastfeeding-and-work-associated-challenges-forbreastfeeding-mothers-in-kenya/>

- Avizienis, A., & Landwehr, C. (2004). Taxonomy and rudimentary ideas for safe and reliable computing. *Journal of Paediatrics and Child Health*.
- Bahl, R., Martins, J., & Bhandari, N., (2005). Risks of Death and Hospitalization Associated with Infant Feeding Practices in the First Half of Infancy. Retrieved January 21, 2016.
- Basavanthappa, B. T. (2009). Rogers's theory of relativity (1970). Nursing fundamentals are taught in the book *Fundamentals of Nursing* (2nd ed., p. 23). A medical publisher in New Delhi, Jaypee Brothers.
- Beck, L. F., & Gilbert, B. C. (2002). Maternal habits and experiences that are common. *Monitoring System for Pregnancy Risk Assessment (PRAMS)*. PubMed, 51 (2), 1-27.
- Bernardo, L. H., & Cesar, G. V. (2013). A comprehensive study of the benefits of breastfeeding on mortality from diarrhea and pneumonia in infants breastfed for less than six months. Geneva is the home of the WHO.
- Biks, G. A., Tariku, A., & Assefa, G. T. (2015). Breastfeeding practices in northwest Ethiopia: a nested case-control study of the impact of prenatal care and institutional delivery. *breastfeeding journal*, tenth edition (30).
- Black, R. E., & Mercedes, d. O. (2013). Nursing fundamentals are taught in the book *Fundamentals of Nursing* (2nd ed., p. 23). A medical publisher in New Delhi, Jaypee Brothers.
- Bollen Alex. (2015). Women's transitions to motherhood: a review of the current studies. *Journal of the National Council of Teachers of English*; 26.
- Caroline. H. D., Harshpal. S. S., Clive, O., Restrepo-Mendez, M. C., & Cesar. V. (2015). A prospective research in five low- and middle-income countries

- examined the link between the mother's age at delivery and the children's and adults' outcomes. *Lancet Global Health*, 3 (7), 366–377.
- CDC. (2010). Report card on breastfeeding in the United States. From <http://www.cdc.gov/breastfeeding/pdf/breastfeedingrcportcard2010.pdf>
- Celi, A. C., Kleinman, K. P., Costanza, M. E., & Gillman, M. W. (2015). Immigration, race/ethnicity, and socioeconomic characteristics have been shown to be determinants of the commencement of breastfeeding. *Medical journal Arch Pediatr Adolesc Med*. In PubMed, 159 (3), 255-60, the journal cites.
- Celi, A. C., Kleinman, K. P., & Gillman, M. W. (2015). Predicting whether or not a mother will start breastfeeding: the role of immigration, race/ethnicity, and socioeconomic status. 169(6), 538-544. doi: 10.1001/archpediatrics.2015.134
- Cesar, G. V., Bernardo, L. H., Rajiv, B., & Jose, C. M. (2007). Meta-analyses and systematic reviews of breastfeeding's long-term effects. Geneva is the home of the WHO.
- Chudasama, R. K., Amin, C. D., & Parikh, Y. N. (2009). Exclusive breastfeeding prevalence and associated factors in a Western Indian urban slum. 16(2), 58-65.
- Col-Araz, N., Costanza, M. E., & Parlar-Kilic, S. (2013). Preparation of medical and health science students for expressing breast milk. *npj*, 3 (10), 19-25.
- Costanza, M. E., & Chen, W. Y. (2011, October 19). Breast cancer epidemiology and risk factors are discussed. Retrieved January 21, 2016.
- Cox, K. N., Costanza, M. E., & Binns, C. W. (2015). Nursing fundamentals are taught in the book *Fundamentals of Nursing* (2nd ed., p. 23). A medical

publisher in New Delhi, Jaypee Brothers. The International Breastfeeding Journal is a publication that promotes breastfeeding worldwide. 10 (15).

Costanza. M. E., (1993). Patterns of maternal weight reduction throughout the course of a lengthy breastfeeding. (ASCN) 58 (2), 162-166.

Doherty, T., Swanevelder, S., Lombard, C., & Zembe, W. (2006). Breastfeeding discontinuation in young children is an essential public health issue in South Africa. *Journal of Paediatrics and Child.*

Ekhtiari, A., & Emami. P. (2008). The Medical Sciences journal published a study comparing the success rates of nursing after vaginal birth vs cesarean surgery. 18 (1), 51-54.

Fein, S. B., & Roe. B. (2012). The impact of job status on breastfeeding start and duration. PubMed, 88 (7). 1042-6.

Forster, D. A., & McLachlan, H. L. (2007). A Review of the Literature on Breastfeeding Initiation and Birth Setting Practices. The Journal of Midwifery & Women's Health is a publication dedicated to the study of midwives.

Ghuman, M., Saloojee, H., & Morris, G. (2009). Infant-feeding practices of mothers of three ethnic groups in South Africa. 22(3), 118-124.

Giugliani, E. R. J., Vieira, T. O., Silva, L. R., Oliveira, L. D., Oliveira, N. F., & Santana, R. F. (2016). A comprehensive evaluation and meta-analysis evaluating the effect of breastfeeding promotion strategies on breastfeeding and exclusive breastfeeding rates. *Journal of Paediatrics and Child Health*, 16(1), 435.

- Guo, S., Fu, X., & Scherpbier, R. W. (2013). In 2010, breastfeeding rates in central and western China were high, with consequences for infant and community health. World Health Organization (WHO).
- Hasan, M. R., Roy, R. N., & Rahman, M. M. (2018). Mothers' awareness of and commitment to the benefits of breastfeeding in rural Bangladesh. 24(2), 279-287.
- Hauck Y.L., F. J. (2011). A study of breastfeeding start, prevalence, and early cessation rates in Western Australia. 2011; 15: PubMed, /5 (2), 260-268.
- Heck, K. E., Hellings, P., Howe, C. & Kiely, J. L. (2006). Breastfeeding initiation and socioeconomic level among California women. Reports on public health.
- Hellings, P., & Howe, C. (2000). Nurse practitioners and nurse-midwives were tested on their breastfeeding expertise. Women's Health in Midwifery, 45 (3). 264-270.
- Higa, R., Vale, I., & Campos, F. (2015). Breastfeeding practices in Brazil: A nationwide survey and associated factors. *Cadernos De Saúde Pública*, 31(12), 2547-2558. doi: 10.1590/0102-311X00105114
- Inch, S., & Renfew, M. J. (1995). Women's beliefs about breast milk supply and breastfeeding behavior. *Maternal and Child Health Journal*, 23(2), 501-514. doi: 10.1007/s10995-018-2657-1
- Kalyne, A. K., Monica. B. O., Regina. C. M., Paul, C. A., & Lorena, B. X. (2013). A descriptive study of mothers' knowledge about nursing. The Brazilian Nursing Journal is an online publication that publishes articles on nursing in Brazil. 7 (2), 85-94.
- Kalyne, V. L., Monica, G. F., Regina, M. B., Paul, V. M., & Lorena, S. B. (2013). Maternal education and breastfeeding duration: A survival analysis.

Revista De Saúde Pública, 47(6), 1059-1066. doi: 10.1590/S0034-8910.2013047004617

Kamawat, D., Kamawat, B. S., Avadhesh. J., & KalsiKohli, G. (2015). Knowledge, attitudes, and behaviors of newborn feeding among mothers in Ajmer district's urban and rural regions *Med. Res* 2015: 1 (3):90-94. *Bio-med-pharma-journal*, 1(3). 90-94.

Kaneko, A., Howe, C. & Avadhesh. J., (2005). Factors linked to exclusive breastfeeding in Japan: for efforts to encourage breastfeeding childrearing. *J. Epidemiology* is a journal that publishes research in the field of epidemiology 2006:16: PubMed, 16 (3), 57-63.

Katherine. E. H., Avadhesh. J., Hellings. P., & Howe, C. (2011). California Mothers' Socioeconomic on public health 121 (1), 51-59.

Kathleen, M., & Rani, R. (2012). Pregnancy, labor, and postpartum customs and rituals: *Journal of Paediatrics and Child Health*, 28(4), 490-498. doi: 10.1016/j.midw.2011.07.003

Kathleen. M. M., & Rani. T. S. (2009). Prelacteal feeding is a procedure used by Hindu and Muslim households to feed their newborns. *Journal of Paediatrics and Child Health*, 54 (1), 78-81.

Kramer. M. S., & Kakuma, R. (2002). A comprehensive study of the ideal period of exclusive breastfeeding. January was retrieved. 21. 2016.

Krocger, M. (2003). Feeding Facts: Best Practices for Improving Infant Nutrition in the First Six Months.

La Leche League International. (2011). Childbirth and Breastfeeding. The Brazilian Nursing Journal is an online publication that publishes articles on nursing in Brazil. 7 (2), 85-94.

- Liu P., Q. L. (2013). A 30-month cohort study in northwest China looked at the factors that influence breastfeeding duration. *PubMed*, 29 (2), 253-259.
- Mai IA, Sultan A, Abdelqadir A, Ebtihal D, Maha A & Jaishen R. (2018). SKnowledge, attitude.
- Merewood, A., Philipp, B. L., & Bauchner, H. (2005). Baby-Friendly Hospital Breastfeeding Statistics in the United States: *Journal of Paediatrics and Child Health*, 116(3), 628-634. doi: 10.1542/peds.2005-0246
- Mitra. A. K., Monica. B. O., & Lorena, B. X. (2014). Breastfeeding intention among low-income mothers is predicted by a number of factors. *PubMed*, 8 (2). 65-70.
- Motee A, Jeewon R. (2014). Nursing fundamentals are taught in the book *Fundamentals of Nursing* (2nd ed., p. 23). A medical publisher in New Delhi, Jaypce Brothers.
- Murage, F. (2015). What influences women's decision to breastfeed exclusively in Wajir County, Kenya. *African Health Sciences*, 15(1), 266-271. doi: 10.4314/ahs.v15i1.39
- National Bureau of Statistics. (2015). The findings of the KDHS Key Findings report. KNBS and ICF International are based in Rockville, Maryland, USA.
- National Statistical Office (NSO). Malawi's 2015-16 Demographic and Health Survey is available online. NSO and ICF, Zomba and Rockville, Maryland; 2017.
- Njcri, M. (2015). Nursing and work: the problems that breastfeeding mothers in Kenya face in their professional lives. Retrieved November 1. 2016, from

- Nkoka, O., Regina. C. M., Paul, C. A., & Arora A. (2019). A population-based cross-sectional research was conducted in Malawi to determine the factors that influence the timing of breast milk start and exclusive breastfeeding.
- Nkwanko. B. O., & Brieger. W. R. (2002). In rural Southwestern Nigeria, the practice of exclusive breastfeeding is jeopardized by the use of other liquids. The Journal of Tropical Paediatrics is a peer-reviewed journal that publishes original research in tropical pediatrics.
- O'Connor. M. E., Lewin, L. O., & Brown, E. W. (2011). Improved Maternal-Child Healthcare Provider Breastfeeding Knowledge. Through an Internet-Based Education Program Medical Treatment for Breastfeeding.
- Oche, M. O., Umar, A. S., & Ahmed, H. (2011). In Kware, do people know about and use exclusive breastfeeding? 11(3), 518-523. doi: 10.4314/ahs.v11i3.26
- Ochola, S. A. (2008). Randomized controlled trial comparing the effectiveness of two strategies designed to promote breastfeeding in the Kibera slum of Nairobi, Kenya. Stellenbosch University in Cape Town. Medical anthropology, often known as cross-cultural studies of health and sickness, is an academic discipline concerned with this question.
- Ochola, S. A. (2008). Infant feeding practices and nutritional status of children in a pastoral community in Kenya. *Journal of Biosocial Science*, 40(5), 675-686. doi: 10.1017/S0021932007002651
- Ogbuanu, C., & Hussey, J. (2011). Breastfeeding success after a mother's maternity leave and upon her return to work. *Pediatrics*, 127(6), e1414-e1427.
- Ogbuanu, C., Lewin, L. O., Liu, J., & Hussey, J. (2011). Whether or not to breastfeed depends on the length of maternity leave and the time it takes to return to work. *Pediatrics*.

- Oweis, A., Tayem, Y., & Froelicher, E. S. (2009). Women in Jordan discuss their experiences with breastfeeding. *International Breastfeeding Journal*, 4(8), 1-7.
- Patil. S. S., & Yadavannavar, M. C. (2011). The influence of socio-cultural variables on breastfeeding habits and choices among rural women has been documented. *IJPAES*, vol. 1, no. 2, pp. 46-50.
- Powe, C. E., Lewin, L. O., Newbur, D. S., Lonnerdal. B., & Brown, E. W. (2011). Research on the composition of breast milk in the presence of recombinant human prolactin. *Pediatrics*.
- Prime, D. K., (2012). Term and premature babies' moms' milk production in the first six weeks of life. *Breastfeeding Medicine*, 28(2), 272-279. doi: 10.1177/0890334411431575
- Prime. D. K., Lewin, L. O., Newbur, D. S., Lonnerdal. B., & Hartmann. P. E. (2012). Milk removal dynamics in women while simultaneously expressing their breasts. *PubMed*, 7 (2), 100-6.
- Prior. E., Monica. B. O., Regina. C. M., Paul, C. A., & Lorena, B. X. (2012). An international systematic review and meta-analysis of the research on breastfeeding following cesarean birth. *Am J Clin Nutr*, 95 (5), 1113-1135.
- Priya Mohan, Newbur, D. S., Lewin, L. O., Lonnerdal. B., (2016). Mothers in Western Maharashtra have a better understanding, attitude, and practice about the expression of breast milk. *Vol 04(01) pg. 8828*.
- Quigley, C., Monica. B. O., Regina. C. M., Paul, C. A., & Zgaga. L. (2016). There is a link between having a home birth and having a successful nursing experience. *BM.J*, 6 (8).

- Rabiepoor. S., Regina. C. M., Paul, C. A., & Sadeghi, E. (2017). The association between the method of birth and the likelihood of a good nursing experience. *IntJPediatr*, 5 (5), 4899-4907.
- Radha, H. B., A. I., A. G., & Regina. C. M. (2015). Investing in breastfeeding. *International Breastfeeding Journal*, X (8), 1.
- Raffle, H., Ware, L. J., & Regina. C. M. (2011). There are several factors that contribute to the success of breastfeeding in Ohio's Appalachian area. Athens, Ohio.
- Rajaei, M., Mohsenzadeh, A., & Emamhadi, M. (2012). Factors affecting exclusive breastfeeding among urban women. *Iranian Journal of Pediatrics*, 22(1), 81-86.
- Restrepo-Mendez, M. B. (2011). Findings from three population-based cohorts in southern Brazil on adolescent pregnancy and offspring mortality. *BMC*, / 7, 781.
- Schanler. R. J. (2011, March). Maternal and economic benefits of breastfeeding. Retrieved <http://www.uptodate.com/contents/maternal-and-economic-benefits-ofbreastfeeding>.
- Scott. J. A., Ware, L. J., Schanler. R. J., & Graham. K. I. (2006). Evidence from a Cohort Study on Predictor Variables of Breastfeeding Duration. *American Academy of Paediatrics*, 117 (4), 646-55. January 21, 2016.
- Seid, A. M., Ware, L. J., & Schanler. R. J. (2013). Women in Bahir Dar, Northwest Ethiopia, had their exclusive breastfeeding habits and other relevant characteristics studied in a cross-sectional study. 8th edition of the *International Breastfeeding Journal* (14).

- Setegn, T., , A., & Biadgilign, S. (2012). Goba area, south-east Ethiopia. *International Breastfeeding Journal*, 7(17), 1-8.
- Sinshaw, Y., Ketema, K., & Tesfa, M. (2015). Medical anthropology, often known as cross-cultural studies of health and sickness, is an academic discipline concerned with this question. *Journal of Food and Nutrition Sciences*.
- Stuebe. A. M., Ware, L. J., Grewe, K., Ketema, K., & Tesfa, M. (2011). A Longitudinal Cohort Study of Lactation Duration and Maternal Hypertension Incidence. *The American Journal of Epidemiology* is a peer-reviewed medical journal published in the United States.
- Talbert A W, Monica. B. O., Regina. C. M., Paul, C. A., & Zgaga. L. (2018). Rural coastal Kenyan women and their advisors discussed their experiences and opinions on the topic of feeding their children expressed breastmilk as part of a focus group.
- Tampah-Naah AM, Kumi-Kyereme A. (2013). A cross-sectional investigation of the factors that influence breastfeeding exclusivity in Ghanaian women.
- Tawia, S. (2012). Effect of birth interventions on breastfeeding. Retrieved November 2, 2016. from <https://www.brcastfecding.asn.au/effect-birth-intervcntionsbreastfeeding-%E2%80%93-what%E2%80%99s-new>
- Terrant, P., McManaman, J., & Biehler, E. (2010). Why lactation consultants need to know the difference between true and perceived milk insufficiency. *Journal of Human Lactation*, 26(3), 269-273. doi: 10.1177/0890334410369845
- UNICEF. (2009). Keeping tabs on developments in the field of nutrition for both children and pregnant women. A matter of life and death.
- UNICEF. (2011). Breastfeeding: Progress.

- UNICEF. (2013). UNICEF: Breastfeeding Cheapest Lifesaver in History. Retrieved January 22, 2016.
- UNICEF. (2015). Impact of breastfeeding on child survival and the world health status. University of Tennessee. (2016, September). Orem handbook. Retrieved November 10, 2016, from [http://www .utc.edu/nursing/pdf/classes/Orem-handbook.pdf](http://www.utc.edu/nursing/pdf/classes/Orem-handbook.pdf)
- Vaahtera, M., Monica. B. O., Regina. C. M., Paul, C. A., & Zgaga. L. (2001). In rural Malawi, breastfeeding and the use of supplemental foods are commonplace. *ActaPaediatr.*
- Varga, C. A., Doherty, T., & Chopra, M. (2003). Creating a supportive environment for breastfeeding in South Africa: An assessment of the current status and future needs of breastfeeding mothers. *South African Medical Journal*, 93(10), 764-768.
- Venancio, S. I., Giugliani, E. R. J., & Bortolozzi, A. (2012). Recent developments and the current state of breastfeeding in Brazil's major cities and the Federal District. *Pediatrics Journal*, 88(6), 497-502. doi: 10.2223/JPED.2239
- Wainaina. C. W. (2015, March 27). Workplace support for breastfeeding mothers. Retrieved April 20, 2017. from APHRC: <http://aphrc.org/archives/4306>
- Wainaina. C. W. (2015, March 27). Workplace support for breastfeeding mothers. Retrieved from APHRC: <http://aphrc.org/archives/4306>
- Wang. I. Y., & Fraser. 1. S. (1994). Following childbirth, women's reproductive health and contraception are discussed. *Obstetrical &Gynaecological Survey*, 49 (1), 56-63. October 26, 2015, from
- Wanjohi. M., Monica. B. O., Regina. C. M., Paul, C. A., & Zgaga. L. (2017). Breastfeeding patterns in two slums in Nairobi, Kenya, are influenced by sociocultural variables. *The International Breastfeeding Journal*.

- Watson BM. (2013). Kenyan Ethnicity and Breastfeeding: A Case Study The University of Tennessee is located in Knoxville.
- Wayne, G. (2014). Nurses-labs. Medical Anthropology: Cross-Cultural Studies in Health and Illness is a field of study that focuses on the study of health and illness across cultures.
- WHO. (2014). Maternal, baby, and early child nutrition: a comprehensive implementation strategy WHO Document Production Services, Geneva, Switzerland.
- WHO/UNICEF. Breast-milk replacements are used for medical reasons that are acceptable.
- Win. N. N., Colin. B. W., Zhao. Y., Scott. J. A., &Oddy. W. H. (2006). A cohort study of breastfeeding duration among mothers who breastfeed. I (28), 1–28, in International Breastfeeding Journal.
- Xu. F., (2009). Breastfeeding in China is legal. A look at the situation. Journal of international lactation, 4 (6).
- Yashmin, Shaheda (2015. 10 1). Islamic and cultural practices in breastfeeding. Retrieved 03 06, 2017, from <http://leadcrtoday.breastfeedingtodayvllli.org/islamic-and-cultural-practices>.

APPENDICES

Appendix I: Letter of Self Introduction

Daniel Mwendwa Maweu
Mount Kenya University
School of Nursing
P. O. Box 342-01000

THIKA

The.....

Date

Dear Sir/Madam,

REF: COLLECTION OF DATA

I am a post graduate candidate pursuing Master's degree in masters of Science degree in Nursing of Mount Kenya University. I am doing a research on the factors that influence breastfeeding habits among mothers of infants between the ages of 6 and 12 months who visit the well-baby clinic at the Nairobi Women's Hospital in Kenya.

There is no direct benefit to you, but your participation will be helpful in improving breastfeeding practices among women with children 6 - 12 months old. Data will only be collected from the women aged 18 years and above with children aged 6 - 12 months attending Well-Baby clinic at Nairobi Women's Hospital and who will give informed consent to participate in the study. Participation in this research is voluntary thus you do not have to answer any questions or take part in the survey against your wish. The data collected will be confidential and will only be used for the purposes of this study. You are not expected to provide your name or any other identification information about you and the questionnaire will have a number on it instead of your name.

I am pleased to inform you that your institution has been nominated to partake in the research. Your assistance to make this exercise a success will be highly appreciated.

Thank you in advance.

Yours sincerely,

Daniel Mwendwa Maweu

Appendix II: Participant Information Sheet and Consent Form

Dear participant,

Dated: .../...../.....

Greetings Respondent,

I am Daniel Mwendwa Maweu a masters of nursing student at the Mount Kenya University. I am doing a research on the factors that influence breastfeeding habits among mothers of infants between the ages of 6 and 12 months who visit the well-baby clinic at the Nairobi Women's Hospital in Kenya.

Currently, I am a student at Mount Kenya University in Thika, pursuing a Master of Science in Nursing. Among women who frequent well-baby clinic at Nairobi women's hospital, Kenya, the researchers want to find out what influences their decision to breastfeed their children.

Because of the findings of this research, health-care practitioners and policymakers will be better equipped to address concerns relating to newborn feeding in order to minimize child morbidity and death rates. It will also aid policymakers in formulating policies that are attentive to the socio-economic and cultural context of the local area in which they are implemented.

During the course of the research, you will get no advantages and will not be exposed to any hazards. All of the information you provide will be kept strictly secret, and your name will not be included in the questionnaire in order to safeguard your identity.

Your participation in this research is completely optional, and you will only be needed to complete a questionnaire based on a semi-structured interview that will take around 10 minutes of your time. You have the right to ask whatever questions you want, and you have the option of declining to answer any questions you don't feel comfortable answering.

We really appreciate you taking the time to participate.

Potential benefits/risks: Although the outcomes of this study may not immediately help you, they will be beneficial to researchers and policymakers in the field of health. Participants in this study will not face any dangers or possible hazards since the information they submit will never be used against them in any manner.

Compensation: Participant in the study will not be eligible for any rewards or advantages because they have chosen to take part in it.

Voluntary consent: This study entails voluntary participation. You have the option to withdraw from the study at any point and time without being victimized by anyone.

Privacy and confidentiality: The information you will give will be maintained confidential as you will not be required to indicate your identity in the questionnaire. No information of any kind will be released to any other person without your written permission.

Each and every one of the materials utilized throughout the research will be kept under lock and key, with only the professionals participating in the study having access to them.

Conflict of interest: The researcher and the supervisor confirm that there is no conflict of interest among them.

In case of further concerns or clarification concerning this study, you can contact the following:

Confirmation of Consent

I hereby consent to participate in this study. The investigator has explained to me what the study involves, including the potential risks and benefits pertaining my participation in the study. I also understand that my participation in the assignment is entirely optional, and that it will have no impact on my well-being at work. I also have the option to discontinue my participation at any time without penalty. I've also been told that all of my personal information and data would be kept private. I certify that the investigator has sufficiently addressed my concerns regarding my involvement in the research and has asked me questions to ensure that I understand the material given.

I admit to take part in this research study: Yes/No

I acknowledge that I will complete the questionnaire Yes/ No

Thank you for your cooperation.

Study participant's signature.....

Date.....

I admit that I have explained to the respondent the dynamics of the study and the elements of the acknowledgement form in detail and the respondent has agreed to take part on voluntary basis without any undue influence.

Appendix III: Questionnaire for Mothers

Instruction: Kindly tick appropriately in the boxes provided or fill in the spaces provided where necessary

Section I: Socio-demographic characteristics

1. How old are you?
2. What is your marital status?
 - a) Single
 - b) Married
 - c) Divorced
 - d) Widowed
3. What is your religion?
 - a) Catholic
 - b) Protestant
 - c) Muslim
 - d) Hindu
 - e) Others
4. What is your Occupation?
 - a) House wife
 - b) Student
 - c) Casual Labourer
 - d) Self-employed
 - e) Formal employment
 - f) Unemployed
5. What is your highest level of education attained?
 - a) No education
 - b) Primary
 - c) Secondary
 - d) Tertiary
6. How old were you when this baby was born?
 - a) Below 20years
 - b) 21-30years
 - c) 31-40years
 - d) Above 40years
7. What is your households' total income?
 - a) Less than Shs. 20,000
 - b) Shs. 20,000 < Shs. 40,000
 - c) Shs. 40,000 < Shs. 60,000
 - d) Shs. 60,000 < Shs. 80,000
 - e) Shs. 80,000 or more
 - f) Don't Know

Section II: Knowledge on breastfeeding

1. Which mode of feeding did you use to feed your baby within the first 2 days after delivery? (Note: colostrum is considered as breast milk)
 - a) Breast milk only
 - b) Breast milk combined with other fluid
 - c) Complimentary feeding only
 - d) Other modes of feeding, please explain _____
 - e) Can't remember
2. How long did you take to initiate breastfeeding for your baby after birth?
 - a) Within 1 hour
 - d) 12 -23 hours

- b) 1 – 3 hours e) 24 hours or more
 c) 4 –11 hours f) Can't remember

3. After starting breastfeeding, was your baby fed anything else other than breastmilk within the first 6 months?

- a) Yes
 b) No
 c) Can't remember

4. If yes, what type of feed was your baby given?

- a) Formula feed
 b) Dextrose water
 c) Plain water
 d) Other feeds; Please specify _____
 e) Can't remember

5. At what age did you initiate complementary feeds to your baby?

- a) 0 - 3 months b) 4 - 6 months
 c) 7 - 9months d) 10 - 12months

6. For the following questions kindly tick the most appropriate response

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Breastfeeding benefits are only limited for a specific time period.					
2. Formula feeding is more convenient than breastfeeding.					
3. Babies fed with Formula feeds gain weight faster than those who are breast-fed.					
4. Babies who are fed with Breast milk are healthier than those fed					

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
with formula.					
5. The most ideal food for babies is Breast milk.					
6. Women who do not breastfeed their children miss out mother-child bonding.					
7. Breast milk is more affordable compared to formula feeds.					
8. Breastfeeding promotes bonding between mother and neonate.					
9. Formula/complimentary feeds are a better option for mothers who are employed/working.					
10. Breast feeding is more convenient than formula.					

6. Digestion of breast milk is easier for the baby than formula feeds.
a) Yes b) No c) Don't know
7. Breastfeeding helps in losing weight to pre-pregnancy weight.
a) Yes b) No
8. Formula feeding and breast milk feeding have similar health benefits.
a. Yes b) No
9. Breast milk has all the important nutrients for a new-born.
a. Yes b) No
10. Antibodies found in colostrum helps the child's immune system.

a) Yes

b) No

Section III: Cultural factors that can affect breastfeeding

1. Does your culture influence choice of infant feeding?

a) Yes

b) No

If yes, explain _____

2. Who determines choice of feeding?

a) Myself

b) Spouse

c) Extended family

d) Others _____

3. For the following questions kindly tick the most appropriate response

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) The first breast milk should be discarded since it's not good for the baby.					
b) Supplementary water is necessary to quench the infant's thirst					
c) Supplementary feeds enhance growth and development of infants.					
d) There's no milk secretion in the first three days after delivery.					
e) Babies who are Formula-fed gain weight faster than breast-fed infants.					
f) Breastfeeding should not be done in public places.					

g) When a woman is breastfeeding a baby, fathers will feel isolated.					
--	--	--	--	--	--

4. Do you feel obliged by your culture to breastfeed?

- a) Yes b) No

If yes, explain _____

Section IV: Contextual factors that can affect breastfeeding

- 1) What's your baby's current age in months _____
- 2) At what gestation was your baby born?
 - a) 37-42 weeks b) ≥ 37 weeks c) ≥ 42 weeks
- 3) What was your baby's weight at birth:
 - a) Less than 2.5kg b) 2.5kg-4kg c) Greater than 4kg
- 4) What was the mode of delivery
 - a) Vaginal Birth b) Caesarean Section
- 5) How many other children do you have?
 - a) One b) Two c) Three d) Four e) More than five.
- 6) If more than one child, what was the mode of feeding for your previous child/children?
 - a. Breastfeeding
 - b. Formula feed
 - c. Dextrose water
 - d. Other feeds; Please specify

7) Did you deliver in a hospital?

- a) Yes b) No

8) At your workplace, do you have a place to breast feed or express breast milk?

- a) Yes b) No c) Do not work

9) At your workplace, are you provided with a fridge to store expressed breast milk?

- a) Yes b) No c) Do not work

- 10) How long did you stay in the hospital after your delivery?
a) 1-23hours b) 1day c) 2days
d) 3 days and above
- 11) Did hospital staff offer any help regarding feeding your baby, while in the hospital?
a) Yes b) No
- 12) If YES, was it useful to you in feeding your infant?
a) Very useful b) Somewhat useful
c) Not useful d) Can't remember
- 13) Did you receive any free formula samples after your discharge?
a. Yes b) No
- 14) Have you had any medical condition requiring permanent cessation of breastfeeding?
a. Yes b) No
- 15) Have you had any medical condition requiring temporary cessation of breastfeeding since your delivery?
a. Yes b) No
- 16) Has your baby had any medical condition preventing him/her from breastfeeding?
a. Yes b) No

THANK YOU FOR YOUR RESPONSE

Appendix IV: ERC Letter

Mount Kenya University



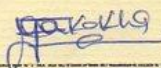
JUNE 8, 2018

Ref. No. MKU/ERC/0791

CERTIFICATE OF ETHICAL CLEARANCE

This is to certify that the proposal titled “DETERMINANTS OF BREASTFEEDING PRACTICES AMONG WOMEN WITH CHILDREN AGED BELOW 12 MONTHS ATTENDING WELL BABY CLINIC AT NAIROBI WOMENS’ HOSPITAL”, Whose Principal Investigator is Mr Daniel M. Maweu (MScN/2015/24003) has been reviewed by Mount Kenya University Ethics Review Committee (ERC), and found to adequately address all ethical concerns.

Mr Francis W. Makokha
Secretary, Mount Kenya University ERC

Sign: 

Date: 8/06/2018

Prof. Francis W. Muregi
Chairman, Mount Kenya University ERC

Sign: 


Date: 8/6/2018

Main Campus, General Kago Road, P.O. Box 342-01000 Thika. Tel: +254 67 2820 000,

Cell: +254 720 790 796, 0709 153 000

Email: info@mku.ac.ke, Web: www.mku.ac.ke

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Appendix V: Postgraduate Letter



SCHOOL OF POSTGRADUATE STUDIES

MSCN/2015/24003

22nd August, 2018

*The Director, Research Coordination Division
National Commission for Science, Technology & Innovation
Utalii House, 8th & 9th Floor
P.O Box 30623- 00100
NAIROBI*

Dear Sir/Madam,

RE: DANIEL M. MAWEU - REGISTRATION NO. MSCN/2015/24003

The purpose of this letter is to introduce the above named student who is pursuing Master of Science in Nursing (Midwifery) in the Department of Nursing Education Leadership Management and Research in the School of Nursing.

The title of his research is *"Determinants of Breastfeeding Practices among Women with Children aged below 12 Months Attending Well Baby Clinic at Nairobi Womens' Hospital."*

He has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data for his research between August and October, 2018.

Any assistance accorded to him will be highly appreciated.

Thank you.



Daniel Gatungu

Registrar, School of Postgraduate Studies

Enc.

Registrar
School of Prograduate Studies
Mount Kenya University
P. O. Box 342 - 01000, Thika

Main Campus, General Kago Road, P.O. Box 342-01000 Thika. Tel: +254 67 2820 000,

Cell: +254 720 790 796, 0709 153 000

Email: info@mku.ac.ke, Web: www.mku.ac.ke

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Appendix VI: NACOSTI Authorization



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/51488/25043**

Date: **17th October, 2018**

Daniel Mwendwa Maweu
Mount Kenya University
P.O. Box 342-01000
THIKA

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Determinants of breastfeeding practices among women with children aged below 12 months attending Well Baby Clinic at Nairobi Women’s Hospital”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **12th October, 2019**.

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a **copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

Appendix VII: Authorization from Nairobi Women Hospital



Date: 17th October, 2018

To whom it may concern,

REF: PERMISSION TO CONDUCT RESEARCH

The purpose of this letter is to inform you that **Daniel M. Maweu** has been granted permission to conduct the research titled "**Determinants of breastfeeding practices among women with children aged below 12 months attending well-baby clinic at Nairobi Women's Hospital, Kenya**". This also serves as assurance that this hospital is very keen to ensure privacy and confidentiality of its patients and complies with the national ethical requirements for research and will ensure that these requirements are followed in the conduct of this research.

Kind regards,

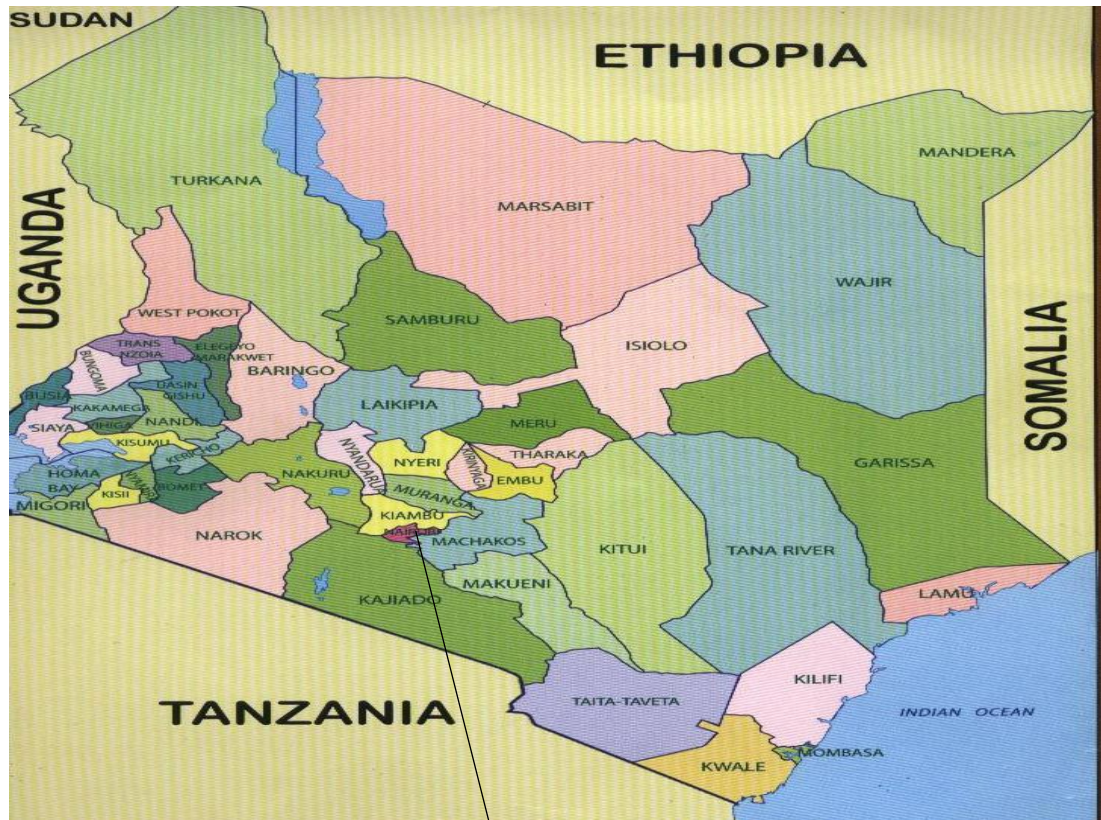
Penina Kirea,
Chief Nursing officer.



THE NAIROBI WOMEN'S HOSPITAL
Tel: 0703081001-100
P.O. Box 10552-00100, Nairobi, Kenya
Website: www.nwch.co.ke

HURINGHAM, ADAMS, ONGATA RONGAI

Appendix VIII: Map of Kenya Showing Nairobi County



DETERMINANTS OF
BREASTFEEDING PRACTICES
AMONG WOMEN WITH
CHILDREN AGED 6 - 12
MONTHS ATTENDING WELL-
BABY CLINIC AT NAIROBI
WOMEN'S HOSPITAL, KENYA

by Daniel Mwendwa Maweu

Submission date: 03-May-2022 10:45AM (UTC+0300)

Submission ID: 1827029926

File name: Daniel_Maweu_-_Thesis_final_revised_final.docx (1.74M)

Word count: 20154

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DETERMINANTS OF BREASTFEEDING PRACTICES AMONG WOMEN WITH CHILDREN AGED 6 - 12 MONTHS ATTENDING WELL-BABY CLINIC AT NAIROBI WOMEN'S HOSPITAL, KENYA

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