DECLARATION

1. THE STUDENT

I Dalmas Ochieng Onyango hereby declare that this thesis is my original work and has not been submitted for the award of a degree or diploma in any other University or College.

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Reg.No.PG/MPH/00012/2013

Signature..................................... Date......................................

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I would not forget my wife Benter A. Owan’g and my children Stephanie and Joyleen for their support and patience when I was undertaken this work. It is not possible to thank all those who helped me in one way or another in person in the completion of this piece of work. However, to all of you, I say thank you very much.
DEDICATION

To my beloved wife Benter and all women in formal employment who strive to exclusively breastfeed their children for up to 6 months.
Formal employment is a barrier to exclusive breastfeeding (EBF) as recommended by World Health Organization (WHO). National breastfeeding policy recommends workplace breastfeeding support for working women. These women may have been excluded by efforts to scale up EBF, not by design but because they are “special population group” who have been neglected by research, studies existing are old, up to date information lacks to inform programs. Currently, out of 2.56 million people in formal employment, a third are women and because they have been neglected we don’t know whether they have best practices in EBF. There is little scientific information to inform on challenges and successes women in formal employment face given there is only 3 months official maternity leave period. This study aimed to assess socio-demographic, knowledge, attitude and work place factors influencing EBF among women of varied socio-economic status with equal access to health information. Through a cross sectional study, 197 women from 6 cadres at Maseno University who had a child in the last five years were selected using purposive sampling. Data on; socio-demographic characteristics, EBF rate, knowledge and work place factors were collected using a questionnaire. Iowa Infant Feeding Attitude Scale was used to collect data on EBF attitude. Data on; socio-demographic factors, EBF rates, knowledge, attitude and work place factors was expressed as percentages. Logistic regression was used to determine relationship between EBF and socio-demographic factors; knowledge and attitude as work place factors were presented as percentages. Study findings indicate that 42.6 % of women practiced EBF. 70.5 % had poor knowledge and all women had negative attitude towards EBF. 46.2 % continued breastfeeding due to staying closer to work place. 53.3 % discontinued breastfeeding due to lack of breastfeeding breaks/rooms. Knowledge was the only factor significantly associated to EBF. Those with good knowledge were 1.495 more likely to EBF than those with poor knowledge, OR=1.495 (0.763-2.931), \(P=0.014\). Decision to EBF by women in formal employment does not depend on socio-demographic characteristics and EBF attitude. Women who continued to breastfeed after work resumptions did so from their own efforts and creative arrangements as there was no workplace support. In spite of the availability of health cover, employed women still have poor EBF knowledge and low EBF rate compared to other women in the general population. Like economically disadvantaged women, scale up of EBF among “special population group” need to go beyond policy issues to focussed interventions.
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ABBREVIATIONS

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<th>Description</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquire Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>ANC</td>
<td>Ante-Natal Clinic</td>
</tr>
<tr>
<td>BF</td>
<td>Breastfeeding</td>
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<tr>
<td>EBF</td>
<td>Exclusive Breastfeeding</td>
</tr>
<tr>
<td>BFHI</td>
<td>Baby Friendly Hospital Initiative</td>
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<tr>
<td>FNSP</td>
<td>Food and Nutrition Security Policy</td>
</tr>
<tr>
<td>GIT</td>
<td>Gastro Intestinal Tract</td>
</tr>
<tr>
<td>GOK</td>
<td>Government of Kenya</td>
</tr>
<tr>
<td>HCWs</td>
<td>Health Care Workers</td>
</tr>
<tr>
<td>HiNi</td>
<td>High impact Nutrition interventions</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HODs</td>
<td>Head of Departments</td>
</tr>
<tr>
<td>IIFAS</td>
<td>Iowa Infant Feeding Attitude Scale</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labor Organization</td>
</tr>
<tr>
<td>KDHS</td>
<td>Kenya Demographic and Health Survey</td>
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<tr>
<td>KHSP</td>
<td>Kenya Health Strategic Plan</td>
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OPERATIONAL DEFINITION OF TERMS

**Attitude:** Is mother’s ability to have positive or negative thinking towards breastfeeding practice.

**Barriers:** These are factors making it difficult for employed women to carry out exclusive breastfeeding as recommended.

**Breastfeeding duration:** This refers to that period which a mother breastfed her child before introducing other feeds to the child.

**Breastfeeding patterns:** Refers to breastfeeding durations which mothers breastfeed their children.

**Breastfeeding:** Is feeding an infant or a young child the breast milk either directly from the breast or with expressed breast milk from a cup.

**Exclusive breastfeeding:** A practice whereby the infants receive only breast milk during the first six months of life, with the exception of vitamins, mineral supplements, or medicines.

**Formal employment:** Refers to employment in which employees work for a minimum of 8 hours per day, get regular pay at the end of the month and apart from having employment rights, they pay income tax.

**Infant:** Means a child from birth to 24 months of age.

**Iowa Infant Feeding Attitude Scale (IIFAS):** Refers to a tool containing asset of a given items for measuring attitude (knowledge) whereby half of the items are positively worded to favour
breastfeeding and half worded to favour other feeding options which are measured in a five Likert scale.

**Knowledge:** Refers to mother’s ability to define exclusive breastfeeding in terms of feed (breast milk), duration and its benefits.

**Promoting factors:** This refers to factors which encourages employed women to exclusively breastfeed as recommended.

**Work place support:** Refers to conditions at work place which enable exclusive breastfeeding or not.

**Under five (< 5):** A child from birth to 59 months
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CHAPTER ONE

INTRODUCTION

1.1 Background Information

Exclusive breastfeeding refers to feeding an infant only with its mother’s breast milk and without any other food or liquid for the first six months (WHO, 1999). Over the last couple of decades, there has been an increasing interest in the promotion of exclusive breastfeeding as the ‘best’ feeding method for newborns. This, to a larger extent, has been inspired by mounting scientific evidence on the importance of EBF in reducing infant morbidity and mortality as well as reduction in non-communicable diseases (NCDs) early and later in life.

As one of the 11 High Impact Nutrition Interventions (HINI), EBF is one of those prioritized areas that are important in reducing under five mortality (WBTI, 2012). It has been reported that if children are exclusively breastfed for the first six months of their life, their survival rates will be improved by 13 percent (Jolly, 2008). However, findings from several studies have shown difficulties facing employed women in meeting personal goals and adhering to the WHO’s recommendations for continued and EBF (Perry, 2003; Xu et al, 2007).

The WHO and UNICEF (1990) recommends EBF for six months. Evidence presented in the Lancet series (Lutter K., et al., 2013), show that EBF has the potential of reducing morbidity and mortality rates by 53 and 13 percent respectively in children below the age of five years in developing countries. A study done in Zimbabwe (Ethel & Fungal, 2013) also found that EBF helps in reducing infant’s mortality by 10 percent. EBF therefore would play a role in achievement of sustainable development goals 3, 4 and 12 (SDGs) which are concerned with
ensuring healthy lives and promotion of well – being for all at all ages, quality education and responsible consumption and production.

Despite noticeable improvements in EBF rates in Kenya, child mortality rates are still high as 1 in every 19 children born die before reaching their fifth birth day (KNBS and ICF Macro, 2014). Out of 1000 children born, 38 die before reaching the age of two years. Compared to WHO global recommendation of below 20 deaths per 1000 live births, the figure is still high.

Through the Ministry of Health (MOH), the Government of Kenya promotes EBF in accordance with WHO and UNICEF (1990) set standards. This information is passed to women through health education during Ante and Post natal clinic visits. The Government has also envisioned support for employed women to continue breastfeeding on their return to work. This is evidence by enactment and adoption of International Labor Organizations (ILO) in the year 2002 allowing employed women to take 3 months paid maternity leave. However, the 3 months is not sufficient to achieve EBF without additional effort by an employed woman given that, they are unlikely to be in close proximity to their children once they have resumed work. As a result, they are likely to introduce mixed feeding earlier or stop breastfeeding altogether.

In the year 2010, through Private Sector Alliance (PSA) and MOH, the Government made a commitment “Better Business Practice For the Children“. The main aim was to strengthen support for breastfeeding mothers to breastfeed their children in the work place. The theme for breastfeeding week 2015 was “work and breastfeeding let’s make it work”. But there were no strategies to make it work.

Although studies have been done on women’s knowledge, attitudes and practices of EBF, most of these have addressed women in general, in rural or urban settings (Mbada et al., 2013;
Khassawneh et al., 2006; Al-Binali, 2012; Bolanle, 2013); and with little focus on EBF practice by employed women. Studies addressing employed women are restricted mainly to developed countries (Kosmala – Anderson, 2006; Wallace, 2006;) and Asia (Dearden et al., 2002; Tengku et al., 2012). The only studies in Africa having been done in Ghana (Danso, 2014), Ethiopia (Taddele et al., 2014), South Africa (Netshanda, 2013) and one in Kenya (Lakati et al., 2002). However, the Kenya study which reported that women in Kenya were able to successfully continue to breastfeed after they returned to work failed to differentiate between breastfeeding practice among women in formal and non-formal employment and also, it did not clarify whether those who continuing to breastfeed successfully did so exclusively for six months or not (Lakati et al., 2002).

Given differences in formal and non-formal working place environments, there is need for the two to be considered separately to capture the challenges that may be unique to each. As a result information on breastfeeding behaviour of employed women in Kenya is inadequate. For a holistic approach towards improvement of exclusive breastfeeding, neglected areas that are likely to make significant contributions to improvement of exclusive breastfeeding such as breastfeeding at the work places need to be well understood.

A study done in Kenya among lactating mothers attending ANC in an hospital (Nyanga et al., 2012) found out that having knowledge on EBF information have a direct influence on exclusive breastfeeding practice by women in that, those with more knowledge on EBF carry out the practice more than those who does not. In a different study done in America (Bay et al., 2008) work place factors which provide support and or education for employed women may be additional factors in ensuring that employed women EBF. However, there is hardly any study in Kenya on EBF in women in formal employment.
Although recommendation to support employed women to breastfeed at place of work has been in Kenya for more than a decade, little is understood as regards work and breastfeeding. This is because there is little if any report on progress made. This has necessitated the need to establish how socio-demographic characteristics, knowledge, attitudes and work place factors influence employed women’s breastfeeding practice. In addition, new information will be provided on breastfeeding and employment as not many studies has recently been done in Kenya making studies such as this to rely on old studies from other countries which might have different set up to Kenya and whose context might not conform to changes of recent times.

1.2 Statement of the Problem

Despite the extensive information available on the benefits of exclusive breastfeeding for women, infant and society, 39 percent of Kenyan children below six months are not exclusively breastfed. As a result, more children before reaching the age of five still die from diseases lack of exclusive breastfeeding being the underlying cause (WHO, 2000).

Babies not exclusively breastfed for six months are likely to be introduced to either mixed or replacement feeding. These feeds have too much fat and carbohydrates leading to obesity, poor muscle development and low resistance to infections. Such babies are also more than 14 times likely to die from diarrhea, or respiratory infection than babies who are exclusively breastfed in the first six months (Lancet series, 2008). In this era of HIV and AIDS, babies not exclusively breastfed risk being infected by HIV as a result of mixed feeding. Children living with HIV are likely to increase in number if EBF as one of those ways through which this virus can be transmitted is not well understood in “special group of women”.

4
There are 2.56 million people in formal employment in Kenya of which 1/3 are women (KNBS, 2010) yet, not much is known about their EBF practice. National statistics that are readily available in demographic health reports on exclusive breastfeeding conducted after every five years are general, covering all women with no specific information on employed women.

Most EBF improvement efforts focus on areas where information on EBF is available with little focus on areas where little is known such as EBF practice by women in formal employment. Thus, unique EBF needs of such women are not clearly understood. Yet, based on societal regards, employed women are likely to act as role model for other women.

EBF and women in formal employment as an area having been neglected by research lacks and does not have adequate information to guide and inform programs as well as further studies. Continued neglect of this area by research is a matter of public health concern because its underlying effect affects child survival and makes studies in this area to rely on old scientific information.

Most public universities in Kenya provide health cover for their employees who are of diverse socio-economic backgrounds. There employees have access to health services. Such environment provides access to breastfeeding information to women employees. However, it has never been known whether such environment would enhance best practices of EBF regardless of socio-economic status. Because of this, this study could have been done in any women employees in any public University within the country but, Maseno University was purposively selected as the study area because of curiosity to establish status of exclusive breastfeeding in this institution and also to provide the much lacking EBF information to inform interventions and other future studies in this area.
1.3 General Objective

To assess socio-demographic, knowledge, attitudes and work place factors influencing exclusive breastfeeding by employees in Maseno University.

1.4 Specific Objectives

1. To establish the relationship between socio-demographic characteristics and exclusive breastfeeding by employed women in Maseno University.

2. To assess the relationship between breastfeeding knowledge and exclusive breastfeeding by employed women in Maseno University.

3. To establish the relationship between breastfeeding attitudes and exclusive breastfeeding by employed women in Maseno University.

4. To identify workplace factors influencing exclusive breastfeeding by employed women in Maseno University.

5. To determine significant associations existing between socio-demographic, knowledge, attitude and work place factors with exclusive breastfeeding practice by employed women in Maseno University.

1.5 Research Questions

1. What is the relationship between socio-demographic characteristics and exclusive breastfeeding by employed women in Maseno University.

2. What is the relationship between breastfeeding knowledge and exclusive breastfeeding by employed women in Maseno University.
3. What is the relationship between breastfeeding attitudes and exclusive breastfeeding by employed women in Maseno University

4. What work place factors influence exclusive breastfeeding by employed women by employed women in Maseno University

5. What significant associations exist between socio-demographic, EBF knowledge and exclusive breastfeeding by employed women in Maseno University?

1.6 Significance of the Study

The aim of the study was to assess exclusive breastfeeding by employees in Maseno University. The information from the study findings will be useful in informing the institution, others similar employment institutions, Non-governmental organization (NGOs), Ministry of Health (MOH) and policy makers in the government on the status of EBF among employed women for them to take appropriate actions and interventions in ensuring that children of working women do not miss out on EBF. The study finding will also help in triggering the Government of Kenya to do a reflection of work place breastfeeding policy so that they do not stop at policy level but, work towards making it a reality in all work environments.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains reviewed literatures on exclusive breastfeeding among employed women in relation to the studies’ independent factors. It also explains how each of these factors was measured.

2.2 World Health Organization Breastfeeding Recommendation

Prior to 2001, the WHO recommended that infants be exclusively breastfed for four to six months, after which complementary foods could be introduced (WHO, 1995). In 2001, an expert WHO consultation on the optimal duration of exclusive breastfeeding (WHO, 2001a) resulted in a review of this recommendation to exclusive breastfeeding for the first six months of life (WHO, 2001b). This arose from evidence as a result of a systematic review commissioned by the WHO to evaluate the health outcomes of infants and mothers when exclusive breastfeeding is done for six months and when it is done for three to four months (Kramer et al., 2002).

Infants who are exclusively breastfed for 6 months experience less morbidity from gastrointestinal infection than those who receive mixed feeding as from 3 or 4 months, and no deficits have been demonstrated in growth among infants from either developing or developed countries who are exclusively breastfed for 6 months. Moreover, the mothers of such infants have more prolonged lactational amenorrhea (WHO/UNICEF, 2003). Compliance with this recommendation has important child health and nutritional benefits in developing countries due
to the meaningful protection that breastfeeding provides to infants against diarrheal diseases and pneumonia (Black, Morris, & Bryce, 2003).

In many developing countries, clean water and safe, nutritious foods are scarce therefore complimentary foods given are usually nutritionally inadequate and contaminated which increases the rate of gastrointestinal infections and growth faltering (Black et al., 2003). In addition, various population studies in developing countries have indicated that children between three to fifteen months are at the greatest risk of nutritional deficiency which is correlated with poor breastfeeding and complementary feeding practices (Shrimpton et al., 2001).

Results of observational studies in developing countries corroborate those of Kramer et al. (2000), conducted in a developed country; in an intervention trial to assess the influence of exclusive breastfeeding infants from the intervention group which was based on the Baby Friendly Hospital Initiative (BFHI) had a reduced risk of getting one or more gastrointestinal tract infections. Reduced risk of gastrointestinal tract infections in infants, who were exclusively breastfed for six months, was observed in studies in Iran and Nigeria.

Khadivzadeh & Parsal (2004) carried out a study in Iran to compare the growth and morbidity of infants who were exclusively breastfed for six months and those breastfed for four to six months. Among other results, the study revealed lower rates of diarrhoea in infants exclusively breastfed for four to six months compared to those who were given complementary foods before that age. Nigeria also reported fewer episodes of illnesses including diarrhoea in infants breastfed for six months compared to infants who were introduced to complementary foods before six months (Onayade et al., 2004).
There are more benefits for the infant and the mother if exclusive breastfeeding is done for six months as opposed to introduction of other feeds before six months. So children whose mothers are working might have access to safe clean water and commercial formulas and thus have reduced episodes of illnesses including diarrhoea and pneumonia but this cannot be a reason for them not to exclusively breastfeed as recommended.

In addition, to exclusive breastfeeding for six months, WHO recommends that women breastfeed their children / infants frequently and on demand until two years of age or beyond. This means breastfeeding infants as often as they want day and night. The use of bottles and pacifier teats is discouraged, because of the high hygiene standards necessary for their safe use (WHO/UNICEF, 2003). In order to improve exclusive breastfeeding, the ILO and WHO/UNICEF recommends that employers support employed women by making the work place conducive for breastfeeding women willing to continue breastfeeding once they have returned to work.

2.3 Child Morbidity, Mortality and Exclusive Breastfeeding

Worldwide, a total of 6.3 million children under the age of five died in the year 2013 (UNICEF report, 2014). In 2014, UNICEF reported that globally, out of 1000 children born 46 die before reaching the age of five. In comparison, out of 1000 children who are born 6 die in developed countries against 50 who similarly die in developing countries. Most of these deaths occurred in less developed countries where factors that promote child survival such as exclusive breastfeeding are low. Sub-Saharan Africa and South Asia together account for 4 out of 5 under-five deaths globally. Sub-Saharan Africa continues to shoulder the greatest burden as 1 in 11 children born still die before the age of five years, nearly 15 times the average in high-income countries (1 in 159).
In Kenya out of 1000 children born, 52 will die before reaching the age of five years (KNBS et al., 2014). 50 percent of these deaths are attributable to under nutrition emanating from low or lack of exclusive breastfeeding. It has been affirmed that if children are exclusively breastfed infant mortality would reduce by 20 percent (Robert et al., 2008). Introduction of complimentary foods, especially commercial formulas, exposes children to non-communicable diseases earlier or later in life (Gillmann et al., 2001; Jones et al., 1998).

Compared to developed countries, more under fives are still dying in developing countries. Many of these deaths could be prevented if children are to breastfeed exclusively as recommended. For this, factors known to be affecting exclusive breastfeeding such as employment need to be understood in an effort to inform decisions which are meant to increase number of children who are exclusive breastfed with an overall aim of improving child survival.

There is compelling evidence on role of exclusive breastfeeding in reducing morbidity and mortality: Betran et al., (2001) reported a fifty percent reduction in infant mortality from diarrhoea and acute respiratory infection (ARI) in infants who are exclusively breastfed; and Kramer et al., (2001) reported forty percent lower risk of GIT infections in exclusively breastfed babies compared to babies who were not exclusively breastfed.

The benefits observed in studies on exclusive breastfeeding are supported by evidence that a dose-response relationship appears to exist between breastfeeding and infant immune function (McLennan, 2000). This means that, the longer and more frequent children are breastfed, the stronger their immune system and the less they are breastfeed the weaker it is. Scariati et al., (1997) reported that the more breast milk an infant receives during the first six months of infancy, the less likely the infant is to develop health problems including diarrhoea and
pneumonia. It is important that every child is exclusively breastfed as required if their survival is to be improved especially, in developing countries where child mortalities are still extremely high. Breast milk contains antibodies that protect the baby from infections and reduces contaminants which might causes diseases because it is well preserved if fed directly from breast.

2.4 Efforts in Scale up of Exclusive Breastfeeding

Since 1981 various global policy frame works have been developed to address breastfeeding. In 2010, Scaling Up Nutrition (SUN) global movement was launched to address four “nutrition specific” interventions. Among other measures, it was identified that exclusive breastfeeding be scaled up in order to address direct and underlying causes of under nutrition. In 2012, The World Health Assembly endorsed the six global targets for nutrition, one of which was to promote exclusive breastfeeding as well as maternal, infant and child nutrition (UNICEF, 2013). In their plan of action, SUN movement has put a lot of emphasis in scaling up exclusive breastfeeding in comparison to other global initiatives.

The solutions to low exclusive breastfeeding as a contributing factor to malnutrition are practical, basic and have to be applied at scale and prioritized in national development agenda. Kenya has shown a renewed commitment to improve exclusive breastfeeding which is well articulated in the Food and Nutrition Security Policy (FNSP) and the Kenya Health Strategic Plan (KHSP). To help improve exclusive breastfeeding and implementation of nutrition intervention activities by the Government and nutrition stakeholders, the National Nutrition Action Plan (NNAP) was developed to provide practical guidance to Kenyans commitments. Most of the interventions in
NNAP are part of Scale Up Nutrition (SUN) actions that are being implemented globally in ensuring child survival.

2.5 Exclusive Breastfeeding by Women in Formal Employment

According to available statistics, globally there is steady increase in the number of women joining the workforce. For example, in the United States of America the number of employed women are 60.7 percent (Libbus, 2002 & Biagioli, 2003), in the United Kingdom 58 percent (Day Care Trust, 2001) and in South Africa 42.5 percent in 2008 (SADHS, 1998 & Piliso, 2008). Kenya is no exemption; in the early eighties to the mid 1990s 30 percent to 50 percent of women were in formal employment (Suda, 2002). From then on, with increased literacy level and affirmative action among women, more are supposedly employed today.

An estimated 50 percent of women employed in the workplace are of reproductive age and return to work within one year of their infants’ births (Wyatt, 2002). However, in most countries women return to work within three months after delivery. Most studies on breastfeeding by working women have been done in Western countries (Amanda et al., 2008; Chao-Hua, 2010; Juyalakshmi, 2004; Ferreira et al., 1999 and Marina, 1999) and Asian countries (Mohamad et al., 2006, Deadan et al., 2002; Rojjanasrirat, 2004; Yimyam & Morrow, 1999). In Africa only three studies were found: one was in Ghana (Danso, 2014), another in South Africa (Netshanda, 2013) and another in Kenya (Lakati et al., 2002). Of these three studies only the one in Ghana addressed exclusive breastfeeding by women in full time employment.

Even though the Ghana’s study reported women had good exclusive breastfeeding knowledge, only 48 percent were able to practice exclusive breastfeeding as recommended by WHO. Among the major factors making it difficult for them to exclusively breastfeed as recommended were
work status at 90.5 percent and followed by family member’s influences. It emerged that challenges working women face at work places are; inadequate time at work to breastfeed, lack of proper place at work to breastfeed, far distance between the women and their infants making it difficult for women to go and breastfeed.

In a study done in *Sau Paulo* Brazil (Ferreira *et al.*, 1999), when employed women returned to work from maternity leave which is 4 month, only 2 percent were still exclusively breastfeeding. By one month about 60 percent of employed women had either given water, tea and artificial baby milk (*ibid*). The two findings in Ghana and Brazil were influenced by the type and hours of work. Women working full time breast feed 8.6 weeks less than non working women, and part – time of more than four hours per day decreased the duration of exclusive breastfeeding (Fein & Roe, 1998). These asserts a study by Luan (2003) which found that, compared to those in informal employment, women in formal employment faces more challenges on how to exclusively breastfeed their children alongside work.

In a study on breastfeeding and working women in Nairobi (Lakati *et al.*, 2002), 92.2 percent of women were able to exclusively breastfeed. However this study did not give a clear insight on exclusive breastfeeding practice and employment. This is despite its conclusion that unlike in other countries, especially those in Western countries, employed women in Kenya are able to exclusively breastfeed. For women in full time employment, when work place is not breastfeeding friendly, exclusive breastfeeding becomes very difficult to achieve. This was clearly evident in the Ghana’s study (Danso, 2014) which was purely on women in full time employment. Even though, the Kenyan study disapproves the fact that women’s work status does not affect breastfeeding, the study failed to clarify; what proportion of women in full time employment who exclusively breastfed. Factors that made working women in Kenya able to
exclusively breastfed were not clarified. This study sought to provide answers to these specific questions with regard to exclusive breastfeeding by women in full time employment.

In the year 2002, ILO enacted maternity protection laws however, developed and developing counties have responded differently to these laws. Some adopted them some did not. Even for those countries which adopted them, implementation is a challenge. In the United States of America, there is no paid maternity leave. In the United Kingdom, it is not mandatory for an employer to provide work place breastfeeding facilities at the work place. Unlike most developing countries South Africa do not have policy on paid maternity leave. Kenya, Ghana and Brazil have policy supporting paid maternity leave. But, the durations are usually shorter the required recommended six months duration for exclusive breastfeeding.

2.6. Socio-demographic Factors

Age, marital status, education and occupational level are some of the socio – demographic factors looked at by this study.

2.6.1 Age

Literature on the determinants of breastfeeding done in developed countries has consistently identified lower maternal age as predictors of lower exclusive breastfeeding rates (Scott et al., 1999). A first time mother may find it difficult to believe that she can successfully breastfeed exclusively. Breastfeeding fails easily in a young school girl who has a baby that she really did not want (King et al., 1983). The young women feel shy to breastfeed and this impairs milk secretion. The young women to a large extend perceive their breasts in terms of their attractiveness rather than their function. Several women with a child at the end of a large family give up breastfeeding rather easily, although they had no difficulties with earlier children (Ibid).
Age above 25 years has been repeatedly associated with a longer duration of breastfeeding (Scott et al., 2001). It is probable that older women know more about the benefits of breastfeeding and have more realistic outcome expectations (Lawson et al., 1995). If a young woman is interested in breastfeeding, she should talk to women who have done it successfully. Experienced women can be an enormous help to the first time mother (Freed, 1993).

Studies done in developing countries particularly in Africa have varied findings on how women’s age influences how they breastfeed. From two different studies done in Nigeria, different findings were reported. Ademola et al., (2011) found that most employed women aged 25 years and above support exclusive breastfeeding while in a different study, employed women with 30 years and above prefer exclusive breastfeeding in Nigeria (Agbo et al., 2013). In Ethiopia, employed women aged 20 years and above are more likely to exclusively breastfeed (Mekuanint et al., 2014). In Kenya, Mututho (2008) though did not specify age reported that young women do not exclusively breastfeed as required and they stop exclusive breastfeeding early. This could be so because young women unlike their older counterparts (older than them) lack the necessary experience needed to successfully carry out exclusive breastfeeding.

2.6.2 Marital Status

Single women have great difficulty supporting themselves and caring for the baby especially if they are young in the ages of 20s. Single women have less family support. Without this support, activities outside the home such as having to work might prevent exclusive breastfeeding. It is often best if the women and the baby can stay together and be supported as a family. They can breastfeed at least partially (Ebrahim, 1991). Many years of marriage has been found to result in highest frequency of practicing exclusive breastfeeding (Agbo, et al., 2013). In a study by Alemayehu et al., (2005) exclusive breastfeeding is associated a woman’s marital status. In
studies done in Kenya, (Makena & Kimani (2011), married women were reportedly having higher exclusive breastfeeding rate than single women. Women who were not married, particularly those who were separated or divorced from their spouses were more likely to stop breastfeeding their infants than women who were married. Most often, married women have social, emotional and financial support from their partners these factors seems to reinforce exclusive breastfeeding practice among married as opposed to single women whom these factors are absent.

2. 6. 3 Education and Occupational Level

A woman’s educational and social class affects her motivation to breastfeed but the way it does differs in different parts of the world. In many industrialized countries in the west, breastfeeding is more common among the educated and upper class women. On the other hand, in third world countries the educated and upper class women are more likely to feed their infants artificially (King et al., 1993). Generally, educated women tend to breastfeed less and are likely to introduce supplementary feeding earlier than those with little or no education. This is attributed to the fact that a better educated woman is more likely to work away from home which makes breastfeeding difficult (Luan, 2003).

Exclusive breastfeeding is strongly associated with social economic status of the women with it being more prevalent among women with higher income (Vanancio & Monteiro, 2006). Similar findings were reported in Ethiopia (Alemayehu et al., 2009) and in Kenya (Ochola, 2008) who found women in the wealth index ranking middle and above to be two times more likely to exclusively breastfeed than those below.
Even though, the role of education of women is well understood in promoting exclusive breastfeeding, much less is known regarding influence women’s level of occupation has on exclusive breastfeeding. Highly educated women are likely to occupy higher rank than the less educated. This gives them an opportunity to be part of decision making process. For this, as opposed to those in lower positions they can decide when and how to breastfeed. But whether this gives them advantage over their counter parts in lower ranks is not clear. The above studies in Kenya and Ethiopia were not specific on how occupation level influences exclusive breastfeeding but rather based its findings on wealth index which might not necessarily have any relationship with a woman’s occupational level at place of work.

2.6.4 Knowledge on Exclusive Breastfeeding

Several studies have assessed knowledge in relation to breastfeeding. A study done in Iceland (Thomea et al., 2006), demonstrated that increased level of knowledge on the benefits of exclusive breastfeeding results in the positive upsurge on exclusive breastfeeding. Studies in Africa show similar findings. A Kenya study on factors influencing knowledge and practice of exclusive breastfeeding, found that more women who had breastfeeding knowledge were exclusively breastfeeding than those who did not (Nyanga. et al., 2012). This study was conducted in a rural setting and assessed breastfeeding in women in general. In Nigeria, Ogunba, (2014) women’s lack of exclusive breastfeeding knowledge was shown to result in the reduction in the number of children that are exclusively breastfed. In the Ghana study among professional working women by Danso (2014), all the women were found to have good knowledge on exclusive breastfeeding and were able to define it as ‘the infant receives only breast milk, in accordance with the WHO definition. However, only 48 percent of the professional working
women practiced exclusive breastfeeding. This indicates, although knowledge increases chances of breastfeeding, it does not necessarily translate into practice.

This is confirmed in a study conducted in both rural and urban Morogoro in Tanzania, by Shirima et al. (2001). Even though the study highlighted influences of exclusive breastfeeding intention, counselling at Ante and Post natal on exclusive breastfeeding practice, knowledge was found to be key in determining whether women will exclusively breastfeed. But, the authors point out that exclusive breastfeeding may not be practiced just by conveying knowledge about it, but that without that knowledge it is definitely absent. With reference to exclusive breastfeeding in the workplace, Agbo et al. (2013), found that a high proportion of employed women with breastfeeding knowledge practice exclusive breastfeeding (67.7 percent) despite the fact that there is no proper work place breastfeeding support they are getting in their place of work. This suggests high motivation to exclusively breastfeed, which was not hindered by a non-supportive workplace. However, participants were female resident doctors in a tertiary institution, and this may have contributed to the prevalence of exclusive breastfeeding of close to 70 percent.

From the studies reviewed, good knowledge on the benefits of exclusive breastfeeding increases the practice of exclusive breastfeeding. Shellton (1994) asserts that one of the elements to empower a woman to breastfeed is that she has sufficient knowledge to make decisions. Hence, misconceptions associated with exclusive breastfeeding are likely to be disregarded and exclusive breastfeeding achieved. This finding corroborates those of a study by Wallace, (1992) which found that breastfeeding choices and success are usually associated with knowledge on breastfeeding.
According to the WHO’s Maternal Infant and Young Child Nutrition guideline (MIYCN), mothers should initiate breastfeeding within 1 hour after delivery, exclusively breastfeed for 6 months and continue to breastfeed for a period of up to 2 years and. These recommendations are implemented in health facilities and mothers are informed on exclusive breastfeeding through Antenatal clinics; reinforced in post-natal clinics. Promoting knowledge on exclusive breastfeeding, according to the studies reviewed, should improve exclusive breastfeeding practice. It is not clear how effectively access to healthcare, including information on exclusive breastfeeding translates to breastfeeding knowledge, and influences practice of exclusive breastfeeding among women in employment, in settings such as public universities in Kenya, where healthcare is accessible to all female workers, regardless of cadre, and information on exclusive breastfeeding is provided in ante and Postnatal clinics.

2.7 Attitudes and Exclusive Breastfeeding Practices

According to Gagne’s theory, (1985) attitude is defined as; acquired internal states that influence the choice of a personal action towards some class of things, persons or events (Gagne, 1985; Driscoll, 2003). Knowledge can lead to development of positive attitude for personal behaviour change. Losch, et al., (1995), and Wagner and Wagner, (1995) indicate that more than knowledge, positive attitudes towards breastfeeding are better predictors of breastfeeding behaviour. This suggests that in addition to knowledge, positive attitudes are associated with more positive breastfeeding outcomes. This may partially explain the findings of Danso (2014) where only about half of the women, who had knowledge on exclusive breastfeeding, actually practiced it. Hence not just knowledge, but attitude, as well, influences whether or not a woman will exclusively breastfeed her infant.
Recent studies conducted in Africa support a role of attitude in the practice of exclusive breastfeeding. Most of these studies have been conducted in Nigeria (Embada et al., 2013; Ogunba, 2014 and Ekanem, 2012) with few conducted in other African countries. For example, only one study each was conducted in Central Africa (Ethel & Fungal, 2013) and East Africa (Mututho, 2000), that is in Zimbabwe and Kenya respectively. In the study by Ethel and Fungal (2013) conducted in Zimbabwe, 80 percent of women did not agree that exclusive breastfeeding is practical. They had the perception that breast milk alone for six months was not enough for their children and that they therefore had to give extra feeds to their babies. In a study on factors influencing exclusive breastfeeding among infants less than 6 months in Kenya (Mututho, 2008), while some mothers agreed that breastfeeding is practical others disagreed. As reflected in the Zimbabwe study, those disagreeing felt that a child could not survive on breast milk alone. Thus they introduced other feeds as only 29.3 percent of women exclusively breastfed despite many having good knowledge and attitude towards breastfeeding. This suggests that although mothers may have knowledge on the importance of breastfeeding a negative attitude may hinder practice of exclusive breastfeeding, confirming an important role of attitude in the decision of women to exclusively breastfeed.

Contrary to the findings reviewed in the preceding paragraphs, studies done in Asian Countries; Saudi Arabia (Saied et al., 2013) and India (Vijayalakshmi et al, 2015) reported exclusive breastfeeding was reportedly very low despite mothers having positive exclusive breastfeeding knowledge and attitude. This indicates that there are factors other than knowledge and attitude, that may influence whether women exclusively breastfeeds or not.
2.8 Work Place Factors Influencing Exclusive Breastfeeding

There are many socio-economic factors known to bar women from practicing exclusive breastfeeding, key among these barriers is employment (Danielle et al., 2011). In Taiwan, Sui – Ying, (2013) found that, encouragement by colleagues and supervisors as well as availability of lactation rooms with space motivated women to continue breastfeeding after resuming work. In addition, lack of time to breastfeed due to long working hours, lack of clean rooms and incorrect working environments where mothers do not have control on how they work discourages continuation of breastfeeding.

The study further reported factors such as; reduced work hours, availability of lactation rooms, breast pumping brakes and encouragement by colleagues or supervisors for employees to take advantage of breastfeeding brakes were significantly predictors of breastfeeding for more than 6 months after return to work. Similarly, lack of breastfeeding facilities made milk expression difficult for employed women in urban and rural Malaysia (Tengku, 2012). It is evident that apart from employed women, their workmates have a role to play in ensuring that they exclusive breastfeeding as recommended. For this, there is need for employers to have breastfeeding work place friendly environment.

Even though the Taiwan’s study findings take cognisance of the ILO recommendations, it has also identified social support as a key motivational factor to breastfeeding at the work place (ibid).

In Africa, a study in South Africa by Netshanda, (2013) reported that due to lack of facilities at the work place, negative attitude of colleagues and employer on breastfeeding in addition to their
lack of information on benefits of breastfeeding results in low exclusive breastfeeding by working women.

In the year 2000, ILO came up with measures of protecting, promoting and supporting employed women to continue breastfeeding on their return to work. These included; paid maternity leave, breastfeeding breaks, and breastfeeding crèches, providing milk expression rooms, reduction of work hours and making work place environment conducive for those who would like to continue breastfeeding. In the year 2002, Kenya adopted the ILO 2000 resolutions on maternity protection and agreed to fulfil all other recommendations, but it has implemented only one recommendation; paid maternity leave. However, compared to WHO recommended exclusive breastfeeding duration, without other support mechanisms for employed women, duration of maternity leave alone does not provide adequate time to enable exclusive breastfeeding as recommended for six months. Others work place support mechanisms are therefore needed.

In the absence of these other support mechanisms, employed women are likely to face difficulties to breastfeed exclusively. Any attempt to understand exclusive breastfeeding practice among employed women need to assess what motivates or bars them from exclusive breastfeeding successfully, thus the need to inquire availability or unavailability of these factors.

2.9 Measurements of Socio-demographic Characteristics, Knowledge, Attitudes and Workplace Factors Influencing Exclusive Breastfeeding

Various studies have been done to assess socio-demographic factors, breastfeeding knowledge, attitudes and workplace factors influencing exclusive breastfeeding. To measure these variables, available studies have used different approaches. Most studies done in Africa to assess women’s socio-demographic factors focus on age, marital status, education and nature of work (Makena,
Those on knowledge focus on its definition, benefits, advantages, disadvantages and as well as its duration (Netshanda, 2013; Agbo, et al. 2013; Wanyonyi, 2004). Comparably, a study done in U.S.A (Darby-Carlberg, 2010) and the other in India (Vijayalakshmi et al., 2015) used IIFAS approach in assessing both knowledge and attitude. Only one study done in an African country; Nigeria (Ogunba & Agwo, 2013) used the IIFAS approach in assessment of exclusive breastfeeding knowledge. IIFAS is a scale recommended for use in men and women’s breastfeeding attitude and the probability of their intent to breastfeed their children. Even though Lakati et al., (2004) reported that employed women exclusively breastfeed due to good knowledge they have on exclusive breastfeeding, the reasons given by the women as to why they exclusively breastfeed are not satisfactorily enough to conclude that they have good knowledge on exclusive breastfeeding. As some only mentioned that they feed their children on breast milk because they are still young and that breast milk is the best. Even though these reasons could be valid; they do not address specific reasons to conclude women’s level of knowledge concerning exclusive breastfeeding. As internationally accepted approach in assessing women’s knowledge on exclusive breastfeeding, the researcher will adapt and modify IIFAS questions in the context of Kenya to be used in assessing women’s exclusive breast feeding knowledge.

2.10 Gaps in Knowledge

For working women, employment remains a major barrier to the practice of exclusive breastfeeding. As a result many children miss out on gains derived from exclusive breastfeeding. This makes them susceptible to diseases and increased risk of deaths. The researches upon which EBF are assessed have concentrated on vulnerable women (uneducated, invalid and convalescence, poor and unemployed women). As a result there is inadequate information on
how employed women EBF. Because decision and interventions are informed by scientifically confirmed findings, lack of it limits interventions efforts in ensuring that all children are exclusively breastfed. As a result there is high infant morbidity and mortalities among children whose underlying causes remain lack of exclusive breastfeeding (UNICEF, 2018). In an effort towards ensuring that some children do not miss out on the benefits of exclusive breastfeeding, exclusive breastfeeding practice of employed women has to be properly understood beyond the work place breastfeeding policy. There is a sense that employed women are continuously being left out by exclusive breastfeeding improvement interventions. Reason is that studies to provide adequate information to inform such programs are remarkably small. As more women continue to get into formal employment in the 21st century, employment remains a major impediment to the practice of exclusive breastfeeding. Yet, studies on exclusive breastfeeding by women in formal employment remain deficient in the country. In spite the availability of workplace breastfeeding policy in Kenya, little is known in regards to exclusive breastfeeding practice. Exclusive breastfeeding practice by women employees in Maseno University remains unknown and this is what this study intend to find out.

2.11 Operational Framework

The operational frame work illustrates the association of exclusive breastfeeding and factors influencing its practice by employed women. Women’s socio-demographic characteristics, their exclusive breastfeeding knowledge, breastfeeding attitude and work place breastfeeding facilities work in synergy to determine whether an employed woman will exclusively breastfeed her child or not. Women aged 20-30 years do not have good breastfeeding knowledge, this might negatively affect their perceptions on EBF as well as breastfeeding at the work place. Resulting
in either them practicing EBF or not. Thus, any intervention aiming to improve EBF among employed women has to look at the above mentioned factors (Figure 2.1).
Fig. 2.1: Operational framework on factors associated to EBF

Source: Developed from Ochola (2008)
CHAPTER THREE

METHODOLOGY

3.1 Introduction

In this chapter, research design, the study area and location, target population, sampling procedures, data collection instrument and procedures measurements of variables, data analysis method and ethical consideration are discussed.

3.2 The Study Location

The study was carried out in Maseno University found in Kenya. In terms of population, this institution has 794 fully employed women which include teaching and non-teaching staffs. It has fourteen schools and 2 campuses. This University has a health clinic offering curative and preventive services to staffs and students.

Through Maternal and Child Health (MCH) services, women have access to services such as Ante Natal (ANC) and Post Natal Clinic (PNC) while children under the age of five have unlimited access to growth monitoring, immunizations as well as de-worming services.

During ANC visits, women are educated and encouraged to breastfeed their children as per the national guidelines which are: to initiate breastfeeding within 1 hour of delivery, practice roaming in and breastfeed on demand and exclusively for six months. In Kenya like in many other countries, demographic health surveys done after every five years give statistics of women who practices exclusive breastfeeding. However, despite availability of information that employed women face problem on how to continue breastfeeding when they return to work, no study has reported on exclusive breastfeeding practice of employed women. As a result, there is
scarcity of breastfeeding information among employed women in Kenya (GOK, 2006). Therefore, this study could have been undertaken among employed women in any work environment offering formal employment. However, public institution is preferred because its employees have varied educational background and qualifications with majority sharing same cultural practices. Even though not directly connected to this study, this factor can have underlying effect on their breastfeeding practices. None the less, the choice of this Public University was made intentionally to generate preliminary information to guide and inform further studies.

3.3 Research Design

The research design for this study was cross-sectional survey in Maseno University. Data collection was done once and analysed.

3.4 Target Population

All women employed and working full time in Maseno University were the target population. Only women on full time employment were considered as opposed to those on contracts and casual to enable homogeneity among study participants. This is in consideration that those on contracts and casual employment were likely to be inconsistently at work. The number of women on full time employment in this institution was 794.

3.5 Study Population

These were women who have children aged 5 years and below drawn from the target population. Those women who had taken maternity leave in the preceding five years and were having under-
five children were 220. The sampling unit was women in full time employment and has had a child in the past five years.

3.6 Inclusion Criteria

Women employees with children less than five years of age drawn from the target population. Exclusive breastfeeding is for children aged up to 0-6 months, but to increase the chances of meeting the desired sample size, women with children under five years were recruited to give an account with EBF.

Women who were not on leave and were willing to participate in the study and signed a consent form.

3.7 Exclusion Criteria

Women from the study population whose children died before attaining the first six months or within the first 5 years of life.

Women with children below five years who were not on leave, and not willing to participate in the study.

Women with children below 5 years but were on contract and casual employment as they were not receiving the same health covers from the institution as their colleagues in full time employment.

3.8 Assumptions

This study was based on the assumption that women on contracts and casual employment having no medical cover from the institution were having reduced access to health services in regard to
breastfeeding education and promotion. And thus they could have been disadvantaged if they were included in this research together with their colleagues on full time employment. Additionally, the aim was to ensure “homogeneity” in terms of employment to limit confounding factors.

3.9 Sample Size Determination

In this institution, 794 women are fully employed, out of these 220 (20 percent) have gone for maternity leave in the past five years. For that, the required sample size was derived by using Fisher’s formula (Fisher et al., 1999). This was to enable an attainment of combination of levels of precision, confidence and variability.

Sample size was calculated according to formula below (Fisher et al., 1999).

\[ n = \frac{Z^2 \cdot p \cdot q}{d^2} \]

\( n \) = Desired sample size required if the population is greater than 10,000.

\( Z \) = The standard normal deviation at 95 percent (1.96) confidence level.

\( p \) = Proportion in target population estimated to have specific characteristics

\( d \) = The level of statistical significance set 5 percent or 0.05

\( q \) = 1-p, (1-0.2) = 0.8

Therefore

\[ n = \frac{1.96^2 \times 0.2 \times 0.8}{0.05^2} \]

\[ = 246 \]

The desired sample size = 246

Where the population is less than 10,000, then the following formula applies:
\[
Nf = \frac{n}{1 + \frac{(n-1)}{N}}
\]

Where:

\(Nf\) = The desired sample size when population is less than 10,000

\(n\) = The desired sample size when the population is more than 10,000

\(N\) = The estimate of the population size

Hence; \(n = 794\)

\[
Nf = \frac{246}{1 + \frac{(246-1)}{79}}
\]

\[= 188\]

Required sample size was 188.

To cater for non response or refusal to participate, the sample size was inflated by 5 percent.

So, 5 percent of 188 = \(\frac{5}{100} \times 188\)

\[= 9\]

Therefore, \(188 + 9\)

\[= 197\) women employees

3.10 Sampling Procedure

Existing departments in the institution were identified. Administrators from six departments were requested to identify all women who have gone on maternity leave in the last five years. During actual data collection exercise (1\(^{st}\) - 30\(^{th}\) June 2017) those women who had were found to have
taken maternity leave in the last five years were contacted, and requested for interview appointments made. Based on agreed day and time, they were individually visited in the various departments, their second consent sought consented before data collection was done. For those who were not available on agreed appointment dates were re-contacted and re-visit done. The process was executed until the required sample size was attained.

Figure 3.1 Flow diagram of participants’ participation
3.11 Data Collection Instruments

Data was collected using questionnaires (Appendix 1). Closed ended questions and semi-structured interview schedules was constructed.

A four-part questionnaire was developed based on reviewed literature:

Part A – Socio-demographic characteristics

Part B – Exclusive breastfeeding practice

Part C – Breastfeeding knowledge.

Part D – Breastfeeding attitudes.

Part E – Work place factors

Data on duration of exclusive breastfeeding was collected by asking how long in terms of months a child was breastfed on breast milk alone before other feeds were introduced. Data on knowledge was collected by asking open ended questions on definition of exclusive breastfeeding, its duration and benefits. Background check was done using specific universally accepted information. Data on attitude was collected using Iowa Infant Feeding Scale (IIFAS) with A 5 - point Likert scale from strongly disagree to strongly agree applied to every questions (Appendix 1).

On promoters and barriers mothers were asked open ended questions to establish whether they were able or not able to continue breastfeeding on their return to work. Contributing or hindering factors were also identified by asking open ended questions on the same (Appendix 1).
3.12 Reliability and Validity of the Research Instruments

These was ensured through the use of test and re-test technique. Twenty employed women within the institution with similar characteristics were selected randomly and questions administered. After one week, the researcher re-administered the same procedure (re-test) with the same group to find the correlation between the tests and re-test. The Pearson correlation coefficient \( r \) was used and the result for this instrument was 0.8. The higher the coefficient correlation is, the more reliable the test. There isn’t generally agreed cut-off points but usually 0.7 and above is acceptable. (Nunnally, 1978) and therefore the tool was regarded found to be highly reliable for data collection. This questionnaire was therefore valid and reliable instrument for capturing the information that was required for this study.

3.13 Data Collection Procedures

During data collection, the identified women were contacted and visited based on their availability. First, data collection started in Main Campus, Kisumu Hotel and Homa Bay campus respectively with the venue being in the offices where they were working. Rescheduling and revisits was done for those who were not reached at the time of the visits. The researcher assisted by two trained research-assistants read the questionnaire to each participant and recorded their responses. This was to ensure completeness of the item and also the good return rate.

3.14 Questionnaire Return Rate

One hundred and ninety seven (197) respondents were interviewed representing 100 percent of the study sample. This response rate is considered very good for analysis and reporting (Mugenda & Mugenda, 2003).
3.15 Measurement of Variables

3.15.1 Dependent Variable

The dependent variable for the study was exclusive breastfeeding practice which was either practiced by mothers for up to six months (Yes) or for less than months (No). To assess this, five questions (Appendix: 1) were asked in section B with the main question being in question 10. Question 8, 9, 11 and 12 was to confirm veracity of exclusive breastfeeding.

3.15.2 Independent Variables

The independent variables included socio-demographic characteristics, breastfeeding knowledge, attitudes and workplace factors.

3.15.2.1 Socio Demographic Characteristics

To assess socio-demographic characteristics, four factors (age, marital status, educational level and occupation) were assessed. Measurements and categorization was then done specific depending on each of the above items. That is, age was measured in completed years and grouped as follows; 25 - 29, 30 - 34, 35 - 39, and 40 - 49. Preference was on age bracket of 25-49 years because this is the reproductive age. Marital status was classified as being married, single or widowed.

Educational level was measured by classifying and coding participants according to their highest attained level of education. These were; secondary, certificate, diploma, degree, masters and PhD levels of education.

On occupation, participants were classified as support staff, technicians, administrative staff, Health Care Workers (HCWs) were those working in clinic as health professionals, academic

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staff and hostel / hotel staff. Support staff included office assistants and messengers, technicians were personnel’s working in practical areas guiding students on practical aspects, administration staff were secretaries and administrators, academic staff were lecturers while hostel and hotel staff included those working in hostels, catering department as well as those working in hotel department.

3.15.2.2 Exclusive Breastfeeding Knowledge

To assess mothers’ knowledge on breastfeeding, knowledge was classified as good, or poor. Good knowledge was defined as the ability to define exclusive breastfeeding, correctly mention its duration and at least 3 of its benefits. Poor knowledge was defined as the inability to correctly define exclusive breastfeeding or failing to mention its duration or failing to give at least its 3 benefits.

3.15.2.3 Exclusive Breastfeeding Attitude

Breastfeeding attitude was classified as positive, neutral or negative. To assess breastfeeding attitudes, the Iowa Infant Feeding Attitude Scale (IIFAS) was adapted. The IIFAS is a scale that has been used to assess men and women’s attitudes about breastfeeding and the probability of their intent to breastfeed their child. The IIFAS is a self-administered, 17 item questionnaire with each item measured on a five point bipolar Likert Scale (appendix: 1). Half of the items were worded to be favorable to breastfeeding and half were worded to be favorable to formula feeding.

The scale was modified in this study and 17 attitude items were included to determine level of agreement for each question. Approximately half of the items were negatively worded. Total IIFAS score ranging from 17 to 85 with higher scores reflecting more positive attitudes on
breastfeeding. To score women attitude towards breastfeeding, a study which was done in India (Porreddi et al., 2015) which grouped mean scores for IIFAS into three groups (1) positive to breastfeeding (70-85), (2) neutral (49-69), and positive to formula feeding (17-48) was adopted.

3.15.2.4 Work Place Factors

These are existing conditions within work environment making it easy or hard for employed women to continue breastfeeding on their return to work. Suggestions were enquired on existing conditions among participants or within the institution which enabled them to continue or discontinue breastfeeding and proposals sought on what the institution can do to enable them to continue breastfeeding when they returned to work from maternity leave. These were then grouped and manually coded accordingly into different thematic areas in three different subthemes of enabling continuity, barriers to continuity, and ways of enabling breastfeeding continuity. For factors enabling continuity of breastfeeding categories were; expression of breast milk, breaks / staying closer to work place, flexible working time and supportive boss / colleagues. Non continuity factors were; far distance from work, too much work load, no breastfeeding breaks / rooms. Proposed ways to enable continuity were; provision of breastfeeding breaks / rooms, staff quotas, milk expression rooms, baby care centres, flexible working hours, provision of breastfeeding education and extension of maternity leave for up to 6 months.

3.16 Data Analysis

After administration of questionnaires to the participants was completed, each questionnaire was counter checked to ensure that they are correctly filled. For objective 1, frequencies were calculated for all categories in the 6 socio-demographic characteristics. Findings in question 12,
14 and 16 were analysed in response to objective 2. Findings in question 5 were classified into 3; that is, 1 those who gave correct exclusive breastfeeding definition (Yes), 2 those who gave wrong definition (No) and 3 those who dint know. For analysis, 1 and 2 were grouped into one variable; “no”. On question 16, on seven choice answers; 2, 3, 4, 5, 6, and 7 (I don’t know), 2, 3, 4, 5 and 7 responses were groped in to one variable; “no”. All those whose responses were 6 were marked as “yes” (Correct). On benefits of exclusive breastfeeding participants gave 10 different responses. Out of which 9 were breastfeeding benefits while the 10th one were those who did not know any benefit of exclusive breastfeeding. For analysis, the above 9 responses were grouped into 1 “yes” (those who knew) and 0 “no” (those who didn’t know). This was then analysed to get those who mentioned 1, 2, 3 or those who did not know any benefit. Frequencies were then calculated on findings of the above variables to determine whether knowledge on exclusive breastfeeding was either good or poor. Findings were presented in frequency tables.

For objective 3, for each statement strongly agree and agree response were merged to “Agree” strongly disagree and disagree to “disagree” and neutral responses were maintained as “neutral”. For objective 4, qualitative data was sorted and categorised.

The data was coded and analysed using Statistical Package for Social Sciences (SPSS) version 20. A \( p \) value of < 0.05 was used as the criterion for statistical significance. Logistic and binomial logistic regression yielding odds ratio was used to determine the relationships between dependent and independent variables.

Descriptive summary statistics such as frequencies and percentages, charts and graphs was used to describe exclusive breastfeeding rates, women’s exclusive breastfeeding knowledge,
promoters / barriers of continued breastfeeding on return to work and to give a distribution of scores on attitude.

3.17 Ethical Consideration

Permission to carry out this study and ethical clearance was obtained from Maseno University’s School of Graduate Studies and Ethics Review Committee (MUERC) respectively (Appendix 2). The researcher sought informed consent from the participants and also assured them of strict confidentiality by informing them that the information they gave was only for the sole purpose of this research. They were also assured that by writing their names in the questionnaires was only to enable tracing and verify missing information by the researcher in case there was need.
CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the findings of the research data collected and analysed. Results are discussed and organised under the following sub headings: Socio-demographic information of the respondents, exclusive breastfeeding practice, exclusive breastfeeding knowledge, breastfeeding attitude and promoters and barriers of continued breastfeeding on return to work.

4.2 Socio-demographic Information

Majority (23.4 percent) of the respondents were aged between 25-29 years old and married (86.3 percent). None was found to be a widow, divorced or separated. They possessed undergraduate degree (33 percent) with only a few with PhD degrees (5.1 percent). Diploma, certificate and those educated up to secondary level were 31.5 percent, 21.3 percent and 9.1 percent respectively. Majority (31 percent) were from administrative staffs followed by support staff (18.3 percent), academic staff (16.2 percent), hotel / hostel staffs (14.2 percent), HCWs (11.7 percent) with minority being technicians (8.6 percent).
Table 4.1 Socio-demographic Information

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (Years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 -24</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>25-29</td>
<td>46</td>
<td>23.4</td>
</tr>
<tr>
<td>30-34</td>
<td>63</td>
<td>32</td>
</tr>
<tr>
<td>35-39</td>
<td>49</td>
<td>24.9</td>
</tr>
<tr>
<td>40-49</td>
<td>25</td>
<td>12.7</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>27</td>
<td>13.7</td>
</tr>
<tr>
<td>Married</td>
<td>170</td>
<td>86.3</td>
</tr>
<tr>
<td><strong>Educational level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>18</td>
<td>9.1</td>
</tr>
<tr>
<td>Certificate</td>
<td>42</td>
<td>21.3</td>
</tr>
<tr>
<td>Diploma</td>
<td>62</td>
<td>31.5</td>
</tr>
<tr>
<td>Degree</td>
<td>65</td>
<td>33</td>
</tr>
<tr>
<td>Masters/ PhD</td>
<td>10</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>Occupation (Departments)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support staff</td>
<td>36</td>
<td>18.3</td>
</tr>
<tr>
<td>Technicians</td>
<td>17</td>
<td>8.6</td>
</tr>
<tr>
<td>Administration</td>
<td>61</td>
<td>31</td>
</tr>
<tr>
<td>HCWs</td>
<td>23</td>
<td>11.7</td>
</tr>
<tr>
<td>Academics</td>
<td>32</td>
<td>16.2</td>
</tr>
<tr>
<td>Hostel/Hotel staff</td>
<td>28</td>
<td>14.2</td>
</tr>
</tbody>
</table>
4.3 Exclusive Breastfeeding Practice

4.3.1 Babies Fed before Initiating Exclusive Breastfeeding

Women who did not feed their baby on any other drink/food before initiating breastfeeding were 86 percent while minority 14 percent did (Figure 4.1).

Percentage Number of Children Fed Before Breastfeeding Initiation

![Pie chart showing percentage of babies fed before breastfeeding initiation](image)

**Figure 4.1 Babies fed before breastfeeding initiation**

4.3.2 Drinks / Foods Mothers Fed Baby before Initiating Breastfeeding

For those who fed their baby on any other drink before initiating breastfeeding, 36.7 percent fed their babies on grip water as the minority (5.0 percent) of the mothers having fed babies on herbal drug.
Percentage Amounts of Various Foods Fed to the Babies before Initiating Breastfeeding

Figure 4.2 Drinks / Foods Baby Fed before Initiating Breastfeeding

4.3.3 Duration Taken to Initiate Breastfeeding after Giving Birth in Minutes

27.4 percent of the respondents took 0-30 minutes to initiate breastfeeding after giving birth/delivering their babies as 13.7 percent took 45 minutes to an hour (Figure 2).
Percentage Amount of Time Taken before a baby is initiated on Breastfeeding

![Percentage Amount of Time Taken before a baby is initiated on Breastfeeding](image)

**Figure 4.3 Duration Taken to Initiate Breastfeeding**

### 4.3.4 Time Mother First Introduced any other Food or Liquid to Child besides Breastfeeding

42.6 percent of the respondents first introduced any other food or liquid to their child besides breastfeeding at six months while the same number (9.6 percent) of respondents both took two and five months forming the minority (Figure 4.4).
Percentage Number of Children Introduced to other Foods/Liquids for the First Time by Months

Figure 4.4. Time Taken to Introduce other Foods / Liquids besides Breastfeeding

4.3.5 Relationship between Socio-demographic Characteristics and Exclusive Breastfeeding Practice

Thirty two percent of women were between the ages of 30-34 years while seven percent were between 20-24 years. There was no significant association between the respondents age and exclusive breastfeeding, $P=0.389$. Compared to those women aged between 25-29 years, women aged between 25-29 years were 1.455 times more likely to engage in exclusive breastfeeding OR=1.455 (0.345-4.86), $P=0.543$; those aged between 30-34 years were 0.877 times less likely
to engage in exclusive breastfeeding as compared to those aged between 20-24 years OR=0.877 (0.772-0.834), $P=0.827$.

Eighty six percent of the women were married while the minority fourteen were married. The relationship between the respondents marital status and the practice of exclusive breastfeeding was not statistically significant, $P=0.90$. Married women were 1.578 times more likely to engage in exclusive breastfeeding as compared to single women, OR=1.576(0.671-3.715), $P=0.295$. On the respondents’ level of education, thirty three percent were degree holders while the minority at only five percent were master/PhD holders. There was significant relationship between the respondents highest level of education and exclusive breastfeeding, $P=0.016$. Certificate holders were 0.154 times more likely to engage in exclusive breastfeeding as compared to those who attained secondary level of education, OR=0.154 (0.045-0.526), $P=0.003$; masters and PhD holders were 0.96 times less likely to engage in exclusive breastfeeding as compared to those who attained secondary level of education, OR=0.96 (0.015-0.619), $P=0.014$. Thirty one percent of the women were administration staff while nine percent technicians. The relationship between the respondents occupation and the practice of exclusive breastfeeding was not statistically significant, $P=0.180$.

Women who were hostel / hotel staffs were 1.269 times more likely to engage in exclusive breastfeeding as compared to support staffs OR=1.269(0.419-3.470), $P=0.615$. Women who were technicians were 0.993 times less likely to engage in exclusive breastfeeding as compared to support staff OR=0.993 (0.313-3.155), $P=0.991$.

Women who attended antenatal clinics between 9-10 times were 1.950 times more likely to engage in exclusive breastfeeding as compared to those who attended between 1-2 times
OR=1.950 (0.27-13.983), \( P=0.506 \); those who attended antenatal clinics between 3-4 times were 0.792 times less likely to engage in exclusive breastfeeding as compared to those who attended antenatal clinics between 1-2 times OR=0.792 (0.122-5.155), \( P=0.807 \). More information on relationship between socio-demographic characteristics and exclusive breastfeeding practice is further illustrated in Table 4.2.

Table 4.2.1 Relationship between Socio-demographic Characteristic and Exclusive Breastfeeding Practice

<table>
<thead>
<tr>
<th>Characteristics of the study women</th>
<th>Categories</th>
<th>Participants n(%)</th>
<th>Odds Ratio on EBF</th>
<th>( P )-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-24 (Ref)</td>
<td>14 (7 %)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-29</td>
<td>46 (23.4 %)</td>
<td>1.455 (0.345 - 4.86)</td>
<td>0.543</td>
<td></td>
</tr>
<tr>
<td>30-34</td>
<td>63 (32 %)</td>
<td>0.877 (0.772 - 0.834)</td>
<td>0.827</td>
<td></td>
</tr>
<tr>
<td>35-39</td>
<td>49 (24.9 %)</td>
<td>1.086 (0.328 - 3.603)</td>
<td>0.892</td>
<td></td>
</tr>
<tr>
<td>40-49</td>
<td>25 (12.7 %)</td>
<td>0.518 (0.131 - 2.045)</td>
<td>0.348</td>
<td></td>
</tr>
<tr>
<td>Single (Ref.)</td>
<td>27 (13.7 %)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>170 (86.3 %)</td>
<td>1.576 (0.671 - 3.715)</td>
<td>0.295</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.2.2 Relationship between Socio-demographic Characteristic and Exclusive Breastfeeding Practice

<table>
<thead>
<tr>
<th>Level of education</th>
<th>n(%)</th>
<th>Odds Ratio on EBF</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary (Ref)</td>
<td>18 (9.1 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td>42 (21.3 %)</td>
<td>0.154 (0.045 – 0.526)</td>
<td>0.003</td>
</tr>
<tr>
<td>Diploma</td>
<td>62 (31.5 %)</td>
<td>0.260 (0.82 - 0.820)</td>
<td>0.022</td>
</tr>
<tr>
<td>Degree</td>
<td>65 (33 %)</td>
<td>0.373 (0.119 - 1.166)</td>
<td>0.090</td>
</tr>
<tr>
<td>Masters and PhD</td>
<td>10 (5.1 %)</td>
<td>0.96 (0.015 - 0.619)</td>
<td>0.014</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>n(%)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Support staff (Ref)</td>
<td>36 (18.3 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technicians</td>
<td>17 (8.6 %)</td>
<td>0.993 (0.313 - 3.155)</td>
<td>0.991</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>61 (31 %)</td>
<td>1.013 (0.444 - 2.311)</td>
<td>0.976</td>
</tr>
<tr>
<td>HCWs</td>
<td>23 (11.7 %)</td>
<td>0.489 (0.162 - 1.474)</td>
<td>0.204</td>
</tr>
<tr>
<td>Academic staff</td>
<td>32 (16.2 %)</td>
<td>0.373 (0.133 - 1.047)</td>
<td>0.061</td>
</tr>
<tr>
<td>Hostel / hotel staff</td>
<td>28 (14.2 %)</td>
<td>1.269 (0.419 - 3.470)</td>
<td>0.615</td>
</tr>
</tbody>
</table>
Table 4.2.3 Relationship between Socio-demographic Characteristic and Exclusive Breastfeeding Practice

<table>
<thead>
<tr>
<th>Number of times attended Antenatal Clinic</th>
<th>n(%)</th>
<th>Odds Ratio on EBF</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 (Ref)</td>
<td>5 (2.5 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>55 (28 %)</td>
<td>0.792 (0.122 - 5.155)</td>
<td>0.807</td>
</tr>
<tr>
<td>5-6</td>
<td>83 (42.3 %)</td>
<td>1.207 (0.191- 7.603)</td>
<td>0.842</td>
</tr>
<tr>
<td>7-8</td>
<td>31 (15.8 %)</td>
<td>1.083 (0.158 - 7.435)</td>
<td>0.935</td>
</tr>
<tr>
<td>9-10</td>
<td>23 (11.7 %)</td>
<td>1.950 (0.27 - 13.983)</td>
<td>0.506</td>
</tr>
</tbody>
</table>

Whether women’s attended post natal clinic after delivering

<table>
<thead>
<tr>
<th>Whether women’s attended post natal clinic after delivering</th>
<th>Yes</th>
<th>192 (97.1%)</th>
<th>OR N/ A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>3 (1.5 %)</td>
<td></td>
</tr>
</tbody>
</table>

4.4 Exclusive Breastfeeding Knowledge

4.4.1 Whether Mothers had heard about Exclusive Breastfeeding

Eighty eight percent of women had heard about exclusive breastfeeding, while eleven percent had not.
Table 4.3 Having Heard about Exclusive Breastfeeding n= 197

<table>
<thead>
<tr>
<th>Heard about exclusive breastfeeding</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>175</td>
<td>89</td>
</tr>
<tr>
<td>No</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>197</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.4.2 Meaning of Exclusive Breastfeeding

For those who have heard about EBF (175 participants), forty three percent women knew the meaning of exclusive breastfeeding while fifty six percent did not know the meaning of exclusive breastfeeding.

Table 4.4 Meaning of Exclusive Breastfeeding, n= 175

<table>
<thead>
<tr>
<th>Knowledge on EBF</th>
<th>Frequency (n)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knows</td>
<td>76</td>
<td>43 %</td>
</tr>
<tr>
<td>Don’t know</td>
<td>99</td>
<td>56 %</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
4.4.3 Source of Information on EBF

From those who have heard about EBF (175), seventy percent women had heard about exclusive breastfeeding in the hospital while about seven percent had heard about it from the media/internet.

Table 4.5 Venue Heard about Exclusive Breastfeeding, \( n = 175 \)

<table>
<thead>
<tr>
<th>Venue heard about exclusive breastfeeding</th>
<th>Frequency(n)</th>
<th>Percent(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>121</td>
<td>70</td>
</tr>
<tr>
<td>Media / Internet</td>
<td>12</td>
<td>6.9</td>
</tr>
<tr>
<td>Friends / Relatives</td>
<td>26</td>
<td>15.2</td>
</tr>
<tr>
<td>School / Seminar</td>
<td>16</td>
<td>9.1</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.4.4 The Recommended Duration of Exclusive Breastfeeding

Eighty eight percent of women knew recommended duration of exclusive breastfeeding to be six months while those who knew it is recommended for four and five months were two percent.
Table 4.6 Known Recommended Duration of Exclusive Breastfeeding  n= 175

<table>
<thead>
<tr>
<th>Duration of exclusive breastfeeding in months</th>
<th>Frequency(n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Three</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Four</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Five</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Six</td>
<td>152</td>
<td>86.9</td>
</tr>
<tr>
<td>I don’t know</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.4. 5 Women’s Thought on What the Term Exclusive Breastfeeding Means

For the respondents who had not heard about exclusive breastfeeding fifty nine percent still had no clue on what it meant while forty one percent were knowledgeable on what it meant.
4.4.6 Whether Exclusive Breastfeeding is Beneficial

Ninety two percent women were in agreement that exclusive breastfeeding was beneficial while nine percent felt otherwise.

**Table 4.7 Whether Exclusive Breastfeeding is Beneficial  \( n = 175 \)**

<table>
<thead>
<tr>
<th>Whether exclusive breastfeeding is beneficial</th>
<th>Frequency(n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>159</td>
<td>90.8</td>
</tr>
<tr>
<td>No</td>
<td>16</td>
<td>9.1</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0</td>
</tr>
</tbody>
</table>
4. 4.7 Benefits of Exclusive Breastfeeding

159 participants agreed that EBF is beneficial as the remaining 38 did not. Out of which the 159, forty seven percent stated that it helped a lot in body immunity, one percent stated that it helped in good growth while those who stated that it improved intelligence and safe.

Table 4.8 Known Benefits of Exclusive Breastfeeding  n=159

<table>
<thead>
<tr>
<th>Benefits of exclusive breastfeeding</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonding</td>
<td>8</td>
<td>5.0</td>
</tr>
<tr>
<td>Immunity</td>
<td>76</td>
<td>47.8</td>
</tr>
<tr>
<td>Good growth</td>
<td>43</td>
<td>27</td>
</tr>
<tr>
<td>Cheap/ Available</td>
<td>5</td>
<td>3.1</td>
</tr>
<tr>
<td>Family planning</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>Improved intelligence</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Nutritious/ Highly digestible</td>
<td>17</td>
<td>10.7</td>
</tr>
<tr>
<td>Safe</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>At right temperature</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td></td>
</tr>
</tbody>
</table>
4.4.8 Relationship between Breastfeeding Knowledge and Exclusive Breastfeeding Practice

There was significant association between exclusive breastfeeding knowledge and practice of exclusive breastfeeding, \( p=0.014 \). Those who had good knowledge of breastfeeding were 1.495 more likely to carry out exclusive breastfeeding than those who had poor knowledge, OR=1.495 \( (0.763 – 2.931) \), \( p=0.014 \).

Table 4.9 Relationship between Breastfeeding Knowledge and Exclusive Breastfeeding Practice.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Percentage</th>
<th>Odd Rations EBF</th>
<th>( P ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor (Ref)</td>
<td>139 (70.5 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>58 (29.4 %)</td>
<td>1.495 (0.763-2.931)</td>
<td>0.242</td>
</tr>
</tbody>
</table>

4.5 Relationship between Attitude and Exclusive Breastfeeding Practice

This section analyses, interprets, presents and discusses findings on the third objective: to establish the relationship between breastfeeding attitudes and exclusive breastfeeding by employed women in Maseno University.

4.5.1 Influence of Breastfeeding Attitudes on Exclusive Breastfeeding

All women (100 percent) not only agree to the fact that are employed women cannot exclusively breastfeed but also for them, feeding on cow’s milk or formula is a better choice than breastfeeding for a working mother.
<table>
<thead>
<tr>
<th>Question</th>
<th>Agree n (%)</th>
<th>Neutral n (%)</th>
<th>Disagree n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I will exclusively breastfeed</td>
<td>192 (97.5 %)</td>
<td>8 (4.1 %)</td>
<td>0</td>
</tr>
<tr>
<td>I will only breastfeed if I do not have enough money for infant or cow’s milk</td>
<td>192 (97.5 %)</td>
<td>5 (2.5 %)</td>
<td>0</td>
</tr>
<tr>
<td>I can breastfeed my baby any time regardless of whether I am at home or with other people present</td>
<td>186 (94.4 %)</td>
<td>6 (3 %)</td>
<td>0</td>
</tr>
<tr>
<td>I will combine breastfeeding with infant formula or cows milk</td>
<td>192 (97.5 %)</td>
<td>0</td>
<td>5 (2.5 %)</td>
</tr>
<tr>
<td>Feeding on cows milk or formula is as healthy as breastfeeding</td>
<td>197 (100 %)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I should give my baby breast milk any time they cry for it when am with the baby</td>
<td>197 (100 %)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Feeding on cows milk or formula is a better choice than breastfeeding for a working mother</td>
<td>197 (100 %)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I feel that exclusive breastfeeding is outdated</td>
<td>191 (97 %)</td>
<td>6 (3 %)</td>
<td>0</td>
</tr>
<tr>
<td>Children looking healthy should not be breastfed</td>
<td>185 (93.9 %)</td>
<td>0</td>
<td>12 (6.1 %)</td>
</tr>
<tr>
<td>I would not have breastfed my child at workplace even if support was available</td>
<td>0</td>
<td>191 (97 %)</td>
<td>6 (3.0 %)</td>
</tr>
</tbody>
</table>
### Table 4.10.2 Influence of Breastfeeding Attitudes on Exclusive Breastfeeding

<table>
<thead>
<tr>
<th>Perception</th>
<th>Response 1 (58.4%)</th>
<th>Response 2 (42.6%)</th>
<th>Response 3 (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding on cow’s milk or formula is more convenient than breastfeeding.</td>
<td>194 (98.5%)</td>
<td>3 (1.5%)</td>
<td></td>
</tr>
<tr>
<td>I cannot breastfeed in public</td>
<td>197 (100%)</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>I feel that exclusive breastfeeding is a waste of time.</td>
<td>120 (60.9%)</td>
<td>77 (39.1%)</td>
<td>0</td>
</tr>
<tr>
<td>Breast milk alone is not adequate for the baby</td>
<td>115 (58.4%)</td>
<td>82 (42.6%)</td>
<td>0</td>
</tr>
<tr>
<td>I will give water alongside breastfeeding</td>
<td>114 (57.9%)</td>
<td>82 (42.1%)</td>
<td>0</td>
</tr>
<tr>
<td>Employed women cannot breastfeed</td>
<td>197 (100%)</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>I would rather feed on cow’s milk or infant formula rather than on expressed breast milk</td>
<td>99 (50.3%)</td>
<td>98 (49.7%)</td>
<td>0</td>
</tr>
</tbody>
</table>

### 4.6 Outcome of Relationship of Breastfeeding Attitudes on Exclusive Breastfeeding Practice

Calculation on responses as per the findings on the frequency table resulted in mean IIFAS score which was below 50. This shows that mothers have negative attitude towards exclusive breastfeeding.
Table 4.11 Relationship of Breastfeeding Attitudes on Exclusive Breastfeeding Practice

<table>
<thead>
<tr>
<th>Relationship between EBF and attitude</th>
<th>score</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive attitude to EBF</td>
<td>52-85</td>
<td>-</td>
</tr>
<tr>
<td>Neutral</td>
<td>51</td>
<td>-</td>
</tr>
<tr>
<td>Negative attitude towards EBF</td>
<td>17-50</td>
<td>Yes</td>
</tr>
</tbody>
</table>

4.7 Factors Influencing Exclusive Breastfeeding among Employed Women

This section analyses, interprets, presents and discusses findings in relation to the fourth objective: To identify workplace factors influencing exclusive breast feeding among employed women in a public University.

4.7.1 Whether Respondents Continued to Exclusively Breastfeed their Babies After Resuming Work

Ninety two percent of the mothers continued to breastfeed their babies after resuming work while eight percent did not (Table 4.12). Those who did not either put their children on replacement or mixed feeding.
Table 4.12 Continued Breastfeeding After Resuming Work

<table>
<thead>
<tr>
<th>Continuity of breastfeeding</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>182</td>
<td>92.4</td>
</tr>
<tr>
<td>No</td>
<td>15</td>
<td>7.6</td>
</tr>
<tr>
<td>Total</td>
<td>197</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.7.2 Factors (s) that made it Possible for Mothers to Continue Breastfeeding

Fifty percent of the mothers who continued to breastfeed their babies on return to work stated that breaks/ staying close made it possible for them to continue breastfeeding while fourteen percent stated that it was the support of their boss/ colleagues that made it possible for them to continue breastfeeding (Table 4.13).

Table 4.13 Factors Responsible for Continued Breastfeeding on Return to Work

<table>
<thead>
<tr>
<th>Factors for continuity of breastfeeding</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expression of breast milk</td>
<td>27</td>
<td>14.8</td>
</tr>
<tr>
<td>Breaks / staying close</td>
<td>92</td>
<td>50.5</td>
</tr>
<tr>
<td>Flexible working time</td>
<td>32</td>
<td>17.6</td>
</tr>
<tr>
<td>Supportive boss / colleagues</td>
<td>31</td>
<td>17.1</td>
</tr>
<tr>
<td>Total</td>
<td>182</td>
<td>100.0</td>
</tr>
</tbody>
</table>
4.7.3 Factors for Non Continuity of Breastfeeding on Return to Work

For mothers who did not breastfeed their babies after resuming work, fifty three percent mothers stated that lack of breastfeeding breaks/ rooms made it impossible for them to continue breastfeeding while twenty percent stated work load as the barrier for the continuity of breastfeeding.

Percentage number of women who did not continue to breastfeed after returning to work due to varied reasons

![Figure 4.6 Factors for Non Continuity of Breastfeeding on Return to Work](image)

Figure 4.6 Factors for Non Continuity of Breastfeeding on Return to Work
4.7.4 Suggestions on What the Institution Can Do to Support Exclusive Breastfeeding on Return to Work

Twenty six percent of the respondents recommended that continued breastfeeding on return to work can be ensured through the issuance of breastfeeding brakes/rooms while the five percent recommended that staff quarters should be made friendly for continued breastfeeding.

Table 4.14 Suggestions on How the Institution can Support Exclusive Breastfeeding at Work Place

<table>
<thead>
<tr>
<th>Ensured Continuity of Breastfeeding</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastfeeding brakes/ rooms</td>
<td>52</td>
<td>26.4</td>
</tr>
<tr>
<td>Staff quarters</td>
<td>9</td>
<td>4.6</td>
</tr>
<tr>
<td>6 months maternity leave</td>
<td>21</td>
<td>10.7</td>
</tr>
<tr>
<td>Flexibility in working hours</td>
<td>23</td>
<td>11.7</td>
</tr>
<tr>
<td>Baby care centres</td>
<td>29</td>
<td>14.7</td>
</tr>
<tr>
<td>Milk expression rooms</td>
<td>48</td>
<td>24.4</td>
</tr>
<tr>
<td>Breastfeeding education</td>
<td>15</td>
<td>7.6</td>
</tr>
<tr>
<td>Total</td>
<td>197</td>
<td>100.0</td>
</tr>
</tbody>
</table>
CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter gives a summary of key findings, discussion, conclusion and recommendations from the findings on assessment of socio-demographic, knowledge, attitude and work place factors influencing breastfeeding by female employees at a public university in Kenya.

5.2 Breastfeeding Practice

According to this study, 14.2 percent of women gave their babies other foods/drinks before initiating breastfeeding with majority (36.7 percent) giving grip water. It was also found that 14.6 percent of women did not initiate their children on breastfeeding within the required 1 hour and only 42.6 percent women exclusively breastfed their children for up to six months. According to Maternal Infant and Young Child Nutrition (MIYCN) guidelines, the only food for the baby for the first six months is breast milk and no any other food/drinks should be given to the child before they attain the age of six months. Again, it’s recommended that a child be initiated on breastfeeding within the first 1 hour and no pre-lacteal feed should be given. Compared regionally and nationally, more women are practicing exclusive breastfeeding in Kisumu County at 84.4 percent (DHIS report 2018) and nationally at 62 percent (KNBS and Macro, 2014). From the findings, MIYCN policy recommendation as regards exclusive breastfeeding is not strictly adhered. This could an indirect contributing factor to high child morbidity and mortality which is still reportedly high in Kenya as 1 in every 19 children and 38 in every a thousand born die before they celebrated their fifth and second birth days respectively (KNBS and Macro, 2014). In comparison to the general population of breastfeeding
women, there seems to be low exclusive breastfeeding rate among employed women and demographic surveys and ministry of health reports on exclusive breastfeeding need to outline working women exclusively breastfeeding rates for decision making.

One of the WHO nutrition targets is to improve exclusive breastfeeding rates to at least 50 percent by the year 2025. On face value, Kenya seem to be doing well given that it has already hit fifty plus percent target, however to holistically sustain and improve exclusive breastfeeding rate of 50 percent plus and ensure every child is exclusively breastfed as required and in working towards the achievement of 2030 target of ending all forms of malnutrition of which exclusive breastfeeding is one of the key drivers, all aspects of exclusive breastfeeding such as among working women has to be properly understood.

### 5.3 Relationship between Socio-demographic Characteristics and Exclusive Breastfeeding

Age, marital status, occupation and ante natal attendance were not significantly associated to exclusive breastfeeding. Women’s decision to or not to exclusively breastfeed their children was not determined by socio-demographic factors. Their decisions to or not to exclusively breastfeed was being made independently regardless of availability of the above socio-demographic factors. From literatures studies done, no single study was found to have reportedly looked at the relationship of all the above factors and exclusive breastfeeding. However, looked at individually those factors have varied effect on exclusive breastfeeding practice. By age, mothers who were 25-29 years were found to be more likely to engage in exclusive breastfeeding unlike those aged 45 – 49 years who were less likely to breastfeed exclusively. Despite these, there was no consistency on how age affects exclusive breastfeeding practice. There is irregular trend on unlikely or likeliness of women to exclusively breastfeed in regard to their age difference.
Other studies have also shown variations on how age affects exclusive breastfeeding. For instance, two separate studies done in Nigeria reported different findings. Ademola et al (2011) reportedly found that women aged 25 years and above exclusively breastfeed more while according to Agbo et al (2013), employed women aged 30 years and above reportedly prefer exclusive breastfeeding. In Ethiopia mothers 18-23 years were found to be more likely to carry out exclusive breastfeeding (Mekuanint et al., 2014). Other studies done in Australian (Scott et al, 1999) and Kenya (Mututho, 2008), lower maternal age and mother’s age was respectively reported as one predictor of lower exclusive breastfeeding and how a mother will exclusively breastfeed. But notably, in the Australian and Kenyan studies above, young mothers were found to be most likely to be exclusively breastfeeding than older mothers. However, the researcher did not specify which young age affects exclusive breastfeeding.

This study finding that age variedly affects exclusive breastfeeding is in agreements with findings from the above studies which were done in Nigeria and Ethiopia among working class women. In the two studies, age seems to be variedly affecting exclusive breastfeeding among working class women. That is, there is no consistency on how a given age group will exclusively breastfeed.

In this study, married women were found to be more likely to exclusively breastfeed than single women. Finding which agrees with other findings from other studies done in some African countries (Agbo et al., 2013; Alemayu; et al., 2013; Makena & Kimani 2011) which also reportedly found married women to having a high exclusive breastfeeding rate than single, separated or divorced counterparts. Similarly a study done in England (Ebrahim et al., 1999) single women working away from home and lacking family support at home were found to have great difficulty in carrying out exclusive breastfeeding alongside providing other child care
services. Employed or not, women from developing and developed countries exclusively breastfeed the same in that married women will be more likely to exclusively breastfeed more than single women. This study did not establish why single women were not able to exclusively breastfeed as compared to married women. But, as reported in some of the above earlier studies (Agbo et al., 2013; Alemayu et al., 2013; Makena & Kimani 2011), this could be because married women were getting some support from their partners. Establishing why married women were exclusively breastfeed more than married women was not part of these research findings.

This study found significant association between educational level and exclusive breastfeeding. As opposed to others socio-demographic factors, mother’s level of education determine whether they will practice exclusive breastfeeding or not. In developing countries, studies have found women with lower educational levels to exclusively breastfeed longer than those with higher educational level (King et al., 1993; Alemeyehu et al., 2009; Ochola, 2008). Practice which findings of this study corroborate in that, women having certificates and diplomas were found to be breastfeeding more than those with degree and master / PhD level of education. Women who have acquired more education were less likely to practice exclusive breastfeeding unlike those with lower educational level.

A woman’s educational level couple with her social class has been closely associated with her breastfeeding practices. One of the possible reasons for women with lower educational level to exclusively breastfeed more than those with higher educational level could be attributed to the fact that majority of those with lower educational level are staying closer to their work place thus able to sneak back during tea and lunch breaks to breastfeed their children.
This study found no significant association between mother’s occupational level and exclusive breastfeeding practice. However, there was varied number of times a mother was likely to carry out exclusively breastfeeding with regard to their levels of education paired with their occupation. It is good to note that, from reviewed literatures, no study was found to have directly or independently reported how occupational level affect exclusive breastfeeding without looking at women’s level of education. This is because most often educational level directly influences level of occupation. On this regard, findings from the above studied literatures; (King et al., 1993; Alemeyehu et al., 2009; Ochola, 2008) seems to agree with that of this study that woman’s educational level coupled with her occupational level has been closely associated with her breastfeeding practices.

5.4 Relationship between Breastfeeding Knowledge and Exclusive Breastfeeding

This study found that majority of women (87.8 percent) have heard about the term exclusive breastfeeding but out of which less than half (43.1 percent) of women had good exclusive breastfeeding knowledge. They have heard about it but when it comes to it proper definition in terms of what exactly it is, that is, what to feed the child on and for what duration is not clear to quite a number of women. The association between breastfeeding knowledge and exclusive breastfeeding was not significant.

Studies done in developed (Thomea et al., 2006; Shelton, 1994 and Wallace, 1992) and developing countries (Nyaga et al., 2012 and Ogunba & Agwo, 2014) have reported that when women have good breastfeeding knowledge they tend to breastfeed exclusively. Same finding was reported by a study in Nigeria (Agbo et al, 2014) which reported that with good exclusive breastfeeding knowledge, employed women will strive to exclusively breastfeed even if they are
faced with difficulties to breastfeed in their places of work. In this study, women practicing exclusive breastfeeding were almost equal to those having good exclusive breastfeeding knowledge. That is, 43.1 percent women had good exclusive breastfeeding knowledge and only 42.6 percent women exclusively breastfed. Finding which supports findings of the above studies (Thomea et al., 2006; Shelton, 1994; Wallace, 1992; Nyaga et al., 2012; Ogunba, Agwo, 2014 and Agbo et al, 2014) that with poor exclusive breastfeeding knowledge there will be low exclusive breastfeeding rate.

On the contrary, finding from a study done in Ghana (Danso, 2014) reported that having breastfeeding knowledge does not necessarily translate into good exclusive breastfeeding practice. Finding which contradict that of this study.

This study being done in an institution of higher learning, women were expected to be having adequate information on exclusive breastfeeding. However, it has emerged that women’s level of education does not translate into having good breastfeeding knowledge. Finding which is similar to that of a study done in Ghana (Ogunba and Agwo, 2014) which found that graduates with poor exclusive breastfeeding knowledge have low exclusive breastfeeding practice. As a measure and away of improving exclusive breastfeeding knowledge and rates, there is need for breastfeeding education for all women regardless of their educational level. This will help bridge any existing knowledge gap a rising from belief that educated women are well informed and assumed to have good exclusive breastfeeding.

This study also revealed that the more a mother attends ante and post natal clinic the more their knowledge is enhanced and the more they are likely to exclusively breastfeed. Similar findings were reported in Morogoro Tanzania (Shirima et al., 2001) where mothers who attended both
ante and post natal clinics were found to have increased exclusive breastfeeding rates. The noted improvement in exclusive breastfeeding rate could be because of received counselling on Maternal Infant and Young Child Nutrition (MIYCN) during pre and post natal clinics.

5.5 Relationship between Breastfeeding Attitudes and Exclusive Breastfeeding

This study found women’s attitude to be negative to exclusive breastfeeding practice. Thus women in this institution tend to favour mixed / replacement feeding. Mixed feeding is combining breast milk with other milks, water, liquids such as gripe water, cooking oil, and oral concoction and any other (UNICEF, 2010). The association between breastfeeding attitude and exclusive breastfeeding was found to be significant.

Losch et al. (1995); Wagner and Wagner (1995) in separate studies reportedly found out that in addition to breastfeeding knowledge, breastfeeding attitude of the mother have a role in the practice of exclusive breastfeeding. However, their role was varied as there was no consistency on how they relate.

Mothers attitude in addition to exclusive breastfeeding knowledge affect how exclusive breastfeeding is carried out. Low exclusive breastfeeding rates could be due to women’s poor exclusive breastfeeding knowledge and their negative attitude towards exclusive breastfeeding (ibid).

In Zimbabwe (Ethel & Fungal 2013) and Kenya (Mututho, 2000), it was noted that exclusive breastfeeding knowledge and attitudes influence on exclusive breastfeeding practice varied but mostly they synergies. Findings which tend to agree to findings of this study which shows that poor exclusive breastfeeding knowledge and negative exclusive breastfeeding attitude have a negative impact on exclusive breastfeeding practice.
5.6 Work Place Factors Influencing Breastfeeding and Exclusive Breastfeeding

Evidently, the institution has not implemented International Labour Organization (ILO) breastfeeding recommendations. But despite this, 92.4 percent employed women continued to breastfeed their children when they resumed work from maternity leave. Factors which enabled them to continue breastfeeding were personal initiative to expression breast milk, tea breaks, staying close to work place, supportive boss and colleagues as well as flexible working time.

Findings of this study revealed enabling factors making it possible for employed women to continue breastfeeding, however these factors were not provided by the institution. Women were only making personal initiatives like taking advantage of tea brakes to sneak back for those who were staying closer to their places of work. Failure by the institution to provide these work place breastfeeding facilities could be the reason why exclusive breastfeeding was low despite many women struggling to continue to breastfeed on their return to work from maternity leave.

In absence of maternity leave, studies have shown that employed women find it difficult to exclusively breastfeed beyond their maternity leave (Perry, 2003; Danielle et al., 2011). As a result, some children will be weaned off as others are completely stopped from breastfeeding. In an effort to promote breastfeeding among employed women,

Similarly, separate studies done in Malaysia (Tengku, 2012) and in Taiwan (Sui – Ying, 2013) reported that availability of lactation rooms, breastfeeding brakes, milk expression rooms, flexible working time, supportive colleagues and supervisors encourages employed mothers to continue breastfeeding. In addition to suggestion to extend maternity leave to six months, there was positive gesture on use of breastfeeding support facilities if they are provided by the institution. However, suggestion to extend maternity leave for up to 6 months is a good idea but
it will need policy change by government before it is affected. Even though women were found to be having negative attitude towards exclusive breastfeeding, as regard continued breastfeeding at the workplace they seems to be having good will.

Failure by the institution to provide workplace breastfeeding facilities was the reasons why women who stopped breastfeeding on return to work did so. In support to this finding, in a study to assess breastfeeding practice of working women Nigeria (Netshanda, 2013), it was also found that lack of workplace, negative attitude of colleagues and employers in addition to lack of breastfeeding knowledge reduces breastfeeding by working women.

5.7 Association between Socio-demographic, Knowledge, Attitudes and Workplace Factors Promoting Exclusive Breastfeeding

From reviewed literatures no significant association was reportedly found to have been directly associated to age, marital status, educational levels, occupation and exclusive breastfeeding among employed women. In this study, a part from women’s educational level and their exclusive breastfeeding knowledge other factors were found not to have any significant association to exclusive breastfeeding practice. Comparably, educational level was strongly associated to exclusive breastfeeding \( p=0.014 \) than having exclusive breastfeeding knowledge, \( p=0.453 \). Education enhances knowledge. Educated and uneducated women can have exclusive breastfeeding knowledge. But how that knowledge helps them to make decision as regards exclusive breastfeeding varies according to this study finding. Based on exclusive breastfeeding information they may have, educated women makes faster decision on whether they will exclusively breastfeed or not. Despite this, all women need to have knowledge on exclusive breastfeeding regardless of their educational level.
CONCLUSIONS

Compared to the national EBF rates (62 percent), there is low EBF practice as only 42.6 percent were found to have exclusively breastfed.

In spite women in formal employment having health cover, they have poor exclusive breastfeeding knowledge as majority (56.6 percent) were not able to define, state duration, and mention at least one benefits of EBF.

The participants were having negative attitude towards breastfeeding feeding as all women in formal employment agreed that feeding on cow’s or formula is better choice than breastfeeding for working women.

Majority (92.4 percent) of women employees were able to continue breastfeeding after reporting back to work from 3 months maternity leave but few managed to EBF successfully for up to six months. Majority (50.5 percent) stated that staying closer to work place enable them to go back in their houses during breaks such as lunch and tea break to breastfeed.

Women’s employees’ educational level was significantly associated to exclusive breastfeeding practice as; their age, marital status, occupational level and Ante natal attendance were not.
RECOMMENDATIONS

1. Exclusive breastfeeding promotion efforts need to target working women especially those in formal employment without which other scale up effort will most likely not reach the intended EBF rate of 80 percent and above.

2. There is need to interrogate strategies used in promotion of EBF in the health facility. This is because with health cover, there is more access to health services than if it was not there. This opts to have resulted good EBF knowledge and positive attitude towards EBF.

3. Being an institution of higher learning, the institution needs to provide work place breastfeeding facilities as a way of supporting and promoting exclusive breastfeeding. This will also act as learning centre providing not only students with practical opportunity to learn but also to other organizations as well.

RECOMMENDATION FOR FURTHER STUDIES

1. This study focused only on one institution, so other studies need to be carried out in other institutions with similar set up to enable comparison with findings of this study.

2. There is need for more studies to be done on breastfeeding practice among working in formal women as available literature is scanty and less specific on working women thus cannot inform tangible decision and actions meant to promote breastfeeding among this group of women.

3. Findings of this study show that women employees in this institution have poor knowledge and negative attitude towards breastfeeding. Others studies need to be done to find reasons as to why this is so. This will help inform decisions aimed at improving exclusive breastfeeding practice within this institution.
REFERENCES

Ademola M. A., Adenike, M. D., Adebo, M. T., Abraham, O. B (2011). A study of the knowledge and support level of breast-feeding among the workers in formal employment in South-Western Nigeria


GOK. (2011). NATIONAL FOOD AND NUTRITION SECURITY POLICY


Perry, J. (2003). Mother’s Pride. South China Morning Post. 27th Journal. 4,(1)


The South African Demographic and Health Survey. 1998


APPENDICES

APPENDIX 1: QUESTIONNAIRE

Identification information

Interviewee’s name...........................................................................................................

Date of the interview.................................................................

A: Socio-demographic Characteristics

1. Age of the mother in completed years.......................................................

2. Marital status

   i) Married □          ii) Single □          iii) Widow □

   iv) Divorce □          v) Separated □

3. Level of education

   i) Secondary level □          ii) Certificate level □          iii) Diploma level □

   iv) Degree level □          V) Masters level □          iv) PhD level □

   vi) Any other...........................................................

4. What is your occupation ? ..............................................................

5. How old is your last born child? .....................................................
6. a) Did you attend antenatal clinic when you were pregnant?

   Yes □    No □

   (b) If Yes, how many times..............................................................

7. a) Did you attend post natal clinic after delivering your baby?

   Yes □    No □

   b) If Yes, how many times..............................................................

**B: Exclusive Breastfeeding Practice**

8. Did you feed your baby on any other drink / food before initiating breast feeding?

   Yes □    No □

   If Yes, which drinks / foods:   i) Glucose water □ ii) Milk □

   iii) Infant formula □   iv) Porridge □   v) Tea □  vi) Fruit juice □

   vii) Solid food □ viii) Grip water □

   x) Any other (s) specify ……………………………………………………..

9. After how long did you initiate breastfeeding after giving birth / delivering your baby?

   i) 0-30 minutes □   iii) 31 - 45 minutes □

   iv) 46 minutes - 1 hour □  v) After 1 hour □

   vii) Any other (specify)…………………………………………………..
10. For how long did you feed your child on breast milk before giving any other food / liquid?
   i) 6 months □ ii) 5 months □ ii) 4 months □ iii) 3 months □
   iv) 2 months □ v) Any other (specify)……………………………..

11. When did you first introduce any other food or liquid to your child besides breastfeeding?
   i) At 2 months □ ii) at 3 months □ ii) at 4 months □ iii) at 5 months □
   iv) at 6 months □ v) Any other (specify)……………………………..

12. For how long did you feed your child on breastfeeding before giving any other food / liquid?
   i) 6 months □ ii) 5 months □ ii) 4 months □ iii) 3 months □ ii) 2 months □
   v) Any other (specify)………………………………………

C: Exclusive Breastfeeding Knowledge

13. Have you heard about exclusive breastfeeding?

   Yes □ No □

If Yes proceed to questions 14, 15 and 16. If No proceed to question 17

14. What is the meaning of exclusive breastfeeding?

   --------------------------------------------------------------------------------------------------------
   --------------------------------------------------------------------------------------------------------
   --------------------------------------------------------------------------------------------------------

If Yes proceed to questions 14, 15 and 16. If No proceed to question 17
15. Where did you hear about exclusive breastfeeding?

-------------------------------------------------------------

16. What is the recommended duration of exclusive breastfeeding?

(i) 2 months (ii) 3 months (iii) 4 months (iv) 5 months (v) 6 months

v) Any other (s) specify……………………………………….

After responding to question 7, 8 and 9, proceed to question 11

17. If No, what do you think the term exclusive breastfeeding means?

-------------------------------------------------------------

-------------------------------------------------------------

-------------------------------------------------------------

-------------------------------------------------------------

18. a) In your opinion is exclusive breastfeeding beneficial?

Yes □ No □

b) If Yes, what are some of its benefit?

i). ........................................................................................................................................

ii). ........................................................................................................................................

iii). ........................................................................................................................................
## D. Breastfeeding Attitude

<table>
<thead>
<tr>
<th>Attitudinal statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>I don’t know</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I will exclusively breast feed my child</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will only breast feed if I do not have enough money for infant formula or cow’s milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can breastfeed my baby any time regardless of whether I am at home or with other people present</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will combine breastfeeding with infant formula or cow’s milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeding on cow’s milk or formula is as healthy as breastfeeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I should give my baby breast milk any time they cry for it when I am with the baby</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeding on cow’s milk or formula is a better choice than breastfeeding for a working mother</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that exclusive breastfeeding is out dated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children looking healthy should not be breastfed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would not have breastfed my child at work place even if support was available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeding on cow’s milk or formula is more convenient than breastfeeding.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I cannot breast feed in public</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that exclusive breastfeeding is a waste of time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Breast milk alone is not adequate for the baby
I will give water alongside breastfeeding
Employed women cannot breastfeed exclusively
I would rather feed on cow’s milk or infant formula rather than on expressed breast milk

E. Promoters and Barriers.

19. a) Did you continue to breastfeed your baby after resuming work?

b) If yes, what factor(s) within your institution made it possible for you to continue breastfeeding?

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c). If No, what factor(s) made it hard for you not to continue breastfeeding?

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20). What can the institution do to support exclusive breastfeeding?

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