# FACTORS CONTRIBUTING TO EXCLUSIVE BREASTFEEDING AMONGST WOMEN OF CHILD BEARING AGE AT SEKHUKHUNE DISTRICT, LIMPOPO PROVINCE, SOUTH AFRICA

**By**

**MAKOPO TD**

[redacted]

**DISSERTATION**

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**CONTENTS**

## LIST OF FIGURES

**LIST OF TABLES**

## DECLARATION

I declare that the dissertation hereby submitted to the University of Limpopo, for the degree of masters in Nursing, Factors contributing to exclusive breastfeeding amongst women of childbearing age at Sekhukhune district, Limpopo province, has not previously been submitted by me for a degree at this or any other university, that it is my work in design and in execution and that all the material contained herein has been duly acknowledged.

…….. ……

MAKOPO T. D Date

## DEDICATION

This study is dedicated to my beloved mother Raisibe Selina Makopo, siblings: Makopo Reuben Lehumo, Makopo John Kabelo, and Makopo Lydia Duma, and my niece Makopo Reinette Paballo.

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## ABSTRACT

**Background:** Exclusive breastfeeding (EBF) is giving the infant no other food or drink apart from breast milk for the first six months of an infant's life. Some women fail EBF due to poor latch, sore nipple, or breast engorgement which results in reduced breastmilk.

**Purpose:** The aim of the study was to determine factors contributing to EBF amongst women of child-bearing age at Sekhukhune District.

**Study method:** A quantitative study, applying the cross-sectional study design was used to conduct this study. Four-hundred and forty seven mothers with babies not greater than six months participated in the study. Ethical clearance and permission to conduct the study was obtained. A self-structured questionnaire was used to collect data. Data were analysed using Statistical Package for Social Sciences version 25 .

**Results:**
Most mothers (97%) attended antenatal care and only 3% did not attend. The rate of EBF was 55%. Mothers who initiated breastfeeding immediately after birth were 74%. Health care workers had a great influence on mothers to breastfeed exclusively (25%). Mothers who delivered vaginally were more likely to exclusively breastfeed.

**Conclusion:** The findings of this study revealed the following factors which contributed towards EBF amongst women of childbearing age; such as attendance of antenatal care, counseling on feeding practices, mode of delivery, and the onset of breastfeeding after birth.
**Recommendations:** Interventions such as counseling about the choice of feeding , education about the benefits of EBF, and starting with breastfeeding immediately after birth appears to be of importance in promoting EBF.



**Keywords:** Exclusive breastfeeding, Mothers, Feeding practices

## DEFINITION OF CONCEPTS

**Factors**: Facts or situations that influence the results of something (Oxford Dictionary of English, 2010). To this study, factors refer to the meaning, opinions that influence exclusive breastfeeding amongst women of childbearing age in Sekhukhune District, Limpopo Province.

**Affecting**: Oxford Dictionary of English (2010) refers to affecting as influencing or making a difference to something. In this study, it would mean effect on the exclusive breastfeeding amongst women of childbearing age in Sekhukhune District, Limpopo Province.

**Child-bearing:** child-bearing is the process of giving birth to children (Hornby, 2008). In this study childbearing age will be a woman who gave birth to a child or children.

**Women**: According to (Oxford South African School Dictionary, 2010) women are adults female people. In this study, women will be all women of child bearing age from 18 years old and above with babies not greater than six months old, seeking child health services at the selected clinics of Sekhukhune District, Limpopo Province.

**Exclusive Breastfeeding:** exclusive breastfeeding means the infant receives breastmilk only without liquids or solids (not even water), with exception of oral rehydration solution,drops/syrup of vitamins,minerals or medication (WH0,2020). In this study, exclusive breastfeeding would mean to give the infant breast milk only with no other food or drink for a period of six months in Sekhukhune District, Limpopo Province.

## ABBREVIATIONS

| | |
|---|---|
| AIDS | Acquired Immunodeficiency Syndrome |
| ANC | Antenatal care |
| ANOVA | Analysis of variance |
| ART | Antiretroviral Therapy |
| BFHI | Baby-Friendly Hospital Initiative |
| DHIS | District Health Information System |
| DRC | Democratic Republic Congo |
| EBF | Exclusive Breast Feeding |
| EU | European Union |
| HIV | Human Immunodeficiency Virus |
| MBFI | Mother Baby Friendly Initiative |
| MEC | Member of the Executive Council |
| MRA | Maternal Role Attainment Theory |
| NHS | National Health Services |
| TREC | Turfloop Research Ethics Commitee |
| SADHS | South Africa Demographic Health Survey |
| SPSS | Statistical Package for Social Sciences |
| UK | United Kingdom |
| UNICEF | United Nations International Children’s Emergency Fund |
| US | United States |
| WHO | World Health Organization |

# CHAPTER 1

# OVERVIEW OF THE STUDY

## 1.1. Introduction and background

Breastfeeding remains the biological method of providing nourishment and fluids to babies. In Brazil, there are factors that have been recognized to early exclusive breastfeeding (EBF) disruption e.g. socio-economic and cultural conditions, those linked to age, motherly schooling, family salary and early introduction of artificial feedstuffs and care factors like lack of prenatal consultations, hospital postpartum practice, rooming –in in the maternity ward, basic well-being care follow up and other related to the conditions of birth and health of infants, and social support network (Silva, Lima, Sequeira-de-Andrade, Oliveira, Monteiro, Lima, Santos & Lira, 2016). Furthermore, post-partum hopelessness symptoms affecting the mother were also reported to be the reason for breastfeeding interruption.

In another study conducted in Brazil by Pèrez-Escamilla (2017) it was found that motherly stress during labor and delivery, cesarean section delivery, and maternal obesity delayed the first offering of the breast to the new-born baby. Pèrez-Escamilla (2017) also reported that poor latch, sore nipple, and breast engorgement interfere with breastfeeding, and such factors are responsible for lessened milk production. Fortunately, these factors were found to be highly preventable through timely and adequate lactation management, education and counseling.

A study piloted in two urban slums in Nairobi Kenya, by Wanjohi, Griffiths, Wekesah, Muriuki, Muhia, Musoke, Fotus, Madise and Kimani-Murage (2017) on sociocultural factors influencing breastfeeding reported an expansion in EBF for six months from 31 % in 2008 to 61% in 2015. Furthermore, unlike studies conducted in Brazil concerning factors influencing breastfeeding they emphasized that mythologies about breastfeeding as some of the possible causes of deprived breastfeeding practices.

The incapability of mother to initiate breastfeeding, lactate adequately and endure breastfeeding was reported as the major factors manipulating mothers not to practice

EBF in Nigeria (Kio, 2015). Other reasons were an unfitting latch which led the baby to fail to connect efficiently with the nipple. A rare disease affecting very few women called Sheehan's Syndrome, also known as post-partum hypopituitarism which is associated with prolactin deficiency was also reported to be the reason for not breastfeeding (Kio, 2015).

The most commonly stated reasons given by the mothers for not breastfeeding at all had to return to work or to their studies early, the mother's Human Immunodeficiency Virus (HIV) status and poor maternal health (Siziba, Jerling, Hanekom & Wentzel-Viljoen, 2015). Therefore, healthcare professionals should conduct learning sessions in which mothers can be guided on how to go back to work or carry on with studies and breastfeeding (Siziba et al., 2015). In addition, emphasis must also be placed on ART drugs and balancing the risks of breastfeeding against the risks of HIV transmission (Siziba et al., 2015).

In one of the provinces of South Africa called the Western Cape, the main barriers affecting EBF, were found to be the widely-held perception that infants needed water, the use of behind the counter medicines, the concern that milk alone does not satisfy the infant, inadequate education on infant feeding, lack of support by the health system, absence of community-based postnatal support, family impact and mother separated from their infants due to work (Goosen, 2013). Furthermore, HIV infection exerted a significant influence of infant feeding choice.

According to Kyei, Netshikweta, and Spio (2014), breastfeeding provides the ideal diet for a baby, and provides many health aids for both the mother and the baby. Breastfeeding is nutritious for the baby, and it shields the baby from almost all forms of infection by advancing the child's immunity level and prevents malnutrition in babies (Kyei et al., 2014). The benefits to the mother include more rapid involution, earlier return to pre-pregnant weight, delayed resumption of ovulation resulting in increased child spacing, improved post-partum bone remineralisation and reduced hip fractures in the post-menopausal period, and reduction in the risk of ovarian cancer and premenopausal breast cancer (Kamran, Shrifirad, Farahani & Mirkarimi, 2011).

In 2013 the Department of Health in South Africa released a policy called Infant and Young Child Feeding policy, which includes exclusive breastfeeding (Department of Health, 2013). The policy outlined that all children must be breastfed exclusively for six months unless breastfeeding is contraindicated. It further emphasized that antenatal breastfeeding education and support should be given throughout the antenatal visits. Providing health education on EBF improves the rates of EBF, and enables mothers to understand the benefits of breastfeeding and prepares them to breastfeed successfully. In addition, the formula feeding must not be recommended as an alternative to breastfeeding, unless there are legitimate medical reasons to do so (Department of Health, 2013). Human milk banks should be established in hospitals catering for high-risk infants and workplaces should be structured in such a way that they support breastfeeding (Department of Health, 2013).

The policy emphasizes that early initiation of breastfeeding must be supported by facilitating skin-to-skin contact and to postpone all routine neonatal procedures that are not life-saving and pre-lacteal feeds should not be given during the intra-partum period. Health facilities should also keep mother and baby as pairs throughout the day and night to ensure frequent feeding (Department of Health, 2013).

Despite the release of the policy on breastfeeding in 2013, South Africa has not yet reached its target and is considered to be the lowest with EBF at 35.7% from 8% in 1998 which took 18 years to be at 35.7% (City Press, 2017). This study aims to identify the factors contributing to EBF and to make recommendations based on the findings to improve EBF.

### 1.2. Problem statement

Malnutrition contributes to nearly half of all deaths in children worldwide (UNICEF, 2019). In South Africa, malnutrition is one of the causes of infant and child mortality (Department of Health, 2010). The researcher has identified that children are not exclusively breastfed for six months, and that may lead to an increase in malnutrition and opportunistic infections since nothing is boosting their immune system. Globally, the prevalence of EBF among infants not greater than six months in developing countries increased from 33% in 1995 to 39% in 2010 (Cai, Wardlaw and Brown, 2012). According to Issaka, Agho and Renzaho (2017) the prevalence of EBF for West Africa, East Africa, Central Africa and Southern Africa was 32.6%,

53.5%,23.7%, and 56.6%, respectively. In South Africa the rate has risen from 7% in 1998 to 32% in 2016, which is still far from the target of 50% (South Africa Demographic and Health Survey, 2016). Acccording to report by Massyn, Pillay and Padarath (2019) only 35.2 infants were exclusively breastfed at 14 weeks in 2017/2018 at Sekhukhune district. Furthermore, according to the Head Count book of Ikageng clinic (16 May 2017), which was one of the clinics study was conducted, out of 13 children not greater than six months who consulted, only 3 babies were found to be exclusively breastfed. The researcher is therefore interested in identifying the factors contributing to EBF to make recommendations to improve EBF amongst women of childbearing age in order to increase the rate of EBF to meet the target required of 50%.

### 1.3. Purpose of the study

The purpose of this study is summarised below:

#### 1.3.1. The aim of the study

- The aim of the study is to determine the factors contributing to EBF in women of childbearing age in Sekhukhune district, Limpopo Province.

#### 1.3.2. Objectives of the study

- To describe the factors contributing to EBF in women of childbearing age in Sekhukhune district, Limpopo Province.

### 1.4. Research questions

- What are the factors contributing to EBF in women of childbearing age in Sekhukhune district, Limpopo Province?

### 1.5. Research methodology

The quantitative research approach is the research approach that quantifies the problem by way of generating numerical data (DeFranzo, 2011). A quantitative research approach was used to examine the relationship between categorical variables and study findings were expressed in numbers to quantify the results. The research methodology will be discussed in detail in Chapter 3

### 1.5.1. Study site

The study was conducted at Sekhukhune district clinics, Limpopo Province. The clinics provide the following services: maternal and child health care services, minor ailments, chronic services.

### 1.5.2. Study Design

The quantitative research approach that applied a cross-sectional study design was used to conduct the study. The cross-sectional study was chosen to collect data from respondents at a single point in time, to examine the relationship between the variables and EBF.

### 1.5.3 Population and sampling

A systematic sampling method was used to select 42 clinics at Sekhukhune District, and 447 respondents for the study.

### 1.5.4. Data collection

Data collection is the process of gathering, and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research question (Brink, Van Rensburg & Van der Walt, 2012). Data Collection was done for three months, using a structured questionnaire at the clinics of Sekhukhune district.

### 1.5.5. Data analysis

Data analysis is the process of transforming raw data into usable information, often presented in the form of a published analytical article, to add value to the statistical output (Statistics Canada, 2013). Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 25 with the assistance of the university statistician. Data were presented using frequency distributions, percentages and cross-tabulation to display variables. Chi-square test was conducted to determine the correlation of EBF and factors contributing to it.

### 1.6. Ethical considerations

Ethical clearance to conduct the study was approved by the Turfloop Research Ethics Committee (TREC). Authorization to collect data at the selected clinics was granted by the Limpopo Department of Health and Sekhukhune district office respectively. Operational managers of selected clinics also granted the researcher permission to collect data. Written consent was also obtained from the respondents prior to data collection.

### 1.7. Conclusion

This chapter introduces the study, problem statement, the purpose, summary of the methodology and ethical considerations. The next chapter reviews the literature that is relevant to this study and the theoretical framework**.**

### OUTLINE OF THE DISSERTATION

The chapters in this dissertation are organized as follows:

Chapter 1: Overview of the study.

Chapter 2: Literature review and theoretical framework.

Chapter 3: Research design and methodology.

Chapter 4: Data analysis and interpretation

Chapter 5: Discussion of research results and literature control.

Chapter 6: Summary, conclusions, limitations and recommendations.

# CHAPTER 2

# LITERATURE REVIEW AND THEORETICAL FRAMEWORK

## 2.1. Introduction

A literature review is a summary of the research topic, often prepared to put a research problem in context or to summarize existing evidence (Polit & Beck, 2010). This chapter reviews the literature on EBF from around the world and in South Africa since it is a global concept. Studies conducted by other researchers on benefits of EBF, breastfeeding and HIV & AIDS, factors affecting EBF, factors contributing to EBF, myths of EBF, ten steps to successful EBF and strategies to improve EBF.

## 2.2. Benefits of EBF

According to Benaroch (2017) during the first six months of life, the baby develops at the rate of 1.5 to 2 pounds a month and by six months the baby should have at least doubled the birth weight. Therefore, from six months, the baby's development will slow to about 1 pound a month and height gain will also slow, to about a half-inch each month. The first six months of life is the rapid developing of the baby and it is critical for the baby to receive correct feeding for the first six months of life without any substitutes (Benaroch, 2017).

Breast milk encompasses over 200 different ingredients which make it very challenging for the manufacturers of infant formula to try to copy its composition (Murray, 2018). Breast milk contains living cells, hormones, active enzymes and antibodies (Freeman, 2014).

Mother's milk comprises all the six nutrition groups and essential nutrients required for the baby to grow. You do not have to provide anything else to the baby when you are breastfeeding, not even water (Shabana, 2017). According to Freedom (2014) breast milk is naturally rich in DHA and ARA which are crucial for growth and function. Also, breast milk has more whey than curd which makes breastfed babies to get hungry quicker because proteins in breast milk are digested so efficiently.

Breast milk contains natural cholesterol which formula does not have. The absence of cholesterol may predispose a child to adult heart and central nervous system diseases. Furthermore, breast milk contains lipase and formulas contain no lipase, creating the fats found in formula only partially digested and absorbed, stressing the digestive functions in the little baby (Freedom, 2014).

The fats in breast milk are more readily digested and absorbed than those in formula since saturated fatty acids, especially palmitic, tend to be attached to the middle carbon of the glycerol molecule, encouraging absorption bound to micelles as monoglycerides rather than free fatty acids. Fat absorption from breast milk is also facilitated by the presence of bile-salt stimulated breast milk lipase, although this is probably not of great significance except in immature infants who are born before six months (Powers & Geissler, 2011).

Breast milk contains cells (macrophages, lymphocytes, neutrophils) and humoral components (Powers & Geissler, 2011). Secretory IgA resists digestion, adheres to the intestinal mucosa, and can be detected in infants' stools. It prevents adherence of viruses and bacteria to mucosal cells, allowing the destruction of pathogens by the phagocytic components of breast milk which protect infants against infections in the first six months of life (Powers et al., 2011). Macro-nutrients: Lactoferrin, a-lactalbumin IgG, IgA, Albumin is absent in formula milk but only found in breast milk (Elding, 2013).

When babies are exclusively breastfed for six months, they are immune to many diseases. Exclusive breastfeeding protects the baby from gastroenteritis, middle ear infections and necrotizing enterocolitis (a rare condition where portions of the bowel tissue die) (Renfrew, Pokhrel, Quigley, McCormick, Fox-Rushby, Dodds, Duffy, Trueman and Williams, 2012). Breastfed babies have a lower incidence of sudden infant death syndrome (SIDs), and they have a higher IQ (Bobrow, Quigley & Green, 2009) and are also at a reduced risk of Coronary heart disease, Urinary tract infections,leukemia and childhood cancers (National Health Service, 2010).

According to Lancet Global Health (2016) breast milk also has positive regulatory effects over the intestinal mucosa of the baby. Nutrients in breast milk increase cognitive functioning and reasoning ability, which develop a higher IQ during adulthood (Shabana, 2017).

Mothers who breastfed have reduced incidence of hip fractures, low bone density, osteoporosis, rheumatoid arthritis and an increased likelihood of returning to pre-pregnancy weight (National Health Service, 2010). There is strong evidence showing that breastfeeding confers protection for the mother from breast cancer (Renfrew et al, 2012). Other benefits include financial because breast milk is free, and breastfeeding can bring cost savings to health services, convenience, and promote emotional attachment between mother and baby reducing the risk of neglect and harm (National Health Service, 2010).

### 2.3 Breastfeeding and HIV & AIDS

World Health Organisation (2010) recommends that all mothers regardless of their HIV status should practice EBF which means no other liquids or food for six months. Exclusive breastfeeding in the first months of an infant's life had decreased the risk of HIV transmission compared to infants who were not exclusively breastfed (WHO, 2010). Mixing breast milk and other food before six months increases the baby's risk of HIV (Avert, 2017).

Public health experts estimate that HIV infected mothers have a 10 to 15 % chance of passing the virus to their newborns through their breast milk (Berman, 2013), especially high if the woman has only recently become infected while breastfeeding (Guttmacher Institute, 2011). According to a prospective cohort study conducted in Zimbabwe, women who had been HIV negative at delivery and became infected with HIV while breastfeeding, the transmission rate was found to be 35 per 100 children which were higher than the rate among mothers who had been HIV positive prior to delivery (nine infections per 100 children). The transmission rate eventually plummeted among newly infected women (Guttmacher Institute, 2011). The risk of HIV transmission had been reduced by 18% for infants given the antiretroviral drug Nevirapine prophylasis daily while breastfeeding for six months (WHO, 2010).

HIV-positive women should be assessed for ART eligibility, treated accordingly and encouraged to breastfeed exclusively for at least six months (Homsy, Moore, Barasa, Were, Likicho, Waiswa, Downing, Malamba, Tappero & Mermin, 2010).

## 2.4. Factors affecting EBF

Insufficient knowledge on EBF practices found to be a factor for most working mothers in a study conducted in Assiut City, Egypt by Kotb, Mohamed, Mohamed and Khalek (2012). According to the study conducted in Peri-urban district of Ghana by Mensah, Acheampong, Anokye, Okyere, Appiah-Brempong, and Adje (2017) showed that many mothers have heard of EBF from health facilities. This knowledge of EBF but low practice of EBF might be because of challenges mothers encounter whilst practicing EBF, and inappropriate information they received as a solution to overcome those challenges (Mensah et al., 2017) and lack of confidence to exercise existing learned knowledge leads to shyness, insecurity, and frustration resulting to optional infant feeding methods (Laantera, Polkki, Estrom & Pietila, 2010).

According to a cross-sectional study conducted in Malaysia, 51% of employed mothers had stopped breastfeeding in the first three months of their babies' lives because of lack of support, and inadequate facilities at places of work prove to be the main contributor towards the early cessation of breastfeeding (Amin, Said, Sutan, Shah, Darus & Shamsuddin, 2011). In another cross-sectional study in the Goba District, Ethiopia, results indicate that employed mothers are less likely to breastfeed exclusively due to challenges that are work-related (Setegn, Belachew, Gerbaba,Deribe, Deribew, & Biadgilign, 2012).

Mothers who are employed in the public and private sectors are less likely to practice EBF as compared to self-employed mothers. Self-employed mothers have their own schedule of work and have enough time for their babies, hence the practice of EBF (Mensah et al., 2017).

During the address by the Minister of Health, at the breastfeeding consultative meeting, Dr. Motsoaledi acknowledged that the challenges that contributed to the low EBF rates in South Africa were the promotion of formula feeding by manufactures (Motsoaledi, 2011).

## 2.5. Factors contributing to EBF

The educational level of mothers does contribute to EBF. A woman whose educational level is high, EBF duration is longer (Haqhiqhi & Varzande, 2016).

According to the study conducted in Shiraz, Iran, mothers who had academic education had the highest level of knowledge. If maternal education is high, their access to scientific resources such as books and journals will be higher. Many universities and libraries present educational packages related to EBF and infants' proper nutrition that have a positive and influential effect on maternal knowledge on EBF (Haqhiqhi et al., 2016). Adequate knowledge of EBF is a central implement that navigates the course of breastfeeding stability and distinctiveness amongst mothers (Laantera et al., 2010).

Maternal grandmother and the infant's father played an important role in women's breastfeeding decisions after birth. Exclusive breastfeeding is more common among mothers with supportive husbands regarding breastfeeding compared to non-supportive husbands. Husband's decision and encouragement about EBF positively influences the mother to practice EBF (Draman, Mohamad, Yusoff & Muhamad, 2017).

The social belief that says EBF prevents infections, infant death and improves infant well-being, contribute to EBF. Information sources such as health care workers also contribute to EBF because mothers who have received infant feeding counseling had a much higher adherence to practice EBF for recommended duration than mothers who did not receive the service (Asfaw, Argaw & Kefene, 2015).

### 2.6. Myths about EBF

Myths about EBF are stated below:

- **The formula is as good as breast milk.**

The formula milk is custom-made for the baby while breast milk has antibiotics, anti-viruses, and anti-allergens that help protect the baby from illness. Breast milk also has hormones that help the baby grow and is also more easily digested by baby and has more vitamins and minerals than formula (Texas Department of State Health Services, 2011). There is also a prolonged gastrointestinal transit in formula-fed infants and the stool consistency is hard compared to breastfed infants (Motee, Ramasawmy, Pugo-Gunsam and Jeewon, 2013). According to Brown and Lee (2013) formula fed infants have a greater risk of overweight compared to breastfed infants.

- **There is no milk in the first few days**

Colostrum is breast milk. The small amounts in the first few days (two to five days) are perfect for a new baby's tiny stomach. New-born stomach capacity: day one 9-10mls, day three 22-27mls, day ten 60-80mls (Fleur, 2011).

- **Colostrum should not be fed to your baby because is dirty**

Colostrum helps protect the child from diseases, as it aids in the development of the newborn's immune system. It has a cathartic effect in that it prompts the excretion of excess bilirubin from the new-born, and decreases the chances of jaundice (Gupta, 2014). According to Goghia and Patel (2013) colostrum is rich in Immunoglobulin (Ig), antimicrobial peptides, and other bioactive molecule, including growth factors which are important for nutrition, growth , and development of new-born infants and also for passive immunity.

- **Babies with diarrheal disease need water or tea**

Breast milk contains about 90% water. Exclusive breastfeeding provides all the water, nutrition and immunology a baby needs, without risk of contamination. Feeding infant water can introduce disease-causing bacteria and other contaminants, especially if safe water is scarce or unavailable (World Vision, 2015).

- **Breastfeeding is only beneficial for my baby's health**

According to Patey (2017) breastfeeding produces longer durations of amenorrhea and thereby decreases the chance of closely spaced pregnancies. The benefits to a breastfeeding mother was also supported by Adah, John, Okpe, Okoko (2017) stating that breastfeeding helps the mother to bond with their ewborn, recover from childbirth, regaining pre-pregnancy weight rapidly, and can reduce mothers risks of type 2 diabes, heart diseases, breast and ovarian cancer.

- **Baby is not putting on weight because of EBF**

Most babies who gain weight slowly or lose weight do so not because the mother does not have enough milk. The baby will gain slowly or lose weight because she or

he may not be getting enough of the milk due to the fact that they are not latching on the nipple properly (Hussey-whyte, 2013).

- **Women who breastfeed get less sleep**

Every baby is different and every baby's pattern is different. Breastfeeding mothers who keep their babies in close proximity to them have the benefit of not having to get up, prepare the formula, warm the bottle and so on (Pearson, 2017). There's a myth saying breastfed baby won't sleep through the night until she starts eating solids. Your baby will sleep through the night when she is ready and that depends on a number of factors such as her personality and sleeping patterns (Meredith, 2017).

- **Never wake a sleeping baby to breastfeeding**

Most of the time babies will wake up and be ready to eat every two and a half to three hours. However, the baby may feed vigorously for two or three hours known as "Cluster feeding" then sleep a longer than usual (Bouchez, 2005-2018).

- **Formula fed babies sleep better**

Fact: research indicates that babies that fed on formula do not sleep better, although they may sleep longer. Bottle milk does not get digested quickly (Bouchez, 2005-2018).

- **If you have small breasts, you won't produce enough milk to feed your baby**

Breast size does not matter. The breast tissue you need to nurse a baby grows in response to pregnancy regardless of your breast size (Meredith, 2017).

- **Malnourished mothers cannot breastfeed**

Malnourished mothers can breastfeed. However, the mother should be provided with extra food and fluids to rebuild her own nutrient stores and be encouraged to breastfeed the infant very frequently. Moderate malnutrition has little or no effect on milk production. Milk production is only likely to be reduced if a mother is severely malnourished; then the woman herself would need immediate feeding and extra food while continuing breastfeeding." Fed the mother and let her feed the baby" is the key approach (World Vision,2015).

- **Mothers cannot resume lactation once breastfeeding has stopped**

Women who have breastfed in the past or whose breast milk production has diminished can breastfeed again. Increased skin to skin contact and frequent access to the breast helps to increase milk production, which can be critical for babies during emergencies. The help from professionals and encouragement for the mother are also important (World Vision, 2015).

- **Angry mom makes sour milk**

Getting angry or upset will not affect the quality of milk (Jackel International Limited, 2017).

- **Drinking a lot of milk is necessary for increasing milk production**

A healthy diet of vegetables, fruits, grains, and proteins is all that a mother needs to provide the proper nutrients to produce milk. Calcium can be obtained from a variety of non- dairy foods, such as dark green vegetables, seeds, nuts, and bony fish (Jackel International Limited, 2017).

- **The woman who becomes pregnant while breastfeeding must stop breastfeeding**

Breastfeeding does not have any effect on the pregnancy or the quality of breast milk, so it can be continued during pregnancy and after the birth of the newborn (Gupta, 2014).

- **You can't breastfeed if you have had implants or piercings**

As long as a plastic surgeon has not cut a milk duct, then any woman who has had cosmetic surgery or nipple piercings can still breastfed (Patey, 2017).

- **You can't drink alcohol**

Some mothers choose not to drink alcohol at all while breastfeeding, but this is not necessary. Drinking in moderation, such as having a glass of wine with dinner, will not affect the baby (The Telegraph, 2017).

### 2.7. Ten steps to successful breastfeeding

The Baby-Friendly Hospital Initiative (BFHI) was launched by WHO and UNICEF in 1991. The initiative is a global effort to implement practices that protect, promote and support breastfeeding (WHO, 2018). Baby-Friendly Hospital Initiative ensures that all mothers who deliver in health facilities are trained on how to sit and correctly position

their babies for breastfeeding. The purpose of those practices is to ensure that the majority of pregnant women are well informed on the importance, and benefits of breastfeeding to their health, and that of their babies before delivery (Nkrumah, 2017). The BFHI is based on the ten steps to successful breastfeeding (Bonny, Whalen, Kelly & Holmes, 2019).

The ten steps to support successful breastfeeding serve as the basis for the Baby-Friendly Hospital Initiative. According to Yotebieng (2015) the steps are as follows:

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

### 2.8. Strategies to improve EBF

According to Kam (2017) and Mangasaryan, Martin, Brownlee, Ogunlade, Rudert and Cai (2012) one of the strategy to improve EBF suggested is to involve health professionals, home-based community carers and peer counselors to educate communities about EBF.

- **Exclusive breastfeeding education for health professionals**

It’s important for health professionals to be appropriately trained to provide breastfeeding support and, accurate information about EBF to mothers (Kam, 2017).

- **Community**

Mangasaryan et al., (2012) have suggested that in order to reach the communities, home-based community carers and peer counselors, should be the ones who educate the community about EBF since they have a great influence on mothers. This view is also supported by Imdad, Yakoob, Bhutta (2011).

- **More Breastfeeding- Friendly workplace**

According to Kam (2017) returning to work does affect breastfeeding rates. The Australian Breastfeeding Association has developed initiatives (Breastfeeding Friendly-Workplaces) to encourage workplace support for breastfeeding. Breastfeeding Friendly-Workplaces (BFW) program is a national consultancy service that aims to remove the workplace as a barrier to breastfeeding and assists employers to create a supportive environment for breastfeeding mothers returning to work. South Africa Department of health grants government employees an hour to breastfeed (Kam, 2017).

## 2.9. Theoretical framework

This research study is based on Maternal Role Attainment Theory (MRA) which was developed by Ramona Mercer to provide health care interventions for becoming a mother. The stages are not discrete; they overlap (Mercer, 2006). According to Koniak-Griffin (1993), the mother bonds with the infant acquires competence in general care-taking tasks and then comes to express joy and pleasure in her role as a mother.

According to Mercer (2014) Maternal Role Attainment Theory consists of four stages of the process of becoming a mother:

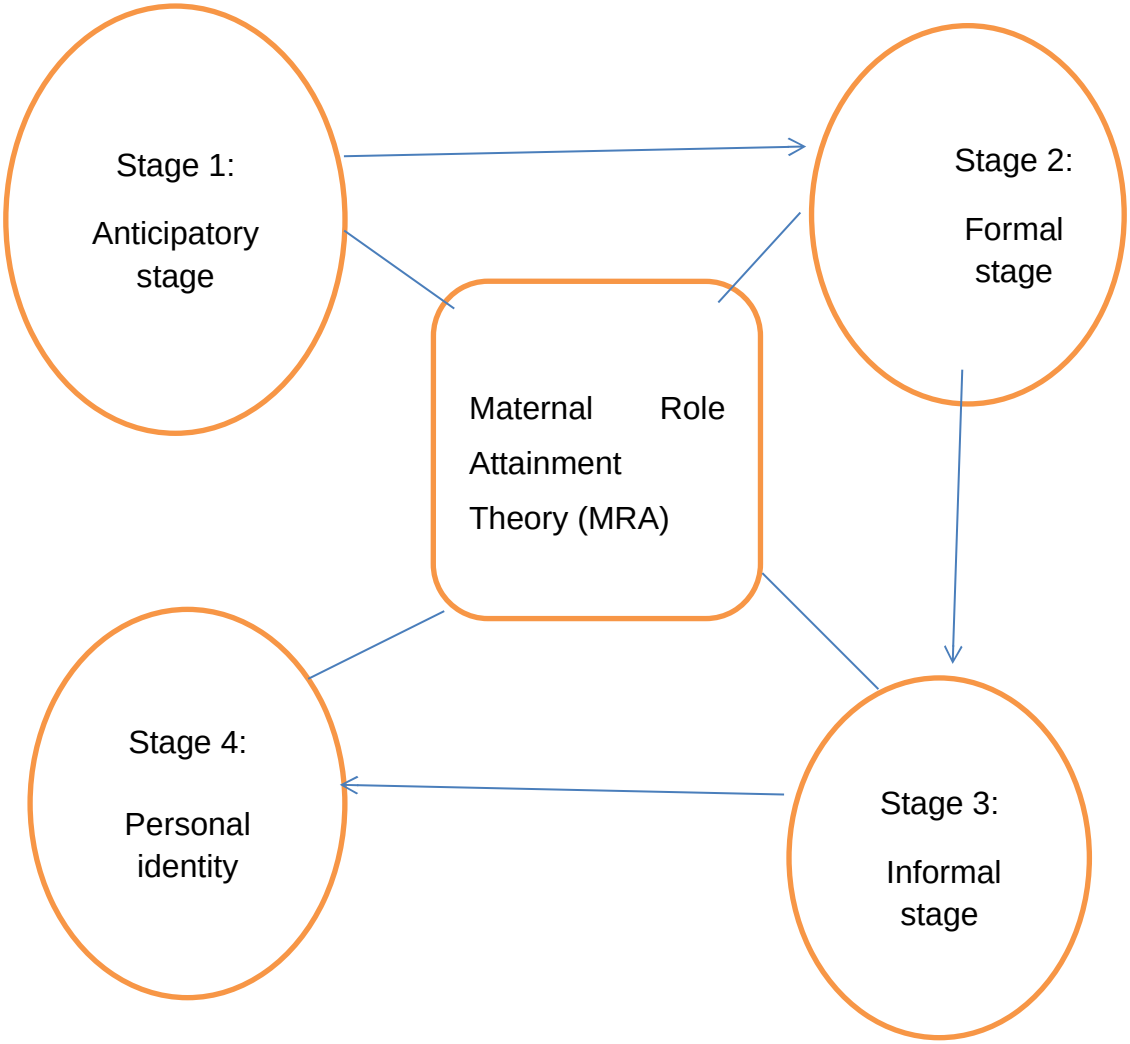


**Figure 2.1: Maternal role attainment theory (adopted from Mercor, 2004).**

- **Stage 1: Anticipatory stage**

The anticipatory stage is a time of psychosocial preparation for the maternal role (Mercer, 1985). A woman makes a vow to the pregnancy and tries to assure the development of a healthy baby by giving up any unhealthy practices and seeking

health care to assure a safe and healthy outcome. She begins to develop an attachment to her own unborn child. She daydreams about what it will be like to be a mother and seeks family approval and support. She enlists the help of others in making physical preparations for the baby (Mercer 2004). This stage includes learning social expectations (Radhika, 2014).

In this study, mothers are asked about their ANC attendance and if they were counseled about EBF as preparation for their child birth.

- **Stage 2: Formal stage**

The second stage starts immediately after childbirth. The mother adapts to her role by modeling learned behaviors (Radhika, 2014). In this study women are asked about the onset of breastfeeding and which method of feeding are they practicing, since they have being counseled about EBF during their ANC visits to assess their adoption to their maternal roles.

- **Stage 3: Informal identity**

According to Thornton and Nardi (1975), the mother progresses from rigidly following directions of others to using her judgment about the best care for her infant. Further said, the mother gains increased confidence in caring for her infant, relating to her intimate partner as a co-parent, establishing new family routines, and defining family responsibilities and boundaries. In this study, all women of childbearing age meeting the inclusion criteria were included in data collection regardless of the choice of feeding they chose, in order to collect factors contributing to EBF and respecting their decisions in their mothering skills.

- **Stage 4: Personal identity**

The stage of personal or maternal identity is characterized by the mother's sense of harmony, confidence, satisfaction in the maternal role, and attachment to her infant. She feels a congruence of self and motherhood as others accept her performance (Mercer, 1985). Mother's pleasure in mother-infant interchange, love for her infant, and feelings of competence are evident as she achieves a maternal identity in this stage (Mercer, 2006). In this study, continuous health education about the feeding

methods and the care of the child was given by the staff of each clinic, to all women who brought their children for child health services, to maintain optimal health of their children and to give them a motive to be more confident and to feel more competent.

## 2.10. Conclusion

This chapter has reviewed literature that relates to benefits of EBF, breastfeeding and HIV& AIDS, factors affecting EBF, factors contributing to EBF, myths about EBF, ten steps to successful breastfeeding, strategies to improve EBF and the theory which guided the study. The next chapter describes the research methodology which was used to conduct the study.

# CHAPTER 3

# RESEARCH DESIGN AND METHODOLOGY

## 3.1. Introduction

Chapter 3 presents the materials and methods employed in the study. This chapter includes; research approach, study site description, study design, population, and sampling. Furthermore, the chapter describes methods of data collection, data analysis, measures to ensure reliability and validity and how ethical issues have been dealt with.

## 3.2. Research approach

The quantitative research approach was used to conduct the study. Quantitative is a research approach that quantifies the problem by way of generating numerical data (DeFranzo, 2011). A quantitative research approach was used to examine the relationship between categorical variables. This approach was chosen in order to examine factors contributing to EBF among childbearing women at Sekhukhune clinics. Study findings were expressed in numbers to quantify the results.

## 3.3. Study site

Sekhukhune district is the district amongst the five districts of Limpopo Province, located with four municipalities: Elias Motsoaledi, Ephraim Mogale, Fetakgomo-Greater Tubatse, and Makhuduthamaga municipality. There are eighty-nine (87) clinics in Sekhukhue district:

Elias Motsoaledi (15), Ephraim Mogale (15), Fetakgomo-Greater Tubatse (37) and Makhuduthamaga (20) and mobile clinics were excluded since they don’t have formal structures, the privacy of respondents would have been compromised.

Sekhukhune district clinics provide the following services, which are offered into different separate consulting rooms with a professional nurse(s) allocated for each consulting room:

- **Maternal and Child health services**

Maternal and child health services refer to the services rendered to women during pregnancy and the postpartum period and the health of the child (WHO, 2018). The services include reproductive health services (i.e. ANC) and child monitoring services.

- **Minor ailments**

Minor ailments are conditions with little or no medical intervention (Gustafsson, 2016). Examples of minor ailments are cough, loss of appetite, wounds.

- **Chronic conditions services**

These are conditions that last longer than 1 year or refer to uncertain long-term conditions requiring ongoing medical attention while limiting activities of daily living (American Nurses Association, 2012). Examples of chronic diseases are Asthma, hypertension, and epilepsy.

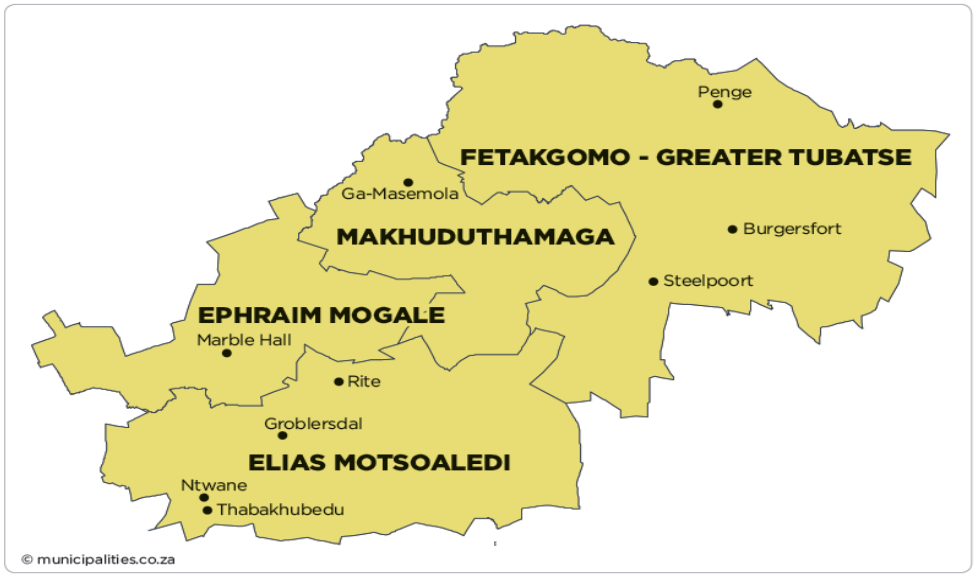


**Figure 3.1: Sekhukhune district municipality** (National Fund for Municipal Workers. 2012-2020).

### 3.4. Research design

The cross-sectional study design was chosen to conduct the study. According to Cherry (2018), a cross-sectional study design studies people who differ on one key characteristic of interest at one specific point in time. The cross-sectional study was

choosen because the researcher was interested at women who differ in characteristics of interest, and also to collect data at a single point in time.

### 3.5. Population and sampling

Population and sampling of the study are discussed below.

#### 3.5.1. Population

A population is a group of people whose composition meets specific criteria (Moule & Goodman, 2009). The population of the study was all women of childbearing age who come at well-baby clinics of Sekhukhune district, meeting the inclusion criteria. The researcher took the headcounts of each clinic and checked the number of how many children of not greater than six months consulted the previous week, the same day the data is going to be collected. By so doing the researcher was trying to get how many mothers came previous week to gain assurance that the same number may be available in the day of collecting data.

#### 3.5.2. Sampling

According to Moule et al. (2009), a sample is a subset of the population, selected through sampling techniques. The sample selected is representative of the target population.

- **Sampling of clinics**

Sekhukhune district has 87 clinics in total (District Health Information System software (2018). Clinics were put on a list alphabetically, then a systematic sampling was used to select the first half of clinics according to each municipality. Forty-two (42) clinics were selected to participate in this study.

- **Sampling the population**

Headcount of each clinic was checked manually to check how many children of not greater than six months were seen the previous week of the same day the researcher is collecting data. Therefore, the total headcount of those children was recorded in a piece of paper of each clinic individually and Krejcie and Morgan's (1970) table was applied to sample the population. The figure got after applying

Krejcie and Morgan's table, was the number of respondents to participate in the study based on their consent. Therefore, a systematic sampling method was used in a way to give each respondent a chance to participate in the study to avoid bias. The researcher approached mothers meeting the inclusive criteria individually for their consent according to their queue numbers until the sample size of that clinic is reached. If a woman refused to participate, then the researcher moved to the next woman for consent, until the number from Krejcie and Morgan's table is reached. Same applied to each selected clinic, making the total sample size of 447 respondents.

The table below shows the sample size (n) of each clinic according to sub-districts (municipalities).

**Table 3.1: Names of sub-districts, and clinics of Sekhukhune District**

| **Name of sub-district and clinics** | | **Name of sub-district and clinics** | |
|---|---|---|---|
| **Elias Motsoaledi** | **n** | **Ephraim Mogale:** | **n** |
| Dikgalaopeng clinic | 9 | Elandskraai clinic | 10 |
| Elandsdoom clinic | 9 | Makeepsvlei clinic | 6 |
| Goedgedgedach clinic | 8 | Marble mall clinic | 9 |
| Groblersdaal clinic | 8 | Marulaneng clinic | 12 |
| Hlogotlou clinic<br>Kwarrielaagte clinic | 10 | Matlala clinic | 9 |
| | 11 | Matlala Gateway clinic | 16 |
| Magukubjane clinic | 8 | Mmotoaneng clinic | 11 |
| **Total = 7 clinics** | 63 | **Total = 7 clinics** | 73 |

| Name of sub-district and clinics | | Name of sub-district and clinics | |
|---|---|---|---|
| **Fetakgomo-Gr Tubatse District:** | **N** | **Makhuduthamaga District:** | **n** |
| Boschkloof clinic | 10 | Dichoeung clinic | 7 |
| Burgesfort clinic | 13 | Eensaam clinic | 9 |
| Dilokong gateway clinic | 14 | Jane Furse gateway clinic | 19 |
| Eerstegeluk clinic | 12 | Klipspruit clinic | 10 |
| HC Bushoff CHC | 11 | Madibong clinic | 12 |
| Ikageng clinic | 15 | Magalies clinic | 11 |
| Mahubahube clinic | 12 | Mamone clinic | 6 |
| Makofane clinic | 11 | Mampana clinic | 12 |
| Mankotsana clinic | 7 | Manganeng clinic | 15 |
| Manotoane clinic | 12 | Marishane clinic | 9 |
| Mohlaletse clinic | 11 | | |
| Mashabela clinic | 13 | | |
| Matsageng clinic | 8 | | |
| Mecklenberg gateway clinic | 9 | | |
| Mmutlane clinic | 9 | | |
| Motlolo clinic | 11 | | |

| | | | |
|---|---|---|---|
| Motsepe clinic | 13 | | |
| Motshana clinic | 10 | | |
| **Total= 18 clinics** | 201 | **Total=10 clinics** | 110 |
| **Grant Total: 42 clinics** | | **n= 447** | |

- **Inclusion criteria**

An inclusion criterion refers to the characteristics that the prospective subjects must have to be included in the study (Brink et al., 2012). All women of child bearing age from 18 years old and above with babies not greater than six months old, seeking child health services at the selected clinics of Sekhukhune district, Limpopo Province were included in this study.

- **Exclusion criteria**

Exclusion criteria refer to characteristics that the prospective subjects do not have to be included in the study (Brink et al., 2012). The researcher excluded all women of child bearing age below the age of 18 years, and who were not the biological mothers of the babies, women who seek mental health care services since their responses can't be relied on due to their mental status, severely ill women since they need to be given assistance.

### 3.6. Data collection

Data collection is the gathering of information to address a research problem (Polit & Beck, 2010). In this study, data was gathered by means of a questionnaire.

### 3.6.1. Data collection instrument

A self-structured questionnaire on factors contributing to EBF was designed by the researcher. The questionnaire was developed using literature review and consultation with the supervisor. The questionnaires were written in English for those who preferred English and translated to Sepedi since it was their mother tongue.

### 3.6.2. Structure of the questionnaire

The questionnaire was divided into three sections namely:

- Section A: Demographic information
- Section B: Maternal factors
- Section C: Views of the respondents regarding Breastfeeding

Section A consist of five questions, section B of eleven questions and section C of four questions which were in a form of Likert scale. When responding to this Likert scale instrument, respondents were asked how strongly they agree (1), agree (2), uncertain (3) Disagree (4) or strongly disagree (5).

### 3.6.3. Data collection process

Data was collected in 3 months. One week was reserved for a pilot study which was conducted at Mashite linic since the clinic was not part of the selected clinics for the main study (Capricorn district).

***Pilot study***

Ten respondents participated in the pilot study and ten questionnaires were answered by the respondents who given the consent to participate in the study and meeting the inclusion criteria. The pilot study helped the researcher to determine if there are no questions which are ambiguous. After the data collection of a pilot study, 12 questions were removed from the questionnaire because they were not significant to the study. The pilot study was having 32 questions and main study questionnaire had only 20 questions.

- **Results of the pilot study**

Data of the pilot study was captured and analyzed using Excel and IBM SPSS statistics software, but some respondents did not answer all questions since they were not clear and confidential like HIV status. Most were between 25-35 years (70%), 20% of 18-24 years and only 10% above 36 years. Eighty percent of respondents were unemployed depending on child grant and 60% of unemployed practiced EBF and 20 % mixed fed their babies. Seventy percent attended ANC but 20% of the attendance were not counselled about feeding methods, which led them not to breastfeed exclusively. Ten percent (n=1) experienced breast problems which made her fail EBF. Seventy percent of unemployed mothers took care of their children while 30% had nannies/ helpers.

Data was collected in the private room where respondents were given the questionnaire inside the room alone and given time to answer. Respondents came after each other. Data collection was done through the aid of the researcher on illiterate respondents by reading the questions to illiterate, and the researcher tick answers on the questionnaire according to their responses. The questionnaire was not discussed until been handed in the private room. Answering the questionnaire took about 10 minutes each.

### 3.7. Data analysis

Data analysis is the process of transforming raw data into usable information, often presented in the form of a published analytical article, in order to add value to the statistical output (Statistics Canada, 2013). When data was ready for analysis, the university statistician provided guidance on choosing the most appropriate data analysis methods as well as how to use the IBM SPSS statistics software and Excel to analyze data. Data analysis involved statistical tests. Descriptive statistics such as frequencies and percentages and chi-squared test**.** Data analyzed, coded, and entered into a computer using Excel and SPSS.

Descriptive statistics were used to determine the frequencies and the percentages of demographic characteristics of the study population, whereas a cross-tabulation used to find out the factors associated with feeding methods. Thereafter multivariate regression model was used to determine independent predictors of EBF to the variables shown significant associated with ($p<0.05$) to the dependent variable (EBF) and data tested by using Chi-square. At last the coefficient correlation (95%) was used to determine the most influential contributing factors that had been seen positive to inadequate EBF.

### 3.8. Measures to ensure reliability and validity

Reliability and validity were both tested in this study:

#### 3.8.1. Reliability

Reliability is the extent to which an experiment, test or other measuring procedure yields the same result when repeated over time, within the same framework of

research (Bannigan & Watson, 2009). Reliability was ensured by conducting a pilot study at Mashite clinic which is in the Capricorn district, Limpopo province.

### 3.8.2. Validity

Validity seeks to ascertain whether an instrument accurately measures what it is supposed to measure, given the context in which it is applied (Brink et al., 2012). Face and content validity were adopted to ensure validity in this study:

- **Face validity**

Face validity is a rudimentary type of validity that basically verifies that the instrument gives the appearance of measuring the concept (LoBiondo-Wood & Haber, 2010). Face validity was ensured by the questionnaire that encompassed headings that guided what information was needed and respondents were requested to just tick the appropriate column so that, at the glance, the respondents could see what to fill in.

- **The content validity**

The content validity is an assessment of how well the instrument represents all the components of the variable to be measured (Brink et al., 2012). Content validity was ensured by conducting a literature review to construct a questionnaire so that it can represent all the components of the variable to be measured. The questionnaire was then reviewed by the supervisor, co-supervisor and university statistician before a pilot study was conducted, to check whether those questions measure the essential aspects of the study and the results of the pilot study were reviewed by a statistician for corrections and recommendations, in checking the overall stability of the questionnaire for the main study.

### 3.9. Bias

Bias is anything in the design or undertaking of a study that causes an untruth to occur in the study potentially affecting the outcome of the study (Ellis, 2013). Systematic sampling was used to select the respondents and clinics, where all respondents had an equal chance to participate. Sample size also was calculated using Krejcie and Morgan’s formula to avoid bias on sample size.

### 3.10. Ethical considerations

Ethics refers to social norms of conduct that distinguishes between acceptable and unacceptable behavior (Akaranga & Ongong' a, 2013). Ethical considerations were addressed in this study as reflected below.

- **Ethical clearance and permission to collect data**

According to LoBiondo-Wood and Haber (2010), ethics is the discipline dealing with principles of moral values and moral conduct. Ethical clearance was given by the TREC (TREC/107/2018: PG). Permission to collect data was obtained from the Limpopo Department of Health, Sekhukhune district manager, Sub-district managers and operational managers of the selected clinics.

- **Informed consent**

Informed consent comprises three elements: information, voluntariness and comprehension and must be obtained before recruiting respondents who must be given enough information about the study, the procedures involved and potential risks and benefits to ensure that they don't feel deceived or exploited (May & Holmes, 2012).

The language of the respondent's preference was used. The respondents were first told that participation is voluntary and they can withdraw from the study anytime without any penalty. The purpose, risks, and benefits of the study were explained to the respondents, and how the results will be published; which is through articles, internet and University of Limpopo library. After the explanation, participants were given the opportunity to ask questions, adequate time to consider taking part, and those who agreed to participate in the study signed a consent form.

- **Autonomy**

Autonomy is the authority to make decisions and the freedom to act (Skar, 2010). Participants were not coerced or forced to take part in the study. This was ensured by asking them permission to participate. Those who refused to participate were not penalized.

- **Confidentiality**

Information provided by the respondent was not divulged to unauthorized people. Names and identification were not written on questionnaires. Data was password-

protected, stored in a computer. Publishing's through articles, internet and University of Limpopo library are without respondent's names attached.

- **Anonymity**

Anonymity is preserved by coding data, using numbers/pseudonyms, so that respondents cannot be identified in any presentation of the findings, and keeping personal information separate from the data (May et al., 2012). Anonymity was maintained by providing the respondents with numbers such as respondents' number one, instead of using their real names and those numbers are given were written on the questionnaires whereas their real names are kept safe.

- **Right to privacy**

According to LoBiondo-Wood et al., (2010) privacy is the freedom of a person to determine the time, extent, and circumstances under which private information is shared or withheld from others. In this study, respondents were given a questionnaire in the private room one after each other. In the private room were only the respondent and the researcher. Private space was provided to the respondent when filling in the questionnaire, except the illiterate respondents who were assisted by the researcher.

- **Right to self-determination**

Right to Self-determination refers to treating people as autonomous agents who have the freedom to choose without external controls (LoBiondo-Wood et al., 2010). In this study, right to self-determination was maintained by informing participants that they have the right not to participate or to withdraw from the study at any time without any penalties, and also can come back again after the withdrawal to participate in the study.

### 3.11. Significance of the study

The results of the study might assist the Department of Health on factors contributing to EBF based on the results of the study, and recommendations made based on findings to improve EBF in women of childbearing age. The study will also help to decrease child mortality, and promote child well-being in Limpopo Province and neighbouring provinces, and also helped mothers economically for they won't buy

formula since breast milk is always available and the updates were done after the results of the study.

### 3.12. Conclusion

This chapter 3 discussed the research methodology according to which the study was conducted, including Research approach, study site, research design, population and sampling, data collection, data analysis, measures to ensure reliability and validity, bias, ethical considerations, and the significance of the study. The results of the research study are presented in the next chapter.

# CHAPTER 4

# DATA ANALYSIS AND INTERPRETATION

## 4.1. Introduction

In this chapter, the results of the study are presented. Tables and graphs are used to explain the results. A structured questionnaire was answered by 447 mothers from 42 clinics in relation to factors contributing to EBF. SPSS software was used to analyze the results. The results are presented according to sections of the questionnaire and presented in tables, pie charts, and graphs.

## 4.2. Statistical analysis

The researcher was assisted by the University of Limpopo statistician who is an expert in quantitative research. The statistician aided and guidance on choosing the most appropriate data analysis methods as well as how to use the SPSS software to analyze the data.

Capturing of the data was done on a Microsoft Excel computer package. The Excel document was then imported into the IBM SPSS Statistics version 25 where it was coded in preparation for data analysis. Furthermore, the researcher consulted the statistician after analyzing the data to double-check in order to see whether the interpretations done by the researcher were accurate.

The data analysis involved several rigorous statistical tests such as reliability tests, normality test and, chi-squared test. A comprehensive diagrammatic representation of the research path adopted for data analysis in the current study is also made in the next section.

## 4.3. Descriptive statistics

Descriptive statistics are techniques that help to state the characteristics or appearance of sample data (Zikmund, Babin, Carr & Griffin, 2013), frequency tables and the mean score ranking technique are the major descriptive statistics employed in this study.

### 4.4. Frequency Distributions

Frequency distributions such as percentages, graphs, line charts, pie charts, histograms and bar charts were utilized to display research findings. Frequency distributions are used to depict absolute and relative magnitudes, differences, proportions and trends (Zikmund et al., 2013). These methods use both horizontal and vertical bars to examine different elements of a given variable (Malhotra, 2011). The use of frequency distributions facilitated the assessment of age, marital status, educational status, employment status and the source of income.

### 4.5. Demographical profile of the respondents

Demographical profile of the respondents provides basic facts about individuals, such as their age, marital status, educational qualifications, employment status and source of income. Section A of the questionnaire elicited information pertaining to the demographic characteristics of respondents. The section addressed the following attributes pertaining to the respondents:

- Age of the respondents
- Marital status
- Educational status
- Employment status
- Source of income

Each of these characteristics will now be discussed.

#### 4.5.1. Age distribution of participants

The participants were required to indicate their ages to establish whether age had any influence on the factors contributing to EBF in women of childbearing age.

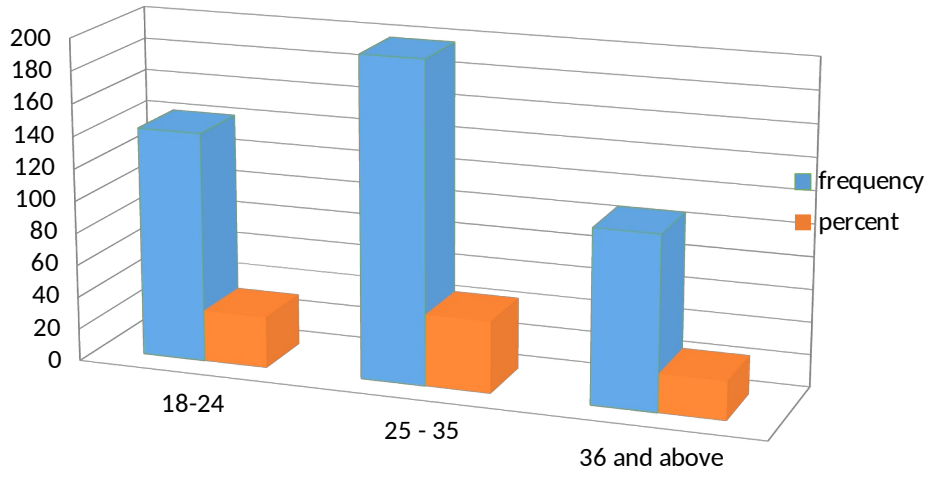


**Figure 4.1: Age distribution of participants (N=447)**

Majority 198 (44%) of the respondents were between ages 25 to 35 years. The respondents between the ages of 18-24 were 142 (32%) and 107(24%) respondents were of age 36 years and above.

### 4.5.2. Marital status of participants

It was important in this study to determine the marital status of respondents to anticipate the support they receive from people they live within their perceptive homestead.

1%

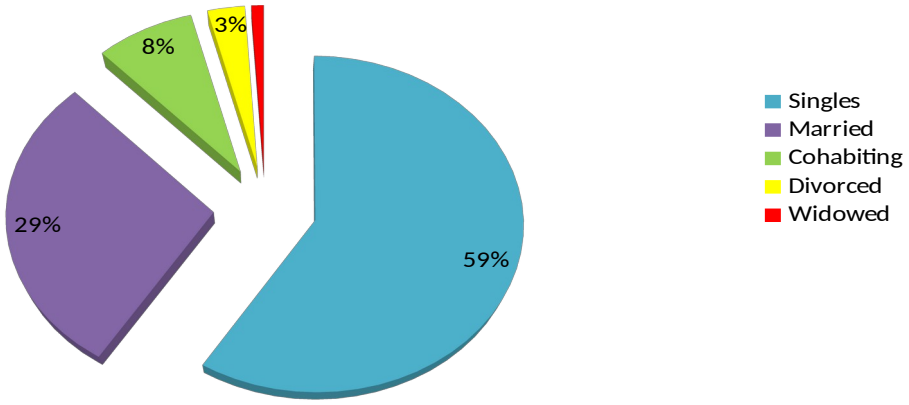


**Figure 4.2: Marital status of participants (n=447)**

The respondents who participated in the study were single, married, cohabiting, divorced and, widowed. In figure 4.2 the single women constitute the majority with 59% (n=264), married women came second with 29% (n=130), cohabiting women constitute 8% (n=36), while divorced and widowed women recorded least with 12(3%) and 5(1%) respectively.

### 4.5.3. Educational status

The majority (80%) of respondents were literate while 20% were illiterate. This may have been caused by the fact that majority of the respondents were youth aged between 25 and 35 years.

**Table 4.1: Educational status (n=447)**

| | Frequency | Percent |
|---|---|---|
| Illiterate | 90 | 20.1 |
| Literate | 357 | 79.9 |
| Total | 447 | 100 |

### 4.5.4. Employment statuses of the respondents

Respondents were asked to indicate their current employment status.

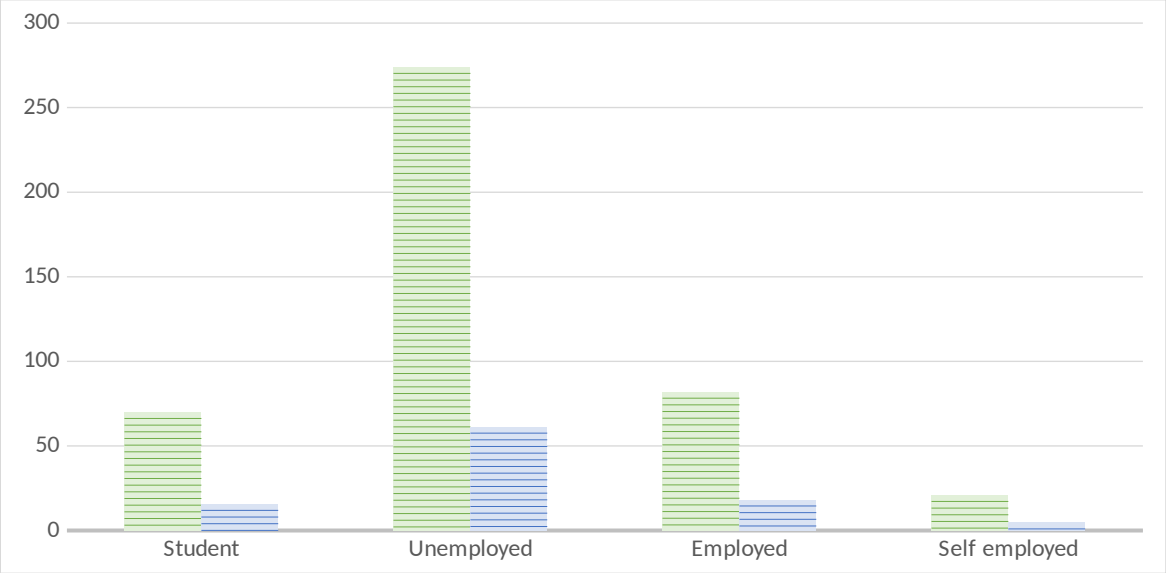


**Figure 4.3: Employment status of participants (n=447)**

The occupations of the participants were classified as students, unemployed, employed and self-employed. Sixty-one percentage (n=274) of the participants were unemployed, 18% (n=82) employed, 16% (n=70) were students and 5% (n=21) indicated that they are self-employed.

### 4.5.5. Source of income

Source of income was of critical importance in this study for the determination of affordability. Results are indicated in the table below.

**Table 4.2: Source of income (n=447)**

| | Frequency | Percent |
|---|---|---|
| Child grant | 255 | 57 |
| Old age grant/ Pensioner | 21 | 4.7 |
| Internships | 31 | 6.9 |
| Stable salary | 140 | 31.3 |
| Total | 447 | 100 |

More than half (57%) of the respondents indicated that their source of income is child grant, 5% old age grant, 7 % internships and 31% stable salary.

### 4.6. Maternal factors

Maternal factors are discussed below:

#### 4.6.1. Care of a child most of the time

The researcher wanted to know who cares for the child most often. Majority 344 (77%) stated that they take care of their children, only 61 (14%) of respondents indicated that they have nannies/helpers while few 39 (9%) take the children to the daycare center. It is also recorded that 3 (0.7%) of the respondents didn't indicate who was caring for their children.

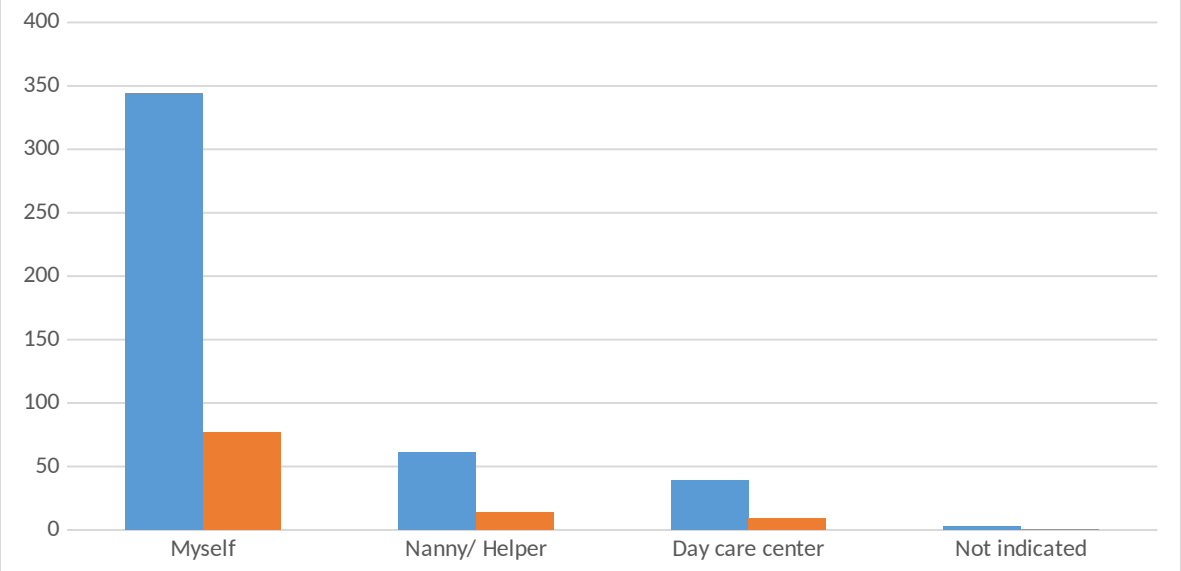


**Figure 4.4: Person caring for the child most often**

#### 4.6.2. Feeding practices of respondents

Respondents were asked to specify the method of feeding they practice. More than half (55%) of the respondents practiced EBF. Only 21% practiced exclusive formula feeding, while only 24% practiced mixed feeding.

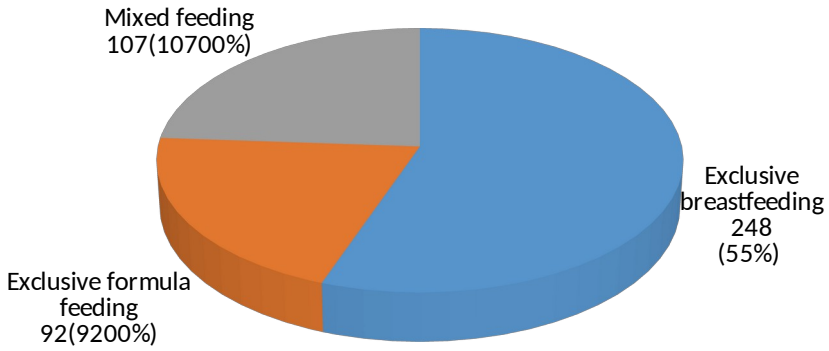


**Figure 4.5: Feeding practices of respondents (n=447)**

### 4.6.3 Reasons of respondents for not practicing exclusive breastfeeding

Respondents who failed to practice exclusive breastfeeding due to insufficient breast milk were 63 (14%), due to being scholars 42 (9%), lack of support (5%), work-related 45 (10%), 32 (7%) health-related and lastly 20 (5%) due to family/religion or self-preference.

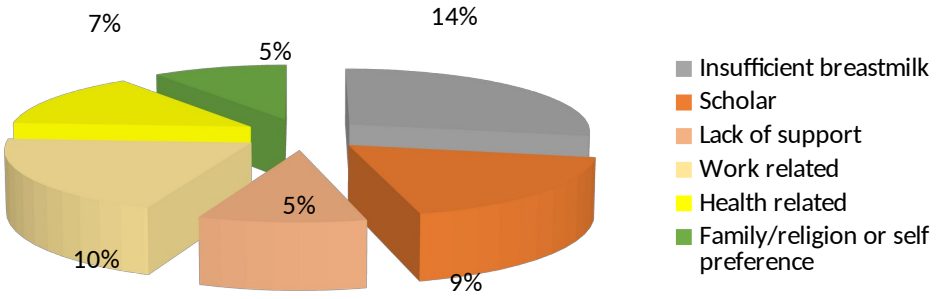


**Figure 4.6: Reasons of respondents for not practicing exclusive breastfeeding**

### 4.6.4. Maternal factors associated with the feeding method

Maternal factors associated with feeding methods are reflected in the table below:

**Table 4.3: Maternal factors associated with feeding method (n=447)**

| Variables | Feeding methods | | | P value |
|---|---|---|---|---|
| | Exclusive breastfeeding | Exclusive formula feeding | Mixed feeding | |
| **Take care of a child most often** | | | | 0.000 |
| Myself | 217(49%) | 55(12%) | 71(16%) | |
| Nanny/Helper | 13(3%) | 21(5%) | 27(6%) | |
| Daycare center | 18(4%) | 13(3%) | 8(2%) | |
| **ANC attendance** | | | | 0.096 |
| Yes | 244(55%) | 90(20%) | 101(23%) | |
| No | 4(0.9%) | 2(0.4%) | 6(1%) | |
| **Counselled on feeding practices** | | | | 0.000 |
| Yes | 223(50%) | 90(20%) | 85(19%) | |
| No | 25(6%) | 2(0.4%) | 22 (5%) | |
| **Parity** | | | | 0.459 |
| Primiparous | 96(22%) | 38(8%) | 49(11%) | |
| Multiparous | 152(34%) | 54(12%) | 58(13%) | |

| Variables | Feeding methods | | | P value |
|---|---|---|---|---|
| | Exclusive breastfeeding | Exclusive formula feeding | Mixed feeding | |
| **Mode of delivery** | | | | 0.024 |
| Normal vaginal delivery | 206(46%) | 64(14%) | 84(19%) | |
| Cesarean section | 42(9%) | 28(6%) | 23(5%) | |
| **The onset of breastfeeding your baby?** | | | | 0.000 |
| Immediately after birth | 201(45%) | 63(14%) | 68(15%) | |
| Three hours or more | 42(9%) | 21(5%) | 27(6%) | |
| A day after | 5(1%) | 8(2%) | 9(2%) | |
| Never Breastfed | 0(0%) | 0(0%) | 3(1%) | |
| **Breasts problems** | | | | 0.000 |
| Affected | 4(0.9%) | 14(3%) | 16(4%) | |
| Not affected | 52(12%) | 7(2%) | 16(4%) | |
| Not applicable | 192(43%) | 70(16%) | 75(17%) | |

| Variables | Feeding methods | | | P value |
|---|---|---|---|---|
| | Exclusive breastfeeding | Exclusive formula feeding | Mixed feeding | |
| **Who influenced your choice on current feeding?** | | | | 0.000 |
| Personal Choice | 129(29%) | 52(12%) | 70(16%) | |
| Health Workers | 111(25%) | 23(5%) | 19(4%) | |
| Family | 7(2%) | 16(4%) | 15(3%) | |
| Friends | 0(0%) | 0(0%) | 4(1%) | |
| Colleagues | 1(0.2%) | 0(0%) | 0(0%) | |

- **Take care of a child most often**

Almost half (n=217) of the respondents that prefer exclusive breastfeeding took care of their children. Since P=0.000, implies that there is a significant difference between who take care of the child most of the time and method of feeding practices.

- **ANC attendance**

Over half 55% (n=244) of the mothers who attended ANC prefer exclusive breastfeeding as compared to 0.9% (n=4) who didn't attend ANC. Because P value is more than 0.05 (P=0.096) it means that there is no significant association between those who attended ANC and the method of breastfeeding.

- **Counselled on feeding practices**

Half of the respondents (n=223) who got feeding practice counselling, prefer exclusive breastfeeding compared to those who did not. However, the $p<0.05$, p= 000, indicates that there is a significant association between those who attended the counseling and feeding method.

- **Parity**

Mothers who were primiparous (n=96) were less likely to practice exclusive breastfeeding than multiparous (n=152). P = 0.5 shows that parity does not have a significant association with the method of feeding.

- **Mode of delivery**

Almost less than half (n=206) of the respondents who delivered normally practiced exclusive breastfeeding. Nine percent (n= 42) mothers whose mode of delivery were cesarean section were likely to practice EBF compared to those practiced exclusive formula feeding and mixed feeding, (n= 28) and (n=23) respectively. P=0.024 shows that there is a significant association between mode of delivery and method of feeding.

- **The onset of breastfeeding your baby**

Many mothers who managed to EBF were those who initiated breastfeeding immediately after birth (n=201), followed by those who initiated 3 hours or more (n=42), day after childbirth (n=5) and other women never initiated breast milk (n=3). From the above results, it shows that the onset of breastfeeding is vital for successful EBF.

- **Breasts problems**

Even though some wished or planned to EBF but were interrupted by breast problems (n=30). Some had breast problems which did not affect their feeding choice for it was found that amongst those with breast problems but not affected their feeding method, n=52 of them managed to EBF but others with or without breast issue they went for EFF/ mixed feeding. Three hundred and thirty-seven (n=337) participants never had breast problems but only 192 of them did EBF.

- **Who influenced your choice on current feeding?**

Personal choice without other influence also plays a role in successful EBF (n=129). Health care workers also have a great impact on EBF (n=111), family (n=7) while friends and colleagues have very little influence have 0% (n=1) impact towards successful EBF. P= 000, indicates that there is a significant association between onset of breastfeeding, breast problems and the influencer on feeding choice and feeding practices.

### 4.7. The views of the women regarding breastfeeding.

To investigate the views of the women regarding breastfeeding exclusive breastfeeding, five questions were asked. Table 4.4 below illustrate the descriptive statistics of the responses. In the information presented in tabular form, the numbers 1, 2, 3, 4 and 5 represent strongly disagree, disagree, uncertain, agree and strongly agree respectively. The frequencies are presented as percentages for all 4 items and have been placed in rank order.

**Table 4.4: Views of the respondents regarding exclusive breastfeeding (n=447)**

| Item No | Statement | Strongly Agree | Agree | Uncertain | Disagree | Strongly disagree | Total |
|---|---|---|---|---|---|---|---|
| C17 | EBF is good for your baby. | 78% | 19% | 2% | 1% | 0% | 100% |
| C18 | Babies get satiety (enough) from EBF | 70% | 22% | 2% | 4% | 2% | 100% |
| C19 | It is important to breastfeed your baby exclusively for six months. | 69% | 24% | 3% | 2% | 2% | 100% |
| C20 | Babies should not be given water or porridge to supplement EBF | 45% | 23% | 12% | 6% | 14% | 100% |

From the table above, we can note the views of the respondents regarding EBF. EBF is good for the baby,97% agreed to the statement while 2% were uncertain and 1% disagreed. Babies get satisfied from EBF: 92% of respondents agreed and 2% uncertain,6% disagreed. It is important to breastfeed the baby exclusively for 6 months: 93% agreed as true, 3% uncertain and 4% disagreed. Babies should be given water or porridge to supplement EBF: 68% agreed to the statement while 12 were uncertain and 20% disagreed. As reflected in the literature review, we can conclude that all statements should have been agreed to, to be considered knowing the meaning of EBF.

**Table 4.5: Socio-demographic characteristics of respondents and their feeding method**

| Variables | Feeding methods (n=447) | | | P value |
|---|---|---|---|---|
| | Exclusive breastfeeding | Exclusive formula feeding | Mixed feeding | |
| **Age(years)** | | | | 0.015 |
| 18-24 | 66 | 27 | 48 | |
| 25-35 | 121 | 42 | 35 | |
| 36 and above | 60 | 23 | 24 | |
| **Marital status** | | | | 0.382 |
| Single | 148 | 48 | 68 | |
| Married | 69 | 33 | 28 | |
| Divorced | 8 | 2 | 2 | |
| Co-habiting | 22 | 8 | 6 | |
| Widowed | 1 | 1 | 3 | |

| | | | | |
|---|---|---|---|---|
| **Educational status** | | | | 0.087 |
| Illiterate | 56 | 10 | 24 | |
| Literate | 191 | 81 | 85 | |

| **Variables** | **Feeding methods (n=447)** | | | **P value** |
|---|---|---|---|---|
| | **Exclusive breastfeeding** | **Exclusive Formula feeding** | **Mixed feeding** | |
| **Employment status** | | | | 0.000 |
| Student | 22 | 17 | 31 | |
| Unemployment | 179 | 39 | 56 | |
| Employment | 36 | 31 | 15 | |
| Self-employment | 11 | 5 | 5 | |
| **Source of Income** | | | | 0.125 |
| Child grant | | | | |
| Old age grant/ | 154 | 41 | 60 | |
| Pensioner | 11 | 4 | 6 | |
| Internships | | | | |
| Stable salary | 17 | 11 | 6 | |
| | 66 | 39 | 35 | |

Out of 447 respondents, 248 (56%) were practicing EBF, while only 92 (21%) were practicing exclusive formula feeding and 107 (24%) were practicing mixed feeding. However, in terms of age, 121 (27%) were aged between 25 and 35 years. Since

p=0.015 found to be significant using the chi-squared test, that implies that there is an association of age and feeding method.

In terms of marital status, most women who practiced EBF (33%) were singles and P=0.382 which shows that there is an association between marital status and feeding method. There is no significant association between educational level (p=0.087), and a source of income (p= 0.125) with feeding methods respectively.

### 4.8. Place of delivery and educational status of the respondents

Table 4.6 shows that most mothers delivered at health facilities (92%) and majority (75%) of those mothers were literate. Only 8% respondents delivered at their homes, 3% illiterate and 5% literate respectively. Pearson Chi-square confirm there is an association between the education level of the mother and place of delivery (p=0.001). Education has an important role in the place of delivery.

**Table 4.6: Place of Delivery by Education Level of a Mother**

| **Place of delivery** | **Education level (%)** | | |
|---|---|---|---|
| | **Illiterate** | **Literate** | **Total** |
| Home delivery | 3% | 5% | 8% |
| Health facility delivery | 17% | 75% | 92% |
| Total | 20% | 80% | 100% |
| | | | $\chi^2$ = 11.289, P = 0.001 |

### 4.9. The relationship between exclusive breastfeeding and some selected factors

The relationship between EBF and some selected factors are reflected as follows:

#### 4.9.1 Regression analysis

Exclusive breastfeeding was regressed against four predictor variables, educational status, place of delivery, the onset of breastfeeding your baby and the Influencer on

your feeding choice. The regression analysis was undertaken at 5% significance level. The study obtained the model summary statistics as revealed in table 4.7 below.

**Table 4.7: Regression Model summary**

| Model Summary[b] | | | | | |
|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | .226[a] | .051 | .042 | .817 | 1.640 |
| a. Predictors: (Constant), influenced, delivery place, start feeding, Educational status | | | | | |

The study set out to determine the factors contributing to EBF in women of child bearing age in Sekhukhune district, Limpopo Province. The results revealed that there was a weak positive correction of (R= 0.226) between EBF variable and predictors. The results further indicated that the value of the adjusted R-square was 0.042. This implies that the predictors (educational status, place of delivery, the onset of breastfeeding your baby and Influencer on your feeding choice) can account for 4.2 % of the change in exclusive breastfeeding. A Durbin Waston statistic of 1.640 indicated that the variable residuals were not serially correlated since the value was more than 1.5.

### 4.9.2 Analysis of Variance

The study was seeking to confirm the Goodness of fit of the regression model through ANOVA statistic. Study outcomes were given in Table 4.8 below:

**Table 4.8: Analysis of Variance**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Regression | 15.849 | 4 | 3.962 | 5.932 | .000[b] |
| | Residual | 294.575 | 441 | .668 | | |
| | Total | 310.424 | 445 | | | |
| a. Dependent Variable: feeding method | | | | | | |
| b. Predictors: (Constant), influenced, delivery place, start feeding, Educational status | | | | | | |

Based on the above ANOVA statistics, it was determined that the regression model had a significance level of 0.0% which indicates that the model was ideal for predicting the effect of educational status, place of delivery, onset of breastfeeding your baby and Influencer on your feeding choice because of value of significance (P=0.000) was less than 5%. This means that the model is fit for the data.

### 4.9.3 Coefficient of determination

Coefficient of determination was used as indicators of the direction of the relationship between predictors (educational status, place of delivery, the onset of breastfeeding your baby and the Influencer on your feeding choice) and method of feeding. The P-value under the significance level section was connected to demonstrate the importance of the connection between the response and the predictor factors. At 95% certainty level, a p-estimation of under 0.05 was deciphered as a proportion of factual significance. As such, a p-value above 0.05 shows a statistically insignificant relationship between the dependent and the independent variables. Table 4.9 gives the results

**Table 4.9: Coefficient of determination**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Lower Bound | Upper Bound |
| 1 | (Constant) | 1.461 | .326 | | 4.487 | .000 | .821 | 2.101 |
| | Educational status | .101 | .098 | .049 | 1.031 | .303 | -.091 | .293 |
| | delivery place | -.200 | .144 | -.065 | -1.389 | .165 | -.483 | .083 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Onset of breast feeding | .299 | .065 | .214 | 4.598 | .000 | .171 | .427 |
| | Influencer on feeding method | .020 | .055 | .017 | .355 | .723 | -.089 | .128 |

Based on the results above, it is evident that the predictor factor of when you started feeding your baby first time produced positive and statistically significant values of this study (High t-value= 4.598 and p=0.000). Educational status and who Influenced your feeding choice produced positive but statistically insignificant values for this study as evidenced by (t= 1.031 and 0.355, p=0.303 and 0.723) more than required p=0.05 respectively. Lastly, the place of delivery produced negative statistically insignificant value for this study as evidenced by (t= -1.389, p=0.165).

The following regression equation was estimated:

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4$$
$$= 1.461 + 0.101 x_1 - 0.200 x_2 + 0.299 x_3 + 0.020 x_4$$

Where

Y = Breastfeeding method (Exclusive breastfeeding)

$X_1$= Educational status

$X_2$= Place of delivery

$X_3$= When did you start feeding your baby first time

$X_4$= who Influenced your feeding choice

On the estimated regression model above, the constant 1.461 shows that if predictor factors (educational status, place of delivery, the onset of breastfeeding your baby first time and Influencer on your feeding choice) were rated zero, the breastfeeding method (exclusive breastfeeding) would be 1.461. A unit increase in place of delivery would result in a decrease in breastfeeding method by 0.200. A unit increase in educational status, the onset of breastfeeding your baby and Influencer on your feeding choice would result in an increase in breastfeeding method by 0.101, 0.299 and 0.020 respectively.

## 4.10. Conclusion

This chapter includes statistical analysis, descriptive statistics, frequency distribution, the demographic profile of respondents, maternal factors, reliability testing and the relationship between EBF and some selected factors. The next chapter discusses the results of the study.

# CHAPTER 5

# DISCUSSION OF THE RESULTS

## 5.1. Introduction

This chapter discusses the implication of the major findings as presented in Chapter 4 and Maternal role attainment theory adopted in this study. According to Mercer (1985), the first stage of the theory is psychological preparation for the maternal role. In second stage, the mother adapts her role by demonstrating learned behavors (Radhika,2014). The thirst stage is about using her own judgement, in what is best for her infant (Thornton & Nardi,1975). In the final stage the mother do her parental duties with harmony and confidence ( Mercer,1985).

Exclusive breastfeeding for the first six months is identified as one of the interventions to reduce infant morbidity and mortality. Exclusively breastfed children have a much lower risk of infectious diseases than infants who receive other foods (Seid, Yesuf & Koye, 2013).

## 5.2. Discussion of the major findings

Major findings are discussed as follows:

- **Age distribution of respondents**

The respondents between the age of 18-24 years constitute 32%, 44% were of between 25-35 years and 24% of respondents were of the age of 36 years and older. Fifty-six percent (56%) of women practiced EBF and most of them were between 25-35 years (27%). Mothers' age has been found to be significantly associated with EBF practice (P=0.015). This could be due to the fact that younger mothers may have a lack of knowledge of breastfeeding (Hossain, Islam, Kamaral & Hossain, 2018). Also, young mothers (18-24 years) have more job opportunities or careers to follow than other age group mothers (Hossain et al., 2018).

- **Marital status of respondents**

Most respondents were singles (59%), married (29%), cohabiting (8%), divorced (3%) and widowed (1%). Single ones practiced EBF (33%) more than others, followed by married ones (15%). According to a study conducted by Odindo, Odindo, Alwar, Olay, Mwayi, and Oyugi (2014) in Kenya reported that women who were single were more likely to breastfeed their children exclusively than those married. Single mothers have reported a high rate of EBF than those who are married, because of the freedom of choice they have (Odindo et al., 2014). The same finding of singles practicing EBF more than the married, cohabiting, divorced and widowed, is also supported by the United State Department of Health and Humanities (2011).

- **Educational statuses and place of delivery of respondents**

The majority (92%) of mothers delivered at health care facilities, and 75% of them were literate. Eight percent of respondents delivered at home, 5% literate and 3% illiterate respectively. Mothers' education was found inversely proportional to the place of delivery. Institutional delivery had a positive association with EBF practice than home delivery (Asfaw, Argaw & Kefene, 2015). A similar report documented by Seid et al., (2013) shows that the majority of literate women delivers at health care facilities.

- **Employment statuses respondents**

Since most of the respondents were not working (n=179), they had time to exclusively breastfeed their own babies. The employed ones also managed to EBF (n=36) more than students (n=22) and self-employers (n=11). Employed mothers might have difficulty in expressing and storing milk and thus were not able to maintain EBF (Chekol, Biks, Gelaw & Melsew, 2017). In this study, unemployed mothers were more likely to practice EBF (n=179) than employed ones (n=36). Employment status was significantly associated with EBF practice which was supported by Setegn, Belachew, Gerbaba, Deribew, Biadgilign (2012) in their study. According to Choi and Yu (2015), mothers' employment status is a significant factor in failing breastfeeding, since most employed mothers found with less EBF rate and unemployed mothers found with greater EBF rate.

- **Antenatal care and feeding counseling**

In this study, 97% (n=435) mothers attended ANC and 3% (n=12) failed. Amongst the attendance; 55% (n=244) of them managed to practice EBF. Amongst 3% (n=12) of those women who failed to attend ANC; 1% (n=4) of them managed to practice EBF. Mothers who attended ANC (97%); 89% (n=398) were counseled about feeding practices and 11% (n=49) of were not counseled on feeding practices. Amongst those who were not counseled about feeding practices, 6% (n=25) of them managed to breastfeed exclusively. According to Hossain et al., (2018) breastfeeding counseling during ANC is identified as a significant factor associated with EBF practice. Antenatal visits improve EBF (Tariku, 2017). Since P value =0.000, this shows that there is a significant association between feeding counseling and feeding practices (p=0.000). The above results of antenatal care attendance and feeding counseling agrees with Maternal Role Attainment Theory (MRA) were it states that the first stage to motherhood is psychosocial preparation through learning to be competent in taking care of the baby (Mercer, 2006). According to the study conducted in Bangladesh by Hossain et al., (2018) mothers who received ANC were also likely to provide EBF to their infants compared to those mothers who did not receive ANC. Further said, this could be due to the ANC programs that include breastfeeding counseling which in turn improves breastfeeding knowledge of mothers and motivates them to exclusively breastfeed their children.

- **The onset of breastfeeding**

In this study, 74% of mothers initiated breastfeeding immediately after birth. Out of the 74% mothers who managed to initiate breastfeeding immediately after birth, 45% of them managed to breastfeed exclusively. Mothers who started feeding their children three hours after childbirth (9%) practiced EBF and those who initiated breastfeeding a day after giving birth (1%) practiced EBF. Women delaying the onset of breastfeeding are less able to sustain EBF in the early postpartum period (Brownel, Howard, Lawrence & Dozier, 2012).

The results of the study concur with stage 2 of MRA which begins after childbirth (Radhika, 2014), were the mother adopts learned behaviours such as early initiation

of breastfeeding. Even though some mothers failed to initiate breastfeeding immediately after giving birth, they managed to do so after three hours of birth (20%), and others a day after (5%). Maternal Role Attainment Theory stage 2 states that the mother begins care-taking tasks by copying learned behaviors and following the advice of others on taking care of her own child (Mercer, 2004).

- **Reasons for not practicing EBF**

According to Latona (2014), some mothers never breastfed since they consider breastfeeding exclusively to be emotionally and physically stressful due to sleepless nights. In contrast with the findings by Latona (2014), mothers who failed to breastfeed exclusively in this study, 14% said it was due to insufficient breast milk production, 10% said it was work-related, whereas 9% indicated that they were scholars and an equal percentage of 5% sighted lack of support and family/religion or self-believe.

Health care workers also have a great impact on EBF (25%), family (2%) while friends and colleagues had no impact on successful EBF. P = 0.000 shows that the influencer on feeding practice does have a significant association with the method of feeding. Lack of social support (family and friends), and health support found to be the common barriers to successful breastfeeding (United State Department of Health and Humanities, 2011).

According to Suplee, Bloch, McKeever, Borucki, Dawley, and Kaufman (2014), nurses play a vital role in preparing, educating, encouraging women to breastfeed during antenatal care visits. Health care providers promote and support the initiation and the continuation of breastfeeding for optimal health of the child and mother (Suplee et al., 2014) which makes the completion of stage 4 of the theory.

- **Mode of delivery**

Out of the 447 mothers, three hundred and fifty-four had a normal vaginal delivery. At least 206 of those mothers who had a normal vaginal delivery practiced EBF and 42 of those who delivered by cesarean section also practiced EBF. Mothers who delivered vaginally were more likely to exclusively breastfed their infants compared to mothers who had a cesarean delivery. This could be due to the fact that mothers may have had complications after cesarean section (Hossain et al., 2018). Cesarean

section delivery has an impact on the early initiation of breastfeeding which later affects successful EBF (Khatun, Comins, Shah, Islam, Choudhury & Ahmed, 2018). In support studies conducted by Fenske, Burns, Hothorn, Rehfuess (2013) and Pandey, Tiwari, Senarath, Agho and Dibley (2010) reported that there is a significant association between mode of delivery and method of feeding.

- **Feeding practices**

In this study, the rate of EBF was found to be 55%, 21% practiced EFF and 24% mixed feeding. This concur with stage 3 of MRA which states that the mother develops her own methods of mothering which are not conveyed by a social system. She finds what works for her and the child (Koniak-Griffin, 1993). In this study personal choice without other's influence played a role in success of EBF (29%).

- **Breast problems and caretaker of a child most often**

Even though some might have wished or planned to EBF, 8% were interrupted by breast problems. Some had breast problems which did not affect their EBF (0.9%). Three hundred and thirty-seven (75%) participants never had breast problems but only 192 (43%) decided to EBF. There is a significant association between breast problems and feeding practice (P value=0.000).

Most women took care of their own babies (77%) and only (49%) managed to practice EBF more than those babies who were cared for by nannies (3%) or day care centers (4%). The study conducted in Mahwelereng local area of Waterberg district by Frans (2014) shows that the respondents who took care of their own babies where more than those with nannies and day care centers. Since P=0.000, implies that there is a significant difference between who take care of the child most of the time and method of feeding. According to Suan, Ayob, and Rodzali (2017), EBF is promoted at daycare centers for women who decide to take their babies to nurseries for continuity of EBF. This was confirmed by their study in Malaysia which were focusing on supporting breastfeeding at registered nurseries, by helping to label bottles breast milk, and encouraging mothers to come over during breaks to breastfeed and they were providing reading materials regarding breastfeeding to the mothers. Also emphasized that it is necessary to ensure that childcare workers have

comprehensive, up to date knowledge about how to correctly store, label and prepare breast milk (Suan et al., 2017).

### 5.3. Conclusion

This chapter discussed major findings of the study which were age distribution of respondents, marital status of respondents, educational status and place of delivery of respondents, employment statuses of respondents, ANC and feeding counseling, onset of breastfeeding, influencer on breastfeeding and reasons of not practicing EBF, mode of delivery, feeding practices, breast problems and care taker of a child most often.

# CHAPTER 6

# SUMMARY, CONCLUSION, STRATEGIES, LIMITATIONS, AND RECOMMENDATIONS

## 6.1. Introduction

This chapter consists of a summary, conclusion, strategies, limitations of the study. The recommendations are based on findings discussed in the previous chapter. The limitations experienced during the period of the study are also presented.

## 6.2. Restatement of the problem statement

Malnutrition contributes to nearly half of all deaths in children worldwide (UNICEF, 2019). In South Africa, malnutrition is one of the causes of infant and child mortality (Department of Health, 2010). The researcher has identified that children are not exclusively breastfed for six months and that may lead to an increase in malnutrition and opportunistic infections since nothing is boosting their immune system. Globally, the prevalence of EBF among infants not greater than six months in developing countries increased from 33% in 1995 to 39% in 2010 (Cai, Wardlaw and Brown, 2012). According to Issaka, Agho and Renzaho (2017) the prevalence of EBF for West Africa, East Africa, Central Africa and Southern Africa was 32.6%, 53.5%,23.7%, and 56.6%, respectively. In South Africa the rate has risen from 7% in 1998 to 32% in 2016, which is still far from the target of 50% (South Africa Demographic and Health Survey, 2016). Acccording to report by Massyn, Pillay and Padarath (2019) only 35.2 infants were exclusively breastfed at 14 weeks in 2017/2018 at Sekhukhune district. Furthermore, according to the Head Count book of Ikageng clinic (16 May 2017), which was one of the clinics study was conducted, out of 13 children not greater than six months who consulted, only 3 babies were found to be exclusively breastfed. The researcher is therefore interested in identifying the factors contributing to EBF to make recommendations to improve EBF amongst women of childbearing age in order to increase the rate of EBF to meet the target required of 50%.

### 6.3. Restatement of objectives of the study

- To determine the factors contributing to EBF in women of childbearing age in Sekhukhune district, Limpopo Province.

### 6.4. Research methodology

The quantitative research approach which applied the cross-sectional design was used to determine factors contributing to EBF amongst women of childbearing age. This study was conducted at Sekhukhune district, in four sub-districts namely: Elias Motsoaledi, Ephraim Mogale, Fetakgomo-Tubatse, and Makhuduthamaga. Forty-two clinics were selected. The population of the study was all mothers who consulted at the clinics with babies who were not greater than six months and 447 respondents participated in the study.

Data were collected using a self-structured questionnaire consisting of three sections and 20 questions. Data collection took three months. Data were analyzed using SPSS and presented in tables, graphs and pie charts. Ethical clearance was granted by TREC and permission to conduct data was obtained from the Limpopo Department of Health, sub-district offices and operational managers of each clinic.

### 6.5. Findings of the research

The study revealed that women who practiced EBF mostly were singles, unemployed, literate and mothers depending on child grant. As confirmed in the discussion that unemployed mothers have a chance to spend most of the time with their babies and breastfeed exclusively unlike employed mothers. Majority of mothers attended ANC and were counseled about feeding methods which led them to breastfeed exclusively even though some were not taught. Multiparous mothers breastfed exclusively more than primiparous due to their experience and those who initiated breastfeeding immediately after birth were likely to breastfeed exclusively unlike those who initiated breastfeeding later. Most mothers practiced EBF even though some mothers did not breastfeed exclusively due to other reasons. The personal choice had a great influence on EBF.

## 6.6. Conclusion

The findings of this study revealed that there are various factors which contribute towards EBF amongst women of child bearing age. Interventions such as counselling about the choice of feeding practice, education about the benefits of EBF and starting with breastfeeding immediately after birth appears to be of importance in promoting EBF.

## 6.7. Limitations of the study

The study design used was cross-sectional so, it is difficult to establish a causal relationship between the determinant factors and EBF.

The study was conducted in Sekhukhune district which cannot be generalized for the whole of Limpopo province.

## 6.8. Recommended strategies to improve EBF amongst women of childbearing age

Based on the results, the literature reviewed and in relation to Maternal role attainment theory, the following strategies were developed:

- **Usage of breastfeeding policy**

According to Hawke, Dennison and Hisgan (2013) a written breastfeeding policy is the first step to improve EBF. Each facility must have a breastfeeding policy in usage. Staff must be oriented to the policy and the policy must be routinely discussed amongst staff as one of ten strategies to improve EBF.

- **Health education**

According to this study, antenatal health education about EBF must be continued as it contributes to EBF success as revealed in the Breastfeeding policy by the Department of Health (2013). Providing health education on EBF improves the rates of breastfeeding and enables mothers to understand the benefits of breastfeeding and prepares them to breastfeed successfully (Department of Health, 2013). Counseling about feeding practices and education about the benefits of EBF should be provided during antenatal visits in order to assist mothers to make informed choices and practice EBF. This can be ensured by checking facilities health

education books and supervisors to supervise their staff to make sure it is done. It is recommended that it be part of performance assessments.

- **Group discussion class**

According to WHO (2013), formal education to improve EBF should include group education sessions led by health professionals, home visits to educate women who have just delivered and distribution of printed or written material on EBF.

Group discussion class must be held at each clinic at least once a week with everyone interested in attending the group sessions especially women of childbearing age, in preparing them for future childbirth and those attending postnatal care for continual teachings, equipping them with knowledge about EBF since the lack of knowledge could be the reason for not practicing EBF (Ssemukase & Kearney, 2014). Husbands must also be included since mothers report a negative influence from husbands towards EBF and group educational sessions may assist in improving EBF (Ssemukase et al., 2014).

The committee of the group must be selected in order to ensure that the purpose and needs of the group are met. The committee to support EBF in the community must include all the categories of health professionals i.e. professional nurse, dieticians, and community health care workers.

- **Training of health professionals**

Carvalho de Jesus, Couto de Oliverira and Fonseca (2016) stated that there is a need for periodic training for health professionals in promoting, protecting, and supporting breastfeeding. Because health professionals who ‘lack of knowledge and skills on EBF can negatively influence EBF (Carvalho de Jesus et al., 2016).

Workshops must be held in empowering health care workers with knowledge on EBF, to deliver adequate information to patients about EBF and to be notified about any changes regarding EBF.

- **Breastfeeding personnel (consultant) in each facility**

One person can be delegated to only focus on EBF just like other programmes in place at primary health care centers (i.e. Maternal health, Child health programmes). In this way that personnel will be able to focus and identify gaps which need attention in order to improve EBF. This was supported by Ssemukase and Kearney (2014) stating that formal support provided by a health professional may positively influence EBF. Further said, this should be from competent professionals and the information should be consistent.

One consulting room can be delegated for consulting only EBF mothers with one delegated professional nurse to assess/ discover any challenge those mothers might have regarding EBF and assess the well-being of the mother and the baby.

- **Community breastfeeding awareness**

  Community outreaches about EBF must be done continuously to equip the community with the necessary information. Community health workers must reach patients in the comfort of their homes rather than wait for it in clinics. Visiting them in their homes may help in identifying some of the challenges they have. The improvement of EBF was observed with home visits by peer counselors in Sub-Saharan Africa, which resulted in a significant increase of EBF at 12 and 24 weeks postpartum (WHO, 2013). Plessis, Peer, Honikman, and English (2016) stated that community visits are strongly associated with adherence to EBF.
- **Media**

  Television and radio should be used to educate pregnant women and mothers about the importance of EBF and the use of celebrities to promote EBF has also been proposed to elevate the status of EBF (Plessis et al., 2016). Magazines, pamphlets, advertising through big boards, short popular dramas about EBF must be requested to spread the information.
- **Daycare centers**

  The study revealed that 4% of babies attending care centers were exclusively breastfed. This could be due to the support that daycare centres offers to the mothers, as reflected in the study conducted in Malaysia which was focusing on supporting breastfeeding at registered nurseries by helping to label bottles breast milk, encouraging mothers to come over during breaks to breastfeed and provide reading materials regarding breastfeeding to the mothers. Also emphasized that it is

necessary to ensure that childcare workers have comprehensive, up to date knowledge about how to correctly store, label and prepare breast milk and to give mothers courage to breastfeed exclusively for six months (Suan, 2017).

### 6.9. Recommendations for further studies

A similar study using the mixed method research approach and covering all the sub-districts should be conducted to generalize the findings for Limpopo Province.

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## APPENDIX A: ENGLISH QUESTIONNAIRE

The aim of the study is to determine factors contributing to exclusive breastfeeding in women of child-bearing age in Sekhukhune district, Limpopo Province

**Dear Respondent**

I, Makopo T.D, currently studying Master's Degree in Nursing at the University of Limpopo.

My study is about determining factors contributing to exclusive breastfeeding amongst women of child-bearing age at Sekhukhune District, Limpopo province.

Kindly you are requested to participate in the study by filling the questionnaire that will take about 10 minutes.

Remember that your names and contacts details will not be written in the questionnaire and will not be published.

Your respond will be highly appreciated.

Yours sincerely

Makopo T.D

## APPENDIX A: ENGLISH QUESTIONNAIRE

### SECTION A: Demographic Information

Instruction: tick on the appropriate box, please be honest and free

1. Age (in years)

| | |
|---|---|
| 18-24 | 1 |
| 25-35 | 2 |
| 36 and above | 3 |

2. Marital status

| | |
|---|---|
| Single | 1 |
| Married | 2 |
| Divorced | 3 |
| Cohabiting | 4 |
| Widowed | 5 |

3. Educational status

| | |
|---|---|
| Illiterate | 1 |
| Literate | 2 |

4. Employment status

| | |
|---|---|
| Student | 1 |
| Unemployed | 2 |
| Employed | 3 |
| Self- employed | 4 |

5. Source of income

| | |
|---|---|
| Child grant | 1 |
| Old age grant | 2 |
| Internship | 3 |
| Stable salary | 4 |

## SECTION B: Maternal Factors

6. Person caring for the child most often?

| | |
|---|---|
| Myself | 1 |
| Nanny domestic worker | 2 |
| Day care Centre | 3 |

7. Did you attend ante-natal clinic while pregnant?

| | |
|---|---|
| Yes | 1 |
| No | 2 |

8. Which feeding practice do you use?

| | |
|---|---|
| Exclusive breastfeeding | 1 |
| Exclusive Formula feeding | 2 |
| Mixed-feeding | 3 |

9. Were you counselled on feeding practices?

| | |
|---|---|
| Yes | 1 |
| No | 2 |

10. Parity

| | |
|---|---|
| Primiparous | 1 |
| Multiparous | 2 |

11. Mode of delivery

| | |
|---|---|
| Normal vaginal delivery | 1 |
| Caesarean section | 3 |

12. Place of delivery

| | |
|---|---|
| Home delivery | 1 |
| Health care facility | 2 |

13. When was the onset of breastfeeding your baby first time?

| | |
|---|---|
| Immediately after birth | 1 |
| Three hours and more after birth | 2 |
| A day and more after birth | 3 |
| Never breastfed | 4 |

14. Has breast problem(s) during breastfeeding affected your feeding practice?

| | |
|---|---|
| Affected | 1 |
| Not affected | 2 |
| Never applicable | 3 |

15. Who influenced your feeding choice?

| | |
|---|---|
| Personal choice | 1 |
| Health workers (e.g. Nurses/Doctors) | 2 |
| Family | 3 |
| Friends | 4 |
| Colleagues | 5 |

16. If not exclusively breastfeeding currently, why are you not?

| | |
|---|---|
| Insufficient breast milk production | 1 |
| Scholar | 2 |
| Lack of support | 3 |
| Work-related | 4 |
| Health-related | 5 |
| Family/religion related or self-preference | 6 |

**SECTION C: Views of the respondents regarding exclusive breastfeeding**

Choose the statement which best describes the meaning of the following:

SA= Strongly Agree; A= Agree; U= Uncertain; D= Disagree; SD= Strongly Disagree

16. Exclusive Breastfeeding is good for your baby.

| | | | | |
|---|---|---|---|---|
| 1. SA | 2. A | 3. U | 4. D | 5. SD |

17. Babies get satiety (enough) from Exclusive Breastfeeding.

| | | | | |
|---|---|---|---|---|
| 1. SA | 2. A | 3. U | 4. D | 5. SD |

18. It is important to breastfeed your baby exclusively for six months.

| | | | | |
|---|---|---|---|---|
| 1. SA | 2. A | 3. U | 4. D | 5. SD |

19. Babies should not be given water or porridge to supplement breast milk

| | | | | |
|---|---|---|---|---|
| 1. SA | 2. A | 3. U | 4. D | 5. SD |

**THANK YOU**

## APPENDIX B: SEPEDI QUESTIONNAIRE

### KAROLO YA PELE: Maemo

1. Megwaga ya lena ke bokae

| | |
|---|---|
| 18-24 | 1 |
| 25-35 | 2 |
| 36 le go feta | 3 |

2. Maemo a lenyalo

| | |
|---|---|
| Ga se ka nyala/ nyalwa | 1 |
| ke nyetswe | 2 |
| ke hladilwe | 3 |
| Re dula mmogo le molekane re sa nyalana | 4 |
| Mohlodikgadi | 5 |

3. Maemo a thuto

| | |
|---|---|
| Ga se ka tsena sekolo | 1 |
| ke tsene sekolo | 2 |

4. Maemo a mosomo

| | |
|---|---|
| Ngwana wa sekolo | 1 |
| Ga ke bereki | 2 |
| ke a bereka | 3 |
| ke a itshomela | 4 |

5. Leamogela bokae ka lapeng ka kgwedi

| | |
|---|---|
| Mphiwafela wa bana/ngwana | 1 |
| Tsheledi ya batsofadi | 2 |
| Tshelete ya nako nyana | 3 |
| Tshelete ya mosomo | 4 |

**KGAOLO YA BOBEDI: Dilo tsa go amana le lehlakore la bo mme**

6. Ngwana o hlokomela ke mang nako ye ntshi?

| | |
|---|---|
| Ke nna | 1 |
| Mothutsi kalapeng | 2 |
| Krecheng | 3 |

7. A na o be o sepela kliniki ya boimana?

| | |
|---|---|
| Ee | 1 |
| Aowa | 2 |

8. ke mokgwa ofe owe o tshomishago go fepa ngwana?

| | |
|---|---|
| Maswi a letswele feela ntle le meets,dijo goba lebotlelo | 1 |
| Maswi a lebotlelo feela | 2 |
| Goba o hlakantsa maswi/ dijo | 3 |

9. O kilwe wa fiwa ka tlhahlo ya go fepa ngwana?

| | |
|---|---|
| Ee | 1 |
| Aowa | 2 |

10. Le belege ga kae?

| | |
|---|---|
| Ga tee | 1 |
| Go feta ga tee | 2 |

11. Mohuta wa pelego

| | |
|---|---|
| Tlhago | 1 |
| Legare | 2 |

12. O belegetsi kae ngwana wa gago

| | |
|---|---|
| Ka gae/Tseleng | 1 |
| Kliniking/ sepetlele | 2 |

13. Le thomile neng go fa ngwana letswele

| | |
|---|---|
| Ka bonako ge ke fetsa go belega | 1 |
| Di iri tse tharo goba go feta, ka morago ga pelego | 2 |
| Letsatsi goba go feta, ka morago ga pelego | 3 |
| A sanka ka fa ngwana letswele | 4 |

14. Bothatha bja gago bja matswele bo amile kgetho ya go fepa ngwana?

| | |
|---|---|
| Ee, ke amegile | 1 |
| Ga se ka amega | 2 |
| A sanka ka ba lebotatha bja matswele | 3 |

15. Ke mang a hweditsego ka kgetho ye ya go fepa ngwana?

| | |
|---|---|
| Ke nna | 1 |
| Baoki | 2 |
| Ba lelapa | 3 |
| Bakgwara | 4 |
| Bosomi mmogo ka nna | 5 |

16. Ke ka lebaka la eng a safa ngwana wa gago letsele feela feela?

| | |
|---|---|
| Ga kena matutu a mantis | 1 |
| Ke ngwana wa sekolo | 2 |
| Ga ke a hwetsa thego | 3 |
| Ke a soma | 4 |
| Ke tsa maphelo. Mohlala: Ditlhoko tsaka ne di baba | 5 |
| Ba lelapa/ Tumelo yaka/ Kgetho yaka | 6 |

**KAROLO YA BORARO: Bakgatha karolo ba bona bjang gofa ngwana letswele feela**

**Kgwatha karabo yeo e hlalosang gabotse go feta tsedigwe**

**DU= Ke a dumela kudu kudu**

**GA=Ke a dumela**

**TSH=ke no ba magareng**

**GAN=Ke a ganetsa**

**GANKU=Ke gana kudu kudu**

17. Go fa ngwana letswele feela gona le phepo e botse kudu

| | | | | |
|---|---|---|---|---|
| 1. DU | 2. GA | 3. TSH | 4. GAN | 5. GANKU |

18. Bana ba khura ka letswele feela

| | | | | |
|---|---|---|---|---|
| 1. DU | 2. GA | 3. TSH | 4. GAN | 5. GANKU |

19. Go bohlokwa go fa ngwana letswele feela dikgwedi tse tshela ka moka

| | | | | |
|---|---|---|---|---|
| 1. DU | 2. GA | 3. TSH | 4. GAN | 5. GANKU |

20. Bana ba go fiwa leswele feela gaba swanelwa go fiwa le meetse goba motepana go thusa maswi a leswele

| | | | | |
|---|---|---|---|---|
| 1. DU | 2. GA | 3. TSH | 4. GAN | 5. GANKU |

**MAFELELO: KE YA GO LEBOGA**

## APPENDIX C: CONSENT FORM

**Title: Factors contributing to exclusive breastfeeding amongst child bearing age women at Sekhukhune district, Limpopo province.**

Name of the researcher: Makopo T.D

University of Limpopo

Nursing department

I am a postgraduate student doing Master's degree in the department of nursing at University of Limpopo. I am kindly inviting you to participate in the study. The aim of the study is to identify the factors contributing to EBF amongst child-bearing age mothers. This study involves full participation of all mothers meeting inclusion criteria regarding the question that will be asked through the questionnaire to help to make recommendations based on findings regarding strategies to improve EBF. Questionnaire will be structured for participants to answer and will take three months to collect data.

The participants will be informed that they could withdraw from the study at any time if they wish to withdraw without any penalty. This right will be explained to the Respondents prior to engagement in the study and before the interview.

By signing this consent form you are indicating that you fully understood the above information and agree to participate in this study.

Respondent's signature……

Researcher's signature……

Date ……

If you have any question about the study, please contact the researcher 0721429633

Your participation will be highly appreciated.

Thanks in advance

## APPENDIX D: SEPEDI CONSENT FORM

**Setatamente mabapi le go tšea karolo ka go ya Dinyakišišo.**

Leina la Dinyakišišo: **Dilo tseo di tshitisago bomme bao basa belegang go fepa ngwana ka letswele feela, ka gare ga district ya Sekhukhune, provinseng ya Limpopo**.

Ke kwele ka ga tshedimošo mabapi le maikemišetšo le morero wa dinyakišišo tšeo di šišintšwego gomme ke ile ka fiwa monyetla wa go botšiša dipotšišo gomme ka fiwa nako yeo e lekanego gore ke naganišiše ka ga taba ye. Ke tloga ke kwešiša maikemišetšo le morero wa dinyakišišo tše gabotse. Ga se ka gapeletšwa go kgatha tema ka tsela efe goba efe.

Ke a kwešiša gore go kgatha tema Dinyakišišong tše ke ga boithaopo gomme nka tlogela go kgatha tema nakong efe goba efe ntle le gore ke fe mabaka.

Ke a tseba gore Dinyakišišo tše di dumeletšwe ke Yunibesithi ya Limpopo. Ke tseba gabotse gore dipoelo tša Dinyakišišo tše di tla dirišetšwa merero ya saense gomme di ka phatlalatšwa. Ke dumelelana le se, ge fela bosephiri bja ka bo ka tiišetšwa.

Mo ke fa tumelelo ya go kgatha tema Dinyakišišong.

| | |
|---|---|
| Leina la moithaopi | Tlhatse |
| ..... | ..... |
| Lefelo. | Letšatšikgwedi. |
| …… | …….. |

**Setatamente ka Monyakišiši**

Ke fana ka tshedimošo ka molomo le/goba yeo e ngwadilwego mabapi le Dinyakišišo tse Ke dumela go araba dipotšišo dife goba dife tša ka moso mabapi le Dinyakišišo ka bokgoni ka moo nka kgonago ka gona.

Ke tla latela melao yeo e dumeletšwego.

| | | | |
|---|---|---|---|
| ..... | ..... | ..... | …… |
| Leina la Monyakišiši | Mosaeno | Letšatšikgwedi | Lefelo |

## APPENDIX E: PERMISSION LETTER

University of Limpopo

Department of nursing sciences

Private bag X 1106

Sovenga

0727

Department of Health Limpopo Province

Dear sir /madam

Request for permission to conduct a research at clinics of Sekhukhune district, Limpopo province, South Africa

I am Makopo T.D student at University of Limpopo Turfloop campus, hereby request for permission to conduct research at Sekhukhune district, Limpopo province. Title of the research project: **Factors contributing to exclusive breastfeeding in women of child-bearing age in Sekhukhune district, Limpopo province, South Africa.**

The aim of the study is to identify factors contributing to exclusive breastfeeding in women bearing age at Capricorn clinics, Limpopo province.

The objectives of the study are as follows:

- To identify factors contributing to EBF in child bearing age women at Sekhukhune District, Limpopo Province

Questionnaires will be answered by those participants who meet the inclusion criteria.

Hoping that my request will be taken into consideration

Yours faithfully

Makopo T.D (0721429633)

drtumi.limp@gmail.com

## APPENDIX F: APPROVAL LETTER FROM TREC

University of Limpopo
Department of Research Administration and Development
Private Bag X11 06, Sovenga, 0727, South Africa
Tel: (015) 268 3935, Fax: (015) 268 2306, Email: Anastasia.Ngobe@ul.ac.za

**TURFLOOP RESEARCH ETHICS COMMITTEE CLEARANCE CERTIFICATE**

| | |
|---|---|
| **MEETING:** | 15 May 2018 |
| PROJECT **NUMBER:** | **TREC/107/2018:PG** |
| PROJECT: | |
| Title: | Factors contributing to exclusive breastfeeding amongst women of child bearing age at Sekhukhune district, Limpopo province, South Africa. |
| Researcher: | TD Makopo |
| Supervisor: | Prof RN Malema |
| Co-Supervisors: | Mrs L Muthelo |
| School: | School of Health Care Sciences |
| Degree: | M.A Nursing |

-&
PROF FAB MASH
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: REC-03101 11-031

Note:
i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
ii) The budget for the research will be considered separately from the protocol.
PLEASE QUOTE THE PROTOCOL **NUMBER IN** ALL ENQUIRIES.

## APPENDIX G: APPROVAL LETTER FROM LIMPOPO DEPARTMENT OF HEALTH

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Stander SS (015 293 6650) Ref: LP_2018_06_011

**Makopo TD**
**University of Limpopo**
**Private bag X1106**
**Sovenga, 0727**

Greetings,

**RE: Factors contributing to exclusive breastfeeding amongst women of child bearing age at Sekhukune District, Limpopo Province, South Africa**

The above matter refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that:-
    - Research must be loaded on the NHRD site (http://nhrd.hst.org.za) by the researcher.
    - Further arrangement should be made with the targeted institutions, after consultation with the District Executive Manager.
    - In the course of your study there should be no action that disrupts the services, or incur any cost on the Department.
    - After completion of the study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
    - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
    - The above approval is valid for a 3 year period.
    - If the proposal has been amended, a new approval should be sought from the Department of Health.
    - Kindly note, that the Department can withdraw the approval at any time.

Your cooperation will be highly appreciated.

Head of Department

20/06/2018
Date

Private Bag X9302 Polokwane
Fidel Castro Ruz House, 18 College Street. Polokwane 0700. Tel: 015 293 6000/12. Fax: 015 293 6211.
Website: http/www.limpopo.gov.za

*The heartland of Southern Africa – Development is about people!*

## APPENDIX H: APPROVAL LETTERS FROM SEKHUKHUNE DISTRICT OFFICES

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

# DEPARTMENT OF HEALTH
## SEKHUKHUNE DISTRICT

Ref: 5/3/1
**Enq: Mashiane PN**
Tel: 0156332352 / 078 126 5414
**E-mail: Philistus.Mashiane@dhsd.limpopo.gov.za**

Date: 27 August 2018

**To: Makopo TD**
**University of Limpopo**
**Faculty of Nursing Sciences, School of Health Care Sciences**

From: Human Resource Utilization and Capacity Development.

**Approval for permission to collect data: Yourself**

1. The above matter bears reference.
2. Based on the approval granted by the Head of Department of Health, Limpopo Province regarding your request to conduct research in our institution, the District Executive Manager for Sekhukhune District is hereby permitting you to visit the institutions as indicated in your application letter where you will be undertaking your research.
3. Also take note that as per the approval granted, your research conduct is valid for a period of 3 years. You are also reminded that the collected data from our institutions should be kept confidential and after completion of your study, your findings should be shared with the District to serve as a resource and be loaded on the NHRD site (http://nhrd.hst.org.za).
4. **During assumption of data collection, you will present yourself, your scope of work and your schedule to the Chief Executive Officer for the institutions you intend to visit.**
5. Hope the matter is found to be clear and understandable.

27/08/2018

District Executive Manager
**Mrs Maepa ML**

Date

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

# DEPARTMENT OF HEALTH

## SEKHUKHUNE DISTRICT

Ref: 5/3/1
**Enq: Mashiane PN**
Tel: 0156332352 / 078 126 5414

**E-mail: Philistus.Mashiane@dbsd.limpopo.gov.za**

Date: 27 August 2018

**To: Acting Director: Primary Health Care**
**Sub-District Manager: Elias Motsoaledi**

Attention to Operational Managers for the following facilities:

**Dikgalaopeng, Elandsdoorn, Goedgedaght, Groblersdal, Hlogotlou, Kwaarielagte and Magukubjane**

From: Human Resource Utilization and Capacity Development.

**Approval for permission to collect data: Makopo TD, Ms (University of Limpopo)**

1. The above matter bears reference.
2. The Head of Department of Health, Limpopo Province has approved a request to conduct research in our institution in respect of **Ms TD Makopo**; therefore the District Manager for Sekhukhune District give permission to the applicant to visit your institution as he has specified in his individual application letter to collect data.
3. Please take note that the approval for the research is valid for a period of 3 years. Also be informed that the collected data from our institutions will not be used for any other reasons unless for study purposes.
4. During assumption of data collection, Ms Makopo Tumelo Daphney will present herself to your offices, her scope of work and schedule on how she will be visiting your institution. The researcher's visits should not in any way disrupt the rendering of services during collection of data.

5. Hope the matter is found to be clear and understandable and also refer this letter to the Operational Managers of the individual facility on your visit

27/08/2018

District Executive Manager
**Mrs Maepa ML**

Date

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

# DEPARTMENT OF HEALTH

## SEKHUKHUNE DISTRICT

Ref: 5/3/1
**Enq: Mashiane PN**
Tel: 0156332352 / 078 126 5414

**E-mail: Philistus.Mashiane@dhsd.limpopo.gov.za**

Date: 27 August 2018

**To: Acting Director: Primary Health Care**
**Sub-District Manager: Ephraim Mogale**

Attention to Operational Managers for the following facilities:

**Mmotoaneng, Matlala, Marulaneng, Makeepsvlei and Marble Hall**

From: Human Resource Utilization and Capacity Development.

**Approval for permission to collect data: Makopo TD, Ms (University of Limpopo)**

1. The above matter bears reference.
2. The Head of Department of Health, Limpopo Province has approved a request to conduct research in our institution in respect of **Ms TD Makopo;** therefore the District Manager for Sekhukhune District give permission to the applicant to visit your institution as he has specified in his individual application letter to collect data.
3. Please take note that the approval for the research is valid for a period of 3 years. Also be informed that the collected data from our institutions will not be used for any other reasons unless for study purposes.
4. During assumption of data collection, Ms Makopo Tumelo Daphney will present herself to your offices, her scope of work and schedule on how she will be visiting your institution. The researcher's visits should not in any way disrupt the rendering of services during collection of data.

5. Hope the matter is found to be clear and understandable and also refer this letter to the Operational Managers of the individual facility on your visit

27/08/2019

District Executive Manager
**Mrs Maepa ML**

Date

Private Bag X04, Chuenespoort 0745 Tel: (015) 633 2300, Fax: (015) 6336487,Website:www.limpopo.gov.za

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

# DEPARTMENT OF HEALTH

## SEKHUKHUNE DISTRICT

Ref: 5/3/1
**Enq: Mashiane PN**
Tel: 0156332352 / 078 126 5414

**E-mail: Philistus.Mashiane@dhsd.limpopo.gov.za**

Date: 27 August 2018

**To: Acting Director: Primary Health Care**
**Sub-District Manager: Fetakgomo**

Attention to Operational Managers for the following facilities:

**Ikageng, Mankotsana, Mohlaletse, Matsepe and Manotoane**

From: Human Resource Utilization and Capacity Development.

**Approval for permission to collect data: Makopo TD, Ms (University of Limpopo)**

1. The above matter bears reference.
2. The Head of Department of Health, Limpopo Province has approved a request to conduct research in our institution in respect of **Ms TD Makopo;** therefore the District Manager for Sekhukhune District give permission to the applicant to visit your institution as he has specified in his individual application letter to collect data.
3. Please take note that the approval for the research is valid for a period of 3 years. Also be informed that the collected data from our institutions will not be used for any other reasons unless for study purposes.
4. During assumption of data collection, Ms Makopo Tumelo Daphney will present herself to your offices, her scope of work and schedule on how she will be visiting your institution. The researcher's visits should not in any way disrupt the rendering of services during collection of data.

5. Hope the matter is found to be clear and understandable and also refer this letter to the Operational Managers of the individual facility on your visit

District Executive Manager
**Mrs Maepa ML**

27/08/2018
Date

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

# DEPARTMENT OF HEALTH

## SEKHUKHUNE DISTRICT

Ref: 5/3/1
**Enq: Mashiane PN**
Tel: 0156332352 / 078 126 5414

E-mail: Philistus.Mashiane@dhsd.limpopo.gov.za

Date: 27 August 2018

**To: Acting Director: Primary Health Care**
**Sub-District Manager: Greater Tubatse**

Attention to Operational Managers for the following facilities:

**Boschkloof, Burgersfort, Dilokong, HC Boschoff CHC, Mahubehube, Makofane, Mashabela, Matsageng, Motlolo, Motshana, Mmutlane and Mecklenburg Gateway**

From: Human Resource Utilization and Capacity Development.

**Approval for permission to collect data: Makopo TD, Ms (University of Limpopo)**

1. The above matter bears reference.
2. The Head of Department of Health, Limpopo Province has approved a request to conduct research in our institution in respect of **Ms TD Makopo**; therefore the District Manager for Sekhukhune District give permission to the applicant to visit your institution as he has specified in his individual application letter to collect data.
3. Please take note that the approval for the research is valid for a period of 3 years. Also be informed that the collected data from our institutions will not be used for any other reasons unless for study purposes.
4. During assumption of data collection, Ms Makopo Tumelo Daphney will present herself to your offices, her scope of work and schedule on how she will be visiting your institution. The researcher's visits should not in any way disrupt the rendering of services during collection of data.

5. Hope the matter is found to be clear and understandable and also refer this letter to the Operational Managers of the individual facility on your visit

07/09/2018

District Executive Manager
**Mrs Maepa ML**

Date

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

# DEPARTMENT OF HEALTH

## SEKHUKHUNE DISTRICT

Ref: 5/3/1
**Enq: Mashiane PN**
Tel: 0156332352 / 078 126 5414

**E-mail: Philistus.Mashiane@dhsd.limpopo.gov.za**

Date: 27 August 2018

**To: Acting Director: Primary Health Care**
**Sub-District Manager: Makhuduthamaga**

Attention to Operational Managers for the following facilities:

**Marishane, Manganeng, Mampana, Mamone, Magafies, Madibong, Klipspruit, Jane Furse Gateway, Eensaam and Dichoueng**

From: Human Resource Utilization and Capacity Development.

**Approval for permission to collect data: Makopo TD, Ms (University of Limpopo)**

1. The above matter bears reference.
2. The Head of Department of Health, Limpopo Province has approved a request to conduct research in our institution in respect of **Ms TD Makopo;** therefore the District Manager for Sekhukhune District give permission to the applicant to visit your institution as he has specified in his individual application letter to collect data.
3. Please take note that the approval for the research is valid for a period of 3 years. Also be informed that the collected data from our institutions will not be used for any other reasons unless for study purposes.
4. During assumption of data collection, Ms Makopo Tumelo Daphney will present herself to your offices, her scope of work and schedule on how she will be visiting your institution. The researcher's visits should not in any way disrupt the rendering of services during collection of data.

5. Hope the matter is found to be clear and understandable and also refer this letter to the Operational Managers of the individual facility on your visit

27/08/2018

District Executive Manager
Mrs Maepa ML

Date

## APPENDIX I: EDITORIAL LETTER

Sue Matthis
B A (Hons)
1 Oden Place
Douglasdale, 2191

Cell: 0837817646
e-mail:suematthis@gmail.com

**TO WHOM IT MAY CONCERN**

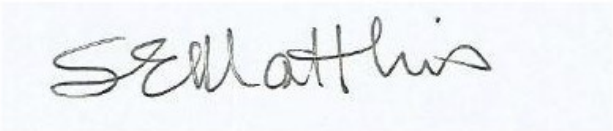
This serves as confirmation that I have proofread and language edited:

FACTORS CONTRIBUTING TO EXCLUSIVE BREASTFEEDING AMONGST WOMEN OF CHILD BEARING AGE IN THE SEKHUKHUNE DISTRICT, LIMPOPO PROVINCE, SOUTH AFRICA.

by

T D MAKOPO (201201836)

A dissertation, submitted in fulfillment of the requirements for the degree of Masters in Nursing Science



S E Matthis
6 April 2019