Factors influencing breastfeeding of infants of mothers who are living with HIV at Ehlanzeni District, Mpumalanga, South Africa.

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A mini-thesis submitted in partial fulfillment of the requirements for the degree of Master in Public Health in the School of Public Health, Faculty of Community and Health Sciences, University of the Western Cape.

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Date: September 2021

Keywords

Exclusive breastfeeding

Exclusive Formula feeding

Feeding practices

Infant feeding

Infant formula

Maternal-infant bonding

Mother-to-Child Transmission

Mothers living with HIV

Vertical transmission

Abstract

Background: The World Health Organisation recommendations for breastfeeding in the general population, including mothers living with HIV, emphasise breastfeeding within one hour of birth, exclusive breastfeeding (EBF) during the first six months of life, and continued breastfeeding for up to two years or beyond. However, only 34.8% of infants worldwide are exclusively breastfed for the first six months of life, and as a result, about 1.4 million infants lose their lives due to undernutrition. In South Africa, only 31.6% of infants are exclusively breastfed for the first six months. Despite the benefits of exclusive breastfeeding, many mothers living with HIV do not initiate breastfeeding or discontinue breastfeeding prematurely. It is, therefore, crucial to determine the barriers inhibiting the uptake of EBF and factors promoting mothers living with HIV to adopt exclusive breastfeeding.

Methodology: Using a descriptive research design and a purposive sampling method, this qualitative study explored the factors influencing exclusive breastfeeding of infants of mothers who are living with HIV. The study sample consisted of thirty mothers living with HIV aged between 18 – 40 years who gave birth at a provincial hospital in Ehlanzeni District, Mpumalanga province in South Africa. The data collection process was undertaken through in-depth interviews.

Ethics clearance approval was obtained from the Biomedical Research Ethics Committee of the University of the Western Cape and the Mpumalanga Research Ethics Committee. Further study approval was obtained through applying to the Mpumalanga Provincial Department of Health via the National Health Research Database website. Informed consent was obtained from all participants prior to participating in the study. In the eventuality of a need for psychosocial support by the participants after the in-depth interviews, details of the National AIDS Helpline and a registered Psychosocial Specialist were made available.

Results: The study findings demonstrated that the majority of the participants who chose alternative infant feeding methods were influenced by the fear of mother-to-child transmission of HIV through breastfeeding, mothers' unavailability to breastfeeding, breast problems and health-related issues, and image and social lifestyle. Although some mothers acquired knowledge on the

benefits of exclusive breastfeeding, it was evident that knowledge acquisition did not translate to the adoption of exclusive breastfeeding. Instead, mothers chose exclusive breastfeeding as a result of their desire to exclusively breastfeed, inability to afford infant formula due to household financial constraints and healthcare workers' support of exclusive breastfeeding. Overall, it was the interplay of the above-mentioned factors that influenced the selection of the mother's infant feeding practice.

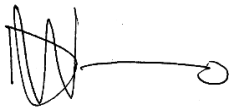
Conclusion: The study findings indicate the necessity of educating mothers living with HIV on the safety of adopting exclusive breastfeeding to address their fear of vertical transmission. Additionally, the study further recommends the active enforcement of the labour law policy on the provision of maternity leave to enable employed mothers to adopt exclusive breastfeeding. Lastly, the cultural empowerment of community leaders remains central in promoting the uptake of exclusive breastfeeding.

Declaration of originality

I declare that this mini thesis, "**Factors influencing breastfeeding of infants of mothers who are living with HIV at Ehlanzeni District, Mpumalanga, South Africa**" is my own work and has not been submitted for any degree or examination at another university. All the sources I have used or quoted have been indicated or acknowledged by way of complete references.

Full name: Desmond Munemo

Signed



10 September 2021

Acknowledgements

I would like to thank everyone who assisted me in making this mini-thesis a success.

Thank you, Dr. Nasheetah Solomons, for your patience, support, and guidance in supervising my mini-thesis. It is through your valuable feedback and constructive criticism that I eventually managed to complete my studies.

I am deeply grateful to the Rob Ferreira Provincial hospital management for allowing me to carry out my study at their institution. Sister C.R. Mnisi and Sister P. Silawule from the Maternity Ward who provided invaluable support during data collection. However, I would especially like to highlight my special thanks to the women who volunteered their time to participate in this study.

To my many friends and family, Barbara Munemo, Cleopas Munemo, Brandon Munemo, Nonkosi Khumalo, Sthembile, Bongani Mothoa, Mofart, Bernard Tavengwa, Garikai Muzamhindo, Jonathan Ruwanika, Farai Chipangura, SaMatimba, the Mutazus, the Chinakas, the Goredemas, the Marimas, the Gomos, the Nkosis, the Chuchus, the Magwindiris, the Murenjes, the Munemos, and the Mushatis, thank you all for your unwavering support.

I would also like to acknowledge my child who was born during this mini-thesis journey. Murishé, you will always remain special.

Lastly, I would like to thank my wife, Livhu.

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Acronyms

AFASS: Affordable, Feasible, Acceptable, Sustainable and Safe

AIDS: Acquired Immunodeficiency Syndrome

ART: Antiretroviral Treatment

ARV: Antiretroviral

BFHI: Baby Friendly Hospital Initiative

CD4: Cluster of Differentiation 4

EBF: Exclusive Breastfeeding

EFF: Exclusive Formula Feeding

ERF: Exclusive Replacement Feeding

HCPs: Healthcare Providers

HIV: Human Immunodeficiency Virus

NCDs: Non-Communicable Diseases

PLHIV: People Living with HIV

PMTCT: Prevention of Mother-To-Child-Transmission of HIV

SA-DoH: South African Department of Health

TB: Tuberculosis

UNAIDS: Joint United Nations Programme on HIV and AIDS

UNICEF: United Nations Children's Fund

VMMC: Voluntary Medical Male Circumcision

WHO: World Health Organisation

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The decline in the cases of early initiation of breastfeeding around the world continues to be a public health problem. The 2020 United Nations Children's Fund (UNICEF) report revealed that less than 1 in 2 newborns are breastfed within 1 hour of birth (UNICEF Data, 2021). The situation is further worsened by the poor uptake of exclusive breastfeeding (EBF), with only 2 in 5 infants under the age of 6 months being EBF from birth until 6 months (UNICEF Data, 2021). It is against this background that the World Health Organisation (WHO) recommended in 2010 that all mothers living with HIV be provided with lifelong antiretroviral treatment (ART). In addition, the WHO also recommended that they should EBF for 6 months and continue with breastfeeding their child until the age of 24 months (West et al., 2019). Yet, despite all its potential and practical benefits, many mothers living with HIV do not initiate breastfeeding or discontinue breastfeeding prematurely (West et al., 2019). This trend is evident, particularly in developing countries such as South Africa, where there is a minimal uptake of EBF to reach the global target of 50% (Trafford et al., 2020; Jama et al., 2017). In 2016, 67.3% of infants in South Africa were initiating breastfeeding within the 1st hour of birth, yet only 31.6% were exclusively breastfed up to 6 months of age. This translates to a mean exclusive breastfeeding duration of 2.9 months, the lowest EBF rates in Africa (DHS Program, 2016; South Africa Demographic and Health Survey, 2016).

Scepticism regarding the health benefits of breastfeeding began in the 1980s when the first case of mother to child HIV transmission via breastfeeding was reported (Humphrey and Iliff, 2009). Since then, many questions have been posed regarding the risk of mother-to-child transmission of HIV (MTCT) (Young et al., 2011). This resulted in scientists and policymakers struggling to determine the proportion of the risk of MTCT linked to breastfeeding. This subsequently affected the development of realistic infant feeding guidelines related to HIV (Preble and Piwoz, 2019), as evidenced by several adjustments undertaken over the past 15 years to the infant feeding guidelines for women living with HIV in South Africa. Policies on breastfeeding in South Africa have shifted

a number of times in response to changing perceptions of the role of mother to child transmission of HIV. Initially, the government set out to provide government-supplied infant formula milk for mothers living with HIV from 2002. This was followed by a recommendation in 2011 for nursing mothers with HIV to cease breastfeeding at 6 months in 2011, then a shift in policy to EBF for 6 months and continued breastfeeding for up to 24 months for all women on ART in 2017 (West et al., 2019; NDoH, 2017).

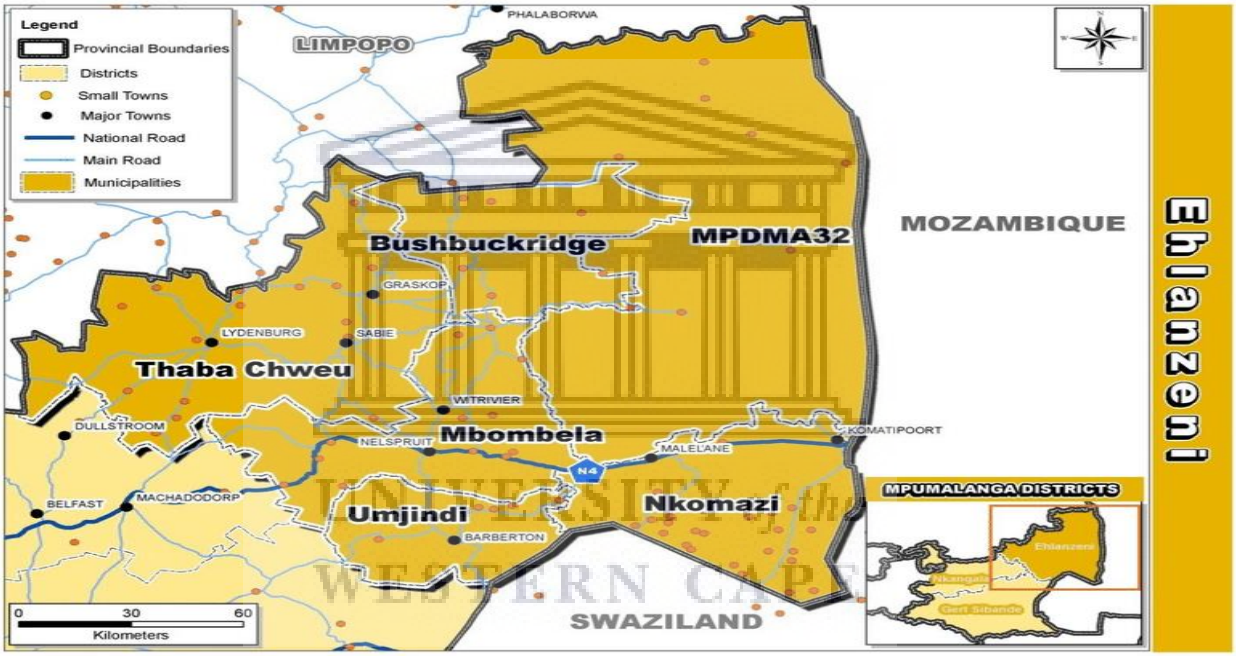
The 2019 Joint United Nations Programme on HIV and AIDS (UNAIDS) report estimated that 38 million people globally are living with HIV, of which 1.8 million are children under the age of 15 years old, and that 1.7 million people are newly infected, resulting in 690 000 annual deaths (UNAIDS, 2020). South Africa is home to the largest HIV epidemic in the world, contributing 19% of people living with HIV globally. In addition, 15% of all new HIV infections and 11% of AIDS related deaths annually has been reported in South Africa (UNAIDS, 2019). South Africa is also one of the 22 countries that make up 90% of the world's pregnant women living with HIV (Goga et al., 2018).

Despite a global increase in EBF in recent years, EBF rates among South African mothers remain below the global targets. The 2016 South Africa Demographic and Health Survey findings confirmed that 25.2% of children aged between 0 and 5 months were not breastfed; 11.4% received breast milk and other types of milk, and 17.6% were given complementary feeds before turning 6 months old (Statistics South Africa, 2016). These findings were supported by another study which confirmed that only 31.6% of infants in South Africa were exclusively breastfed for the first 6 months after birth (Nieuwoudt et al., 2019). While most mothers record high rates of breastfeeding initiation, it has become common practice for mothers to cease breastfeeding and adopt mixed feeding before the infant reaches the age of 6 months (Jama et al., 2017). This could be attributed to barriers such as the fear of vertical HIV transmission and involuntary HIV status disclosure by mothers living with HIV (Mnyani et al., 2016; Tuthill, McGrath and Young, 2014).

South Africa's serious challenge of low EBF practice emanates from numerous complexities, including longstanding support for the use of infant formula and a historical lack of breastfeeding support resulting from fears of mother to child transmission. This is further exacerbated by the

poor implementation of the 2001 WHO guidelines on infant feeding within the country's operational settings. This led to the mushrooming of arguably inappropriate infant-feeding options, including replacement feeding and mixed feeding, and ultimately a lower HIV-free survival rate among infants (Van der Merwe et al., 2015). It is within this context that the balance between the risks of HIV transmission through breastfeeding and its long-term benefits create a difficult situation in decision making regarding infant feeding for the first 6 months among HIV-positive mothers (Olorunfemi and Dudley, 2018).

1.2 Study Setting



Source: Map of Ehlanzeni District showing its constituent local Municipalities and neighbouring countries: Ehlanzeni District Municipality GIS Unit (2010).

This study was conducted in the Ehlanzeni District in the Mpumalanga Province, which is located in the Eastern part of South Africa, bordering Swaziland, and Mozambique. The word Ehlanzeni finds its origin in the isiZulu and siSwati languages meaning "lowveld", defining its geographical location. The Mpumalanga province is South Africa's third most rural province, with the majority of its population residing in the former homelands of Kwa-Ndebele, Ka-Ngwane and Lebowa. It covers a land surface area of 78,370 km² representing 6.4 % of South Africa's total land area. According to the Community Survey of 2016, its population is approximately 4 million people

representing 7.8% of the national population. The province shares borders with Limpopo province to the north, Gauteng province to the west, the Free State province to the southwest, and KwaZulu-Natal province to the south (Mpumalanga Department of Health, 2020).

Mpumalanga province consists of three districts: Gert Sibande, Ehlanzeni, and Nkangala District municipalities. These are further subdivided into 18 local municipalities. The district of interest, Ehlanzeni, hosts three border gates to both Swaziland and Mozambique (Matsamo, Komatipoort and Mananga border gates) and therefore provides passage of movement to people from neighbouring countries to the district and from Gauteng province to either Swaziland or Mozambique. In 2019, it had a population of 1 856 753 people, housing approximately 40% of Mpumalanga province's population and 3.2% of South Africa's total population (Cooperative Governance & Traditional Affairs, 2020).

In terms of HIV prevalence, the Mpumalanga province is ranked 2nd amongst the 9 provinces of South Africa. In 2016, it recorded a predicted HIV prevalence rate of 15.2% and a total of 675,414 HIV infections. HIV prevalence in Mpumalanga increased from 35.6 % in 2012 to 37.5 % in 2013 (Mpumalanga Department of Health, 2020). About 294 000 people in the district contracted HIV in 2018, and a total of 159 821 people are currently receiving Anti-Retroviral therapy (ART) (Cooperative Governance & Traditional Affairs, 2020).

The Ehlanzeni district has a total of 141 health care facilities consisting of 110 clinics, 15 Community Health Facilities, 11 District, Regional and Tertiary hospitals and 5 "other" hospitals. Out of all these facilities, the largest number of facilities are concentrated in the City of Mbombela. Non-Communicable Diseases (NCDs), HIV and Tuberculosis remain the leading cause of death in the district of Ehlanzeni.

Almost 48% of the people in the Ehlanzeni District do not have any schooling, which accounts for 5.8% of the national rate. In 2019, 1.26 million people in the district were living in poverty (using

the upper poverty line definition)[1], and 36.69% of the total district population were unemployed (Cooperative Governance & Traditional Affairs, 2020).

1.3 Problem Statement

Infants of mothers living with HIV are at risk of contracting HIV from their mothers during pregnancy, labour, and breastfeeding. As such, it is critical to explore factors driving the decision of mothers' living with HIV to adopt EBF (Yapa et al., 2020; Ladzani et al., 2011). Infants become exposed to life-threatening health problems each time mothers discontinue EBF within 6 months from birth. The risk is also exacerbated when infants are introduced and exposed to inappropriate breast milk substitutes, inadequate sanitation, low nutritional quality of weaning foods, and early introduction of solid foods (WHO (1), 2021). It is for these reasons that improved infant feeding and care practices are critical for improved nutrition, health, and development of the infant (Yapa et al., 2020). South Africa advocates for exclusive breastfeeding during the first 6 months of an infant's life, yet the practice remains uncommon (Plessis et al., 2019), as demonstrated by an average EBF rate of 32% for infants below 6 months (NDoH, 2017). In 2011, the South African Department of Health adopted the WHO recommendations of EBF for 6 months for all mothers regardless of HIV status. This move demarcated a clear shift from preceding policies and had immediate ramifications as the average EBF rates increased from less than 10% in 2011 to 32% by 2016 (Nieuwoudt et al., 2019). However, this increase remains inadequate to address the infant breastfeeding practice challenges countrywide. This is further supported by a 2019 study that mapped exclusive breastfeeding in Africa between 2000 and 2017, which identified South Africa as having the lowest rates of EBF in Africa and globally (Bhattacharjee et al., 2019). At the core of South Africa's EBF challenges is the failure to translate the scientific knowledge of the life-saving benefits of EBF into practice (Victora et al., 2016). To avoid a further decrease in EBF in South Africa, it is imperative to understand the determinants of breastfeeding behaviour, including cultural beliefs, attitudes, and practices of HIV-positive lactating women (Nieuwoudt et al., 2019). Globally, infants who are exclusively breastfed have only 12% of the risk of death as those who

[1] ZAR 1 227 (in April 2019 prices) per person per month. This refers to the food poverty line plus the average amount derived from non-food items of households whose food expenditure is equal to the food poverty line.

were not breastfed, demonstrating the protective effect of EBF (Victora et al., 2016). It is estimated that universal EBF would prevent about 13.8% of deaths of children below 2 years. This would have a lifesaving impact in countries like South Africa, which has a national EBF average rate of 23.7% for infants between 4 and 5 months of age (NDoH, 2017).

1.4 Purpose of the Study

The purpose of this study was to identify barriers and facilitators to breastfeeding in mothers who are living with HIV and describe their attitudes towards infant breastfeeding. This study's preoccupation with these variables was encouraged by South Africa's low EBF for the first 6 months record of 32% (NDoH, 2017). The public health consensus accepts that EBF for the first 6 months is the best start for the health and development of infants (Victora et al., 2016). Since dietary decision making for children is dependent on their families and communities (Du Plessis et al., 2016), it is imperative to understand the determinants of breastfeeding behaviour, including cultural beliefs, attitudes, and practices of mothers living with HIV.

1.5 Aim of the Study

To explore the barriers and facilitators to breastfeeding in mothers living with HIV from Ehlanzeni District, Mpumalanga.

1.6 Research Objectives

1. To describe the enablers that influence mothers living with HIV to choose breastfeeding as a choice for infant feeding.
2. To describe the barriers to breastfeeding experienced by mothers living with HIV.
3. To describe the attitudes of mothers living with HIV towards breastfeeding their infants.

1.7 Structure of the Report

Chapter One: Introduction

This chapter introduces the reader to the study and indicates the Problem Statement, Purpose of Study, Aim of Study, Research Objectives, and Contextual setting of the study.

Chapter Two: Literature Review

This chapter presents reviewed literature relevant to the study particularly the facilitators and inhibitors of infant breastfeeding practices by mothers living with HIV. It conducts a review of the infant breastfeeding practices introduced in South Africa since 1994 and how the current landscape of infant breastfeeding is looked at.

Chapter Three: Research Methodology

This chapter presents the research techniques adopted by the Researcher in undertaking this study. These processes include study design, study population, study sample, data collection and analysis methods, research rigour and ethical considerations.

Chapter Four: Findings

This chapter presents the study findings. The findings are organised thematically to identify and describe the factors that promote infant breastfeeding and those that inhibit infant breastfeeding.

Chapter Five: Discussion and Conclusion

This chapter reconciles the key findings of the study with relevant literature on breastfeeding and HIV transmission. Based on the findings of the study, the report concludes by providing a brief reflection on the limitations of the research and presents suggested recommendations for possible future consideration.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The World Health Organisation (WHO) defines exclusive breastfeeding as the feeding of an infant with only breast milk, to the exception of any other liquids or solids such as water, for a duration of 6 months (WHO, 2016). This, however, excludes the provision of oral rehydration solution, drops or syrups of vitamins and minerals, or medicines (WHO, 2016). Based on the benefits of breastmilk, and in comparison, to other forms of infant feeding, exclusive breastfeeding is considered the gold standard for infant feeding (WHO/UNICEF/UNAIDS, 2016). Yet, research confirms a poor uptake of EBF in the resource-poor settings of sub-Saharan Africa, especially in South Africa (Victora et al., 2016; Horta et al., 2015; de Jager et al., 2013).

Exclusive formula feeding (EFF) is the feeding of an infant with only processed infant formula milk instead of breast milk (WHO/UNICEF/UNAIDS, 2016). This form of infant feeding practice was promoted by government in South Africa until 2011. The programme was sponsored by the South African infant feeding policy which advocated for Affordable, Feasible, Acceptable, Sustainable and Safe (AFASS) infant feeding enabled by the provision of free infant formula milk for infants of all women living with HIV for up to 6 months of age at public health facilities (National Department of Health (SA), 2011). The programme was later phased out in 2012 through a 2011 circular that adopted the WHO 2010 guidelines promoting EBF (Department of Health (SA), 2012; National Department of Health (SA), 2011).

Mixed feeding is the feeding of an infant younger than 6 months of age with other liquids and/or foods together with breast milk. This feeding approach supplements breastfeeding with water, animal milk, infant formula, and any type of solid food (WHO, 2016). This type of feeding is associated with increased risks of vertical transmission of HIV (Yapa et al., 2020; Iliff et al., 2005), resulting in higher infant morbidity and mortality (Sankar et al., 2015). It is also considered to be

the most prevalent infant feeding practice for babies younger than 6 months of age in South Africa (Risenga, 2017; Doherty et al., 2012; Mushaphi et al., 2008; Sibeko et al., 2005; Mamabolo et al., 2004).

2.2 Infant and Young Child Feeding in the Context of HIV

In 2019, an estimated 150,000 children were newly infected with HIV worldwide (WHO, 2020). About 90% of these infected children acquired HIV from their mothers during pregnancy and, to a lesser extent through breastfeeding (Beyene, Dadi and Mogas, 2018). Studies confirm that most HIV-infected children are likely to die before the age of 5 years due to the malignant nature of the HIV infection in infants compared to adults (WHO (1), 2016). To reduce the under-5 infant mortality and postpartum vertical transmission of HIV, adherence to antiretroviral therapy (ART) and exclusive breastfeeding from birth is encouraged (Kedir and Mengistu, 2017; Davis et al., 2016; Aishat et al., 2015; Marembo et al., 2013).

Young child feeding, particularly breastfeeding, is a key component in child survival. It reduces infant morbidity and mortality in children worldwide (WHO, 2019). However, in the 1980s, these perceived health benefits of breastfeeding were overshadowed by the first case of breastfeeding-associated HIV transmission reported, which resulted in serious questions on the risk of mother-to-child-transmission of HIV (MTCT) (Young et al., 2011; Humphrey and Iliff, 2009). This challenge further stunted the development of realistic infant feeding guidelines related to HIV (Preble and Piwoz, 2019). It is for these reasons that the HIV pandemic is believed to have threatened to "knock breastfeeding off its pedestal as a pillar of child survival" (Coutsoudis et al., p.1164, 2010).

Of note, changes were made to the WHO's HIV and Infant Feeding Guidelines from 1998 to 2010, emanating from the availability of new evidence on breastfeeding and HIV transmission. For instance, the 1998 WHO guidelines stated that "when children born to women living with HIV can be ensured uninterrupted access to a nutritionally safe and adequate breastmilk substitute, then they are less at risk of illness and death" (Paulson and Nadege, 2013, p. 277). The 2001 and 2006 guidelines further recommended that "When replacement feeding is acceptable, feasible,

affordable, sustainable and safe (AFASS), then avoidance of breastfeeding is recommended, or else exclusive breastfeeding is recommended during the first six months of life" (WHO, 2007; WHO, 2001).

The latest 2016 WHO guideline updates on HIV and Infant feeding were guided mainly by four key questions that came up during the guideline scoping process (WHO, 2016). It could be argued that these questions remain relevant today in assessing the extent to which infant feeding practice has been addressed across the WHO member states, and specifically, South Africa, where the practice of EBF remains low (Victora et al., 2016; Horta et al., 2015; de Jager et al., 2013). The four questions were as follows: (1) How long should a mother living with HIV breastfeed if she is receiving ART and there is no evidence of clinical, immune, or viral failure? (2) To what extent can facility and community-based interventions improve the quality of infant feeding practices among mothers living with HIV? (3) If a mother living with HIV does not exclusively breastfeed, is mixed feeding with ART better than no breastfeeding at all? and (4) If a mother living with HIV plans to return to work or school, is a shorter duration of planned breastfeeding with ART better than no breastfeeding at all? (WHO, 2016).

The ultimate survival of infants and young children is dependent on optimal infant and young child feeding practices for nutritional status, growth, development, and health. Across the world, sub-optimal breastfeeding results in 1.4 million deaths of children aged less than 5 years (Hoche, Meshesha and Wakgari, 2018; Mukhopadhyay et al., 2010). Infant breastfeeding has also been recognised as a strategy towards the prevention of childhood obesity and related health problems (Ortega-García et al., 2018; Eckhardt et al., 2014). It must be mentioned, however, that infant feeding behaviours are but one cause of vertical transmission and one out of the four components of the WHO's comprehensive strategic approach towards the prevention of HIV in infants and young children. The other components include "prevention of infection among women of reproductive age, prevention of unintended pregnancies among women living with HIV, and the provision of adequate treatment, care, and support to such women and their families" (WHO, 2010). This research, however, focused only on postnatal vertical transmission, namely, infant breastfeeding practices.

2.3 Benefits of Breast Milk

Optimal breastfeeding is critical for child survival and development since breast milk has all the necessary nutrients for healthy growth and provides significant protection against childhood diseases (WHO, 2020). It is for this reason that the 2016 WHO guidelines recommend that all infants be exclusively breastfed from birth up to 6 months of age. Consistent with this approach, the mothers are expected to receive counselling and support for exclusive breastfeeding at each postnatal visit (Prell and Koletzko, 2016). Complementary foods should only be introduced at the age of 6 months while continuing with breastfeeding until 12 months, provided the complementary foods are nutritious and safe (Prell and Koletzko, 2016).

Breastfeeding has short and long-term benefits for both the mother and the child. The short-term benefits for the mother are that breastfeeding reduces the risk of post-partum haemorrhage (UNICEF, 2019). It also reduces the risk of breast and ovarian cancers, retained gestational weight gain, type-2 diabetes, myocardial infarction, and metabolic syndrome. An additional benefit is lactational amenorrhea which can aid in birth spacing (Tiwari, Khanam and Savarna, 2018; Stuebe, 2009). For infants, breastmilk has protective elements which are derived from its optimal nutritional composition, which protects infants against infections (Elmoussaoui et al., 2018). These elements include antibodies and oligosaccharides responsible for the lower prevalence of infectious diarrhoea, otitis media, pneumonia, bacteremia, and meningitis in the first year of life (Elmoussaoui et al., 2018). Breast milk also helps with the development of healthy gastrointestinal microbiota in infants (Zivkovic et al., 2010). Infants receive most of their protein and energy from breast milk until the end of their 1st year of life. Breast milk also contains several important micronutrients such as vitamins A, C, and B_{12} and folate (Dror and Allen, 2018). Such nutrients are not easily available in complementary foods, especially in several parts of the developing world (Abeshu, Lelisa and Geleta, 2016).

2.4 Health Risks Associated with Breastmilk: HIV Transmission

Attempts to quantify the exact risks of HIV-infant infection via breastmilk vary significantly due to the multivariate nature of the risk of transmission (Hoche, Meshesha and Wakgari, 2018; Kuhn

and Aldrovandi, 2010). These risk variables include timing of maternal infection; maternal viral load; immune function; nutritional status of both the mother and baby; antiretroviral (ARV) use; breast health, and type of breastfeeding (exclusive, mixed, or replacement feeding); duration of any breastfeeding, and presence of oral lesions in the infant (De Cock et al., 2000). However, a study conducted in Malawi, which included more than 600 mother-infant pairs, demonstrated that the risk of transmitting HIV to the infant through breastfeeding varied according to duration of breastfeeding, being 7% for infants breastfed for 1 year and 10% for infants who breastfed for up to 2 years of age (Uptodate.com, 2019). Notwithstanding, the latest WHO recommendations on HIV and infant feeding encourage mothers living with HIV to breastfeed for a duration of 12 months, and they may continue to breastfeed until 24 months or longer, on the condition that the mother is adhering to antiretroviral treatment and has a suppressed viral load (WHO, 2019). Alternatively, mothers living with HIV can continue breastfeeding while taking ARVs and the HIV-exposed infant taking prophylaxis to reduce transmission of HIV through breastfeeding (Avert, 2019).

Between 2000-2015, HIV prevention services such as the provision of free male and female condoms, sex and reproductive health services, voluntary medical male circumcision (VMMC), antiretroviral drugs for the prevention of mother-to-child transmission, pre-and post-exposure prophylaxis, and treatment as prevention, increased in scale (UNAIDS, 2019). These interventions resulted in a 70% decline in the number of new HIV infections among children. Despite this notable decline, the number of new HIV infections among children remains relatively high. In 2015, about 150 000 children were infected with HIV (UNAIDS, 2019).

2.4.1 Health Risks of Abstaining from Breastfeeding: Increased Morbidity and Mortality

Each year, about 595 379 diarrhoea and pneumonia-related childhood deaths are documented for the 6 months to 59 months age group worldwide. These children die because they are not breastfed in line with the global recommendations from WHO and UNICEF (Walters, Phan and Mathisen, 2019). Additionally, about 974 956 cases of childhood obesity, which is linked to non-compliance with breastfeeding recommendations, are reported annually (Walters, Phan and Mathisen, 2019).

There are risks associated with exclusive formula feeding in an infant exposed to HIV infection and the use of a combination of breast milk and solid foods increases the chances of childhood infection. Infant formula feeding is associated with higher risks of infant illnesses, including water-borne diseases such as diarrhoea. For these reasons, infant mortality rates among non-breastfed infants are 14 times higher as compared to exclusively breastfed infants. Of note, mixed infant feeding can increase the risk of HIV transmission through antigens in non-breast milk, which cause inflammation in the infant's gut, exposing the infant to higher risks of HIV infection (SAHIV, 2019).

The ideal of HIV-free survival among infants encapsulates the conundrum that defines the dilemma confronting infant feeding modalities. On the one hand, breast milk can transmit HIV, yet on the other hand, infants require breast milk to develop a strong immune system capable of fighting illnesses (Marinda et al., 2017; Kuhn and Aldrovandi, 2010; Kuhn et al., 2009).

2.5 Evolution of Strategies for Risk Mitigation

The WHO has been the force behind advocacy for breastfeeding for many decades. This is evidenced by several of its research conducted and policies introduced at the many platforms it has created in support of breastfeeding. It led to the Innocenti Declaration, the Mother Baby-Friendly Hospital Initiative, and the International Code of Marketing of Breastmilk Substitutes (UNICEF, 2019). However, in the early 1990s, WHO, UNICEF, and UNAIDS adopted a paradigm shift as it began to place emphasis on avoiding vertical transmission through breastfeeding by means of replacement-feeds. They released numerous documents arguing that HIV-exposed infants were not at risk of illness and death if they were consistently fed nutritionally adequate breast milk substitutes. Although the WHO continued insisting on the importance of breastfeeding in the absence of adequate substitutes, it became clear that its policy had shifted significantly from the times of its advocacy of "breast is best" (UNICEF, 2019).

In 2001, the WHO introduced the acceptable, feasible, affordable, sustainable, and safe (AFASS) criteria into their guidelines (WHO Technical Consultation, 2001). All mothers living with HIV were encouraged to avoid breastfeeding if replacement feeding was deemed to be AFASS. It was also recommended that they receive appropriate counselling support to enable them to determine

whether their replacement feeding options met the AFASS criteria (WHO, 1998). If the AFASS criteria could not be met, mothers were encouraged to exclusively breastfeed infants for the first months of the infant's life. However, the duration of cessation was not specified (Young et al., 2011).

The 2010 WHO guidelines, on the other hand, shifted slightly from the AFASS language but instead emphasized the environmental (personal, household, and health service) conditions that result in safer replacement feeding (WHO (1), 2019). Infant feeding practice decision making which was previously in the hands of mothers and counsellors, was shifted to national health authorities (Young et al., 2011).

2.6 Infant Feeding and HIV in South Africa

The uptake of exclusive breastfeeding remains very low in South Africa despite a plethora of evidence suggesting its benefits (Risenga, 2017; Doherty et al., 2012; Mushaphi et al., 2008; Sibeko et al., 2005; Mamabolo et al., 2004). Instead, mixed feeding practices remains the most prevalent in children less than 6 months old (Risenga, 2017; Doherty et al., 2012; Mushaphi et al., 2008; Sibeko et al., 2005; Mamabolo et al., 2004). In some parts of South Africa, this status quo is driven by cultural norms which are difficult to confront, and which pay little regard to a mother's HIV status (Madiba and Langa, 2014). In such a cultural context, the situation is further exacerbated by the failure of mothers living with HIV to heed the infant-feeding guidelines given by health care providers (Chinkonde et al., 2012). However, studies still maintain that the intervention by health care providers (especially nurses, community health workers and doctors) remains critical in promoting exclusive breastfeeding in South Africa (Jones et al., 2018; Goga et al., 2012).

If the global target of 50% EBF for 6 months is to be achieved (WHO, 2019), holistic, contextualized interventions to promote breastfeeding are needed. This is particularly relevant in South Africa, where society and health systems face complex challenges, including high levels of inequality, unemployment, poverty, and gender-based violence, which keep rates of EBF low (Mayosi et al., 2009) and infant mortality rates high (Statistics South Africa, 2016). In-depth

understanding of the socio-economic context in which mothers make feeding decisions is necessary to design such interventions (Jama et al., 2017).

2.7 Factors Influencing Breastfeeding: A Socioecological Framework

To appropriately identify interventions to promote breastfeeding, a socioecological framework could be utilised to analyze breastfeeding determinants (Rollins et al., 2016). The framework has been adjusted to accommodate the perceptions of mothers during the antenatal period and the South African feeding guideline changes over time (Trafford et al., 2020). The framework presents the shift in feeding guidelines between 1980 and 2018. The guidelines shifted first from: (1) EBF from 4-6 months for all women to either EBF or EFF for the first 3-6 months for women living with HIV, to (2) requesting all women living with HIV to either EBF or EFF for 6 months, to (3) EBF for all women for a full 6 months (Nieuwoudt, 2019). The framework places emphasis on both interpersonal and structural contexts, together with the maternal attributes that have been the focus of breastfeeding behavioural change efforts when attempting to predict feeding practices (Trafford et al., 2020).

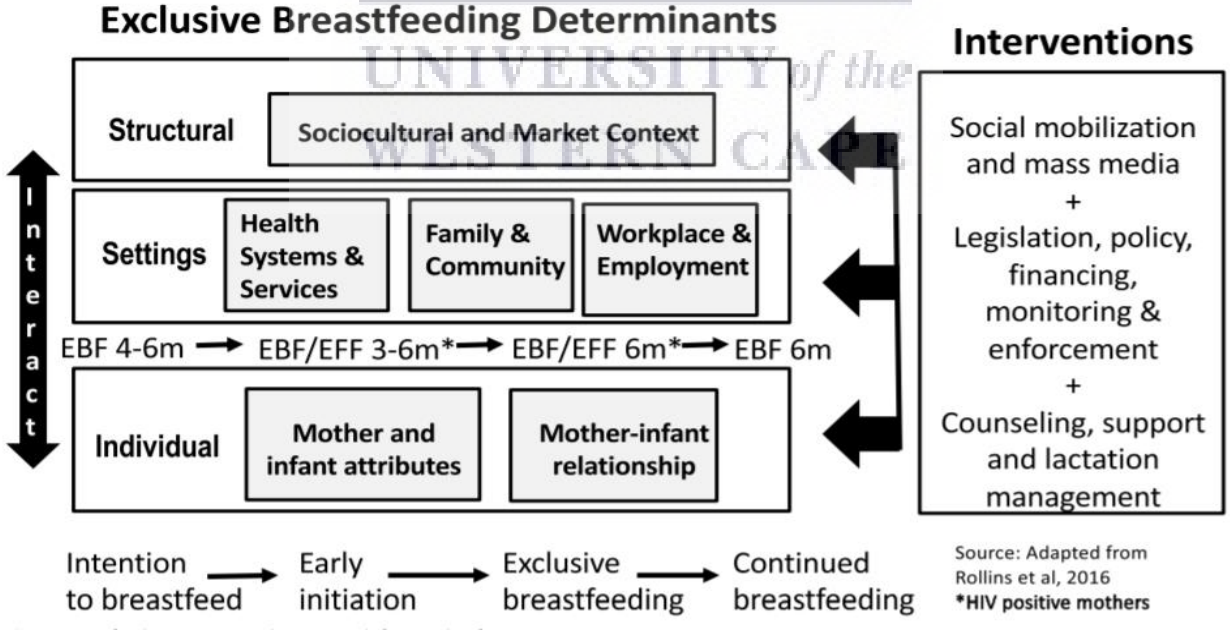


Figure 1: Breastfeeding Conceptual Framework for South Africa (Source: Trafford et al., 2020)

2.7.1 Structural Factors

The above framework demonstrates the extent to which structural factors influence the uptake of exclusive breastfeeding. Factors under the structural level relate to a mother's attributes, hospital and family settings, poverty, livelihood and living arrangements, early and single motherhood, poor social and professional support, poor knowledge, myths and misconceptions, HIV, and unintended pregnancies (Nieuwoudt, 2019; Kimani-Murage et al., 2014). Attitudes refer to an individual's feelings towards any given subject or topic, as well as any preconceived ideas that they may have towards it (Ajzen, 2020). At this level, factors such as advertising, existing social trends, media influence and the availability of milk substitute products influence a mother's decision making on infant feeding in different ways (Hoche, Meshesha and Wakgari, 2018; Sattari et al., 2010). The structural level acknowledges that in some cases, mothers who are interested in breastfeeding might find themselves in challenging environments that compromise their intention to EBF such as resuming work shortly after giving birth (Ahishakiye et al., 2020; Kimani-Murage et al., 2014; Sattari et al., 2010). In addition, EBF might prove a challenge to women who find themselves in situations where social expectations denote either that breastfeeding is forbidden or must be done outside of the public view. Therefore, the exercise becomes uncomfortable to the mother, and she may possibly discontinue EBF prematurely (Jamie et al., 2020; Boyer, 2011). The attitudes that women and family members have towards exclusive breastfeeding could negatively or positively affect their decision to breastfeed exclusively for a duration of six months. Widespread stigma and discrimination in a population can adversely affect the mother's willingness to adopt exclusive breastfeeding (Dlamini, 2015).

Some participants from the Kenyan study believed that exclusive breastfeeding is the best option for their babies and that breastfeeding increases the bond between mother and child. In contrary, some participants demonstrated a negative attitude towards exclusive breastfeeding with a fear that it might risk a transmission of the virus to their infants and further demanded a supply of formula milk from the government. In a study in Kenya, a positive attitude towards breastfeeding was associated with a good infant exclusive breastfeeding practice (Samburu et al., 2021).

In order to lower the risk of HIV transmission during the breast-feeding period, it is important for breastfeeding mothers to adopt a positive attitude towards PMTCT and to apply the knowledge received into practice through behavioural change (Dlamini, 2015).

In South Africa, traditional and cultural factors are amongst the key determinants of breastfeeding. In the Northern Cape province, infants are given traditional medicines for dentition and protection against witchcraft. In the same way, in the Limpopo province, grandmothers promote a traditional soft porridge dish consisting of maize and roots to be given to infants soon after birth. The dish is believed to energize the infant to grow well and assist with passing stools. In some other parts of South Africa, some cultural settings promote mixed feeding, including complementary foods from as early as one month after birth (Van der Merwe et al., 2015; Bland, 2008; Mushaphi et al., 2008).

The marketing of breastfeeding replacements on television and radio influences the infant feeding decision making process of pregnant women and mothers with children younger than 5 years of age (Harris and Pomeranz, 2020). Commercial food companies embark on intensive marketing of non-nutritious infant food, compromising the uptake of EBF by pregnant women and mothers with children younger than 5 years of age. More glaringly, the South African government fails to utilise mass media consistently in disseminating nutrition policy messages. Mass media should be used to educate and increase the uptake of good nutrition by pregnant women and mothers with children younger than 5 years of age (Vitalis, et al., 2021). It is recommended that the National Department of Health (NDoH) develops a focused health-promotion strategy on nutrition for infants and young children, similar to the HIV/AIDS campaigns (Du Plessis, et al., 2016).

In a study conducted in Kenya, participants mentioned that a lack of peer models or tangible examples demonstrating that exclusive breastfeeding was safe influenced their attitude and decision to stop breastfeeding (Samburu et al., 2021). Other participants reported the lack of support and attitude of community members that breastfeeding is not feasible for HIV positive mothers (Samburu et al., 2021).

In summary, the above framework confirms that a mother's decision-making process, ability to exclusively breastfeed and the duration of breastfeeding, is highly influenced by structural factors

and the mother's attitude towards EBF. These factors remain vital towards the identification of detriments which in return helps improve infant feeding practices among mothers living with HIV as a means of reducing infant morbidity and mortality.

2.7.2 Influence of Setting on Exclusive Breastfeeding

The setting in which infant feeding occurs influences infant feeding decision making. These factors include health systems and services, family and community, and workplace and employment. Studies confirm that pregnant women receive advice on infant feeding choices mostly from healthcare workers. This, therefore, asserts the importance of healthcare workers, the quality of their service and the overall effectiveness of health systems in influencing infant feeding decisions (Van der Merwe, et al., 2015). A 2005 South African study confirmed that 80% of literate mothers-based decisions to feed their infants on the information provided by healthcare workers (Davies, 2005). This confirms the central role of healthcare workers in implementing nutrition interventions. However, while healthcare workers are central in educating pregnant women and mothers with young babies on the importance of EBF, they are also faced with the challenge of insufficient staff members at PMTCT sites and a shortage of educational materials such as feeding-option cards (Du Plessis, et al., 2016).

A 2013 study conducted in KwaZulu-Natal province concluded that the community and elders, particularly grandmothers, can act as barriers to EBF in the first 6 months of an infant's life (Spies, 2013). Other barriers to EBF mentioned were a negative perception of breastfeeding among younger women and girls, lack of knowledge, desire for social acceptance and pressure to maintain an ideal body and breast shape (Levendal, 2016). Other women reportedly breastfeed to lose weight but upon failure to achieve the desired weight loss they discontinue with EBF (Van der Merwe, et al., 2015; Bland, 2008).

Workplace and employment are additional factors that influence a mother's decision concerning exclusive breastfeeding (Daniels, et al., 2020). It is argued that paid maternity leave increases EBF practice as mothers receive enough time to breastfeed their baby. Also, flexible, and low-cost interventions in the workplace such as lactation rooms and nursing breaks provide opportunities

for mothers to breastfeed exclusively. Studies observed that such interventions reduce absenteeism and improve work performance among female staff (Rollins, et al., 2016). In South Africa, women are protected again discrimination related to pregnancy and hazardous working circumstances through the Labour Relations Act, Employment Equity Act, and Basic Conditions of Employment Act (Republic of South Africa (1), 1998; Republic of South Africa (2), 1996; South African National Department of Labour, 1995). Women are also entitled to a 4-month maternity leave. However, in most cases the maternity leave is unpaid except in government service and in a few private companies. Resultantly, some mothers are inclined to select sub-optimal feeding practices. It would appear the South African government is yet to fully implement the Tshwane Declaration which resolved to amend the legislation to protect and extend maternity leave for all workers and adopt a conducive workplace for nursing mothers (Du Plessis et al., 2016).

2.7.3 Individual Factors Influencing Breastfeeding

The individual factors identified within the socioecological framework assume that exclusive breastfeeding decisions are limited to the mother and the infant. The mother's breastfeeding behaviour is influenced by personal attributes such as age, body weight, education level, degree of personal confidence, infant's gender, infant's wellbeing, and infant's temperament (Rollins et al., 2016). Since breastfeeding is an intimate process between mother and baby, the mother interprets and internalizes her influence on the baby and makes a judgement on whether the baby is satisfied with breast milk (Rollins et al., 2016). Among mothers who choose to breastfeed, they believe it is the best option for the infant's growth and health. However, other mothers who chose not to breastfeed exclusively indicate fears about milk insufficiency, reduced milk production and perception of infant getting hungry or not receiving optimal nutrition (Sandhi et al., 2020; Goosen, et al., 2014).

2.8. Infant feeding challenges by Mothers Living with HIV

The process of choosing an appropriate infant feeding practice among mothers living with HIV varies from one mother to another. The mediating factors are multi-faceted and include (i) employment commitments: a challenge facing working mothers who are unable to obtain enough

time away from work to exclusively breastfeed for six months; (ii) social influence and cultural norms: some mothers receive exerted pressure from friends, family and the general society to adopt a particular infant feeding practice; (iii) stigmatization: mothers who choose to EBF may be stigmatized by individuals who associate EBF with HIV infection, (iv) inadequate infant feeding counselling: failure by healthcare workers to equip mothers with the necessary knowledge on the benefits of EBF may result in choosing an inappropriate infant feeding method, and (v) limited financial resources: absence of funds to buy infant formula by mothers who wish to formula feed (West et al., 2019; Marlow, 2017; Risenga, 2017; Hazemba et al., 2016; Odeny et al., 2016; Chinkonde et al., 2012).

2.8.1 Health Care Providers' Recommendation

In South Africa, the change in infant feeding policies created disarray among healthcare workers and mothers alike resulting in ambiguous messages (Jama et al., 2017). When government transitioned from exclusive formula feeding and the provision of free infant formula milk interventions to the exclusive breastfeeding approach, the message was not received adequately by health care practitioners some of whom still currently provide insufficient or contradictory messaging (Ijumba et al., 2012; National Department of Health (SA), 2011). Many healthcare providers (HCPs), who communicated inconsistent messages on infant feeding for mothers living with HIV confirmed that it was as a result of the several national guidelines changes (West et al., 2019). Studies further confirm that health care providers' advice on exclusive breastfeeding fails to match the lay knowledge and what is advised in the household (Nor et al., 2011).

2.8.2 Societal Influence

Although some mothers accept the advice provided by health care providers on infant feeding, others find it difficult to accept it due to their particular sociocultural circumstances (Marlow, 2017; Risenga, 2017; Hazemba et al., 2016; Chinkonde et al., 2012). Apart from healthcare providers, mothers living with HIV also receive counsel on exclusive breastfeeding from their significant others such as parents, sisters, husbands, and in-laws and this bears an impact on their decision making regarding infant feeding (Jones et al., 2018; Kedir and Mengistu, 2017; Odeny et

al., 2016). While it is clear that mothers receive exclusive breastfeeding information from different sources, it is less apparent which of these sources has the most influence on a mother's exclusive breastfeeding behaviour. However, it is agreed that the interpretation they attach to EBF influences their understanding of breast milk insufficiency, mixed feeding and weaning in the context of preventing mother-to-child transmission of HIV (Hazemba et al., 2016).

2.8.3 Employment and School-related Commitments

Commitments such as employment and academic studies are common reasons why some mothers choose exclusive formula feeding over exclusive breastfeeding. Young women are the most common group of mothers who opt for EFF due to academic commitments, which force them to leave their infants in their mothers' care. This infant feeding modality works best for them as they are not able to express breast milk due to time constraints (Adeniyi et al., 2019; West et al., 2019). In addition, some mothers particularly those from rural settings and those in search of employment, also prefer EFF as they are forced to migrate to the city in search of employment. Generally, mothers who erroneously chose EFF did so to accommodate their different commitments which were not compatible with EBF (Jama et al., 2017; Nabulsi, 2011). However, their decision to choose EFF came from a misinformed assumption that failure to maintain exclusive breastfeeding for 6 months and switching to infant formula feeding increased the risk of HIV transmission to infants. Some mothers with a busy lifestyle remain comfortable with breastfeeding exclusively for a short duration such as 3 months before introducing infant formula feeding (Adeniyi et al., 2019).

2.8.4 Fear of Vertical Transmission

Despite being counselled by healthcare providers on the benefits of breastfeeding, a significant number of mothers living with HIV choose infant formula as their feeding practice for fear of transmitting HIV to their infants (West et al., 2019). In some mothers, the fear emanates from experience of non-adherence to ART which they fear might reoccur. In their opinion, their priority is to avoid the transmission of HIV to their infants by avoiding breastfeeding and instead they opt for infant formula feeding to avoid a repeat of their past mistakes (Mlambo and Peltzer, 2020).

For other mothers, choosing infant formula feeding over exclusive breast feeding is motivated by their high viral load and low CD4 counts. They are aware that a high viral load implies a high risk of HIV transmission during breastfeeding. In the same vein, some women whose viral load and CD4 count data is not available are advised by health care providers to take precaution and not breastfeed (Adeniyi et al., 2019; Horwood et al., 2018).

2.8.5 Breast Problems and Health-related Issues

Infant formula feeding is often chosen by some mothers who have issues relating to their breast health. They point to insufficient milk production as the reason for not breastfeeding. Although some of these mothers might have opted for breastfeeding, producing inadequate amounts of breast milk makes it difficult to keep on trying breastfeeding. In such instances, the option of infant formula feeding appears to be the best option so as not to starve their babies. Other women choose infant formula feeding after experiencing pain in their breasts or when lumps appear in their breasts (Adeniyi et al., 2019; Remmert et al., 2019).

Other reasons that prompt women to choose a certain practice of infant feeding include, the infant refusing to suck the milk from the breast, domestic violence, recommendations from spouse and significant others, surrendering baby for adoption, coercion by mother and partner, first time mothers who wanted to experience breastfeeding and mother to child bond (Adeniyi et al., 2019).

2.9 Factors Promoting Breastfeeding by Mothers Living with HIV

A 2019 study conducted in Eastern Cape province in South Africa, confirmed that many mothers, irrespective of their HIV status, arrived at the decision to breastfeed exclusively after receiving professional recommendations from health care providers. Health care providers also provide education to mothers living with HIV on the importance of ART adherence in the prevention of HIV transmission to their infants (Adeniyi et al., 2019). In another study, mothers confirmed that the continuous teaching and counseling provided by nurses during child-welfare clinic visits encouraged them to continue breastfeeding (Shongwe and Mkhonta, 2015).

2.9.1 Perceived Benefits of Breastfeeding

The perceived benefits of breast milk encourage mothers living with HIV to choose exclusive breastfeeding as an infant feeding modality (Umeobieri et al., 2018). These benefits include nutrients that are essential for infant growth, infant muscle development and prevention of diseases, adequate feeding of infant and a calming effect on the infant (Nyaloko, Lubbe and Minnie, 2020; Adeniyi et al., 2019; Shongwe and Mkhonta, 2015). One can argue that these perceived benefits are the offshoots of education and awareness obtained from healthcare providers, friends, and mothers and through personal research (Adeniyi et al., 2019).

2.9.2 Socioeconomic Conditions

While some mothers prefer infant formula feeding to exclusive breastfeeding, their socioeconomic status affects their ability to purchase infant formula. Financial deprivation resulting from unemployment remains a challenge among mothers who prefer infant formula feeding. The cost of infant formula becomes a deterrent resulting in them choosing exclusive breastfeeding (Belay and Wubneh, 2019; Hazemba et al., 2016).

2.9.3 Previous Exclusive Breastfeeding Experience

A study found that some mothers living with HIV described a previous positive breastfeeding experience as the main reason they decided to exclusively breastfeed again. This was found to be the case for a number of mothers who opted to continue with exclusive breastfeeding (Nabwera et al., 2017). It was also found that the mothers who opted for EBF understood how to implement the strategies for the prevention of HIV transmission to their infants during exclusive breastfeeding. Contrarily, some mothers who had a negative experience with breastfeeding were driven by their experiences to favour infant formula feeding. The negative experience was mostly a result of mixed feeding resulting in HIV transmission to the infant (Adeniyi et al., 2019).

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter provides a detailed account of how data related to the study was collected, organised, and analysed through a discussion of the study design, study population, sample and sampling, data collection methods, process and tools, data analysis, research rigour, and ethics consideration.

3.1 Study Design

The study adopted a qualitative research method which permitted the researcher to focus on how people deduce meaning from their lived experiences and the world around them (Creswell, 1994). Through this method, the researcher further engaged research participants' issues in detail, receiving in-depth information while increasing understanding of the area of study (Denzin and Lincoln, 2011; Merriam and Associates, 2002; Patton, 1990).

A descriptive research design was chosen for its suitability in discovering and gaining critical insights regarding the who, what, and where of events and experiences of research participants (Kim, Sefcik and Bradway, 2016). This study also applied the two concepts of an interpretive paradigm and interpretive binocular. The former guided the researcher to understand the respondents' world and subjective experiences of individuals as they are (Terre-Blanche, Durrhein and Painter, 2006). While the latter was employed as a metaphorical lens that accepts research as an interactive process moulded by the participants' history, biography, gender, social class, race, and ethnicity (Denzin and Lincoln, 2011).

3.2 Study Population

The study population consisted of HIV-positive mothers aged between 18 and 45 years who had babies less than 6 months of age, and who had given birth at the study site. The question of age

was critical since immediate consent during the data collection process had to be acquired by all participants aged 18 years and above.

3.3 Sampling Method and Sampling

The researcher identified research participants from the Rob Ferreira Provincial Hospital by accessing the Maternity Ward delivery register, assisted by professional nurses from the Maternity Ward. Potential participants who met the inclusion criteria where telephoned by the professional nurses, informed of the study before indicating their interest to take part in the study. A total of 30 mothers living with HIV were recruited to participate in the study. Participants were interviewed to gather exclusive breastfeeding information until the data saturation point was reached. The study adopted the purposive sampling method to allow the researcher to purposefully determine and select participants that met the characteristics of the required study population capable of contributing to the study objective (Merriam and Associates, 2002). Considering the nature of the study, it was crucial for the researcher to focus on recruiting participants who met the inclusion criteria through implementing the screening process to minimise selection bias, which is inherently found in pre-existing groups like clinic populations. This method allowed the researcher to include what would otherwise be deemed as 'outliers' (Barbour, 2009).

3.3.1 Inclusion Criteria

Research participants who took part in the study met the following inclusion criterion:

i) Mothers living with HIV.
ii) Aged between 18 years and 45 years old.
iii) Self-reported to be healthy both physically and mentally.
iv) Gave birth to a healthy and full-term baby.
v) Understood either English language or SiSwati language.

3.4 Data Collection and Management

An interview guide consisting of 15 closed and open-ended questions was used to collect data (Appendix 1). The interview guide was divided into 3 sections: i) Biographical data ii) Socio-Cultural Determinants enabling breastfeeding iii) Barriers to exclusive breastfeeding. Prior to data collection, the researcher conducted a pre-testing session of the interview guide with both a professional nurse and mothers living with HIV who gave birth at a different facility to alter the questions of the final guide. The interview guide questions were in English and siSwati languages (Appendices 1 and 7).

3.4.1 Data Collection

The researcher was provided with a private room to conduct interviews. Data was audio recorded and manually transcribed. All the questions addressed the objectives of the study. In-depth interviews were utilised to gather sensitive data (Mack et al., 2005). By mixing structured questions with semi-structured questions, the researcher sought to gather pertinent information from all participants (Merriam and Associates, 2002). For participants who preferred the interview in siSwati, a professional nurse (research assistant) who had previously gone through the interview guide interpreted the questions and the answers.

3.5 Data Analyses

Upon completion of data collection, the researcher processed data through data management, description, interpretation, and evaluation (Wolcott, 1994). Thirty audio interviews were transcribed verbatim to English by the researcher and the professional nurse. Research participants were provided study codes and all their personal identification traces were removed from the data and transcripts. The final interview transcripts were saved in plain text in Microsoft Word for ease of access and analysis. Thereafter, the researcher utilised the qualitative data analysis computer software, Nvivo, to organize, analyze and find thematic codes and insights in unstructured data (Ritchie and Lewis, 2003). This approach placed emphasis on the meanings people derived from their participation in their social and cultural life (Robson, 2011). Using thematic coding analysis, themes were identified in the data set. These were then grouped logically and were clarified and analyzed before their meaning was established (Nowell, et al., 2017).

Data Set Familiarisation: After data collection, data analysis began through listening to the interview recordings and comparing and consolidating these with the field notes and comments collected during interviews. Transcripts were read several times to establish a full understanding of all data. The emotions and perceptions of the research participants were derived by listening to the voice recording repeatedly. This process was necessary to generate meaning of the data (Nowell, et al, 2017).

Coding: After data set familiarisation, codes were generated. This was undertaken using the qualitative data analysis software programme Nvivo. Nvivo was applied to group pieces of data with similar ideas and to label them with initial codes. To differentiate the codes, codes of the same trend were populated together and separated from the others (Nowell, et al., 2017).

Identifying Themes: Potential themes were generated by grouping together codes of similar trains of thoughts. It must be noted that themes were generated inductively from the data (Nowell et al, 2017). The codes and themes were aligned to the study objectives which focused on identifying enablers and barriers to breastfeeding as well as attitudes regarding breastfeeding by mothers living with HIV. They were also aligned to the discourse of exclusive breastfeeding practices of mothers living with HIV. The last part entailed reviewing themes. This was done to identify patterns and ultimately reduce raw data into manageable data sets (Nowell et al, 2017).

3.5.1 Rigour

Rigour is defined as confirmation of data quality and trustworthiness produced in a qualitative study (Wahyuni, 2012; Merriam, 1995). It determines whether the conclusions presented by the researcher are trustworthy. To guarantee that rigour was maintained, only research participants that met the criteria were recruited. In addition, an atmosphere that enabled participants to engage and express their views was created and so relevant data was provided.

Triangulation of data and sources of data was undertaken by the researcher to confirm new information during the process of data collection. To assure the validity of the study and to capture

different dimensions of the same phenomenon, the researcher verified the data collected during the interviews. This was undertaken through usage of field notes memos and increasing the number of study participants. To decrease the deficiencies and biases that emanates from a single method, the researcher cross examined the data and the results obtained from the research. Various sources of information from peer reviewed journals were utilised to understand the subject matter. Other than open-ended interviews with research respondents, the researcher referred to the field notes to strengthen data accuracy and accuracy of findings (Gifford, 1998). The researcher interviewed both older and young mothers living with HIV for the purposes of triangulating data.

Through an audit trail, all processes utilised in reaching a conclusion were documented. This included providing a detailed account of the research background setting in Ehlanzeni District and the Hospital as well as problems faced during the research process, data collection methods and data analysis to guarantee dependability of the study. These were recorded by means of diarising, memo-ing and research activity logging, indicating the chronological steps, activities and decisions taken (Creswell and Miller, 2000; Sandelowski, 1986).

The process of member checking was also used to validate participant data. This was conducted as an ongoing process during interviews when research participants were asked to confirm their responses. This process confirmed the researcher's interpretation of participants' responses. Prolonged engagement with research participants also provided an opportunity to gain their trust and create rapport. Prolonged engagements are deemed to produce credibility in qualitative studies (Hadi and Closs, 2015).

Based on the nature of the study, which saw some research participants sharing some of their personal misfortunes during their infant feeding period, the researcher ensured reflexivity by taking note of his feelings after every interview to be able to separate thoughts and emotions from the data shared. This was true, especially in cases where some mothers shared information that was not relevant to the study yet required the urgent attention of a clinician. The researcher directed such cases to the hospital clinicians for further management. In all, this process permitted the researcher to identify personal experiences that resonated with him and separated them from data

communicated by research participants. This process was to maintain the credibility of research findings (Hadi and Closs, 2015).

3.6 Ethics Consideration

Ethics clearance for the study was obtained from the University of Western Cape's Biomedical Research Ethics Committee (Reference Number: BM20/5/26) (Appendix 5). Subsequently, the Provincial Research Approval letter was granted by the Mpumalanga Provincial Health Research Committee (Reference Number: MP_202006_008) (Appendix 6).

The nature, procedure and purpose of the research study were explained to potential participants during the recruitment phase. All participants were provided with a study information sheet (Appendix 2) and underwent debriefing post-interview (Appendix 10). They were also provided with the contact details of the National AIDS Helpline Toll-free number as well as that of a registered Psychosocial Specialist (De Vos, et al., 2011). Signed informed consent (Appendix 3) was obtained prior to the interview and the participants were informed of their right to withdraw from the study at any given time without incurring any penalty or loss of treatment or other benefit to which they might be entitled. They were also informed that their identity would not be revealed. Instead, code names were utilised to protect their identity (Richards and Schwartz, 2002). They were assured that data would be utilised for research purposes only (Aluwihare-Samaranayake, 2012).

Consent to audio record the interviews was sought from each participant before interviews were recorded. After every interview session, the data forms and audio recordings were kept safely under lock and key storage at the researcher's residence and was saved on the researcher's laptop in a password protected folder. While identification codes were only used on data forms, electronic data was kept on an encrypted computer. Data collected during the study was handed over for storage in the University server for a duration of five years after study is completed in accordance with standard research ethics practices (Baxter & Jack, 2008).

CHAPTER FOUR

RESULTS

4.1 Socio-Demographic Characteristics of the Research Sample

The socio-demographic characteristics of the research participants are depicted in Table 1. A total of 30 participants who met the inclusion criteria were enrolled for the study. The majority of participants (n=13; 43.33%) were aged between 18 years and 30 years, 36.6% (n=11) were aged between 31 years and 35 years; 17% (n=5) were aged between 36 years and 40 years, and only one (3,3%) participant fell into the 41 – 45 age category. The average age of the study sample was 31 years. The majority of the participants (n=20; 66.67%) were unmarried. More Approximately three-quarters of the participants (76.67%; n=23) had obtained secondary school education or higher. Forty percent (n=12) of the participants were unemployed, 23.3% (n=7) were informally employed, 20% (n=6) were formally employed, and 16,6% (n=5) were informal business owners. In terms of religious practice, all research participants belonged to the Christian faith.

Table 1: Socio-Demographic Characteristics of Research Participants (n=30)

Research Participants Characteristics		
Demographic Variable	**Frequency**	**Percentage (%)**
AGE (years)		
• **18-30**	13	43.33
• **31-35**	11	36.66
• **36-40**	5	17.00
• **41-45**	1	3.33
MARITAL STATUS		
• **Single**	20	66.67
- Living with partner	*14*	*46.67*
- None living with a partner	*6*	*20.00*
• **Married**	10	33.33

EDUCATION		
• **No schooling**	1	3.33
• **Primary school**	0	0
• **High school**	23	76.67
• **Certificate/Diploma**	4	13.30
• **Degree**	2	6.67
EMPLOYMENT		
• **Unemployed**	12	40
• **Informally employed**	7	23.3
• **Formally employed**	6	20
• **Informal business owner**	5	16.6
RELIGION		
• **Christianity**	30	100

At the time of the interviews, more than half (56.67%; n=17) of the participants were practising exclusive formula feeding, while less than a quarter (23.33%; n=7) of the participants were exclusively breastfeeding. The remainder of the participants (20%; n=6) were mixed feeding.

Table 2: Feeding Practices used

Infant Feeding Type	Number of Research Participants	Percentage
• **Exclusive Breastfeeding**	7	23.33
• **Exclusive Formula Feeding**	17	56.67
• **Mixed Feeding**	6	20

4.2 Themes

Seven themes and 17 sub-themes were identified from the data. The seven themes are: (1) mother's unavailability to exclusively breastfeed; (2) social risk of exclusive breastfeeding; (3) breast problems and health-related issues; (4) image and social lifestyle; (5) mother's desire to exclusively breastfeed; (6) financial constraints; and (7) infant feeding knowledge. The sub-themes derived from the themes are depicted in table 3 below.

Table 3: Summary of Themes and Sub-themes

	Themes	Sub-themes
1	Mother's unavailability to exclusively breastfeed	• Employment commitments • Academic commitments
2	Social risk of exclusive breastfeeding	• Fear of vertical transmission • Fear of disclosing HIV status
3	Breast problems and health-related issues	• Breast problem • Producing insufficient breast milk
4	Image and social lifestyle	• Maintaining youthful figure • Social lifestyle
5	Mother's desire to exclusively breastfeed	• Maternal-Infant bonding • Previous exclusive breastfeeding experience • Perceived health benefits of exclusive breast milk • Cultural influence
6	Financial constraints	• Mother's employment status • Single motherhood • Competing financial commitments • Partner's employment status
7	Infant feeding knowledge	• Health care worker recommendation • Personal research on infant feeding

4.3 Mother's unavailability to exclusively breastfeed

There were various reasons why the participants had to spend time away from their children and were thus unable to breastfeed exclusively. These reasons included employment and academic commitments.

4.3.1 Employment commitment

Twenty-three percent (n=7) of the participants identified employment as a barrier to exclusive breastfeeding. Even though they were willing to exclusively breastfeed their infant, they were unable to do so due to their employment commitments.

"Because I am going to work and my child will stay with people maybe when I am not around, they will take some water and give her, that is why I give her formula only and not breastfeeding, because I do not stay with her all the time." ***RP1***

"I am leaving the baby with a Nanny something like babysitter, you know. Maybe sometimes like I have to go to Joburg maybe for a week and I have to leave my child somewhere else. So, it is like how am I going to do it? I cannot like pump like milk for the whole week while I am gone. So, that was my best option for me because jah I travel a lot lately." ***RP12***

*"Sometimes when I ask those who are feeding, feeding formula, I ask them why are you not breastfeeding the child? They would say, especially those close to me, it is because I am working, you see. Or if they decide to breastfeed, it would be for three months maybe I would have to go back to work, but the baby will give me problems, so it is better to just use formula."****RP13***

One participant indicated the extent to which employment commitment hindered her intention to exclusively breastfed her infant, stating that:

"If I were like around always, you know, I would breastfeed for those six months." ***RP12***

The response by participant number 12 captured the perspective of some of the participants who perceived employment commitment as a hindrance towards exclusive breastfeeding. Working mothers who had maternity leave shorter than 6 months could not exclusively breastfeed their infants as they had to return to fulltime work before their infants turned 6 months of age.

*"Some mothers are working and besides, where we are working is different. Some you would want to breastfeed your kid then you end up learning that your maternity leave is three months. Then you have to go back to work. And then now you end up mixing formula and breastfeeding to the child."****RP2***

One of the participants (**RP4**) indicated that mothers who spent the most time away from their infants and thus not breastfeeding due to employment commitments end up developing slight breast complications, and it became difficult to breastfeed consistently. She said:

> *"Some mothers are not breastfeeding because they are working. They will not come, let us say, at night and start breastfeeding the child because they say their breast will be so hard, so she has to first breast pump before breastfeeding."* ***RP4***

> *"I breastfed for two months, and I then stopped, I was mixed feeding because I was working. I stopped and continued with formula, now the baby is on formula feeding."* ***RP7***

> *"When you are working, you cannot go to work and come later to breastfeed."* ***RP9***

4.3.2 Academic commitments

During the in-depth interviews, it became evident that the participants who were pursuing academic studies found it difficult to exclusively breastfeed. This was due to their busy academic schedule, which at times took them away from home, and so they opted to formula feed their infants in their absence.

> *"I was not going to breastfeed because I go to school in the morning and come back during the day then I have to…so even now I chose not to breastfeed."* ***RP4***

> *"I never breastfed because I am at school you know, jah. I am at school, and I am staying with my mum, so I am not staying with him at all, that is why I did not breastfeed."* ***RP12***

4.4 Social risk of exclusive breastfeeding

The fear of infecting their babies with HIV as well as unwillingness to disclose their HIV status were major reasons why mothers chose to either EBF or EFF.

4.4.1 Fear of vertical transmission

Approximately a third of the participants (n=10; 33.3%) who chose to exclusively formula feed their infants took that decision because of the fear of transmitting HIV to their infants. They perceived exclusive breastfeeding as a source of possible infection which could be avoided by adopting exclusive formula feeding. Others feared that their infants would be infected because the mothers were not consistently adhering to antiretroviral treatment. Some also feared that if they adopted exclusive breastfeeding their children's caregivers might mistakenly feed their infant with solid foods while they were away, thereby increasing chances of infection.

> *"Breastfeeding is the best thing hey. Eh, but when I am HIV-positive, there is no choice, I will not breastfeed. I will do it for my son. Sometimes maybe you take the child to someone for two minutes and you give someone, someone will give water, you see. It is a problem, the child should always be with me, you cannot give your child to anyone, a child of a mother living with HIV should never eat anything, while breastfeeding. Say you take your baby to someone, maybe to go to the shop someone will take something to give to the baby, so it is a problem."* ***RP1***

> *"Actually, I am not comfortable with breastfeeding, I am afraid that I might infect my baby, yes. Because I am not taking my medication all the time because I had a problem taking the medication while I was pregnant. I would take it some other days and some other days I would not take the pills. They would give me a problem like dizziness, I would vomit yes, so I do not think it was a good idea for me to breastfeed my baby. Yes."* ***RP11***

> *"So, on my side I do not like to breastfeed my child as I know my status. Because I do not want my child to get the virus. I am scared that maybe I can breastfeed her and then maybe she will get sick now and then."* ***RP14***

> *"Mmm… it just came to me to stop breastfeeding, because I was scared to infect my child."* ***RP7***

"I know I am HIV-positive so if I breastfeed and my baby get infected, I will have that pain of why I did that to such a small baby, you see, why did I not use formula. It is like that in my mind. I had that think of I will infect the baby if I am breastfeeding." ***RP7***

While some mothers were determined to adhere to treatment and exclusively breastfeed their infants, they expressed concern over the possibilities of contracting sexually transmitted infections from their partners and subsequently passing these infections to their infants.

"Actually, I was scared that my partner might come with other, you know, sicknesses other diseases, yes, that might affect my baby." ***RP11***

Infant teething was considered by some participants as a deterrent to exclusive breastfeeding because they were anxious that bruises from bites during breastfeeding could be a source of HIV infection for the infant.

"I think sometimes maybe she will bite me when it is time for teething, you see. When it happens that she bites me maybe she might increase chances of getting infected, you see. Like when she starts getting teething, you see. Ja, that is why I decided not to breastfeed." ***RP13***

"I was afraid that I would infect the baby if I breastfeed, because they say children that teeth early, if they teeth early they will get the virus." ***RP4***

4.4.2 Fear of disclosing HIV status

Disclosure of one's HIV status to family and friends was a challenge faced by some of the participants, resulting in them choosing to exclusively breastfeed. There were others, however, who were comfortable with disclosing their status to everyone which assisted them in adhering to treatment both at home and when collecting medication from the health facility.

Although I was given that advice by my sister, even though my sister does not know that I am HIV-positive. Only my husband knows that, jah. Maybe she knows, but I was not the one who told her. Jah. Maybe she knows. ***RP11***

*Mmm… people would say, more especially at home no one knows your status and when you give birth, they would tell you ja you must breastfeed and so forth breast milk is good and formula is not, you see. So, I did breastfeed as I said and then I changed to formula feeding. At home they asked me "are you not breastfeeding the child anymore?" I said yes, they asked "why?" I came up with a silly excuse which I told them.****RP7***

*Some of my friends asked me, "are you not breastfeeding your child anymore?" and I said "no, I do not" they asked "why?" then I said the same excuse.****RP7***

One participant shared insight into why some mothers living with HIV would feel disinclined to disclose their HIV status and choose to exclusively formula feed. The reasons were a combination of the mother's desire to conceal her HIV status, preventing mother to child HIV transmission and avoiding being persuaded to adopt exclusive breastfeeding against her will.

*Some mothers will tell you I cannot breastfeed because I am always busy and always at work whereas that is not the honest answer, they just protecting themselves.****RP7***

4.5. Breast problems and health-related issues

Some of the participants had health issues which affected their ability to breastfeed their infants. Some mothers for instance did not produce sufficient breastmilk which resulted in them having to feed their infants infant formula.

4.5.1 Breast problems

The practice of exclusive breastfeeding does not always come naturally to some mothers. Some participants choose formula feeding because of breast problems and others due to other health-

related issues. Mothers with breast problems produce insufficient breast milk and thus are unable to exclusively breastfeed their infants.

> *"So, I could not breastfeed because I was taking treatment for breast, I had a problem with my breast. Only if I did not have a problem with my breast, I was going to breastfeed my child. But because I was attending hospital for the breast to check what was wrong because it was painful, I was then sacred to breastfeed thinking maybe I have cancer. If I do maybe the baby will also have cancer, I did not understand."* ***RP8***

> *Because of my first kid when I had her at three months, she stopped breast milk then I underwent an operation for breast cancer. So, I am not allowed to breastfeed. But if they had not operated me, because I stayed for six months at home, I was going to breastfeed.****RP2***

> *Some mothers who could not breastfeed said it is because they had a problem with their breasts, some the milk was not coming out, some they had little wound or cracks on the breast.****RP4***

Although some of the participants (n=7; 23.3%) attempted to exclusively breastfeed, they were experiencing health-related challenges; or the infant was not latching as expected.

> *"At first, I struggled because when my baby was growing, she was sucking on one breast, I could not feed her in one side, I could not hold her in one side she will cry."* ***RP5***

> *"Some mothers may not want to breastfeed because of their health conditions. Jah, so maybe they will engage in formula feeding."* ***RP6***

> *"At home I give the baby breast milk, but the baby does not want it, he does not suck, instead the baby grabs and then leaves, and grabs and then leaves the breast."* ***RP7***

> *"The baby was not sucking the breast, she was sucking the formula."* ***RP4***

4.5.2 Producing insufficient breast milk

Insufficient breast milk supply was identified by some of the participants (n=2; 6.6%) as a barrier towards exclusive breastfeeding. This included painful breasts and nipple problems which facilitated early cessation of breastfeeding. However, before giving up on breastfeeding, it was clear that the participants attempted several methods to improve their production of breast milk.

> *"Some of us, the milk does not come out. Even if you can drink the hot tea, or you can eat a soft porridge, still there is no milk."* ***RP14***

> *"The breast will be so hard, so you have to first breast pump before breastfeeding."* ***RP4***

4.6. Image and Lifestyle

Exclusive breastfeeding is at times perceived as damaging to women's physique and ideal body image. This perception is expressed mostly among young women who are interested in maintaining their outward appearance and social lifestyle after birth.

4.6.1 Maintaining youthful figure

Exclusive breastfeeding was perceived by some mothers (n=3; 10%) as an exercise that disfigures their physical bodies and appearances. This was confirmed by some of the participants who stated that in some parts of their communities, breastfeeding was seen as the major cause of sagging breasts and body fatness, especially among the younger women. They feared that during the period of lactation, breastfeeding would interfere with their ideal body figure and leave them overweight and unattractive to men.

> *"Some mothers they still want to maintain a certain status and live like younger girls, you see."* ***RP2***

"I always hear other people say heeee…I will start stinking, heeee… I will be like this and that if I breastfeed. Some say that when you are breastfeeding you consume too much, you start eating too much, so you will be eating more meals more frequently and stuff." ***RP6***

"My sister and I gave birth almost at the same time, then I would say "you are not sick, breastfeed your child" and she would say "no, it will fall", she is saying her breast will fall." ***RP8***

"Yes, some they told you "no your breast will be like a mop and all", you see. No guys will see you after you breastfeed and all those stuff." ***RP2***

"I did not gain weight I became small because every now and then you must breastfeed every now and then you must breastfeed especially at night, ja at night." ***RP9***

4.6.2 Social Lifestyle

Two (6.6%) of the participants stated that some mothers considered exclusive breastfeeding a hindrance to their social lifestyle. They felt that breastfeeding interfered with their ability to attend gatherings and social parties, as their infants need to be breastfed frequently. In addition, the social pressure exerted upon breastfeeding mothers in public has an aversive effect on attitudes towards exclusive breastfeeding.

"So, you see why the youth is running away from breastfeeding because they still want to go clubbing." ***RP8***

"Maybe you are in a public place, and you want to breastfeed they'll say "yoh yoh yoh do not show us that ugly breast of yours what what." ***RP9***

"So, some people do not understand that if you are in a public place, you must have maybe a blanket to cover your baby then you breastfeed. So, some would say yoh I cannot breastfeed because my breast will look like an old rag or what what." ***RP9***

4.7 Mother's desire to breastfeed

Mothers who chose to exclusively breastfeed their infants arrived at that decision as a result of various factors. These include the desire to foster maternal-infant bonding and previous positive exclusive breastfeeding experience.

4.7.1 Maternal-infant bonding

Twenty percent (n=6) of the participants who chose to exclusively breastfeed, highlighted their desire to establish a bond or connection with their infants as their reason for doing so. Bonding was seen as one of the ways to demonstrate affection and facilitate interaction between mother and infant during breastfeeding when they look each other in the eye.

> *"Breastfeeding is good because you bond with your child, you see. When breastfeeding, a child looks at you in the eye, you bond very well when breastfeeding but when formula feeding anyone can feed the child and they get used to anyone but if the mother is feeding, we bond more than you who is not the mother."* ***RP8***

> *"It has helped me because I am here where I am bonding with my baby. I have time when my mind stays with the baby, it has helped me. I saw that it is really important to breastfeed for six months."* ***RP5***

> *"You bond with the child, you look when you breastfeed looking at each other in the eye, you see even the child enjoys the bond. Then I also felt like I want to breastfeed."* ***RP13***

Seventeen percent (n=5) of the participants confirmed the maternal satisfaction they experienced from breastfeeding their infants helped them embrace exclusive breastfeeding:

> *"It felt so good. Indeed, it felt so good, and I felt so close to my baby. I wanted so much to breastfeed him."* ***RP11***

"Mmm… I imagine the joy the happiness of holding my baby and that baby looking straight into my eyes I say that is the best decision I made." ***RP9***

"I will be able to bond with the baby, you see, so that I will feel what those that are breastfeeding, what is it that they are feeling." ***RP13***

The perceived effect of maternal-infant bonding resulting from breastfeeding was also confirmed by a research participant (***RP2***) who opted to formula feed her infant. She stated that:

"Yes. Some mothers are not working. Some they do enjoy breastfeeding, they love it. Yes, and most of the time, you make the bond with the kid when you breastfeed." ***RP2***

One research participant (***RP9)*** went as far as to state that breastfed infants can distinguish strangers from their mothers.

"If you breastfeed your child, the child gets more love and can recognise between a stranger and a mother." ***RP9***

4.7.2 Previous exclusive breastfeeding experience

Five (n=16.6%) of the participants confirmed that their previous breastfeeding experiences influenced their decision to adopt exclusive breastfeeding as a choice of infant feeding again. Their previous experience produced positive results which remained vivid in their minds, hence they took the decision to exclusively breastfeed their infants.

"When we had our first child, we were not HIV-positive, we were breastfeeding. We have three children now. Uh, when we had number two, we were HIV-positive, but we were still breastfeeding." ***RP1***

"I do not see any problem because the other thing I just know is that this child is not the first one. I will breastfeed until six months." ***RP10***

"I breastfed for six months thereafter I gave my child formula; I did not mix feed. Yes, I will also breastfeed my newborn for the first six months." ***RP3***

The lack of past experience in exclusive breastfeeding by research participants contributed in influencing their decision to formula feed their infants.

"For me to end up formula feeding, I have never breastfed before even my first child I did not breastfeed." ***RP4***

"I cannot say much about breastfeeding because this is my first child." ***RP6***

4.7.3 Perceived health benefits of breast milk

The decision to choose exclusive breastfeeding was driven by mothers' understanding of the health benefits associated with the qualities of breast milk. There was a common understanding among the participants of the nutritional value of breast milk, which grants breast milk properties that protect infants against common illnesses such as flu and diarrhea, while strengthening the infant's immune system. Others also mentioned the benefits of breastfeeding associated with mothers.

"The other thing they say when you breastfeed is that your stomach can go back to normal easily unlike when you are on formula, it takes time, ja." ***RP9***

"The milk of the breast is stronger than the other milk, yes it supports the child to grow fast and to be healthy... to be strong and the bones…eh… it is not easy for the infant to get sick... and it helps the baby grow healthy." ***RP10***

"Breast milk is healthy for the baby because it contains all the nutrients needed by the child." ***RP6***

"Breastfeeding is right because when your baby is sick you can easily see, breastmilk helps prevents a lot of diseases that all I can say." ***RP3***

"When your baby is breastfed, you can easily see that, even if the baby has a problem, hence they use the mouth to suck, you will find the mouth heating up which shows the body has a problem and you can determine if there is a problem with baby or even if the baby is constipated. Breast milk will clean or release the constipation." ***RP3***

"In my experience breastfeeding a child, the child was not getting usually sick, she was not contracting flu. You could see the baby was growing well. The baby was not getting sick. They told me that when you breastfeed only and not mix with anything, the baby will be alright and will grow well." ***RP5***

While ten percent (n=3) of the participants could not be specific about the science behind the benefits of breast milk, they knew the general importance of breast milk, such as the effect on their infants' growth and its role in protection from illnesses.

"Mm…I cannot explain why but maybe breast milk it is like 100%, no formula no chemicals nothing, it is pure." ***RP9***

Thirteen percent (n=4) of the participants stated that the benefits associated with breastfeeding were emphasised by health care workers at the clinics. The knowledge they received on exclusive breastfeeding from clinics created awareness around the importance of exclusive breastfeeding thereby influencing their decision-making process regarding infant feeding.

"If you give the baby formula, they told me that the baby will not poop well and she will be constipated and will be getting sick sometimes, you see. So that is why I decided it is better to breastfeed for six months." ***RP5***

Apart from the health benefits of breast milk, one participant emphasized that the availability, cost-effectiveness, and warmness of breast milk as added advantages in comparison to using formula milk which requires boiling of water and preparation:

> *"I think breastfeeding is the best because it is readily available you do not have to boil water to start thinking of making it hot. And like I have said, it is readily available."* ***RP6***

> *"As I mentioned that breast milk is readily available. Instead of some formula, maybe sometimes there will be no electricity you do not have hot water to mix the powder to make the milk."* ***RP6***

> *"Breastfeeding is healthier, cheaper, and always warm."* ***RP2***

Out of the seventy-seven percent (n=23) participants who chose alternative infant feeding methods, forty percent (n=12) of the participants acknowledged that breastfeeding has several benefits such as protection against infant illnesses, infant protection against evil spirits, while at the same time reducing the stomach size of the mother to its rightful size after giving birth. The views expressed by the participants demonstrated the extent to which they perceived the benefits of breastfeeding.

> *"Okay, when you are breastfeeding your child, you are protecting the baby from many things especially some diseases and it is not easy for the baby to get flu…and another thing it is not easy for the baby to inhale bad spirits, yes, when you are breastfeeding. But when the baby is not getting breast milk and getting formula, they often get sick and you taking the baby to the clinic now and then because of flu so breast milk is very good, but then I realized that my status does not allow me to breastfeed for the longest time."* ***RP7***

> *"Breast milk may be milk, but on the other hand I think it is a medicine."* ***RP9***

One of the participants highlighted the ease of breastfeeding an infant compared to formula feeding, which requires a careful process of accurately measuring the formula milk, boiling the water, and feeding the infant within a specified period. With formula feeding, the participant

argued there are high chances of measurement errors which might result in compromising the infant's health such as causing constipation and diarrhea.

> *"I will make an example with myself, I am unemployed, and with formula feeding you end up putting small amount of spoons saying it is getting finished. But with breast milk it is already prepared you do not have to measure it like formula, it is ready."* ***RP8***

> *"If a baby is breastfed right, they do not often get flu or diarrhea, yes."* ***RP9***

4.7.4 Cultural influence

Apart from the nutritional benefits obtained from exclusive breastfeeding, the practice of breastfeeding could be perceived through the social, emotional, and cultural meaning attached by mothers, family members and the broader social and cultural community. It is these non-health aspects of breastfeeding that require attention as they influence mothers' infant feeding decisions. Five (16.6%) of the participants acknowledged the influential role of their cultural backgrounds in deciding on an infant feeding method.

> *"My culture promotes the breast, just breastfeeding."* ***RP10***

> *"Our culture encourages breastfeeding and in encouraging that they also tell you that when you breastfeeding you do not date or sleep with a man that is not the father of the child, you see. So, you see why the youth is running away from breastfeeding because they still want to go clubbing and when you are there it should be the father of the child otherwise you do not breastfeed, yes."* ***RP8***

> *"Yes, especially the traditional like me, my mother is Swati, and my father is Sotho so my mother and my grandmother would say that a healthy child is a child that you breastfeed."* ***RP9***

"My Sesotho culture promotes breastfeeding, it is the best thing hey. Eh, but when I am HIV, there is not choice, I will do it for my son." ***RP1***

While thirteen percent (n=4) of the participants were encouraged to exclusively breastfeed because of their cultural norms and mores were permissive of the practice, 2 participants (n=7%) indicated the opposite. Their cultures were a barrier towards adopting exclusive breastfeeding. One research participant stated that:

"Our culture they are not the same. Like on my side, I have a child, a boy, so, at the first time, I really wanted to breastfeed her, but at her father's house they told me that you cannot." ***RP14***

"Yes. Our culture they do not breastfeed the child, they just buy formula." ***RP14***

"Ja, there are some cultures that they say our kids do not breastfeed. It is their culture I do not know why." ***RP9***

4.8 Financial constraints

Mothers' financial stability had significant influence on the selection of the infant feeding practice. Financial stability in this study was mainly determined by the mother's employment status, partner's employment status and competing financial commitments.

4.8.1 Mother's employment status

As mentioned elsewhere in this chapter, the decision to exclusively breastfeed infants was as a result of various reasons, some personal choices, and others merely situational. Mother's employment status emerged as an important mediating situational factor in mothers' infant feeding decisions. Twenty-three (n=7) of the participants mentioned that financial constraint caused by unemployment was the reason why they chose to exclusively breastfeed as they could not afford infant formula milk.

"The reason mothers resort to breastmilk it is because we are not working and if I was working I would not feed my baby breastmilk hence I will be waking up in the morning going to working and not being able to breastfeed." ***RP3***

"I am not working so I cannot afford to buy pampers and the Infacare or NAN or any formula." ***RP2***

"The challenge is that some of us as youth, for now there are no jobs." ***RP14***

"I will make an example with myself, I am unemployed and with the bottle you end up putting small amount of spoons saying it is getting finished but with breast milk it is already prepared you do not have to scale like formula, it is ready." ***RP8***

"I spoke to this lady and asked her "why are you breastfeeding?" "Is it good like for you, why?" I just needed to understand why she was doing it. She said, "I do not have any money, it is easy for me, the milk is always here. So, jah. Because like buying formula is expensive, you know." ***RP12***

"Some mothers, sometimes maybe they are not working. So, they have to save their money. That is why they breastfed the child." ***RP14***

"Some chose to breastfeed because of situations, a situation like maybe they are not working and when they look at things the formula is expensive, she won't afford to buy it they then decide to breastfeed for the child to grow you see, because she is not working." ***RP4***

4.8.2 Single Motherhood

One of the participants mentioned that as a single mother she ends up breastfeeding because the financial burden posed by infant formula is too much for her to bear alone. As a solution, the mother resorts to easy and cheap ways to feed the infant, usually through exclusive breastfeeding.

"What can I say, partners not together anymore because sometimes we as girls we want to be, I want to be your girlfriend and then I benefit while I am your girlfriend then I decided to hook you up with a kid, only to find out that you are not ready for that then you jump to another one. Then I have to be going after you to support the baby, so the best way, I have to breastfeed." ***RP2***

"Another thing it might be that she is a single parent, and the father of the child is not there anymore so she decides to opt for breastfeeding for the child to grow." ***RP4***

"Some mothers are single parents, and they will be having those kids alone then find out they are with absent fathers, that is why they are forced to breastfeed, you see. They will not afford to buy formula, something like that. You find them breastfeeding whereas that was not what she wanted but she is now forced to breastfeed ending up infecting the baby, I do not know how but that will be the case most of the time because formula is expensive." ***RP7***

4.8.3 Partner's employment status

In cases where the father of the infant was unemployed, exclusive breastfeeding appeared to have been the infant feeding choice for the mother. Six participants (n=6) indicated that because their partners could not afford to buy infant formula for the duration of 6 months, they were urged to exclusively breastfeed, or they made the decision themselves.

"He did not have a permanent job; he would say what are we going to buy the formula with? Then I would say I will try because there is nothing I can do because of my breast." ***RP8***

"When I asked someone, he came to buy, then I asked her, "why are you breastfeeding the child"? She said the father is not working very well so this will be a challenge for them, and he will not be able to buy the child formula that is why she is breastfeeding the child, you see." ***RP12***

"It might happen this month he buys the formula and next month he does not then I will end up reducing the scoop of the milk. Which will be a bad impact on the baby`s health and might cause the baby illness." ***RP3***

At times, even when the father of the child is working but not earning enough to sustain the family's livelihood, mothers resort to exclusive breastfeeding because it is difficult to obtain funds for formula milk from their partner.

"My partner is not earning enough money to buy formula and if a baby is still young, you see, the formula has to be available and formula is still expensive and he's the only one working." ***RP9***

"Most of the times even if you stay with someone it may happen that month end comes the father buys a small, canned formula instead of the big one and your baby is only living through formula not breastmilk. So, if the formula is finished what will you give your baby? Most of the times that is the challenge we face, you would not want to discipline a person because of your baby. You should tell yourself whatever they do, it is for their own good not for me. So rather give your baby breastmilk because it is reliable." ***RP3***

4.8.4 Competing financial commitments

Where mothers are burdened by the financial strain of raising an infant, any extra financial expense, such as infant formula, becomes a luxury. Exclusive breastfeeding then becomes attractive choice because it is free, and the milk is readily available. One of the participants stated that although they are unemployed, exclusive breastfeeding freed up their budget such that their monthly government grant was channeled towards other baby expenses:

"At home, we are many, and there is no financial stability, then I am having a baby, I can say that I cannot afford to buy both of the things, because nowadays we no longer want to use napkins we want to use pampers. So, pampers are high, formula is high even the clothes

of the kids, you see. So, I rather breastfeed then buy the clothes and the pampers, you see. So that the kids will be fine. Even if I am not working, I can afford that with the SASSA money, the pampers and the clothes." ***RP2***

4.9 Infant feeding knowledge

Access to exclusive breastfeeding knowledge influenced mothers' decision making regarding infant feeding practices. Key sources of exclusive breastfeeding knowledge came from the health care providers and personal research.

4.9.1 Health care provider recommendation

Twenty-three percent (n=7) of the participants who chose to exclusively breastfeed their infants indicated that the health care workers at health facilities who taught them of the benefits of exclusive breastfeeding and the importance of adhering to ART played an influential role in helping the mothers arrive at the decision to exclusively breastfeed. They felt that the health care workers supported the mothers in understanding the negligible proportion of risk of infecting their infants through exclusive breastfeeding.

"Okay. At first, I was afraid. I was afraid because when I started, the nurses explained it to me the benefits of the baby when breastfeeding." ***RP5***

"The sister said can you afford formula? I say ja cause my boyfriend is working something like that she said no there is a problem because maybe you buy that box only last for a week which means you must spend maybe six hundred or thousand rand on formula and your boyfriend is the only one who is working." ***RP9***

One participant received information about exclusive breasting through the Department of Health's MomConnect programme which is a social media-based platform. This suggests that health care workers can influence mothers' decisions regarding exclusive breastfeeding via different methods.

"The time I got to the clinic when I was one month pregnant, they just registered me on MomConnect, you yes, but if you want then they always send messages then you get more information about the child and about the pregnancy until you give birth. I just go through WhatsApp then they send you a message if you want to ask something you just send it back then they answer you." ***RP10***

Even among those participants (n=6; 20%) who chose to formula feed their infants, it was clear that they were taught at the health care facility about the importance of exclusive breastfeeding by the health care workers. The participants appreciated the lessons provided to them by the health care workers on breastfeeding although they ultimately made an independent decision to formula feed their infants based on different reasons.

"Those sisters they were so good, they explained everything, you know. Ah, actually they told me that breastfeeding is good for the child. They emphasized on that, like breastfeeding is good." ***RP12***

"Breastfeeding on its own they used to tell us even at the clinic that it is good to breastfeed, but our problem is that we have that thing of saying I am HIV so if I am breastfeeding, I will infect my child." ***RP8***

"I received information always when you go to the clinic when I go to scan. They always tell you about the HIV mothers, about the breastfeeding, they always teach. There is always a teaching. They say a mother who is HIV positive does not give water to the child, or anything until six months. You give her breastfeeding only, until six months." ***RP1***

"They were telling me at the clinic like it is okay to breastfeed your child even if you are positive, even if you are taking ARVs it is okay. You are not going to pass the virus to a child, no. The research that has been done, like you know, they know it is safe many people have done it. It is like, ja they make it clear." ***RP12***

"With this one I wished I had breastfed because when they were teaching us at the clinic, you see that breastmilk is important." ***RP13***

Seven percent (n=2) of the participants did not receive any information from the health facilities on exclusive breastfeeding, and it had an impact on their infant feeding decision. They were not confident about exclusively breastfeeding, fearing infecting their infant.

"Actually, they did not. Jah, that is why I did not have that information because even at the clinic, I was not, I was not given that information. Maybe some of the reasons why I was scared of breastfeeding. Because I did not know how my baby would be safe if I am breastfeeding while I am HIV, yes." ***RP11***

"Here at the hospital, they asked if how are you going to feed your child? They do not tell you how to do it, you have to choose for yourself." ***RP12***

4.9.2 Personal research on infant feeding

Five of the participants (16.6%) who opted for exclusive formula feeding, invested time in researching knowledge on exclusive breastfeeding for mothers living with HIV through various media platforms utilizing their mobile devices. Others sourced information from any relevant material on breastfeeding they came across.

"I love to Google too much. Before I took a decision of something I do not know properly, I Google. I would write on Google if breastfeeding is okay?" ***RP5***

"When I found out I was pregnant I started to do my research, like okay how is my child going to grow like as a child that is being like breastfed or if I am like using formula? So, for me it was like jah it is okay they can grow like any other child. I like to do some research, but I am not specific from whom I get the information. Jah, but I know it is like if I Google something, like you know, if there is something I come across something like that so that

thing stick in my mind. So, I will know like oh this is important for kids to be, only breastfed milk until they are six months." ***RP12***

"So, some mothers they breastfeed their child because they have that knowledge that breastfeeding is the best, it is better than formula." ***RP14***

"At the time I was pregnant, I was doing that. Because now my phone is broken, I do not have that. I do not have access to check. But the time I was pregnant, I was using the smart phone before it broke. I was checking many things about pregnancy about breastfeeding, and I was writing on top that "What if I am HIV positive and I want to breastfeed my child?" ***RP14***

Although thirteen percent (n=4) of the participants benefited from the process of searching for information on exclusive breastfeeding, one participant indicated that at some point during the search, some of the information she gathered was so contradicting that it left her confused regarding the best choice of infant feeding practice.

"It was helpful. At first, there are other things that I read, and I had doubt, you see? In other cases, they tell you that it is better to use formula, you see. And then in other cases it is confusing." ***RP5***

4.10 Conclusion

The study findings highlighted the variations across participants' experiences with regard to exclusive breastfeeding. Although the majority of the participants were familiar with the importance of exclusive breastfeeding, they still decided to choose to formula feed their infants for fear of vertical transmission. It is evident that a mother's perception of exclusive breastfeeding in relation to vertical transmission is a critical factor that cannot be underestimated when advocating for EBF. The financial stability of mothers and their partners appears to be another crucial factor influencing how mothers decide to feed their infants. Other key variables which influenced the mothers' selection of EBF in the study were work commitments and academic

commitments. To some extent, health care workers played an important role in creating awareness around the benefits of breast milk, resulting in some mothers choosing to breastfeed their infants exclusively. While culture and religion did not play a dominant role in persuading mothers to exclusively breastfeed, it remains a channel through which exclusive breastfeeding can be promoted.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

In this chapter, the main findings of the study will be discussed in comparison to other studies. The findings will be discussed under the seven key themes that emerged from the current study's findings, which include: mother's unavailability to exclusively breastfeed; social risk of exclusive breastfeeding; breast problems and health-related issues; image and social lifestyle; mother's desire to exclusively breastfeed; financial constraints; and infant feeding knowledge.

5.1 Mother's unavailability to exclusively breastfeed

The current study findings demonstrated the impact of employment and academic commitments on the mother's decision to choose EBF. Most participants who were informally employed did not receive adequate maternity leave to facilitate the practice of EBF. This is, however, against South African labour law, which guarantees employees four consecutive months of unpaid maternity leave (South African National Department of Labour, 1995). Similar study findings were identified in a study conducted in Ghana (Abekah-Nkrumah, et al., 2020) which found that the low uptake rate of EBF among working mothers resulted from the short maternity leave granted by the employer, long working hours, late finishing time, and the failure by organisations to adopt and implement maternity policy and the absence of institutional support and family-life/work-life balance.

The current study findings also align with the results of two studies conducted in Bangladesh (Khatun et al., 2018) and Ethiopia (Tadesse et al., 2019), which identified employment status as a key factor in determining the choice of infant feeding practice by mothers. The studies found that working mothers failed to practice EBF because of job demands. To mitigate this challenge, one study recommended the establishment of a breastfeeding-friendly work environment coupled with the provision of relevant information, education, and communication (IEC) programmes targeting working mothers to promote EBF practices (Tadesse et al., 2019).

Findings from the current study identified academic commitments as a barrier towards the uptake of EBF because of the time constraints it presents. This is in line with findings from a study conducted in South Africa (Jama et al., 2017), which found that pursuing academic studies soon after giving birth inhibits a mothers' decision to select EBF. Another study (Ijumba, et. al., 2014) found that mothers who wished to return back to school opted for infant formula since breastfeeding disrupts the learning mother's school schedule and breastfeeding on the school premises is prohibited. As a result, the young mothers passed on the child rearing responsibilities to their mothers, and along with this, their maternal privilege to influence and determine decisions regarding infant feeding (Ijumba, et. al., 2014).

To minimise the postpartum academic and employment time constraint effect, it is essential to address the structural factors and the influence of setting on exclusive breastfeeding through creating a conducive environment accommodative of mothers' decision to choose and practice EBF. This requires organisations, and academic institutions alike to formulate and implement policies compatible with the needs of mothers exercising EBF (Daniels, et al., 2020).

5.2 Social risk of exclusive breastfeeding

The results of the current study showed that the participants' decision to choose alternative infant feeding practices was influenced mainly by the mothers' attitude and individual factors such as the fear of vertical HIV transmission through breastfeeding, personal attributes such as age, body weight, education level, degree of personal confidence, infant's gender, infant's wellbeing, and infant's temperament. The study findings share similarities with findings observed in a study conducted in Uganda (Operto, 2019), where mothers living with HIV chose alternative infant feeding practices in fear of transmitting HIV to their infants through breast milk. The mothers' fear for vertical transmission was triggered by the risks posed by sore nipples, oral sores in the infant's mouth, and infant teething (Operto, 2019). Such fears expressed by mothers demonstrate their attitude towards adopting EBF. In order to lower the risk of vertical transmission during the EBF period, it is necessary for mothers to adopt a positive attitude towards PMTCT and implement and practice the knowledge gained through behavioural change, adherence to HIV prophylaxis,

preventing re-infection, and early treatment of breast problems. In addition, the mothers attitude could be shaped by the involvement of their partners in supporting them to take ART timeously.

Participants' poor adherence to ART was among the reasons for choosing an alternative infant feeding practice. Participants feared that their high HIV viral load would increase the chances of infection with HIV for their infants through breastfeeding. These findings were similar to the study findings in a study of northern Uganda (Napyo et al., 2020), where mothers who were non-adherent to ART during pregnancy did not exclusively breastfeed their infants. Instead, they practised infant mixed feeding. The study also found that non-adherence to ART was a result of mothers' limited routine visits to health facilities (Napyo et al., 2020). These findings are also supported by another study (Bartelink et al., 2013) which found that pregnancy among mothers living with HIV was associated with low ART adherence. A similar study conducted in South Africa accessing HIV-infected women (Adeniyi et al., 2019) found that non-adherence to ART resulted from several factors such as drug-related side effects, absence from home, forgetfulness, non-disclosure, stigma, and work-related demands.

To address the challenge of non-adherence to ART among pregnant women living with HIV, studies (Bansaccal, et al., 2020; Adeniyi et al., 2019) have recommended supportive interventions targeted towards lifestyle behaviours, HIV-related stigma, ART side-effects, psychological counseling and support from family members, spouses, and community in general. In addition, clinicians need to screen for these factors when pregnant women living with HIV attend antenatal clinic visits. This is critical to address the mothers' attitude towards EBF and forge positive attitudes and behaviour.

Analysis of the current study results identified HIV-related stigma as a barrier towards the uptake of EBF. Participants chose alternative infant feeding practices to avoid disclosing their HIV status. Similar findings from a South African study conducted by West et al. (2019) found that the fear of inadvertent HIV status disclosure is amongst the key barriers to EBF for women living with HIV. The study findings concur with various studies (Vitalis, et al., 2021; Odeny et al., 2016) that showed that HIV-related stigma among mothers living with HIV continues to be a barrier towards

the uptake of EBF in HIV-endemic regions. Mothers therefore resort to exclusive formula feeding to keep their HIV status concealed.

The results of the current study support a different conclusion regarding the reasons for the non-disclosure of HIV by nursing mothers from that arrived at by other studies (Remmert, et al., 2019; Fadnes et al., 2010; Hofmann et al., 2009) which observed that the non-disclosure of HIV status by mothers living with HIV were a result of financial vulnerability, and the fear of losing social and financial support. Participants in the current study conversely cited reasons such as fear of stigma and forced adoption of a particular infant feeding practice possibly because they mainly leaned on child support grants from the South African government.

To address the implications of HIV-related stigma on EBF, mothers are encouraged to attend peer support groups which are deemed to be PLHIV-friendly and consider residing in areas far removed from matriarchs during the EBF duration (Maryam, et al., 2016; Mataya et al., 2013; Falnes et al., 2011; Ostergaard et al., 2010). It is further recommended that while promoting EBF to reduce vertical transmission, intuitive psycho-social support strategies may be applied to minimise the stigma attached to HIV and EBF (Odeny et al., 2016). This is critical because the knowledge an individual has on certain practices could greatly affect their attitude towards those practices.

5.3 Breast problems and health-related issues

The analysis of the current study findings demonstrated that in some instances, EBF was avoided due to perceived breast problems and health-related issues such as insufficient breast milk, sore or painful nipples and incorrect infant positioning and latching. These results are similar to the findings identified in studies conducted in Ghana (Tampah-Naah, et al., 2019); Taiwan (Chang et al., 2019) and other studies (Ogbuanu, et. al., 2011; Li, et. al., 2008) which found that low breast milk production, swollen breast, sore nipples, and the mother's medical condition were amongst the key reasons affecting the uptake of EBF and the discontinuation of early breastfeeding by mothers living with HIV.

Another study conducted in Saudi Arabia (Aldalili and El.Mahalli, 2021) found that perceived insufficient breast milk production is considered a worldwide challenge that is faced by mothers who report early discontinuation of EBF. It further added that the cessation of EBF is associated with factors such as young age, inconvenience of breastfeeding, fatigue due to consistent breastfeeding, and sore breasts or nipples. Breast milk production concerns have also been identified in other studies (Ware, et al., 2014; Brand et al., 2011; Brown et al., 2011) as a key contributor towards early cessation of exclusive breastfeeding. Insufficient milk production is also reported amongst the key reasons for early cessation of breastfeeding in the first four weeks postpartum (Brand et al., 2011).

Low breast milk production is related to medical and non-medical conditions. In most cases, the challenge is a result of non-medical conditions which include sucking time and delaying feeds resulting in low breast milk production (Kam, 2016). In some instances, breast abnormalities which include sore nipples result in less breastfeeding and consequently low breast milk production. It is for these reasons that some mothers' find themselves unwilling to practice or continue with exclusive breastfeeding (Tampah-Naah, et al., 2019).

5.4 Image and social lifestyle

The low uptake of EBF by participants was found to be a result of the mothers' perception of breastfeeding as a practice that damages their physical appearance. These findings are in line with several studies (Mgongo, et. al., 2019; Nieuwoudt, et. al., 2019; Okafor, et. al., 2018; Ostergaard & Bula, 2010; Otoo, et. al., 2009) which found that mothers decided against EBF to avoid unwanted changes in physical appearance such as sagging of breasts, weight gain or weight loss. The findings of the current study were consistent with a systematic review study conducted in sub-Saharan Africa (Ejie et al., 2021) which found that young women expressed concern over the effect of EBF on their physical appearance as they would become less attractive to men. Other women associated the frequent breastfeeding associated with EBF with weight loss which made them unenergetic (Ejie et al., 2021).

Studies conducted in West Africa (Sokan–Adeaga et al., 2019; Apanga, 2014; Aborigo, et. al., 2012; Agunbiade, and Ogunleye, 2012; Ogunlesi, 2010) reported similar factors inhibiting the uptake of EBF such as the mothers' concerns over the sagging of breasts and the changes in their physical appearance. Young mothers did not want to lose the shape of their breasts as a result of EBF. They believed that they would become unattractive to their partners if they exclusively breastfeed their infants.

To address the misconception surrounding EBF practice, targeted policy and programme interventions should be introduced at community level to put emphasis on the benefits of EBF and to inculcate a culture of positive attitudes and desirable behavioural change within communities. The community awareness campaigns should strive to include key family and community influential players such as husbands, mothers-in-law, community leaders, and health care workers since they are often involved in influencing the decision of the infant feeding practice (Sokan–Adeaga et al., 2019).

5.5 Mother's desire to exclusively breastfeed

The research findings have demonstrated that exclusive breastfeeding was chosen by some participants to fulfil their desire to experience the maternal-infant bonding. These findings are in line with findings from several studies (Radzyminski and Callister, 2016; Hofmann et al., 2009; Buskens, et. al., 2007) which found that maternal-infant bonding is a practice that is culturally accepted and is believed to benefit both the mother and the infant. The present study revealed that the eye contact that occurs during breastfeeding between mother and infant was perceived as a method through which intimacy and attachment is reinforced between mother and infant. These findings concur with literature which states that soon after birth, breastfeeding facilitates interaction between mother and infant especially when the correct nourishment and care is provided to the infant, thereby influencing the development of neural pathways in the brain of the infant (UNICEF, 2016; Liu, Leung, and Yang, 2014).

Study findings demonstrated that the participants' understanding, and cultural image of motherhood was closely linked with breastfeeding. In a study conducted in Bangladesh (Khatun

et al., 2018), it was found that a mother's decision to exclusively breastfeed was informed by their cultural perception. Similar findings were found in a South African study (Jama et al., 2017) which stated that cultural meaning attached to breastfeeding was among the underlying factors responsible for successful EBF. Similarly, a study in Nigeria reported that mothers chose EBF to uphold their cultural norms since many of them did not want to violate their culture (Aishat, et al., 2015).

The current study findings showed that the decision by some participants to choose EBF was influenced by their previous souveniring experience with infant exclusive breastfeeding. This is in line with the findings of a study conducted among mothers living with HIV in sub-Saharan Africa (Nyoni, et al., 2019), which found that the positive experience of EBF enjoyed by the mother and the infant increased mastery in overcoming problems associated with EBF and possible community support (Nyoni, et al., 2019; de Jager et al., 2013).

One of the common drivers promoting EBF identified in the results' analysis was the perceived health benefits of breast milk such as nutrition, vitamins, protection against illness and strengthening of the infant's immune system. This is in line with the study findings by Sokan–Adeaga et al., (2019) which found that breastfeeding of infants for the first six months of life is considered critical for the infant to achieve optimal growth and development while reducing the chances of developing pulmonary tract infection such as pneumonia (Pandolfi et al., 2019; Aborigo et al., 2012; Aniebue, et al., 2010).

The participants of the current study demonstrated a lay understanding of the general health benefits of breastmilk, in particular its role in protecting against infant illnesses. Other studies (Pandolfi et al., 2019; Aryeetey and Goh, 2013; Aidam, et al., 2005) also found that EBF minimises the risk of gastrointestinal infections such as acute watery diarrhea and gastroenteritis. This concurs with findings from several studies (Tromp et al., 2017; Aryeetey and Goh, 2013; Agho, 2011) that have found that the protection against infant infections and allergies is attributed to the health benefits of breast milk which boost the child's immune system to defend against such diseases.

The current study findings found that participants chose EBF as breast milk is readily available, warm, and cheap compared to infant formula. The same benefits were reported in studies conducted in Nigeria (Sokan–Adeaga et al., 2019; Oche, et al., 2011), which found that breast milk is more beneficial as it is wholesome and cheaper. Other factors which promoted the uptake of EBF mentioned by participants from the current study include the possible weight loss, possible weight gain, the quick stomach size re-adjustment and loss of abdominal fat after giving birth. These perceptions were found in research studies conducted in Ghana (Lackey et al., 2021; Aborigo, et. al., 2012; Kramer and Kakuma, 2012) which found that mothers chose EBF to shed calories and regain their pre-pregnancy weight and have their uterus return to normal size within a short period of time after giving birth.

According to findings from other studies (Sokan–Adeaga et al., 2019; Aborigo, et. al., 2012; Kramer and Kakuma, 2012), factors that promoted the uptake of EBF included the mothers' perception of EBF as a contraceptive method which prevents pregnancy by delaying menstruation, thereby facilitating family planning. Other studies (Eoh et al., 2021; Kramer and Kakuma, 2012) also found that mothers chose EBF with the understanding that it reduces the incidence of type 2 diabetes and endometrial, ovarian and breast cancers, and the risk of osteoporosis in the postmenopausal periods. Such findings, nonetheless, were not corroborated by the current study's conclusions.

Although the current study findings did not explicitly demonstrate the benefits of EBF to participant's communities, literature states that a community with a high uptake of EBF produces healthy children and mothers, resulting in a lower neonatal and infant death rate in comparison to a community where EBF is not practiced (Ware, et al., 2019; Aborigo, et. al., 2012; Agho, 2011; Oche, et al., 2011).

5.6 Financial constraints

The current study findings demonstrated that financial constraints caused by unemployment influence the selection of EBF. This concurs with findings from the studies conducted in South Africa (Sowden, et al., 2009) Ethiopia (Tilahun, et al., 2017) and Tanzania (Mgongo, et. al., 2019)

showing that unemployed mothers with a low monthly household income tend to choose EBF as they cannot afford to buy infant formula among other alternative foods. Another study conducted in South Africa (West et al., 2019) found that financial constraints, among other factors such as employment and social pressure, contribute significantly during the mothers' infant feeding practice.

Participants chose EBF because they or their partners were not gainfully employed and they could not afford infant formula milk.

Participants were faced with financial constraints yet expected to fulfil the competing financial demands of raising an infant. This reality led participants to choose EBF to cushion the financial burden. The study findings correlate with several studies (Mgongo, et. al., 2019; Lang'At, et. al., 2018; Mgongo, et. al., 2018; Coetzee, et al., 2017; Otoo, et. al., 2009) which found that financial constraints remain an important factor in some mothers' decision to exclusively breastfeed. A study from Tanzania (Mgongo, et. al., 2019) showed that mothers spend a significant amount of money during hospital visits and as a result they resort to EBF because they cannot afford the cost of infant formula and access to clean water. They cannot maintain the required standard sanitary practices when preparing infant formula. The family's financial disadvantages push the mother to practice EBF as it is cheap and easily available (Mgongo, et. al., 2019).

5.7 Infant feeding knowledge

Some participants in the current study who chose EBF made the decision based on information on infant feeding gained from health care workers, family, and personal research. The same was reported in studies conducted in Ghana (Aborigo, et. al., 2012; Otoo, et. al., 2009) and the East African region (Dukuzumuremyi, et al., 2020) which demonstrated that mothers who have the knowledge and awareness of exclusive breastfeeding are more likely to practice EBF. Another study conducted in southwestern Nigeria (Agunbiade, and Ogunleye, 2012) found that mothers chose to practice EBF as they were aware that it helps infants to grow and develop optimally. In addition, mothers in Ghana who had knowledge of the rich nutritional properties of breast milk

chose to practice EBF for six months for the growth of their infants (Sokan–Adeaga et al., 2019; Otoo, et. al., 2009). General knowledge of breast milk production boosts a mother's confidence to begin EBF since they know that infants do not entirely drain their breast while breastfeeding and there will be milk left (Sokan–Adeaga et al., 2019).

In southwestern Nigeria, a study (Aishat, et al., 2015) found that the limited number of health workers to promote EBF, the illiteracy among mothers and poor information sharing contributed towards the low rate of EBF. A review of the Baby Friendly Hospital Initiative (BFHI) (Gavine, et el., 2017) conducted in Australia found that support interventions from healthcare workers can increase the duration and exclusivity of breastfeeding, especially when visits are conducted in person. In addition, the review found that education and support provided by healthcare workers or peers has significant influence in increasing breastfeeding initiation rates (Gavine, et el., 2017).

Apart from healthcare worker support, the study findings found that participants invested time in online research platforms such as *MomConnect,* Google, Facebook and WhatsApp researching facts on infant breastfeeding for a mother living with HIV and infant formula. These findings concur with the findings from the study conducted in Australia (Bridges, et al., 2018), which found that the social network online environment, especially a female-dominated online community, created a reservoir of personal experiences for mothers to help themselves and one another. Such platforms provide informational and emotional support, including exchanging information, encouraging each other, empathy, and sharing similar personal experiences.

5.8 Conclusion

The study identified important barriers, facilitators and attitudes that influence infant feeding practice decision making in mothers living with HIV. Some of the critical barriers to EBF include the mothers' individual factors such as the fear of vertical transmission, age, body weight, education level, degree of personal confidence, infant's gender, infant's wellbeing, and infant's temperament. Other barriers to EBF emanated from the influence of setting on EBF which includes work commitments, health systems and services, family and community, and workplace and employment.

On the other hand, the key facilitators to EBF identified by mothers include the mothers' desire to breastfeed and financial constraints to buy infant feeding alternatives. To support mothers' decision to adopt EBF, the study highlighted the need to reinforce practices that encourage adherence to EBF throughout the duration of 6 months and prepare mothers to defend their choice of EBF when faced with social pressures from family, society or cultural influences that contradict the EBF recommendations. These practices will also assist mothers in instances where health care workers provide outdated or contradicting information on EBF. To reduce the effect of postpartum academic and employment time constraint, the study emphasized the need to address the structural factors and the influence of setting on exclusive breastfeeding by creating a thriving environment to accommodate the mothers' decision to choose and practice EBF.

Concerning the effect of the mothers' attitude towards EBF, the study found that the attitude that women, family members and women's respective partners have towards breastfeeding could negatively or positively affect their decision to adopt EBF. In addition, the widespread stigma and discrimination in a population can affect the mothers' willingness to breastfeed exclusively for 6 months.

5.9 Limitations of the study

The findings of the study should be interpreted in light of the methodological limitations encountered during the study. Considering that the study is a mini-thesis, the sample size was limited to one district, namely Ehlanzeni. Data was collected from one provincial hospital, therefore making it difficult to generalize the findings outside of Ehlanzeni district. Although academic rigour and credibility were implemented during the course of the study, caution should be taken when applying the study findings to other settings. Research data was collected through self-reporting; therefore, interpretation of results should account for the possibility of a social desirability bias. Participants may have provided certain responses they deemed desirable. In addition, in some instances, interpretation of raw data during the process of transcribing from SiSwati to English might have missed some of the nuances communicated by participants.

Regardless of the study limitations, the findings remain valuable in guiding other researchers who intend to undertake similar research in other locations.

5.10 Recommendations

To improve the uptake of EBF amongst mothers living with HIV, the following recommendations are provided based on the study findings:

Educating mothers living with HIV on the safety of adopting exclusive breastfeeding

The study findings demonstrated that mothers living with HIV are apprehensive towards the practice of exclusive breastfeeding and therefore prefer alternative infant feeding practices. The following interventions are suggested in empowering mothers to adopt EBF:

- The latest information on the advantages of EBF should be publicly shared and should be easily accessible to increase awareness across communities, rather than targeting mothers alone. By sharing the latest information on the advantages of EBF, challenges of misinformation and EBF stigma are addressed. To maximize effectiveness, EBF messaging should be shared on various social media platforms such as WhatsApp, Facebook, Twitter, and community roadshows.
- Apart from adopting a general approach towards educating mothers living with HIV on the benefits of EBF at antenatal clinics, healthcare workers should be trained to identify possible misconceptions and anxieties harboured by pregnant mothers living with HIV and address them adequately with remedial information.
- To change attitudes among a targeted population, targeted behaviour change communication interventions are necessary.
- Where possible, community health care workers affiliated with hospitals should be employed to provide follow-up EBF support on the mothers living with HIV and educate the caregivers and the entire family on the benefits of EBF.

- EBF community champions such as mothers of any age who have breastfed their own babies or are still breastfeeding and want to support other mothers to have a positive breastfeeding experience should be identified to encourage the EBF practice, fight stigma and act as a contact person for local mothers in need of support in the community.

Enforcement of the labour law policy on the provision of maternity leave for employed mothers

Although South African labour law guarantees employees four consecutive months of unpaid maternity leave, the study findings found that mothers who were informally employed did not receive adequate maternity leave, making it difficult to adopt EBF during the first six months of the infant's life. The following recommendations are suggested in addressing the challenge of maternity leave for employed mothers:

- A joint operation between the National Department of Health and the Department of Labour should be established to educate the formal and informal business sectors on the importance of EBF and their critical role in providing maternity leave to qualifying mothers and establishing a suitable environment for mothers to choose and adhere to EBF.
- As part of requirements for business registration, the government should consider mandating businesses to develop an organizational maternity and breastfeeding policy in support of breastfeeding mothers.

Cultural empowerment

Considering the impact of cultural influence on breastfeeding, policymakers could engage communities to identify values and beliefs which uphold or discourage the adoption of exclusive breastfeeding. Thereafter the following measures could be implemented:

- Empowering of tribal leaders to support the uptake of exclusive breastfeeding by providing the necessary learning material and the resources to frequently host community meetings targeting men and women of child bearing age.
- Encourage tribal leaders to socially enforce laws to punish individuals spreading misinformation about the benefits of exclusive breastfeeding. This will alert the community to refrain from sharing false communication about exclusive breastfeeding.

5.11 Recommendations for further research

Future studies with a larger sample size of mothers living with HIV could inform interventions and policy development around the barriers to exclusive breastfeeding. The study noted that among the barriers to EBF, misinformation surrounding the risks of vertical transmission by mothers living with HIV hindered the uptake of EBF the most. It is therefore important for future studies to explore the origins of the mothers' fear of vertical transmission to formulate targeted interventions focused on increasing the uptake of EBF.

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APPENDIX 1

INTERVIEW GUIDE (ENGLISH)

Introduction

1. Age: How old are you this year?

2. What is your marital status?

3. Which religious faith do you belong to?

4. What do you do for a living?
- Sub-question 4.1 - Type of employment
- Sub-question 4.2 - Working hours
- Sub-question 4.3 Geographical Location

5. Do you have a partner? If so, what does s/he do for a living?

6. What is your highest qualification?

7. What do you think about breastfeeding particularly exclusive breastfeeding?

8. Can you tell me about me about your own experience with breastfeeding?

9. Why did you choose to breastfeed?

Social-Cultural Determinants enabling breastfeeding

10. Tell me about factors that make the practice of exclusive breastfeeding easy to do in this community/locality.

11. Tell me about people who are important in influencing breastfeeding decisions.

12. What information you were given, before, during and after pregnancy on breastfeeding apart from what you have mentioned above?

- Sub-question 12.1: Type of information on infant feeding
- Sub-question 12.2: Sources of information
- Sub-question 12.3: What type of information related to options on infant feeding (Exclusive breast feeding, Exclusive formula feeding etc).
- Sub-question 12.4: How did the information you received influence your decision on infant feeding?

Barriers to exclusive breastfeeding

13. What do you think prevents women in this locality from not breastfeeding their babies exclusively for six months?

THE END

APPENDIX 2

INFORMATION SHEET (ENGLISH)

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21 959 2809 Fax: 27 21 959 2872
E-mail: soph-comm@uwc.ac.za

INFORMATION SHEET

Project Title: Factors influencing breastfeeding of infants of mothers living with HIV at Ehlanzeni District, Mpumalanga, South Africa.

What is this study about?

This is a research project being conducted by Desmond Munemo at the University of the Western Cape. We are inviting you to participate in this research project because you have an infant whom you're feeding. We are interested to know the reasons you are breastfeeding your infant and if not, what are the different infant feeding methods you are using and why? The purpose of this research project is to identify barriers and facilitators to breastfeeding in mothers living with HIV.

What will I be asked to do if I agree to participate?

The study will be conducted at Rob Ferreira Provincial Hospital in Ehlanzeni District in the city of Mbombela, in Mpumalanga province, South Africa. Participation in this study is voluntary. However, if you decide to take part you will be requested to read and sign a consent form confirming your understanding of the study objective and agreement to take part. You will be asked to share information about your infant breastfeeding practice or any other form of infant feeding choices you are exercising. Also, you'll be asked to share reasons and conditions that motivate you to choose breastfeeding as an infant feeding option or any other infant feeding method you're practicing. You will be asked to participate in an open-ended interview session

made up of twenty-three questions. These interviews will also be audio-recorded for the purposes of data analysis during the process of report writing. You may choose to skip any question from the interview. Importantly, you may choose not to participate at any point of this study with no repercussions.

Would my participation in this study be kept confidential?

The researcher undertakes to protect your identity and the nature of your contribution. To ensure your anonymity, each participant will be provided a unique code number for the purposes of protecting their identity. Participants information will only be shared with my research supervisor Dr. Nasheetah Solomons at the University of the Western Cape. Finally, the participants will be assured that their names will not be mentioned in the report and neither can one use the code numbers to trace them. Any information that can be used to trace participants will either be removed or kept safe. After every interview session, the data forms and audio tapes will be kept under lock and key storage at the researcher's residence. While identification codes will only be used on data forms, electronic data will be kept on an encrypted computer. Data collected during the study will be stored in the University server for five years after finishing the study and thereafter destroyed as per standard research ethics practices.

What are the risks of this research?

There may be some risks from participating in this research study. Participants might encounter some discomfort of psychological nature emanating from talking about themselves, their past and present experiences. The researcher will strive to minimise the occurrence of such risks. Should the risk of that nature occur, the researcher will refer the participants to relevant facilities for medical assistance.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the researcher learn more about factors influencing breastfeeding of infants of mothers living with HIV. We hope that, in the future, other people might benefit from this study through improved understanding of infant breastfeeding practices by mothers living with HIV. It is critical that factors influencing selection

of infant feeding such as social, religious, financial and other factors be understood such that infant lives are not lost due to poor feeding practices.

Do I have to be in this research, and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by Desmond Munemo at the University of the Western Cape. If you have any questions about the research study itself, please contact Desmond Munemo at:

Telephone: +27 76 44 888 02

E-mail: 3706322@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof U Lehmann
Director: School of Public Health
University of the Western Cape
Private Bag X17
Bellville 7535
ulehmann@uwc.ac.za

Prof Anthea Rhoda
Dean: Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

Dr. N Solomons
Department of Dietetics and Nutrition
University of the Western Cape
Private Bag X17
Bellville 7535

nsolomons@uwc.ac.za

This research has been approved by the University of the Western Cape's Biomedical Research Ethics Committee.

Biomedical Research Ethics Committee.
University of the Western Cape
Private Bag X17
Bellville
7535
Tel: 021 959 4111
e-mail: research-ethics@uwc.ac.za

APPENDIX 3

CONSENT FORM (ENGLISH)

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

CONSENT FORM

Title of Research Project: Factors influencing breastfeeding of infants of mothers living with HIV at Ehlanzeni District, Mpumalanga, South Africa.

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve, and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

___☐ I agree to be audiotaped during my participation in this study.

___☐ I do not agree to be audiotaped during my participation in this study.

Participant's name……..

Participant's signature…….

Date……

APPENDIX 4

DEBRIEFING FORM (ENGLISH)

Thank you for participating as a research participant in the present study concerning your infant breastfeeding practices. If you have any questions regarding this study, please feel free to ask the researcher. In the event that you feel psychologically distressed by participation in this study, we encourage you to contact a registered Psychosocial Specialist, Charlotte Motsoari at +27 (11) 403-5650 or 081 596 3611. Alternatively, you can contact the National AIDS Helpline at their tollfree number 0800 012 322.

Thank you again for your participation.

APPENDIX 5

ETHICAL CLEARANCE CERTIFICATE

UNIVERSITY of the WESTERN CAPE

60 YEARS of hope, action & knowledge

13 August 2020

Mr D Munemo
School of Public Health
Faculty of Community and Health Science

Ethics Reference Number: BM20/5/26

Project Title: Factors influencing breastfeeding of infants of mothers who are living with HIV at Ehlanzeni District, Mpumalanga, South Africa.

Approval Period: 12 June 2020 – 12 June 2023

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report annually by 30 November for the duration of the project.

Permission to conduct the study must be submitted to BMREC for record-keeping.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

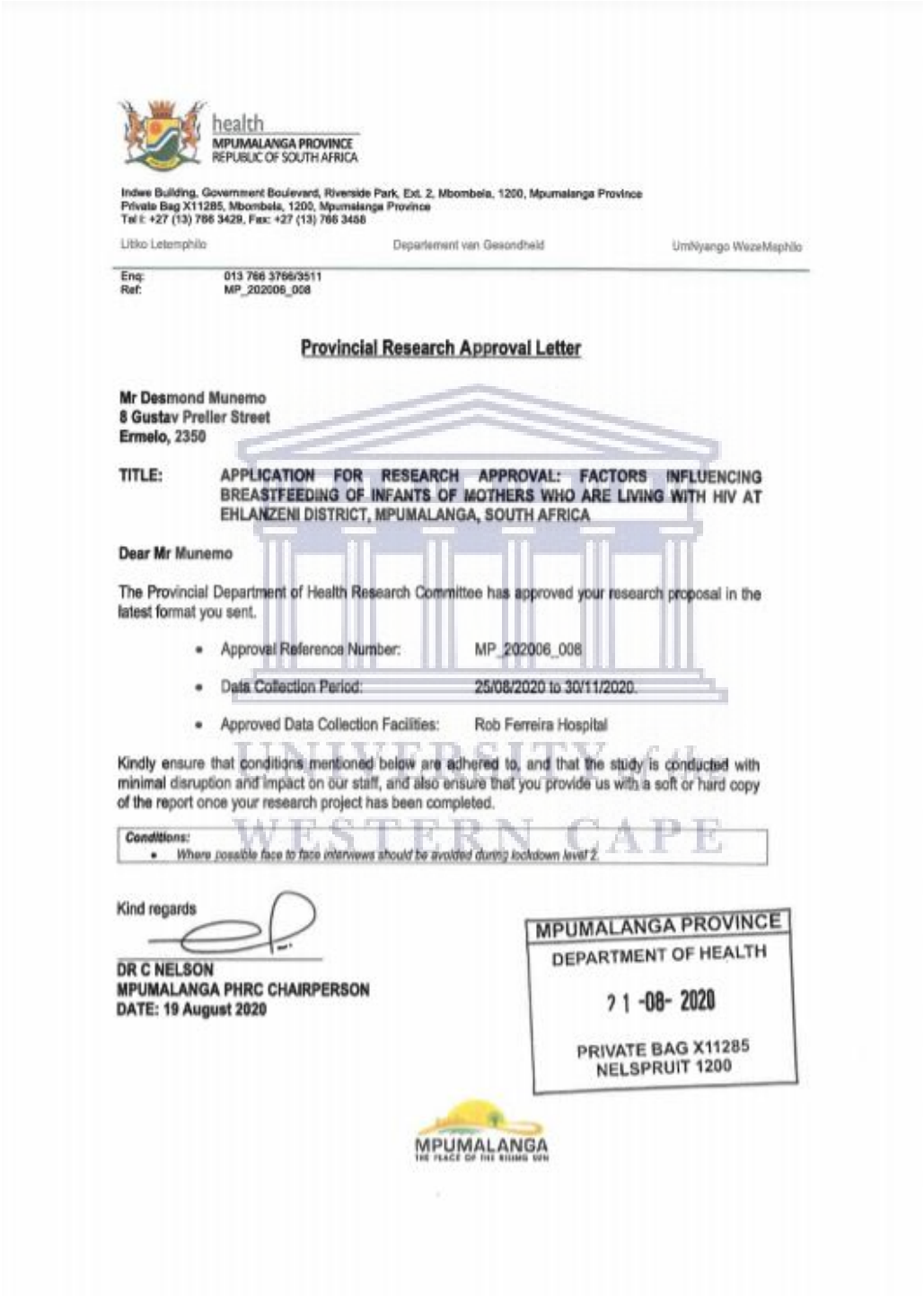
Director: Research Development
University of the Western Cape
Private Bag X 17
Bellville 7535
Republic of South Africa
Tel: +27 21 959 4111
Email: research-ethics@uwc.ac.za

NHREC Registration Number: BMREC-130416-050

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

APPENDIX 6

PROVINCIAL RESEARCH COMMITTEE (PHRC) APPROVAL LETTER



health
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

Indwe Building, Government Boulevard, Riverside Park, Ext. 2, Mbombela, 1200, Mpumalanga Province
Private Bag X11285, Mbombela, 1200, Mpumalanga Province
Tel I: +27 (13) 766 3428, Fax: +27 (13) 766 3488

Litiko Letemphilo | Departement van Gesondheid | UmNyango WezeMaphilo

Enq: 013 766 3766/3511
Ref: MP_202006_008

Provincial Research Approval Letter

Mr Desmond Munemo
8 Gustav Preller Street
Ermelo, 2350

TITLE: **APPLICATION FOR RESEARCH APPROVAL: FACTORS INFLUENCING BREASTFEEDING OF INFANTS OF MOTHERS WHO ARE LIVING WITH HIV AT EHLANZENI DISTRICT, MPUMALANGA, SOUTH AFRICA**

Dear Mr Munemo

The Provincial Department of Health Research Committee has approved your research proposal in the latest format you sent.

- Approval Reference Number: MP_202006_008
- Data Collection Period: 25/08/2020 to 30/11/2020.
- Approved Data Collection Facilities: Rob Ferreira Hospital

Kindly ensure that conditions mentioned below are adhered to, and that the study is conducted with minimal disruption and impact on our staff, and also ensure that you provide us with a soft or hard copy of the report once your research project has been completed.

Conditions:
- *Where possible face to face interviews should be avoided during lockdown level 2.*

Kind regards

DR C NELSON
MPUMALANGA PHRC CHAIRPERSON
DATE: 19 August 2020

MPUMALANGA PROVINCE
DEPARTMENT OF HEALTH
21 -08- 2020
PRIVATE BAG X11285
NELSPRUIT 1200

MPUMALANGA
THE PEACE OF THE RISING SUN

APPENDIX 7

INTERVIEW GUIDE (SISWATI)

Setfulo

1. Iminyaka: Uneminyaka lemingakhi lonyaka?

2. Ushadile nome cha?

3. Ukuyiphi inkholo?

4. Utiphilisa ngani?
- Umbuto 4.1 – Luhlobo lwemsebenti
- Umbuto 4.2 – Ema-awa lowasebentako
- Umbuto 4.3 Usebenta Kuphi

5. Unaye yini umlingani? Nangabe unaye, yena utiphilisa ngani?

6. Esikolweni wagcina kuphi?

7. Ucabangani ngekumunyisa, ikakhulukati kumunyisa umntfwana kuphela ungamniki lokunye kudla?

8. Unganichazela yini ngelwati lwakho ngekumunyisa luswane?

9. Kungani wakhetsa kumunyisa?

Imitselela yetenhlalakahle neyemasiko ekumunyiseni

10. Asewungitjele ngetintfo letenta kutsi lapha kulommango nome kulendzawo kube melula kumunyisa umntfwana ungamniki lokunye kudla.

11. Asewungitjele kutsi bobani labanendzima lenkhulu ekutseni bantfu batawumunyisa yini nome cha.

12. Ngukuphi kwatiswa lowanikwa kona, ngaphambi kwekutsi ukhulelwe, ngesikhatsi ukhulelwe kanye nangemuva kwaloko, mayelana nekumunyisa, ngaphandle kwaloko lesewukushito ngenhla?
- Umbuto 12.1: Luhlobo lwekwatiswa mayelana nekondla luswane
- Umbuto 12.2: Imitfombo yaloko kwatiswa
- Umbuto 12.3: Hlobo luni lwekwatiswa mayelana netindlela tekondla luswane (Kumunyisa umntfwana kuphela ungamniki lokunye kudla, Kunika umntfwana ifomula kuphela, nalokunye).

- Umbuto 12.4: Lokwatiswa lowakutfola kwaba namuphi umtselela endleleni yekondla umntfwana lowancuma kuyisebentisa?

Tinkinga tekumunyisa umntfwana ungamniki lokunye kudla

13. Ucabanga kutsi yini levimbela bomake kulendzawo yakini kutsi bamunyise bantfwana kuphela futsi bangabaniki lokunye kudla tinyanga letisitfupha?

APPENDIX 8

INFORMATION SHEET (SISWATI)

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E-mail: soph-comm@uwc.ac.za

LIPHEPHA LEKWATISWA

Sihloko Sephrojekthi: Imitselela letsintsa kumunyiswa kwetinswane bomake labaphila neligciwane lembulalave (HIV) eSifundzeni saseHlanzeni, eMpumalanga, eNingizimu Afrikha.

Lumayelana nani loluholo?

Lolu lucwaningo lolwentiwa nguDesmond Munemo eNyuvesi Yase-Western Cape. Sikumema kutsi uhlanganyele kuloluhlolo ngobe nawe uneluswane lolumunyisako. Sinenshisekelo yekwati kutsi ngutiphi tizatfu letikwenta kutsi umunyise luswane lwakho, futsi nangabe awulumunyisi, usebentisa tiphi letinye tindlela tekulondla, futsi kungani utisebentisa? Injongo yalolucwaningo kutfola kutsi ngutiphi timbangela letenta kutsi bomake labaphila neligciwane le-HIV bangabamunyisi bantfwana babo nekutsi ngutiphi tintfo letibagcugcutela kutsi bamunyise.

Nangivuma kuhlanganyela kulolucwaningo, yini lengitocelwa kutsi ngiyente?

Loluhlolo lutawuchutjelwa eRob Ferreira Provincial Hospital, sibhedlela lesisesifundzeni saseHlanzeni edolobheni laseMbombela, esifundzeni saseMpumalanga, eNingizimu Afrikha. Kuloluhlolo uhlanganyela ngekutitsandzela. Kodvwa-ke, nangabe uncuma kuhlanganyela, utawucelwa kutsi ufundze futsi usayine lifomu lekuvuma lapho ucinisekisa khona kutsi uyayicondza injongo yaloluhlolo nekutsi uyavuma kuba yincenye yalo. Utawucelwa kutsi uchaze ngekumunyisa kwakho luswane nome ngaletinye tindlela lotisebentisako tekondla luswane. Futsi utawucelwa kutsi usho tizatfu netimo letikukhutsata kutsi ukhetse kumunyisa luswane lwakho

nome letinye tindlela tekulondla lotisebentisako. Utawucelwa nekutsi uhlanganyele encenyeni leyincociswano levulekile lenemibuto lelishumi nakutsatfu. Kuletincociswano kutawurekhodwa emavi ngenjongo yekutsi lokwatiswa kuhlatiywe lapho sekubhalwa umbiko. Ungase ukhetse kuyishiya leminye imibuto kulencociswano. Lokubalulekile kutsi ungase ukhetse kuyekela kuhlanganyela kuloluhlolo nome nini phakatsi nalo futsi kute lotakwentiwa kona.

Ingabe kuhlanganyela kwami kuloluhlolo kutawugcinwa kuyimfihlo?

Loyo lowenta lolucwaningo uyatibopha kutsi utakuvikela ngekutsi angalikhiphi ligama lakho nekutsi uhlanganyele kanjani kuloluhlolo. Kute kucinisekiswe kutsi uhlala ungatiwa, umuntfu ngamunye lohlanganyelako utonikwa inombolo leyehlukile ngenjongo yekutsi avikeleke. Imininingwane yalabo lababe nencenye kuloluhlolo itonikwa kuphela umcondziso wami kuloluhlolo, lokunguDokotela Nasheetah Solomons waseNyuvesi yaseWestern Cape. Kwekugcina, labahlanganyela kuloluhlolo batawucinisekiswa ngekutsi emagama abo ngeke ashiwo kulombiko futsi nenombolo yabo ngeke isetjentiswe kuze batfolwe kutsi babobani. Nome ngumiphi imininingwane lengasetjentiswa kuze kutfolwe labo labahlanganyele itawususwa nome igcinwe iphephile. Ngemuva kwencenye ngayinye yenconciswano, emafomu lanekwatiswa kanye nemathephu lanemavi larekhodiwe atawugcinwa endzaweni lekhiywako lapho kuhlala khona loyo lowenta lolucwaningo. Njengobe tinombolo tekuhlukanisa labo labahlanganyele titawusetjentiswa kuphela emafomini lanekwatiswa, kwatiswa lokusetintfweni tebucwephesha kutawugcinwa kungcondvomshini lonekhodi. Kwatiswa lokutfolakele kuloluhlolo kutawugcinwa emishinini yabongcondvomshini baseNyuvesi iminyaka lesihlanu futsi ngemuva kwaloko itawulahlwa ngekuvumelana nemitsetfo lecondzisa kwentiwa kweluhlolo.

Tiyini tinkinga talolucwaningo?

Tingase tibe khona tinkinga ngekuhlanganyela kulolucwaningo. Labo labahlanganyelako bangase bative bangakhululeki kulokunye, lokungabangelwa kukhuluma ngetindzaba tabo, ngelimuva labo kanye netintfo labahlangabetana nato. Loyo lowenta lolucwaningo utawulwela kunciphisa tinkinga letinjalo. Nangabe leto tinkinga tiba khona, loyo lowenta lolucwaningo utawucondzisa labo bantfu etindzaweni letifanele lapho bangatfola khona lusito lwetemphilo.

Tiyini tinzuzo talolucwaningo?

Lolucwaningo alukentelwa kutsi luzuzise wena ngekwakho, kodvwa imiphumela yalo ingase isite loyo lolwentako kutsi afundze lokwengetiwe ngemitselela letsintsa kumunyiswa kwetinswane bomake labaphila neligciwane le-HIV. Siyetsemba kutsi esikhatsini lesitako, labanye bantfu bangazuza kuloluhlolo ngekutsi batfole lwati lolutfutfukisiwe ngekumunyiswa kwetinswane bomake labaphila ne-HIV. Kubaluleke kakhulu kutsi tintfo letinemtselela ekukhetseni indlela yekondla luswane, letifana netenhlalakahle, tenkholo, tetimali kanye naletinye ticondzakale kahle kuze timphilo tetinswane tingalahleki ngenca yekusebentisa tindlela tekondla letingekho ezingeni lelifanele.

Kufanele yini ngihlanganyele kulolucwaningo, futsi ngingayekela yini nganome ngusiphi sikhatsi?

Kulolucwaningo uhlanganyela ngekutitsandzela ngalokuphelele. Ungase ukhetse kungahlanganyeli kwasanhlobo. Nangabe ukhetsa kuhlanganyela, ungaphindze uyekele nome nini. Nawuncuma kungahlanganyeli nalapho uncuma kuyekela, nome kukunini, ngeke ujeziswe nome ulahlekelwe tinzuzo lokufanele kutsi utitfole.

Kutsiwani nangabe nginemibuto?

Lolucwaningo lwentiwa nguDesmond Munemo eNyuvesi Yase-Western Cape. Nangabe kunemibuto lonayo ngalolucwaningo, sicela uchumane naye Desmond Munemo ku:

Lucingo: +27 76 44 888 02
I-imeyili: 3706322@myuwc.ac.za

Nakwenteka uba nemibuto ngaloluhlolo kanye nemalungelo akho njengobe uhlanganyela kulo nome nawufuna kubika nome ngutiphi tinkinga lohlangabetane nato letihlobene naloluhlolo, sicela uchumane na:

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Lolucwaningo lugunyatwe yiKomidi Lebuke Timiso Tekucwaninga Ngemphilo Yetintfo Letiphilako yaseNyuvesi Yase-Western Cape.

IKomidi Lebuke Timiso Tekucwaninga Ngemphilo Yetintfo Letiphilako.
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APPENDIX 9

CONSENT FORM (SISWATI)

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2809, Fax: 27 21-959 2872
E-mail: soph-comm@uwc.ac.za

LIFOMU LEKUVUMA

Sihloko Sephrojekthi: Imitselela letsintsa kumunyiswa kwetinswane bomake labaphila neligciwane lembulalave (HIV) eSifundzeni saseHlanzeni, eMpumalanga, eNingizimu Afrikha.

Loluhlolo ngichazelwe lona ngelulwimi lengilucondzako. Imibuto yami ngaloluhlolo iphendvuliwe. Ngiyacondza kutsi kuhlanganyela kwami kutawufaka ekhatsi ini, futsi ngekutitsandzela nangekutikhetsela kwami ngiyavuma kuhlanganyela. Ngiyacondza kutsi kute umuntfu lotawutjelwa kutsi ngingubani. Ngiyacondza nekutsi ngingayekela kuhlanganyela kuloluhlolo nome nini ngaphandle kwekutsi ngichaze sizatfu nangaphandle kwekwesaba imiphumela lebuhlungu nome kulahlekelwa tinzuzo.

___ ☐ Ngiyavuma kutsi livi lami lirekhodwe phakatsi nekuhlanganyela kwami kuloluhlolo.

___ ☐ Angivumi kutsi livi lami lirekhodwe phakatsi nekuhlanganyela kwami kuloluhlolo.

Ligama lalohlanganyelako……..

Isiginesha yalohlanganyelako…….

Lusuku……

APPENDIX 10

DEBRIEFING FORM (SISWATI)

Lifomu Lekubuketa

Siyakubonga ngekuhlanganyela kuloluhlolo lolumayenala nekumunyisa kwakho luswane. Nangabe unemibuto mayelana naloluhlolo, sicela utive ukhululekile kubuta loyo lowenta lolucwaningo. Nakungenteka kutsi utiva ukhatsatekile emcondvweni ngenca yekuhlanganyela kwakho kuloluhlolo, sikukhutsata kutsi uchumane naCwephesha Wetenhlalakahle Nengcondvo, Charlotte Motsoari ku +27 (11) 403-5650 nome 081 596 3611. Nome futsi uchumane ne-National AIDS Helpline usebentisa inombolo leshayelwa mahhala letsi 0800 012 322.

Siphindze futsi siyakubonga ngekuhlanganyela kwakho.