PSYCHO-SOCIAL FACTORS INFLUENCING EXCLUSIVE BREASTFEEDING AMONG THE PRIMIGRAVIDA MOTHERS AT A PUBLIC HOSPITAL IN THE UGU DISTRICT, KWAZULU-NATAL, SOUTH AFRICA

Jessica Naicker (22290668)

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Supervisor : Prof M.N. Sibiya

Co-supervisor : Dr K. Chetty

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Declaration

This is to certify that the work is entirely my own and not of any other person, unless explicitly acknowledged (including citation of published and unpublished sources). The work has not previously been submitted in any form to the Durban University of Technology or to any other institution for assessment or for any other purpose.

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Signature of student	Date

Approved for final submission

	2 June 2024
	_____
Prof M.N. Sibiya	Date
RN, RM, D Tech: Nursing	
K.Chetty	2 June 2024
_____	_____
Dr K. Chetty	Date
PhD: Health Sciences	

Abstract

Satisfaction is one of the psychological benefits of exclusive breastfeeding (EBF). This behaviour encourages the mother to continue breastfeeding for up to two or more years. First-time mothers are generally inexperienced at motherhood, which affects breastfeeding initiation and intent. They need frequent professional and social support that must be clinically practical for successful EBF outcomes.

Aim of the study

The aim of the study was to explore the psychosocial factors influencing exclusive breastfeeding among primigravida mothers at a public hospital in the uGu District, KwaZulu-Natal (KZN), South Africa, using Bandura`s Self-efficacy model as a theoretical framework to promote, support and sustain EBF.

Methodology

An explorative qualitative design was used in the study. Eleven primigravida mothers from the postpartum ward, aged 18 years and above, who had attended antenatal clinics (ANCs) and delivered at the selected hospital setting, were nominated for the study using purposive sampling. The participants were from day one to day four post-delivery, and all were South African Nationals who belonged to two race groups, namely two Indians and nine Blacks. The ethnicity of Indian participants was Hindu and Muslim, and Zulu and Xhosa for the Blacks. Four participants were HIV-positive. Semi-structured one-on-one interviews, with an interview guide containing demographic sections and the main question to focus the discussion were used. The interview questions were based on Bandura's Self-efficacy model. Data was collected until data saturation was reached. An accredited research assistant was recruited from the hospital to assist with the language translation of isiZulu to English and English to isiZulu during the interviews. The translation of isiXhosa was not required as the participants were able to understand and speak isiZulu as well. Creswell`s six steps of qualitative thematic analysis were used to analyse the data.

Findings

Based on Bandura's Self-Efficacy and Social Cognitive Theoretical (SCT) framework, the study has shown that personal, social, and environmental factors strongly influenced maternal attitudes towards breastfeeding efficacy. Five significant themes that emerged from the data analysis were (a) factors influencing maternal self-efficacy, (b) challenges to EBF, (c) cultural influence on EBF, (d) the role of support systems to EBF, and (e) breastfeeding support strategies.

Conclusion

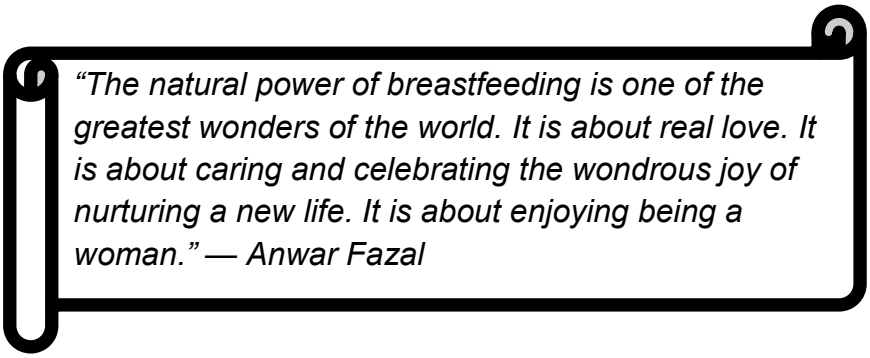
This study recognized psychosocial and demographic factors influencing breastfeeding efficacy among primigravida mothers. The data suggests the need for critical clinical interventions to be applied by health care workers at health care facilities, policymakers, the Department of Health, the Department of Education, the Department of Labour, the Department of Social Services, and Employers if South Africa wants to reach the global nutritional target of 50% EBF by 2025. In addition, family and partner involvement in education programmes, improved antenatal care services and quality of EBF educational material hand-outs, effective utilization of waiting times at Antenatal Centres and implementation of long-acting contraceptives, and sexual reproductive health teachings by school health nurses at schools are among the recommendations to improve EBF practice.

Key words

Primigravida, Exclusive breastfeeding, mixed feeding, maternal self-efficacy and psychosocial factors.

Dedication

I want to dedicate this study to all the Primigravida mothers who chose to breastfeed exclusively. Every drop of breast milk, from colostrum to mature milk, is life-saving and life-giving. Breast is always best with rewarding health benefits for the mother and the infant, even when separated. Breastfeeding can be painful, challenging, and frustrating, but do not quit. Despite the difficulties as a first-time mum, professional solutions and answers are available to make the breastfeeding experience rewarding and joyful. Breastfeeding in the context of HIV can be achieved as long as viral loads are safely suppressed by maintaining compliance with antiretroviral therapy.



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Glossary of terms

Primigravida

La Marca-Ghaemmaghami *et al.* (2022: 945) defines the term primigravida as a woman who becomes pregnant for the first time.

Exclusive breastfeeding

The World Health Organization (WHO) defines exclusive breastfeeding as initiated within the first hour of birth with no other foods or liquids, including water, for the first six months of life. Children can have complementary foods from the age of 6 months while continuing to breastfeed for up to two or more years of age (WHO 2018).

Mixed feeding

Al Sabbah *et al.* (2022: 872217) defines mixed feeding as the introduction of solid food or formula milk during breastfeeding.

Maternal self-efficacy

Dennis (1999: 195) defines maternal self-efficacy as a mother's perceived ability to breastfeed her child and influence her decisions regarding breastfeeding, such as intention to breastfeed, how much effort to place on breastfeeding, and how to respond to any challenges during the experience. Cited in Gonzales *et al*. (2020: 135).

Psychosocial

Psychosocial Health by Carnevale (2021) defines psychosocial as the convergence of one`s thoughts and behaviours with the external social environment. It focuses on the four aspects of life, namely mental health (thought processes), emotional health (feelings), social health (external engagements), and spiritual health (connects to something greater than one`s self). If all are balanced, the individual has a positive attitude, interacts well with others and the

community, and feels they can accomplish anything with a purpose in life. If not balanced, the person can lose self-confidence, face social isolation, or develop a mental disorder.

Acronyms

Acronym	Full word/sentence
ANC	Antenatal clinic
ART	Anti-retroviral therapy/treatment
ARVs	Anti-retrovirals
BFHI	Baby Friendly Hospital Initiative
EBF	Exclusive breastfeeding
EBM	Expressed breast milk
HCWs	Health care workers
IREC	Institute of Research Ethics Committee
IUCD	Intra-uterine copper device
KZN	KwaZulu-Natal
LARC	Long acting reversible contraceptives
MTCT	Mother to child transmission
PHC	Primary Health Care
PMTCT	Prevention of mother to child transmission
SCT	Social Cognitive Theory
SDGs	Sustainable Developmental Goals
SIDS	Sudden infant death syndrome
UNICEF	United Nations International Children Emergency Fund
WHO	World Health Organization

CHAPTER 1
ORIENTATION TO THE STUDY

1.1 INTRODUCTION

The World Health Organization (WHO 2018) recommends that all mothers feed their infants solely with breast milk for the initial first six months of their infants' life and continue up to the age of 2 years and beyond. The definition of exclusive breastfeeding (EBF) is the infant receiving only breast milk, no other liquids or solids, even water, except for oral rehydration solution or drops/syrups of vitamins, minerals, or medicines (UNICEF and WHO 2019: 4). EBF prevents 13% of childhood mortality which is approximately 1.2 million children worldwide saved every year (Ajewole 2020: 2454). Despite the wide use of infant formula, scientific findings confirm and assert that no other food is as nutritious for an infant than human milk (Witten *et al.* 2020: 76). EBF, from birth up to two years, has significant benefits for both mother and baby. Growth and development; protection against diarrhoeal disease, respiratory infections, and life-threatening illnesses; reduced neonatal mortality; risk of childhood obesity; and enhanced cognitive development are among the nutritional benefits of EBF for infants. Similarly, mothers also benefited from EBF by reducing breast and ovarian cancer risks (Gobebo 2021: 9).

Psychosocial factors are modifiable factors that affect a woman's ability to breastfeed successfully and exclusively. A study by O'Brien *et al*. (2008: 397) showed that psychosocial factors, such as breastfeeding self-efficacy, dispositional optimism, faith in breast milk, anxiety, and breastfeeding intentions, were more predictive of EBF. A woman's breastfeeding intentions were highly influenced by social pressures and the cultural expectations placed on them. Previous authors (Thorley 2011: 5; Ogutu 2015; Breastfeeding Forum 2022) have explored the breastfeeding dilemma in research. Studies conducted on the

problem with breastfeeding discourse by Knaak (2006: 412), and breastfeeding as a moral imperative, by Crossley (2009: 71) showed that women felt a moral obligation to breastfeed their infant to uphold the image of a 'good mother' despite their true intentions. Given that most women initiate breastfeeding, it was essential to investigate the factors associated with maintaining EBF. A range of psychosocial factors was likely to contribute to a woman's ability to maintain EBF (O'Brien *et al*. 2008: 397; De Jager *et al.* 2013: 506 and de Jager *et al.* 2014: 657).

Mothers with a positive attitude and initial confidence regarding EBF breastfed longer than younger women and demonstrated more confidence. Also, better education was associated with a more positive attitude, contributing to a better comprehension of the benefits of EBF (Sabo *et al*. 2023: 1277813). Psychosocial factors namely depression and anxiety have previously been linked to early cessation of breastfeeding (Islam *et al*. 2021: e2051419). Based on previous literature, maternal attitude was predicted to have a strong relationship with breastfeeding outcomes. However, there was limited literature on this subject in South Africa especially as relates to the fundamental ethical principle of informed choice. Those wishing to improve EBF rates must acquire a deeper understanding of why alternative feeding behaviours are occurring and who or what influences them. Identifying factors associated with EBF are crucial to inform policymakers and programme implementers to assist them to bring in appropriate interventions to reduce infant mortalities and morbidities. Therefore, this study aimed to explore the various psychosocial factors influencing EBF among primigravida mothers at a public hospital in the uGu district, KZN.

1.2 BACKGROUND

Human milk is a unique biomedical product that is seen as the best and most complete natural food for all the infant's physiological needs during the first six months of life (Victoria *et al*. 2016: 475). While a wealth of literature exists

describing the socio-demographic predictors of the initiation and duration of EBF (O'Brien *et al*. 2008: 397), studies have shown that in 2011, South Africa committed to promoting EBF for six months amongst all mothers, regardless of HIV status, which is in line with the WHO recommendations. This was a tremendous step from earlier policies. The average EBF rate increased from less than 10% in 2011 to 32% by 2016 (Nieuwoudt *et al*. 2019: 10). Additionally, a global nutritional target of 50% EBF was set by the WHO and UNICEF (2015), which is to be achieved at country level by 2025, to meet the sustainable developmental goals (SDGs). However, despite all national efforts to promote and sustain EBF and SDG targets, the EBF rate remained relatively low, requiring more research into factors influencing EBF. Amongst the national efforts implemented were: policy reform (Demographic and Health Survey South Africa 2016), information dissemination, including the legislation of the International Code for the Marketing of Breast Milk (WHO 1981), the high coverage and utilization of PHC facilities in the antenatal care and child health services (Demographic and Health Survey South Africa 2016), as well as a well-established 25 year history of the BFHI, which has significantly scaled up in coverage since 2011 (Innis 2014: 734). Another strategy was implementing health services to pregnant women and mothers of infants through cell phone-based health messaging (Coleman *et al.* 2020: 2). Very little is known about the influence of psychosocial factors on EBF among primigravida mothers within the context of South Africa. Furthermore, the impact of a woman living with HIV was predicted as either an enabler or a barrier to EBF (Jama *et al*. 2017: 43). Despite all the national efforts to promote EBF, South Africa's EBF rate remained only 32% (Witten *et al.* 2020: 76).

As per the Stats SA (2016) community survey, almost two-thirds of the types of dwellings in the district are formal (59%), with 31% being traditional and about 9% being informal. In addition, the uGu District is considered the epicentre of the HIV disease as 27% of the 3.1 million people living in the district are HIV-positive

and it faces one of the highest prevalence of HIV among pregnant women, with 43.4% being HIV-positive. These existing socio-economic factors have the potential psychological effect of stress and anxiety, creating barriers to promoting, protecting, and supporting EBF.

The health facility is a 360-bed public hospital operated by the KZN Department of Health situated in Scottburgh in the Umdoni Local Municipality. It covers an area of 2 470 square km, about 50km from the city of Durban and 65km from Port Shepstone on the South Coast. The Umkomaas River borders the hospital on the North, the Umzumbe River on the South, High flats on the west, and the Indian Ocean on the East. It serves three local municipalities, namely Umdoni, Vulamehlo, and Umzumbe, and has an average delivery rate of 300 babies per month (GJ Crookes Hospital, KZN Department of Health 2023). Even though the hospital is a Mother-Baby Friendly Initiative (MBFHI) accredited by the Department of Health (GJ Crookes Hospital, KZN Department of Health 2023), challenges among primigravida mothers to breastfeed exclusively still exist, possibly due to many psychosocial factors. The researcher therefore selected this hospital to explore various psychosocial factors influencing EBF among primigravida mothers at a public hospital in the uGu District.

HCWs in uGu District lack adequate knowledge to support EBF (Doherty *et al.* 2020: 16). Findings from this study found that mothers in the uGu district did receive group information during ANC with a significant focus on the importance of six months of EBF. However, these sessions did not prepare mothers for the challenges they would likely face in maintaining EBF. Mothers described that they did receive some practical support with breastfeeding initiation after delivery. However, support for common challenges in the early post-natal period appeared to range from supportive and correct messages to incorrect or absent advice by health workers. Single women often lived separately from their partners (National Department of Health/Statistics South Africa/South African Medical Research

Council and ICF 2019). They faced pressure from family members who strongly influenced how they fed their children. Counselling from health workers appeared not to have prepared them for these challenges. Therefore, these psychosocial factors can be viewed as strong predictors of EBF intent, practice, and duration requiring further research.

1.3 PROBLEM STATEMENT

The postpartum period is critical for establishing and supporting breastfeeding (Vieira *et al*. 2013: 116). Despite all the national efforts to promote EBF, the breastfeeding rate remained low in South Africa. Problems faced in uGu district which impacts the public hospital selected for the study includes, raised unemployment rates, low-income households, a high rate of teenage pregnancies, and more female child headed homes. Also, more than half of women living with HIV in KZN practiced EBF (54.5%) at 14 weeks, which were at similar rates to women not living with HIV (51.0%) (Remmert *et al*. 2020: 127). Early cessation of breastfeeding and mixed feeding were common standards of practice among young primigravida mothers. They had to either return to work or go back to school, leaving their babies with family. Health workers at this health facility lacked adequate knowledge and supportive strategies to promote protect and support EBF. Restoring health worker confidence in supporting breastfeeding remains a challenge and requires further research. Initiating and implementing the BFHI's ten steps to successful breastfeeding should be strengthened to improve the supportive breastfeeding services in baby-friendly initiative hospitals to support optimal infant feeding practices and promote maternal and Child health. Presently the organization has adopted a baby-friendly EBF programme; however, challenges among primigravida mothers still exist, possibly due to many psychosocial factors.

1.4 AIM OF THE STUDY

The aim of this study was to explore the psychosocial factors influencing exclusive breastfeeding among the primigravida mothers at a public hospital in the uGu District, KZN, South Africa.

1.5 OBJECTIVES OF THE STUDY

The objectives of the study were to:

- Explore psychosocial factors affecting EBF among primigravida mothers.
- Explore the perceptions of the primigravida mothers towards EBF.
- Determine how socio-demographic factors influence EBF among primigravida mothers.

1.6 RESEARCH QUESTIONS

- What are the psychosocial factors that influence EBF?
- How have the perceptions of primigravida mothers influenced EBF?
- How do socio-demographic factors influence EBF amongst primigravida mothers?

1.7 SIGNIFICANCE OF THE STUDY

For infants to survive, grow and develop according to the milestones they require the right proportion of nutrients in their daily intake. Breast milk has rich nutrients, antibodies and contains equivalent quantities of the four main constituents namely, fats, sugar, water, and proteins. These nutrients are major prerequisites to the health and survival of babies. When a child is exclusively breast fed, their immune system is strengthened, and protects them from life-threatening illnesses such as pneumonia and diarrhoea amongst other infections. Breast feeding provides ideal food for the healthy growth and development of infants, and it also plays an integral part of the reproductive process which contributes to the health of mothers (WHO 2018). However, health care workers need to be more aware

and take a positive approach to promoting EBF within their organisations. This study will identify the various psychosocial factors influencing breast feeding and from the findings a robust comprehensive plan will be developed to guide and support health care workers and promote EBF among primigravida mothers within the organisation studied. Although there are many challenges with first time mothers post-delivery as they need to return to work and face challenges within their environment to EBF it is important that psychosocial factors are identified during the ANC and preparation for breast feeding must start early. This study will not only support primigravida mothers with EBF but will also provide pertinent information to policymakers and programme implementers to plan and introduce appropriate interventions to reduce infant mortalities and morbidities. Mothers who are immunocompromised will be provided with adequate information on their options to exclusively breastfeed and to increase their self-confidence, despite the psychosocial implications of being immunocompromised.

1.8 STRUCTURE OF THE THESIS

CHAPTER 1: OVERVIEW OF THE STUDY

This chapter gives an overview of the study. It addresses the problem statement, key objectives, significance of the study, and provides a brief overview of the related literature as well as the methodological approach of the study.

CHAPTER 2: LITERATURE REVIEW

This chapter provides the literature review on psychosocial factors influencing EBF among primigravida mothers at a public hospital. The sources that are relevant to the research topic are discussed in detail.

CHAPTER 3: THEORETICAL FRAMEWORK

This chapter provides an overall overview of the theoretical underpinnings that provided a framework for this study. The conceptualisation of how the various

psychosocial factors influenced breast feeding among primigravida mothers and their experiences are explored and discussed within the context.

CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

This chapter presents the research design and methodology and design. It further outlines the strategy used to address the research questions.

CHAPTER 5: PRESENTATION OF FINDINGS

This chapter presents the findings of the study using themes extracted from the data revealed by the interviews related to psychosocial factors related to EBF.

CHAPTER 6: DISCUSSIONS OF FINDINGS

This chapter discuss the findings of the study by providing the literature that either supports or refutes the findings.

CHAPTER 7: SUMMARY, LIMITATIONS, RECOMMENDATION AND CONCLUSION OF THE STUDY

This chapter provides the summary, limitations, recommendations and conclusion of the study.

1.9 SUMMARY OF THE CHAPTER

An overview of the study was presented in this chapter and the objectives of the study together with the problem statement and rationale were outlined. In the next chapter, the relevant literature sources on EBF from a global and national perspective will be reviewed. The various psychosocial factors within various models and their influence on EBF among primigravida mothers from global and South African viewpoints will also be detailed.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents a literature review that identifies various psychosocial factors influencing EBF among primigravida mothers at a public hospital in the uGu District, KZN, South Africa from a Global, and South African perspective. The previous chapter provided a background on World Health Organization recommendations (WHO 2018) on EBF, aims and objectives, significance of the study, and the purpose of this study outlined in the problem statement. The literature review is an interpretation and study of the literature, which follows a topic of enquiry and attempts to identify and track all the available literature on the subject by following a systematic and comprehensive methodology (Aveyard 2014: 2). Furthermore, a literature review is a process that involves researching, reading, understanding and using the findings from various literature sources to conclude a topic. It determines what is known and not known about a subject, concept or problem (Burns and Grove 2011: 509). Scientific evidence over the years has documented the benefits of breast milk. Besides the well-known nutritional, anti-infective, and immunologic properties, there was increasing evidence that breastfeeding impacted the mother's and child's long-term health (Work Group on Breastfeeding 1997: 1035).

The influence of the various psychosocial factors on the duration of breastfeeding has been sparsely studied in South Africa, even though psychosocial factors were more accessible to influence than socio-demographic factors. Therefore, it constituted a potential target for the support and intervention of primigravida mothers. At this point, a mental and emotional physiological crisis caused confusion and maternal identity change. Meanwhile, in the puerperal period, the mother's loss of stored energy caused by fatigue, pharmacological effects,

delivery duration, and problems developed during childbirth and lactation made her more prone than ever to emotional crises and mood changes such as stress, anxiety, and depression. The emotional crises and mood changes following childbirth had a negative effect on the mother's parenting role and the infant's nutrition and growth (Rahmani *et al*. 2011: 78). The purpose of the literature review in this study is to identify and analyse literature that is related to the concept of psychosocial factors influencing EBF among the primigravida mothers at a public hospital in the uGu district, KZN.

2.2 PROCESS OF SOURCING RELEVANT LITERATURE

For the current study, a literature search was conducted using various search engines, namely Academic Search Complete, Cumulative Index to Nursing, Allied Health Literature (CINAHL) Plus with Full Text, EBSCO Host, Education Resources Information Centre (Eric) on the EBSCO Host platform, Google Scholar, Medical Literature online (Medline) with full text, South African e-publications, Science Direct, and the Department of Health in South Africa and the WHO websites. Different search words related to the research topic were used. These include EBF, behavioural influences, cultural influences, socio-economic influences and primigravida. To yield maximum results when conducting the literature search, terms were used independently and combined with other keywords to broaden search parameters. The literature search was conducted at different stages of the research process. The advantage of the search process was to organise the literature review into sections that present themes or identify trends, including relevant theory to synthesise and evaluate it according to the guiding concept of the topic of enquiry (Adair and Vohra 2003: 15). The time frame for sourcing the literature and inclusion criteria was from March 2022 to April 2023.

2.3 CONTEXTUALISE AND DEFINE PSYCHOSOCIAL FACTORS INFLUENCING BREASTFEEDING

Psychological factors included individual-level processes and meanings that influenced mental states such as moods, feelings, and thoughts. Sometimes, these words were combined to contextualise the psychosocial aspect of a person. This combination of psychological and social factors also implied that social processes' effects were mediated through psychological understanding (Stansfeld and Rasul 2007: 19). Psychosocial and socio-demographic factors were strong predictors of early EBF abandonment (Santacruz-Salas *et al*. 2020: 298). Therefore, it was necessary to identify and provide early treatment to nursing mothers with depressive symptoms, which decreased the associated morbidity and promoted a more significant duration of EBF. Support from health professionals that was received at home and at work assisted in this process. Adequate nutrition in the early stages of life was integral to the growth and development of infants. Researchers confirmed the positive effect of breastfeeding on the growth and development of lactating infants (Bastani *et al.* 2008: 9).

Successful breastfeeding depended not only on physiological factors but also on the mother's social and psychological conditions (Krouse 2002: 155). A number of studies have shown that mental disorders such as depression, anxiety, and stress have a negative effect on human physiological functions such as breastfeeding. Evidence suggested maternal stress prevented the milk let down reflex (Lashgaripour 2012; Deif *et al*. 2021:4). Research conducted by The Mother and Child Health Education Trust (2019) showed significant long-term benefits to both mother and child if breastfeeding is implemented for a minimum period of six months, to two years. Breastfeeding, especially in the early months of infancy, has a history of multiple physiological, psychological, and emotional benefits for the developing child (Gartner *et al*. 2005: 496-506). Therefore, the WHO recommended that EBF be initiated immediately following birth and

continue until the infant is at least six months (WHO 2018). Some of the literature identified psychosocial factors that hindered the maintenance of breastfeeding in mothers with depression and anxiety, such as antidepressant use, sleep deprivation, apathy, and depressive mood (Zauderer 2011: 131). Some behaviours of depressed mothers, such as remoteness and disengagement from childcare, had negatively impacted their infants. This less intense mother-infant interaction exposed infants to emotional, behavioural, and cognitive development problems as well as malnutrition and physical health problems (Dennis and McQueen 2009: 736).

2.4 PSYCHOSOCIAL FACTORS INFLUENCING EXCLUSIVE BREASTFEEDING FROM A GLOBAL PERSPECTIVE

The WHO and UNICEF demonstrated that breastfed children had at least six times greater chance of survival than others within the first six months of life (WHO and UNICEF 2003: 7-14). Breastfeeding, in this respect, significantly decreased the chance of infection and death from acute respiratory diseases and diarrhoea (Callen and Pinelli 2012: 285). These statistical differentials were actual for children of women in developing countries and developed nations such as the United States, where UNICEF found a 25% increase in mortality among non-breastfed infants (UNICEF 2007). Several intervention studies cited by Haroon *et al*. (2013: 13) showed that increased self-efficacy, knowledge, and support increased breastfeeding initiation and duration. Therefore, this suggested that psychological factors impacted increasing breastfeeding behaviours (i.e., initiation and duration). In the United Kingdom, hospital admissions decreased for diarrhoea by 53% and respiratory tract infections by 27%, due to EBF (Kramer *et al*. 2012: 2). Despite these well-documented advantages and preventive benefits of breastfeeding, few women worldwide met the WHO's recommendation of EBF up to six months postpartum (De Jager *et al.* 2014: 657). Breastfeeding rates tended to decrease dramatically within the first week's after-birth as illustrated by the (WHO 2014a: 451). In Italy specifically, the Health Ministry had recently

promoted breastfeeding practices. It had urged hospitals to adhere to the BFHI (UNICEF 2015) to improve maternity services (Di Mattei *et al*. 2016: 2). Despite these efforts, the current Italian breastfeeding rates were as follows: around 90% of mothers breastfeed immediately after birth, 77% at hospital discharge, 31% at 4 and 10% at six months after pregnancy, respectively (Davanzo and De Cunto 2013: 20). Breastfeeding rates were higher in the North of Italy than in the South. These findings were due to the better health and welfare services offered in the North of the country. However, it was found that other social and personal determinants affected these rates, such as individual attitudes (Quintero *et al*. 2006: 5).

In a study of breastfeeding practices in Kuwait, researchers found that less than one-third of mothers (29.8%) fully breastfed their infants after release from the hospital, and fewer than 1 in 5 infants (18.2%) received colostrum as their first feed. Only 10.5% of infants were EBF since birth (Dashti *et al*. 2010: 7). A Kuwaiti study showed that breastfeeding success was significantly associated with the interest or approval of the baby's father (Dashti *et al*. 2010: 7). Similarly, only 10% of Turkish mothers breastfed their infants immediately at birth, while most women (90%) breastfed two days after birth (Ergenekon Ozelci *et al.* 2006: 143). Similar to the findings from other studies, women in this study felt that breastfeeding, especially in the early months of infancy, had a history of multiple physiological, psychological, and emotional benefits for the developing child (Krol *et al.* 2018: 977-982; Forster *et al*. 2003: 109; Gartner *et al*. 2005: 496-506). The researcher reviewed the literature from a global perspective to strengthen the study of psychosocial factors influencing EBF and made recommendations after the study's findings.

2.5 PSYCHOSOCIAL FACTORS INFLUENCING EXCLUSIVE BREASTFEEDING FROM AN AFRICAN PERSPECTIVE

The study conducted in Ethiopia by Mekebo *et al.* (2022: 2) has shown that EBF was associated with demographic, socio-economic, maternal, socio-cultural, and psychosocial support factors. Globally, optimal infant breastfeeding practice was among the most effective intervention areas identified to achieve the SDG of reducing child mortality rates. Despite its benefits, the practice of EBF in Sub-Saharan Ethiopia remained lower than the internationally recommended one. Earlier studies in various countries showed that EBF practice was also related to obstetric and healthcare factors related to mother and child, such as the child's birth weight, sex, age, order of birth, preceding birth interval, place of birth, mode of delivery, and the level of antenatal and postnatal care received (Tsegaw *et al.* 2021: 106). The authors further stated the percentage of EBF practice was higher (83.74%) among infants born vaginally than those born by caesarean section. Additionally, post-operative pain experienced by mothers caused them to refrain from EBF. Similarly, EBF was higher (88.42%) among infants born at health facilities than those born at home (Tsegaw *et al.* 2021: 106).

Another study in Malawi showed that mothers who attended antenatal clinics could breastfeed more than those who did not attend clinic visits at all (Chipojola *et al.* 2020: 132). Mothers who attended antenatal visits received awareness about EBF practice and its benefits from health professionals, encouraging them to breastfeed. Further study in Tanzania showed other factors that influenced EBF practice, which included: parity, family size, smoking, professional counselling on breastfeeding, infant feeding counselling, initiation of breastfeeding, and mother's knowledge about EBF (Dede *et al.* 2020: 32). In addition, this study showed that family size significantly influenced EBF practice. Mothers with larger family sizes spent more time caring for their large families and gave less attention to EBF; however, a study conducted in Ghana found differently. The study in Ghana showed that mothers with larger families could

breastfeed exclusively (Mohammed *et al*. 2023: 920). Therefore, encouraging antenatal care visits and promotion of health facility delivery were recommended. Furthermore, special attention was given to mothers with no or less education to make them better aware of the EBF and its benefits for enhancing EBF practice.

2.6 PSYCHOSOCIAL FACTORS INFLUENCING EXCLUSIVE BREASTFEEDING FROM A SOUTH AFRICAN PERSPECTIVE

Psychological distress is related to common mental health problems and can be described as a state of emotional suffering associated with stressors and demands that are difficult to cope with in daily life (Arvidsdotter *et al.* 2016: 687). Despite all national efforts to promote EBF, South Africa's EBF rate remained low. A study conducted in the North West province of South Africa by Witten *et al.* (2020: 76) described the mother's attributes, family environment, social environment, and baby cues as main predictors of either enabling or being barriers to EBF. Mixed feeding was a common practice among mothers who lacked adequate EBF knowledge, and a positive attitude towards EBF practice. Breastfeeding mothers from low-income households experienced high-stress levels, which they believed undermined their ability to produce enough breast milk and good quality breast milk. Mothers interpreted and internalised infant cues as negative responses to their breast milk. Babies who cried, breastfed frequently, and who have not slept for long periods were signals of insufficient breast milk. The research further noted that factors such as low education, low income, gender inequalities, social influence, and traditional practices were hindering the uptake of EBF (Witten *et al.* 2020: 76)

The country has a high number of single mothers, with just over 60% of children born in 2017 without a committed father (Hall *et al.* 2020: 156-157). In addition, mothers' high levels of poverty and unemployment in South African townships and the lack of food affecting good maternal nutrition at home were significant concerns and stress for breastfeeding mothers. A study conducted in 2017 by

Witten *et al*. (2020:76) revealed that almost 20% of South African households had insufficient or lack of access to food. According to Statistics Food Security South Africa (2017), the North West Province had the highest number of food insecure households at 64%. Other factors like family stress and the lack of food to support breastfeeding affected mothers' mental health. The mental disposition among breastfeeding women was postnatal depression (O'Brien *et al.* 2008: 397). Bick *et al*. (1998: 242*)* showed that factors in the social environment influenced early cessation of breastfeeding. Mothers who had to return to work within three months, with increased female family support in childcare and who had postnatal depression had stopped breastfeeding within three months. However, in South Africa, mothers did not stop breastfeeding entirely because of financial constraints but had mixed-fed their infants more often. With inadequate finances, good maternal nutrition was limited (Witten *et al.* 2020: 76). Another confounding determinant affecting EBF was the impact of immunocompromised illnesses on infant feeding practices and the psychosocial implications for mothers. A study by Zullinger *et al.* (2013: 1547) found significant variation in perceptions, intentions, and practices related to infant feeding among women living with immunocompromised illnesses in South Africa. Clinic guidance and breastfeeding support were the strongest predictors of breastfeeding or intention to feed (Doherty *et al*. 2012: 105). However, this clinical practice was lacking amongst health care workers. Further studies revealed that infant feeding choices and cultural expectations for seropositive African mothers led to stress and confusion in Afrocentric societies.

Discrimination, fear of disclosure, and stigma are among the psychosocial attributes faced by individuals infected with an immunocompromised illness. (Nyasulu *et al*. 2021:149-155). While disclosure of the mother`s status to partner and family is needed to gain support to EBF, immunocompromised mothers were often forced by their mother and grandmother to formula or mixed feed their babies, as the older generation knew better over one`s own choice of feeding

(Remmert *et al.* 2020:127). A study by Ostergaard (2010: 213) found that HIV-positive mothers expressed fear over potentially exposing their babies to life-threatening immunocompromised illness through breast milk. In addition, the fear and anxiety of poisoning their babies from the misconception that breast milk is unsafe was another serious obstacle to strengthening motherhood. Mothers who are immunocompromised found themselves in another world where they experienced the psychosocial effects of not being able to exclusively breastfeed their babies to avert mother-to-child transmission (MTCT) or do so with a burden of guilt about potentially infecting their infants. Moreover, a study conducted by Koricho *et al.* (2010: 12) showed that some healthcare workers were sources of misinformation that breast milk from immunocompromised mothers was toxic, bad, or poisonous, which led to formula feeding.

This study shed light on the social, economic, cultural, religious, and psychosocial factors that positively or negatively influenced primigravida mothers' breastfeeding practices and helped healthcare providers and policymakers develop interventions to promote EBF. Although the African culture advocated for breastfeeding, it did not promote EBF, which was the approved WHO recommendation for immunocompromised mothers for at least the first six months of their infant's life. The study showed that health care professionals must participate actively in the promotion of breastfeeding and alleviate the current gap in social knowledge and psychosocial influences around breastfeeding practice to re-incorporate into the lives of pregnant women. Over the long term, this knowledge has been adopted by the community so that more women gain the social support they need to feed their children successfully without needing formula.

2.7 CONSEQUENCES OF PSYCHOSOCIAL FACTORS ON EXCLUSIVE BREASTFEEDING

Previous literature consistently reported that a woman's level of breastfeeding self-efficacy was strongly related to EBF duration and that early breastfeeding difficulties experienced were negatively related to both breastfeeding self-efficacy and EBF duration (Blyth *et al.* 2002: 278; Blyth *et al*. 2004: 30; Kronborg and Vaeth 2004: 210; Scott *et al*. 2006: 646). The maternal intention was one of the strongest predictors of actual EBF outcomes (Blyth *et al*. 2004: 30; Kronborg and Vaeth 2004: 210 and Bai *et al*. 2010: 26). Women with higher breastfeeding self-efficacy practiced EBF for a longer duration (Kronborg and Vaeth 2004: 210). Psychosocial factors were significantly predictive of EBF duration. Self-efficacy, psychological adjustments, body image, motivation, and confidence were all essential psychosocial factors that affected a woman's ability to maintain EBF over time (de Jager et al. 2015: 103-111). A systematic review published by the Cochrane Collaboration according to Kramer and Kakuma (2012: 2) demonstrated significant advantages of EBF for six months of an infant, compared to three to four months for selected infants and maternal outcomes. In view of this, World Health Assembly (WHA) over the last decade since the first WHO recommendation, there was only an 8% increase in the rate of women exclusively breastfeeding beyond four months postpartum (WHA 2002).

Given that most women initiated breastfeeding, it was essential to investigate the factors associated with maintaining EBF. A range of psychosocial factors contributed to a woman's ability to maintain EBF (O'Brien *et al.* 2008: 397 and de Jager *et al*. 2014: 657). Selected psychosocial factors were identified as potentially modifiable factors; however, limited research has examined these factors, specifically for EBF and for duration beyond three months postpartum. Psychosocial factors such as depression and anxiety were previously linked to early cessation of breastfeeding (Henderson *et al*. 2003: 175; Akman *et al.* 2008: 369). Consistent with Self-Efficacy Theory Bandura (1977: 191) and Dennis

(1999: 399), the model proposed that this effect can be due to negative psychological symptoms, which precipitated early breastfeeding difficulties and reduced breastfeeding self-efficacy. Based on previous literature, maternal attitude was predicted to have a strong relationship with breastfeeding outcomes (Scott *et al*. 2006: 646; Semenic *et al.* 2008: 428). As psychosocial factors are amendable to change, interventions designed to address these factors resulted in better EBF outcomes, improving the population's long-term health outcomes. Individualised antenatal breastfeeding education and support strengthened the strategies that built a woman's confidence in EBF. Psychosocial supports and methods that provided positive feedback and increased a women's self-efficacy to breastfeed for six months were essential and, therefore, implemented.

2.8 FACTORS INFLUENCING EXCLUSIVE BREASTFEEDING

Breastfeeding duration was statistically significantly associated with psychological factors, including dispositional optimism, breastfeeding self-efficacy, faith in breast milk, breastfeeding expectations, anxiety, planned duration of breastfeeding, and the time of the infant feeding decision, as illustrated in Figure 2.1. Maternal, cultural, and socio-economically factors were discussed in this section.

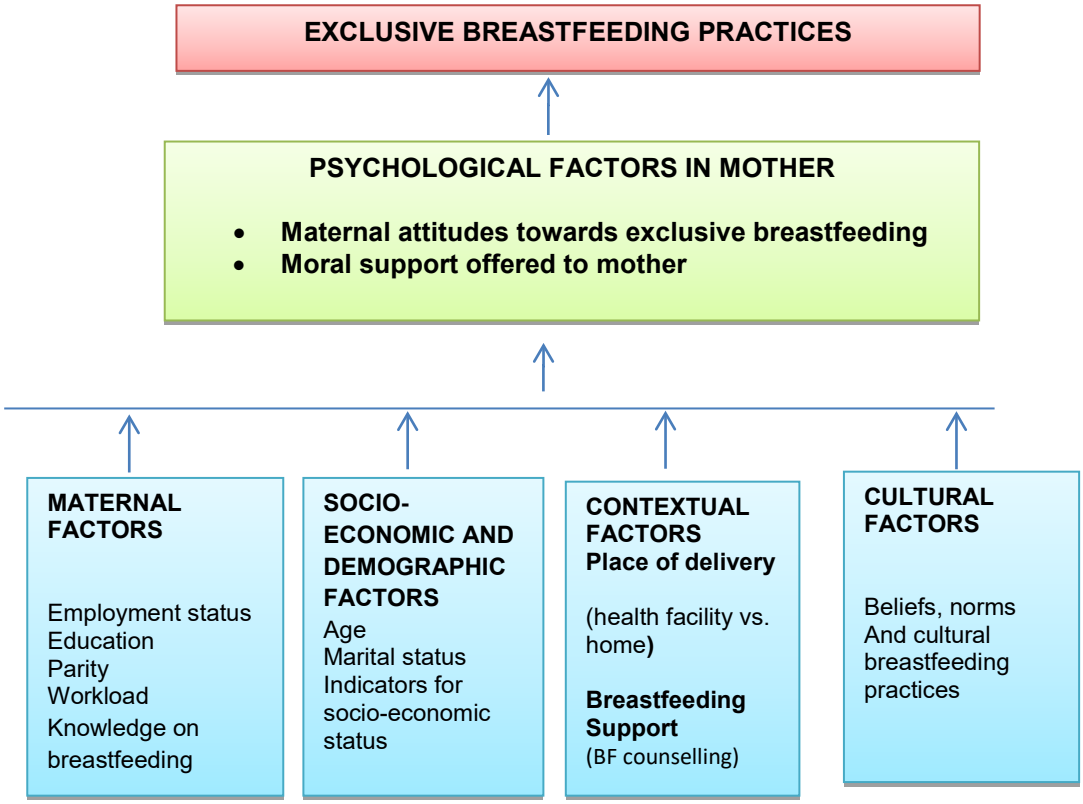

Figure 2.1: Factors associated with exclusive breastfeeding practices.

2.8.1 Maternal factors

The mother's nationality, age, parity, breastfeeding health education, and housekeeping availability were essential to the practice of EBF. A multitude of social, psychological, emotional, and cultural factors defined whether an infant was breastfed or formula-fed (Arora *et al.* 2000: 67). Health benefits of lactation were extended to the mothers; it reduced the risk of diabetes, (Gouveri *et al.* 2011: 135 and Ulnar *et al.* 2017: 422) and premenopausal breast and ovarian cancer. In addition to these beneficial health effects of EBF, which reduced the total healthcare costs, the costs saved from not having to buy formula, had reduced the total family and social expenditure (Pokhrel *et al.* 2015: 334). However, recent studies have expressed alarm at the observed decline in the practice and length of EBF. Ministries of Health in different countries performed

extensive programmes to promote EBF annually. One of the missing links in these programmes was the promotion of maternal literacy, which is one of the most influential factors on EBF. Indeed, there was a tendency to regress this practice concerning progress in marketing industrial milk and mothers' lack of information and awareness (Hassani *et al.* 2005: 343). A study in Morocco showed that 66% of mothers did not reach their initial intended breastfeeding duration. Several mothers suffered from health issues primarily related to perceived insufficiency or hardships with breast milk production (full breasts, breast engorgement, and mastitis). Previous studies showed that nipple pain while breastfeeding was an absolute barrier to EBF for women (Thet *et al.* 2016: 62). However, a key finding in the Cochrane review was that whatever the treatment adopted, nipple pain decreased in 7-10 days after birth (Dennis 2014: 125).

Another factor was the impact of maternal employment on breastfeeding rates. Previously published research had indicated that mothers who were employed full-time, a factor known to have affected breastfeeding, and giving one's child over to another's care before six months of age led to the cessation of breastfeeding (Avery *et al*. 1998: 167). Working mothers had less time and motivation to breastfeed their infants. The impact of formal jobs on breastfeeding was much worse than the case of informal occupations. In this regard, Nkrumah's study on 225 Ghanaian mothers indicated a significant difference in the amount and frequency of EBF between mothers with formal and informal employment. Furthermore, mothers who took their children to the workplace breastfed them more often than mothers who left them at home. Another UK study found that mothers with part-time or self-employed jobs were more likely to breastfeed their infants than full-time mothers. The reason behind this was the nature of their work. Flexible jobs allowed mothers to feed their infants more often, which suggested that although workplace support has been present in recent years, it was insufficient to prevent non-compliance with EBF. The

International Labour Organization (ILO) recommended that mothers be provided at least 18 weeks of maternity leave and 100% salary payment during that period (UNICEF and WHO 2017). Therefore, in accordance with earlier studies, mothers were quite susceptible to messages they receive implicitly and explicitly, such as encouragement, support, and positive reinforcement around breastfeeding from hospital staff, obstetricians, paediatricians, or other primary health care providers (DiGirolamo 2003: 94). The researcher explored the various maternal factors (level of education, breastfeeding knowledge, employment status) that influenced EBF amongst primigravida mothers, as well as their knowledge and perceptions about the diverse forms of collecting and preserving breast milk, to meet the recommendation of the WHO Tens Steps of Exclusive Breastfeeding.

2.8.2 Cultural factors

Culture is the life-ways of an individual or a group regarding values, beliefs, norms, patterns, and practices and can be further described as the legacy that group members pass down to one another inter-generationally (Henry *et al.* 2010: 4). Several studies emphasised the need to understand and have cultural beliefs and practices incorporated in the design and implementation of health and nutrition interventions (Bandyopadhyay 2009: 2). With South Africa being diverse in culture, studies showed that in the Muslim culture, many Muslim families practiced the sunnah of ‘tahneek’. A softened date was sometimes rubbed on the baby’s palate before the first feed so the baby ‘will enter a sweet world’. Traditionally, anything sweet will do if a date is not available. Mothers reported that they were required to cover themselves while breastfeeding in a public area (Shaikh and Ahmed 2006: 164). Human lactation is considered a naturally occurring phenomenon following childbirth, and the act of breastfeeding is affected historically by numerous social and cultural factors. Breastfeeding is an ultimate bio-cultural phenomenon. In human beings, breastfeeding is not only a biological process but also associated with culturally determined behaviours (Stuart-Macadam *et al.* 1995: 152). Cultural beliefs and norms profoundly

influenced human nutrition (Jones *et al.* 2003: 65) and were identified as determinants of breastfeeding practices (Rollins *et al*. 2016: 491). Public breastfeeding anxiety was a reason for some women choosing to bottle-feed. Some mothers reported that they are not at ease in breastfeeding in the presence of some relatives. Hence, since the public health consensus on breastfeeding was crucial for child health and survival, reintroducing the normality of breastfeeding in public places was seen as a positive step toward reducing the perception that breastfeeding in public is a sexual behaviour (Groleau *et al.* 2013: 250).

Another study by Shirima *et al.* (2001: 939) found that pressure associated with cultural practices led to the administration of water and herbal medications. The study in Morogoro, Tanzania, and rural South Western Nigeria found that some traditional beliefs, practices, and rites encouraged pre-lacteal feeds and the giving of extra water, herbs, and “teas” to breastfed babies. Moreover, giving infants water was also regarded as a cultural gesture to welcome the child into the world. In addition, the option of mixed feeding increased the risks of mother to child transmission (MTCT). Further studies in a Zimbabwean community revealed that their culture expected and demanded that babies be fed on solids within a week of their birth. Failure to comply with such an expectation was wrongly interpreted as infidelity in a family where tradition holds that babies who were fed solids were a sign of genetic connection of the baby with their ancestors (Muchacha and Mtetwam 2015: 16). Traditional medicine was administered to babies to try and avert the death caused by the condition that culminated in the subsiding of the fontanel in babies due mainly to severe dehydration (a condition known as “*nhova”* in vernacular). This practice was also common in Kenya. Infants were given various herbs to treat the condition known in Kenya as “*Ndebele*”. Traditionally; this condition was attributed to evil spells. Mothers, who are not practicing EBF, treated their babies with “*Nhova.”* Different foods and

medicines, such as barks, juices, roots, herbs, cooking oil, and wild fruits, were administered to their babies.

Further study in Kenya indicated that a mother's partner and close family members influenced her breastfeeding behaviour (Walingo *et al*. 2014: 250). The same findings were found in other African settings (Agunbiade and Ogunleye 2012: 5). The cultural beliefs documented in this study were reported especially by young mothers who had learned from parents, grandparents, spouses, or from older women in the community. One belief was aligned with the WHO recommendations on breastfeeding and positively influenced the translation of the recommendations into practice. The common belief was that colostrum was a natural medicine and that breast milk promoted brain and intellectual development. Furthermore, social and cultural factors have influenced the process of breastfeeding. Other factors that affected the breastfeeding process included support for breastfeeding and support groups that motivated mothers to breastfeed better. Research conducted by Hill and Humenick (2000: 248) revealed that support from partners was very influential on breastfeeding success. Parents, siblings, friends, and health workers also have an essential role.

Data from 120 cultures showed that 50 cultures initially withheld the infant from the breast for 48 hours or more, and substitute prelacteal feeds were given. Reasons for withholding colostrum were varied. Most groups reported that colostrum was dirty, poisonous, or contaminated. Modern prelacteal feeding substituted for colostrum included water, glucose, or infant formula. Cultural beliefs and practices within other communities around the world assisted midwives, physicians, and lactation specialists in providing more culturally sensitive care to their patients. This study provided significant insight into the practices and barriers for women in South Africa regarding EBF. EBF remained low among primigravida women, especially new generation and working mothers

influenced by culture, values, or beliefs in that community and mothers who need to return to work. Breastfeeding support for mothers struggling to breastfeed was to be provided by the front-line service providers: nurses and health workers.

2.8.3 Socio-economic demographic

Socio-demographic factors through targeted interventions focused on mothers at risk of interrupting breastfeeding before the recommended time. With this in mind, public health strategies were required to identify cultural beliefs and practices supporting infant feeding to promote EBF, affecting maternal and child health. Demographic and socio-economic factors play a significant role in infant feeding practices. One variable was age, which greatly influenced a mother's decision to breastfeed her infant. Studies by (Kitano *et al*. 2016; Ogbo *et al.* 2019; Lawal and Idemudia 2017) have described the influence of maternal age on breastfeeding initiation and duration. In the study by Ogbo *et al.* (2019: 1-6) mothers less than 20 years old stopped EBF in early postnatal period, in comparison to women aged 20-34 years old. Mature and more literate mothers breastfed their infants exclusively and for longer than other groups (Kitano *et al.* 2016: 121).

The major socio-demographic factors that affected prolonged breastfeeding behaviours were: age, marital status, education, and income level. Similarly, there was a literature that showed strong evidence that being of an older age, being married, being well educated, and having a higher income are each associated with longer breastfeeding duration. These factors were not amendable to change by midwives once the woman was pregnant. Knowing that successful long-term breastfeeding was less likely for young, poorly educated, unmarried, and lower-income mothers helped midwives focus their education and support efforts on these groups of women (Meedya *et al*. 2010: 135). Younger mothers aged 20 to 29 breastfed less (81.2%) than mothers aged 30 years or

older (85.9%); hence further research was required to determine why younger mothers did not want to EBF.

Limited studies have addressed socio-demographic variables determining EBF among working mothers in South Africa (Kitano *et al*. 2016; Meedya *et al*. 2010). The most persistent modifiers of health beliefs about breastfeeding behaviour are socio-demographic because they are the most prone to change. Therefore, the various socio-demographic characteristics of health behaviour related to EBF were explored in this study. Nursing mothers needed to understand and be knowledgeable about the factors that influenced their breastfeeding choices and the various available supports to promote the decision to breastfeed exclusively. The practice of EBF was being sabotaged by age and too many pregnancies. Health interventions and strategies from the findings of this study needed to be developed to improve breastfeeding practice among primigravida mothers.

2.8.4 Behavioural factors affecting breast feeding.

Breastfeeding is a complex behaviour; it relies on individual maternal traits and behaviours and infant characteristics intersecting with health systems and services, family and community support, workplace policy, and broader cultural values (Rollins *et al.* 2016: 491). A study conducted by Gallegos *et al.* (2020: 103) showed that skin-to-skin contact in Australia increased from 72% to 94%; however, the skin-to-skin contact policy alone was not enough to influence on-going breastfeeding practice. Furthermore, in Ireland, the odds of being in the ‘any breastfeeding’ group increased when participants indicated they were religious (i.e., belong to a church, denomination, or religious community). This was contrary to previous work where religion, specifically Catholicism, negatively influenced breastfeeding initiation rates. Therefore, it is recommended that, to empower women in problem-solving, access to personalised information and support, which included that which is to be delivered via technology antenatally and postnatally, be implemented as a strategy towards promoting EBF.

Another study by Primo *et al.* (2016: 198) showed that a primipara's decision to breastfeed was related to prenatal care by an obstetrician, not a caesarean section. Women who planned their pregnancy and began prenatal care in the first trimester were 25% more likely to opt for breastfeeding. Furthermore, successful experience of breastfeeding in the previous child was a positive desire to breastfeed a new baby for longer and in an exclusive way. Past experiences of family and friends in breastfeeding were meaningful in the breastfeeding process because they increased confidence and maternal intent in the woman to breastfeed. Therefore, one can agree with Bandura`s Theory of Self-Efficacy that people of influence in our lives, such as parents, teachers, managers, or coaches, have the ability to strengthen our faith in succeeding. Suggesting activities where people feel led makes them believe they can cope successfully with specific tasks. Coaching and giving evaluative feedback on performance are common types of social persuasion towards mastery of a task (Bandura 1986: 191).

Further studies on behavioural factors influencing breastfeeding showed that despite the documented evidence of the harmful effects of smoking on the foetus and infants, many women still continue to smoke during pregnancy and lactation. Among women who smoked, milk production was reduced, with shorter lactation periods. Less educated women of lower socioeconomic status who began smoking at a younger age did not recognise the adverse effects of tobacco smoking on foetal development. Low birth weight, premature infants, and increased pregnancy complications such as placental abruption was among the findings in the study. Smoking exposes infants to the harmful health risks such as risk of suffering from otitis media, lower, upper respiratory tract infections, and heart rate variability (Napierala *et al.* 2016: 321). Given the adverse effects of the nicotine present in breast milk for the infant, mothers must be educated on all the harmful chemicals in cigarettes that are secreted into breast milk. They should be strongly encouraged to stop smoking during pregnancy and lactation *(*Prima *et al.*

2013: 395), and to seek to promote and child health and survival. Therefore, the study aimed to explore various psychosocial factors influencing EBF at a public hospital in uGu district.

2.9 SUMMARY OF THE CHAPTER

The various concepts of psychosocial factors related to EBF experienced by primigravida mothers and health care providers from Global, and South African perspective were highlighted. A complete framework of factors and challenges that affect EBF was explored and discussed in-depth, aligned to the study aims and objectives. The literature review contributes to the general theme, specifically psychosocial experiences among primigravida mothers. In the next chapter, the theoretical framework underpinning the study and the rationale behind the choice of the framework will be discussed.

CHAPTER 3
THEORETICAL FRAMEWORK

3.1 INTRODUCTION

This chapter will discuss the theoretical framework underpinning this qualitative study and the rationale behind the choice of the framework. A framework is a conceptual underpinning of a study (Polit and Beck 2017: 119). A theory enables an accurate description of phenomena while offering a systematic explanation of processes that lead to knowledge claims. The researcher chose to use Bandura's Self-Efficacy Theory to guide the study. The framework was based on an individual's belief in their capacity to implement behaviours essential to produce specific performance achievements (Bandura 1977: 191, 1986, 1997). Self-efficacy indicates a person's confidence in their ability to control motivation, behaviour, and social environment.

The Psychological Theory of Self-Efficacy developed from the research conducted by Albert Bandura. The author noticed a mechanism that played a huge role in people’s lives that, up to that point, had not been defined or systematically observed. This mechanism was the beliefs people have in their ability to influence the events of their lives. Bandura (1999: 21) proposed that perceived self-efficacy influences what coping behaviours are initiated when an individual meet with stress and challenges, along with finding out how much effort and time will be required to reach one’s goals. When people are made to work through their problems on their terms, they gain positive experiences that boost their self-efficacy even more.

The core of Self-Efficacy Theory means that people can exercise influence over their actions. Literature, by the U.S. Department of Health and Human Services (2011: 5) has identified multiple barriers to breastfeeding, which included the lack of knowledge, belonging to a low-income family, social support, and lactation problems, amongst others. The Theory of Self-Efficacy

is derived from the SCT and conceptualizes person-behaviour-environment interaction. This theory was appropriate for this study, as it is the interrelationship between person, behaviour, and environment.

3.2 THE HISTORY OF BANDURA's SELF-EFFICACY THEORY

Psychologist Albert Bandura formulated the SCT and the Self-Efficacy Theory in response to the limitations of behavioural learning theories. While behaviourists looked at how the environment and reinforcement affect behaviour, Bandura (1999: 154) recognized that people learn by observing others behave, including the rewards and punishment they receive. Learning theories see the environment as the primary force in development (Hoffman 1993: 135). In the context of the study, Albert Bandura (1999: 154) is the most authoritative living psychologist. His Social Cognitive and Self-Efficacy theories have influenced many areas of inquiry, namely education, health sciences, social policy, and psychotherapy. The self-efficacy in the Bandura theory introduced the context of an explanatory model of human behaviour, in which self-efficacy causally influences expected behaviour outcomes but not vice versa (Bandura 1986, 1995: 347, 1998: 623, 2004: 143, 2006b: 164).

Self-efficacy beliefs affect one's cognitive, motivational, emotional, and decision-making processes. Efficacy beliefs cause individual thought processes to be either optimistic or pessimistic about self-development or self-esteem. They play a significant role in the self-regulation of motivation through goal challenges and outcome expectations (Mark *et al*. 2011: 15). One of the important features of Bandura's model is the four sources of efficacy information, or learning experiences, leading to the development of self-efficacy expectations. Some researchers, like Betz (2007: 403) and McCormick and Martinko (2004: 2), supported self-efficacy based on Bandura's idea and suggested that self-efficacy can affect behaviour cognition in the following ways:

- Activity choice
- Goal setting

- Effort and persistence
- Learning and success.

They decided that people with high self-confidence are more likely to view difficult tasks as something to be accomplished rather than something to be avoided. In contrast, people with weak self-confidence are more likely to avoid challenging tasks. They also focus on personal failings and negative outcomes (Mark *et al*. 2011:15). This theory provides an outline for understanding, predicting, and changing human behaviour, guiding this study to understand the various psychosocial factors influencing EBF among primigravida mothers.

3.3 THE THEORETICAL FRAMEWORK THAT GUIDED THE STUDY

Self-efficacy refers to a person's belief in their capacity to execute behaviours necessary to produce specific performance attainments (Bandura 1977: 191). Self-efficacy is confidence in the ability to exert control over one's own motivation, behaviour, and social environment. Bandura's framework describes that the human cognitive self-regulation system and self-efficacy beliefs are the most central and pervasive influence on people's choices, their goals, how much effort they apply to a particular task, how much time they take to persevere at a task, whether in the face of failure or hardship, the amount of stress they experience, and the degree to which they are susceptible to depression. In summary, according to Self-Efficacy Theory, verbal persuasion, mastery experiences, vicarious experiences, and somatic and emotional states affect our self-efficacy and, therefore, our behaviour, as illustrated in Figure 3.3 below. Depression and anxiety, classified under psychosocial factors, have previously been linked to early cessation of breastfeeding (Henderson *et al.* 2003: 175; Akman *et al*. 2008: 369). Consistent with Self-Efficacy Theory (Bandura 1977: 191 and Dennis 1999: 399), the model proposes that this effect may be through negative psychological symptoms precipitating early breastfeeding difficulties and reduced breastfeeding self-efficacy.

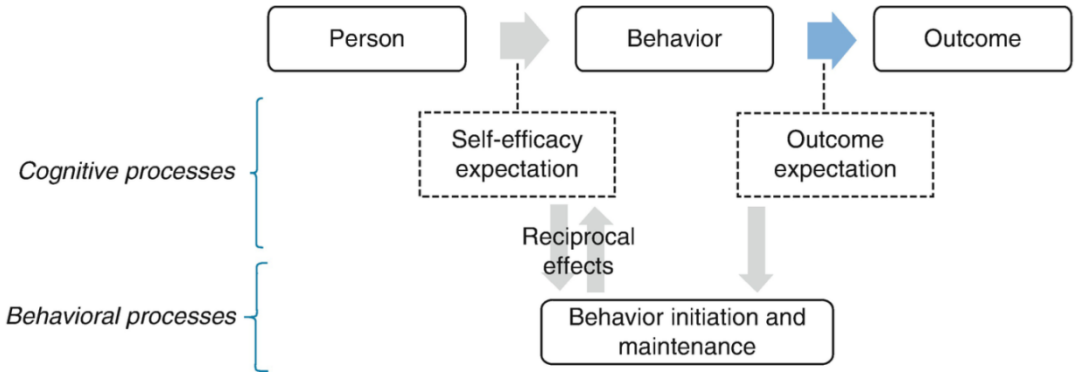

Figure 3.3. Self-Efficacy Theory (Bandura 1986: 21)

3.4 CORE PROPOSITIONS AND SOURCES OF SELF-EFFICACY THEORY

Self-efficacy or confidence is one of the most enabling models in psychology. It is the optimistic self-belief of competence or chances of accomplishing a task and producing a favourable outcome (Bandura,1997). The four sources of self-efficacy are Performance Accomplishments (outcomes), Vicarious Experience, Social Persuasion, and Physiological and Emotional States, as illustrated in Figure 3.4.

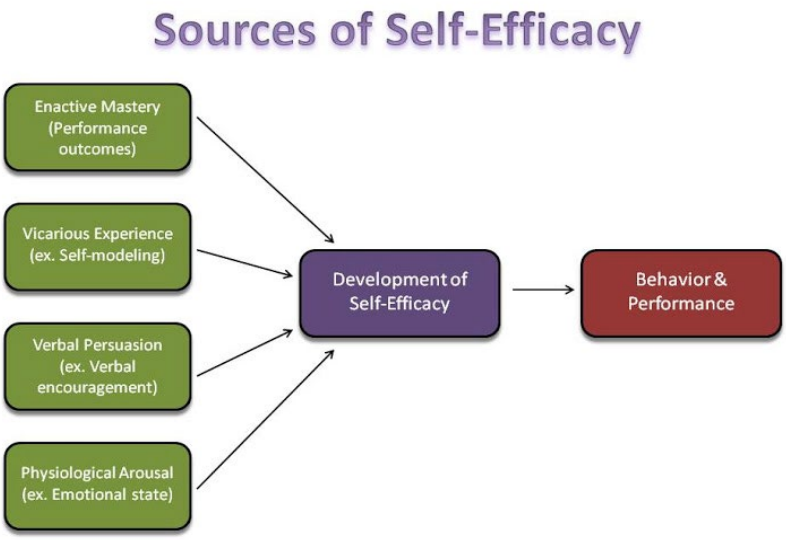

Figure 3.4: Self-efficacy Theory (Bandura 1986: 25)

3.4.1 Performance Accomplishments

This is Personal assessment information of a person's achievement. A strong sense of self-efficacy requires experience in overcoming obstacles through effort and perseverance (Bandura 1986: 25). Mastery experiences are the primary source of self-efficacy, and success raises mastery expectations, while repeated failures lower mastery experiences. Success, for example, in mastering a task or being in control of an environment, builds confidence in that area, whereas failure will underestimate belief in self-efficacy.

3.4.2 Vicarious Experience

The second source of self-efficacy comes from observing people around us, namely those we consider role models who successfully perform activities known as modelling. Modelling develops motivation in observers to master their performance by learning from what they have observed (Bandura 1986: 25). Seeing people like ourselves succeed through sustained effort raises our belief that we also have the ability and potential to master the activities needed for success in that area.

3.4.3 Social Persuasion

People of influence in our lives, such as parents, teachers, managers, or coaches, can positively impact our belief system that we have what it takes to be successful. Being motivated that we possess the ability to master certain activities creates determination to achieve the task and sustain it when problems arise. Suggesting actions lead people to believe that they can successfully cope with certain specific tasks. Types of common social persuasion are: coaching and giving evaluative feedback on performance (Bandura 1986: 25).

3.4.4 Physiological and Emotional States

The state you find yourself in will influence how you judge your self-efficacy. The individual's physiological or emotional conditions affect self-efficacy judgments concerning specific tasks. Emotional reactions to such tasks, namely anxiety, can lead to negative assessments of one's ability to complete the tasks. Depression, for example, has the effect of lowering confidence in our capabilities (Bandura 1986: 25). Stress reactions or tension are evaluated as signs of vulnerability to poor performance, whereas positive emotions can boost our confidence in our skills (Bandura 1986: 25).

3.5 APPLICATION OF BANDURA's SELF-EFFICACY THEORY

Self-Efficacy Theory and research have contributed significantly to studying and understanding human motivation. Researchers have shown that self-efficacy is a crucial internal motivational process that can be affected by personal and environmental variables, influencing motivational outcomes of choices, effort, persistence, and achievement (Bandura, 1977:191). The author further stated that women with negative attitudes towards pregnancy and postpartum might experience difficulties in breastfeeding and have reduced confidence to overcome these difficulties, which in turn may adversely affect their breastfeeding outcomes (Dennis and Faux 1999: 399). The application of self-efficacy principles to diverse contexts suggests some

adaptations are needed to the original theory. Perceived self-efficacy and outcome expectancies are the two key determinants of behaviour (Bandura, 1986:25). The latter construct refers to the perceived positive and negative consequences of performing the behaviour. According to the Bandura's Self-Efficacy Theory, published in 1977, therapeutic change can be brought about by experiences of mastery arising from successful performance for applying this theory. Self-efficacy is the individual's belief or confidence that one can successfully execute a behaviour required to produce an outcome. The greater the self-confidence, the more individuals believe they can implement the behaviour necessary to obtain a particular result, such as improving behaviour positively to promote EBF (Bandura 1977: 191).

Situations that are believed to exceed the individual's abilities and involvement are avoided without hesitation (Bandura 1977: 191). A central idea posed in theory is that success experiences raise self-efficacy but repeated failures lower self-efficacy. Strong self-efficacy enhances human accomplishment and personal well-being in many ways. People with a strong sense of competence in a particular area approach difficult tasks in that area as challenges to be mastered rather than as dangers to be avoided. They have a great intrinsic interest in activities, set challenging goals, and maintain a strong commitment to them. They also maximize their efforts in the face of failure, more easily recover their confidence after failures or setbacks, and attribute failure to insufficient effort or deficient knowledge and skills they believe they can acquire. People with a high sense of self-efficacy develop feelings of serenity in approaching difficult tasks and activities. Moreover, enhanced self-efficacy, secondary to repeated successes, often generalizes to new situations. This theory will guide the study to explore the factors influencing EBF among primigravida (Bandura 1977: 191).

3.6 PSYCHOSOCIAL FACTORS AS A THEORETICAL CONSTRUCT

The WHO recommended that all infants worldwide be EBF for optimal health and growth for the first six months of life (WHO 2018). However, throughout the world, very few women have met this requirement. Psychosocial factors identified as potentially modifiable factors implicate a woman's ability to breastfeed successfully exclusively; however, there is minimal research examining these factors specifically for EBF to six months. Psychological literature from the general population suggests that social and behavioural constructs are essential in determining these factors. Normative beliefs relate to beliefs of others about one's engagement in vicarious psychosocial beliefs about others engaging in the behaviour (Liu *et al*. 2020: 161).

Even though the theory of Self-Efficacy by Bandura (1977: 191) states that a person's ability to perform a behaviour with self-confidence depends on how the individual perceives the behaviour to be performed, women with high antenatal self-efficacy were more likely to "push through" these early difficulties and breastfeed exclusively (Blyth *et al*. 2004: 30). According to the literature, the areas that affect EBF relate to postpartum depression, anxiety, social support, and attitude to breastfeeding (Cho *et al*. 2022: 3128). The early cessation rate for mothers with low self-efficacy was up to twice as high as the cessation rate for mothers with high self-efficacy (Kronborg and Vaeth 2004: 210).

Given the various behavioural models, social and cognitive, the study adopted Bandura's Self-Efficacy Theory. According to breastfeeding Self-Efficacy Theory, mothers with high self-efficacy are more likely to initiate breastfeeding, persist when they experience difficulties, adopt self-encouraging thoughts, and react positively and overcome difficulties (Bandura 1977: 191). Other important constructs involve an intention to undertake the behaviour, which incorporates setting goals and committing to the behaviour through self-regulatory skills. Although maternal and paternal attitudes towards breastfeeding and the benefits of breast milk predict EBF outcomes,

a gap remains in the literature regarding how a woman's attitude towards pregnancy may influence her EBF outcomes. It is unknown whether women who do not enjoy or have a negative attitude towards their pregnancy are less likely to breastfeed exclusively than women who have a positive experience and attitude towards pregnancy and the related postpartum experiences. This study aimed to explore the various psychosocial factors and was guided by Bandura's Self-Efficacy Theory.

3.7 SUMMARY OF THE CHAPTER

This chapter provided an overview of the theoretical framework that guided this study to explore the psychosocial factors influencing EBF in the primigravida. Bandura's Self-Efficacy Theoretical Framework has four processors based on the SCT and conceptualizes person-behaviour-environment interaction. This chapter has demonstrated that each of its constructs has a vital role in the psychosocial adaptation to promote EBF among primigravida mothers. The next chapter will detail the research design and methodology utilized in this study.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

The previous chapter described the selected theoretical framework to contextualize the study. This chapter focused on the research methodology, which described the design, procedures, and tools employed to conduct the study. It also highlighted the use of the Bandura Self-Efficacy Theory to guide the study. A systematic approach to resolving an issue is crucial to any research. It enables the researcher to identify specific tools and methods that will assist in achieving the desired outcomes of research (Saunders, Lewis and Thornhill 2016: 110; McBurney and White 2009: 150). Bryman and Bell (2015: 424) state that a logical approach enables researchers to be aware of the aim of the study and to select data instruments which are appropriate to achieve the aim.

4.2 RESEARCH DESIGN

Research design is a blueprint for conducting any study, and it maximizes control over factors that can interfere with the study's desired outcome (Burns and Grove 2011: 509). This study adopted and applied qualitative research methods in a methodological design. Creswell (2014: 12) describes research design as inquiries within research approaches that provide specific direction for the procedures to be followed. A research design is an overall plan for addressing a research question, including specifications for enhancing the study's integrity (Polit and Beck 2017: 743). For this current study, a qualitative, exploratory design was followed to explore the psychosocial factors influencing EBF among the primigravida mothers at a public hospital in the uGu District, KZN, South Africa.

A qualitative, explorative design was particularly relevant to this study as this approach allowed for the engagement and interaction of the researcher with the participants through interviews whilst striving for subjectivity. The explorative design focused on the lived experiences and feelings of participants and aimed to find shared patterns rather than individual characteristics in the research subjects. This scientific approach guaranteed the authenticity of the collective experiences of participants while adhering to scientific standards (Busetto *et al.* 2020 :14).

Any researcher undertaking a study of this nature must be open to and genuinely want to know the answer to the research questions, not merely to confirm their preconceptions about the phenomenon but to allow it to reveal itself as it is (Busetto *et al.* 2020 :14). Gibson and Hanes (2003: 186) argue that five concepts are critical to conducting phenomenological research and uncovering the essences of lived experience, namely openness, encounter, immediacy, uniqueness, and meaning.

A study by Kleiman (2004: 7) debated phenomenology in research, and revealed that by using phenomenological research, the researcher sought to find the essence of the experience of a phenomenon. Therefore, the goal of the phenomenological researcher in this study was to uncover these essences or underlying themes of the meaning of these shared experiences of primigravida mothers in a public hospital in the uGu district of KZN Province in South Africa.

4.3 STUDY SETTING

According to Polit and Beck (2017: 744) a research study setting is where the study is to be conducted. The District Hospital selected for study is a Department of Health Government institution, situated in the town of Scottburgh under the Umdoni Municipality in the uGu district, KZN, and covers an area of 2 470 square km. It is about 50 km from the city of Durban and 65 km from Port Shepstone on the South Coast. The Umkomaas River

borders the Hospital on the North, the Umzumbe River on the South, High flats on the west, and the Indian Ocean on the East. It serves three local municipalities, namely Umdoni, Vulamehlo, and Umzumbe.

According to the 2020 uGu district Profile and Analysis Report, the uGu district municipality is one of the KZN Province's ten districts (Category C municipalities). It has a total population of 754 954 people, with a growth rate of 1.1% in 2019, up from 0.6% in 2009. It has a relatively young population, with children and youth making up 38.7% of the total population. Children under 18 head 1721 households and 27% (467) of the child headed households have women as their heads. The uGu district Municipality's population consisted of 89.85% African (710 000), 5.80% White (45 800), 0.94% Coloured (7 460) and 3.40% Asian (26 800) people (UGu District-IUDF 2020). Furthermore, uGu District faces high rates of unemployment, poverty, and inequality. In 2019, there were a total number of 68 800 people unemployed in uGu, at a rate of 4.02% annually. Although there are people employed in the informal sector, they earn very low wages and have to support many family members (UGu District-IUDF 2020). Other households depend on grants which are not enough to sustain the levels of living.

As per the Stats SA (2016) community survey, almost two-thirds of the types of dwellings in the UGu district are formal (59%), with 31% being traditional and about 9% being informal. In addition, the uGu district is considered the epicentre of the HIV disease, with 27% of the 3.1 million people living in the district being HIV-positive. It faces one of the highest prevalence of HIV among pregnant women, with 43.4% being HIV-positive. Furthermore, uGu district faces high unemployment, poverty, and inequality rates. All of these existing psychosocial, socio-demographic factors appeared to have an influence on EBF amongst primigravida mothers, hence the researcher aimed to explore these factors for this study.

The Chief Executive Officer bears the overall responsibility for the Hospital with the help of a team of experts. The overall responsibility for the Obstetrics departments is managed by the Head of the Department of Obstetrics and Gynaecology and a team of experts. The services rendered at this public hospital, amongst others are 24 hours Obstetric and Gynae Unit, HIV & AIDS voluntary counselling and testing (VCT), prevention of mother to child transmission (PMTCT) sites, and anti-retroviral (ARV) and Nutrition Programmes. Services provided to PHC are 15 provincial clinics and two local authority clinics, four mobile teams, two school health teams, and a Community team. Being a provincial hospital, maternity services and care for children under six are free, including for breastfeeding mothers. The Hospital is a Mother-Baby Friendly Initiative accredited since 1995 by the Department of Health. It is also accredited by the National Core Standards of South African Establishments. It provides service according to the Batho Pele principles of service delivery, which means that "people must come first" (Department of Health 2019).

The Hospital under study has a bed capacity of 360, which includes a total of 72 beds allocated to obstetrics and gynaecology. It has a delivery rate of 300 babies per month, of which 20% are teenage girls aged 15-19 years or younger. The antenatal clinic sees about 300 pregnant women per month, including a separate high-risk clinic to care for high-risk patients in the antepartum period. The in-patient antenatal and postpartum wards are combined with a bed capacity of 49 with average monthly bed occupancy of 80% and an average length of stay of four days in the postpartum period. The study was done in the postpartum ward at this public Hospital uGu district during the mother’s early postpartum period of Day 1 to Day 4. These settings were chosen as these areas focused on promoting EBF. The interviews were scheduled and conducted at the most convenient time of the healthcare service and the participants.

4.4 POPULATION

The term population refers to the entire group of people who meet the criteria for inclusion (Brink *et al* 2012: 123). In this study, the target population was 10 primigravida mothers, age groups 18 years and above from the postpartum ward, who have attended ANC and given birth at this public hospital. In a qualitative study, the sample size cannot be predetermined. It is dependent on the availability of patients who meet the inclusion criteria and give voluntary consent. Therefore, eleven participants were available and interviewed until data saturation was reached. The population also refers to all the elements of the target population, namely, individuals, objects, or substances which meet specific inclusion criteria in the study (Grove, Burns and Gray 2013: 44). The population comprised all eligible primigravida mothers as per the inclusion criteria of the study. There were 30 postnatal patients in the hospital, and of these, a total of 15 primigravida mothers were admitted. Seeing that the district does have a multiracial population of the four race groups, consisting of Africans, Coloureds, Indians and Whites, the researcher aimed to have participants inclusive of these different race groups. However, at the time of the study only two racial groups were present for the study, which comprised two Indians and nine Africans. Out of the total population of 15 primigravidas, the 11 patients attending the various obstetric units made up the total population of the current study.

Amongst the eleven participants, at least four were HIV-positive mothers. There were no restrictions concerning the overall demographic characteristics of patients, such as age, gender, religion, or educational qualifications. Burns and Grove (2009:43) describe several concepts of sampling theory, and only the elements relevant for sampling a qualitative design were considered for the study. These included population elements, sampling criteria, and sampling method.

4.5 SAMPLING PROCESS

Sampling is the process of selecting or looking for situations, context, and participants who provide rich data on the phenomenon of interest (Polit and Beck 2017, cited by Moser and Korstjens 2018: 9). A sample is a subdivision of a population chosen to participate in the study (Polit and Beck 2017: 46). Purposive sampling refers to choosing participants based on the researchers' judgment about which potential participants will be most beneficial for the study (Polit and Beck 2017, sited by Moser and Korstjens 2018: 9). A purposive sampling method was used to specifically select eleven primigravida mothers 18 years and older in the postpartum. Among these mothers were four immunocompromised mothers.

4.5.1 Sampling process of participants

Purposive sampling refers to choosing participants based on the researcher's judgment about which potential participants will be most beneficial to the study (Polit and Beck 2017, cited by Moser and Korstjens 2018: 9). The strategy of purposive, non-probability sampling was used to recruit participants to participate in the semi-structured interviews.

The researcher approached the participants in the postpartum ward at the public hospital uGu district and arranged for data collection sessions. The participants participated in the interviews during normal working hours without disrupting daily work operations or work time. All information about the study was given to all participants prior to commencement, and they were given an opportunity to read the information letter (Appendices 6a and 7a); thereafter, they were requested to provide written consent voluntarily to participate in the study (Appendices 6b and 7b). Once informed consent was obtained, the researcher scheduled the interviews one at a time that was most convenient for the participants. In addition, no other persons except the researcher, the research assistant recruited by the researcher for the purpose of language translation of English and isiZulu, and the interviewee were allowed into the

designated interview area. The interviews were scheduled to last for approximately 20 to 30 minutes per participant.

4.5.2 Sampling size

The sample size was ten primigravida mothers in the postpartum ward who had given birth at this public hospital selected for the study, however, 11 mothers were interviewed to reach data saturation. They were selected through a purposive sampling technique.

4.5.3 Inclusion criteria

- Primigravida women who were 18 years and above.
- Participants who understood and spoke either English or isiZulu.
- Primigravida mothers who were not classified by doctors as high-risk patients.
- Four Immunocompromised primigravida mothers.

4.5.4 Exclusion criteria

- Primigravida women who were less than 18 years of age.
- Participants who do not understand nor speak either English or isiZulu.
- Primigravida mothers who were classified by doctors as high-risk patients.

4.6 DATA COLLECTION

A qualitative data gathering method was employed to gain a full understanding of the lived experiences of primigravida mothers at a public hospital, UGu district, on psychosocial factors influencing EBF. Participants were from the postpartum ward and they met the inclusion criteria for study. Data from the participants were collected over first four days of the post-partum period. Informed consent included explaining the handling of all interview materials, confidentiality concerns and anonymity procedures for participants, and their option to withdraw at any time. Once informed consent

was obtained, all interviews were recorded with the participants' permission by audiotape to provide a discreet and accurate record of the participants' comments. The in-depth semi-structured individual interviews were conducted with the use of an interview guide containing demographic sections as well as the main question to focus the discussion. Probing questions were used to elicit more information (Appendices 8a and 8b; 9a and 9b). Probing is eliciting more useful information from a respondent in an interview that was volunteered in the first reply, with the goal being to ask questions that give the respondent an opportunity to provide rich, detailed information about the phenomenon under study (Polit and Beck 2017: 788).

The purpose of interviewing was also to understand the essence, meaning, and values that participants attribute to the phenomena under study. Interviews were scheduled for 25 to 30 minutes for each participant. If no common themes emerged in the initial set of scheduled interviews, additional interviews would have been conducted until saturation of key themes occurred. However, during the 11 interviews, similar information and common themes emerged. Data saturation was reached after interviewing the 11 participants. Therefore, no additional interviews were arranged. As noted, before the individual interview was the data collection method, and for this research's purposes, a face-to-face interview was conducted with the 11 participants. The researcher recruited a research assistant from the selected hospital for the study to help translate English to isiZulu and isiZulu to English for the participants who do not understand isiZulu and English (Appendix 10a). A certified hospital interpreter English (Appendix 10b) was assigned to the researcher by the hospital`s Human Resource Department for the interviews, who assisted by using the interview guide in isiZulu to obtain data from participants in the researcher's presence during the interview. The research assistant then translated the participant`s feedback into English to the researcher. Each interview with the participant was recorded on the tape recorder. The researcher then followed the process of data analysis.

4.7 PRE-TEST OF DATA COLLECTION TOOL

According to Sekaran and Bougie (2013: 138-141), the purpose of a pre-testing study is to refine the interview questions to ensure there is no ambiguity or bias. The pre-test was conducted in the same setting as the main study, using the same data collection and analysis techniques. For this study, five homogeneous participants, who were not part of the main study, were randomly selected to participate in the pre-test. The participants comprised of one Indian and four Africans. The pre-test was done to identify whether there was a need to refine the methodology, or the data collection processes, and to determine the clarity and effectiveness of the interview questions as well as the average time required to complete the interview and data collection methods. The pre-testing study participants were questioned on the interview guide questions as well as the psychosocial, and socio-demographic factors influencing EBF. The participants were able to answer the questions in 20-30 minutes and found the interview guide questions to be clear, concise, and relevant to the subject. There were no changes to the proposed interview schedule of questions, as participants indicated that it was very simple to understand during the interview.

4.8 DATA ANALYSIS

Data analysis involves drawing meaning from raw data using multi-methods that can be applied sequentially (Patton 2002: 533). This approach is referred to as methodological triangulation, which includes various steps, namely data preparation and qualitative data analysis (Patton 2002: 533). Qualitative data analysis was used in the study. To perform data analysis using the qualitative methods involves dismantling, segmenting, and reassembling data to create more meaningful and drawn inferences (Boeije 2010: 90).

The research aims and interview questions were used to guide the analysis of data. This translation process from raw data findings and field notes requires the interpretation of empirical data (Skjott *et al.* 2019: 259-270). The approach adopted for qualitative data analysis was inductive. An inductive approach is a

process whereby the researcher reads through the data collected from the participants and identifies or defines the emerging codes, themes, and classifications thereof. (Bingham, 2023). To reach the research objectives, the data analysis process commenced during the data collection period. After each interview, the researcher reviewed how the participant`s responses helped the study to answer the research questions. The researcher personally transcribed each interview within 48 hours of conducting the interviews. The voice-recorded responses were listened to repeatedly for transcription purposes and were verified against the recording. Information from the field notes were compared to that on the audiotape to make sure that all data were captured correctly. Transcribed recordings of interviews and written notes were kept safe for five years and will be destroyed thereafter. The researcher read and understood the collected data to sort and organize the data according to Creswell's six steps of qualitative data analysis Creswell (2014: 12). When analysing the data, the following six steps by Creswell (2014: 12), guided the researcher.

Step 1: Organising and preparing data.

The researcher arranges and prepares for data that is to be collected. Notes will be typed and interviews transcribed to arrange the necessary material and analyse the data.

Step 2: Read through all the data.

The researcher will acquire a general sense of the information obtained by reflecting on what the participant is attempting to say. Notes will be made on the relevant thoughts.

Step 3: Coding, storage, including tape recordings and disposal of data.

Once the researcher is acquainted with the data for qualitative research, the data will be categorized and manually labelled with codes that will be used to identify a component of the data of particular interest. Hard copies of the research materials will be stored in a locked cupboard in the nursing administration office for five years. Only the researcher and supervisor will

have access to the data. Electronic data will be password protected and stored on a secure. The data will be securely shredded after five years. Recycle bin will thereafter be deleted.

Step 4: Description generated.

The above categories were consolidated to generate themes and sub-themes and create headings and subheadings in the data analysis chapter.

Step 5: Interrelate themes.

The core of the themes will be identified from the data and reveal the findings. The findings will be addressed in a detailed discussion.

Step 6: Constructing the report.

The data found will be interpreted. Conclusions and results will be logically and concisely formatted into a report.

4.9 DATA INTERPRETATION

Once data analysis has been completed, it is important that the researcher develops inferences and meta-inferences by interpreting the study's findings; looking across the qualitative results, and assessing how the information addresses the research aims, objectives, and the questions in the study (Creswell and Plano Clark 2011: 212). The inferences included conclusions or interpretations drawn from the data, whilst the meta-inferences were drawn from the data collected and findings of the study.

4.10 DATA STORAGE

An efficient storage system enables easy accessibility and retrievability of the various formats of collected data (Boeije 2010: 75). The researcher ensured that all the ethical principles for conducting field research were followed during and after the study. Therefore, the hard copies of the collected data were stored in a locked cabinet in the nursing administration office, and the

electronic copies were stored in a system with a protected password, allowing access only to the researcher.

The researcher used both the voice recorder and field notes to collect and store data. The interviews were recorded with the use of a voice recorder, with the participants to ensure that their actual messages were captured for verification. Field notes were used to support the recorded information and to record non-verbal cues. The participants were advised, during the information-sharing session and before the commencement of each interview that the interviews would be recorded, and field notes will be taken.

4.11 TRUSTWORTHINESS

As qualitative research has an element of subjectivity, and is open to criticism, it is important that the study and the findings provide evidence of validity and reliability (Polit and Beck 2012: 785). Researchers must ensure that the findings reflect the truth. Research that is inaccurate or holds a biased viewpoint cannot be of any benefit to nursing practice. The nature of this study being a qualitative design, methods of enhancing trustworthiness were utilized, and the following four principles outlined by Guba's strategies of credibility, transferability, dependability, and confirmability were applied (Lincoln and Guba 1985: 438).

4.11.1 Credibility

Credibility refers to the true meaning of the data or the participant's views and the interpretation and presentation of them by the researcher (Polit and Beck 2012: 785). Credibility was accomplished through the accuracy of the descriptions of the parameters of the study, such as whom, where, and when. Participants were purposively sampled. The information was probed until the data was saturated to ensure the study's credibility. Field notes were written during the interview. Voice recordings were also done. Information was probed during interviews until data was saturated and detailed notes were written immediately after the interview. To establish confidence in the truth of

the findings, during report writing voice recordings were replayed repeatedly to ensure that all the information was transcribed. The researcher bracketed existing knowledge, pre-conceived ideas and personal views regarding the existing problems in the clinical area. This also ensured that there was confidence and truth in the collection of data, and truth in the way the data was interpreted by the researcher so that all research results were reflected in a believable way.

4.11.2 Transferability

Transferability is the extent to which findings can be transferred to or have applicability in other settings or groups (Polit and Beck 2017: 559). Qualitative research meets this criterion if the results have meaning to persons who have not participated in the study, and readers can relate the outcome of results to their own experiences (Polit and Beck 2012: 785). According to Lincoln and Guba (1985), transferability is the researcher's responsibility to provide adequate information so that readers can evaluate the applicability of the data to other circumstances. In this study, this was achieved through a thick description of data and purposive sampling. Transferability was promoted in this study by ensuring that there was an adequate amount of data collected to provide evidence of research findings in this study.

4.11.3 Dependability

Dependability refers to data stability over time and conditions (Polit and Beck 2017: 559). In this study, this was achieved by a description of the method of data gathering, data analysis, and interpretation. In order to enhance the consistency, the researcher conducted a pre-test with five participants prior to the study. These participants did not participate in the main study. An audit trail was maintained through safe keeping of raw data of each interview for future reference. The audit involves a close scrutiny of the data collected and any supporting documentation by an external reviewer, in this case the supervisor. Although the researcher coded the interviews herself, the data and analysis were checked for discrepancies scrutinised by the research

supervisors who acted as an independent coder. Results, recommendations and processes were discussed with peers who were not involved in the data collection.

4.11.4 Confirmability

Confirmability refers to the degree to which the researcher can demonstrate neutrality of the research interpretations (Polit and Beck 2017: 786). These authors maintain that confirmability is similar to objectivity in that the study results are derived from participation information related to the context of the study. Researcher biases do not have a place in the study. The researcher's interpretations were scrutinised by the research supervisor who acted as an independent coder. The themes and sub-themes identified by the researcher were contrasted with those identified by the supervisor. No major discrepancies were identified between the analyses of data.

4.11.5 Generalizability

The ability to generalize the findings of the study was ensured through the criteria of thick description as stated by Lincoln and Guba (1985 cited in Shenton 2004: 69), this being an in-depth study of the actual situation investigated and the context. Data was collected and analysed in sufficient detail which provided a baseline understanding for subsequent work to be undertaken, for comparison with other similar studies, and for generalizing to the larger population. The researcher ensured the trustworthiness of the qualitative data by efforts to confirm that the findings accurately reflected the experiences and viewpoints of participants, rather than the researcher's perceptions (Polit and Beck 2014: 78).

4.11.6 Authenticity

Authenticity refers to the researcher's ability and the extent to express the participant's feelings and emotions of experiences in an honest manner (Polit and Beck 2012: 785). In this study, the participant's views of the psychosocial

factors influencing EBF were explored, which contributed to the field of planning new strategies and recommendations to support EBF in primigravida mothers.

4.12 ETHICAL CONSIDERATIONS

Ethics in research is a set of moral principles that guide researchers to conduct and report research without the intention of being deceptive or causing harm to the participants of the study or members of the society holistically, whether knowingly or unknowingly (Singh 2019). While conducting and reporting research, practicing ethical guidelines is important to establish the validity of your research.

For this study, Ethics clearance was obtained from IREC (Appendix 2). Permission was sought and approval was received from the uGu district Manager (Appendices 3a and 3b), the Department of Health (Appendices 4a and 4b), and the Hospital Manager of the public Hospital in the uGu district (Appendices 5a and 5b).

A letter of information, which outlined the details of the study, was given to each participant (Appendices 6a and 7a). Informed consent to participate in the study was obtained from the participants before the demographic data and interview guide completion, and the maintenance of confidentiality of the data obtained (Appendices 6b and 7b). The researcher adhered to the confidentiality preferences of the participants and the organization. The study was purely descriptive, using an interview guide without any experimentation or intervention.

The Belmont Report (1979: 1797-1807) outlines three basic principles relevant to the ethics of research involving human subjects, namely respect of persons, beneficence, and justice. In conducting this research, the researcher ensured that she understood and familiarized herself with the regulations associated with the field of the study. The protection of the rights of the

participants is extremely important. Cooper and Schindler (2006: 102) argue that research must be designed so that a respondent does not suffer physical harm, discomfort, pain, embarrassment, or loss of privacy. Informed consent, confidentiality, anonymity, and the participant's right to privacy are some of the measures used to ensure that the participants will be treated with respect, fairness and benefit from the research. According to McCauley (2003:1), social research is a dynamic process that often involves an intrusion into people's lives, and this largely depends on the establishment of a successful relationship between the researcher and respondents.

4.12.1 Informed consent

Burns and Grove (2011: 259-266) describe informing participants as being the transfer of information from the researcher to the potential participant, and consent refers to the participant's agreement to participate in the study. Burns and Grove (2011: 206) state that the prospective participant should have a sufficient understanding of the information given to them by the researcher, and the researcher must also understand the type of information needed from the participant. The researcher must also be cognizant of the fact that participants have a right to refuse. Participation was voluntary, and anonymity and confidentiality were maintained throughout this study. Participants were advised that they could withdraw from the study at any time, should they wish to do so. Although there were no unforeseen risks anticipated in this study, participants were informed that the interviews and demographic survey sheets used would not be traced back to them and that all research data would be destroyed after five years. The participants were asked to voluntarily sign a written consent form following the full disclosure of information regarding the study, to participate in the study. The informed consent of participants was witnessed and counter-signed by the researcher. The documentation was reviewed by the researcher using a checklist after permission was obtained from the employer.

4.12.2 Confidentiality and anonymity

Confidentiality refers to the researcher's responsibility to ensure that the information gathered is not disclosed to any other person and anonymity refers to the protection of the identity of the contributors of this information (Burns and Grove 2011: 246). Confidentiality was maintained by keeping the consent form separate from the demographic survey sheets and interview question guide so that it would not be used to identify the participants, and the researcher ensured confidentiality by restricting access to the data. Electronic data was kept in a password-protected computer, and only the researcher and supervisor had access to the data.

The completed and returned demographic survey forms from the interview were kept in a safe drawer under lock and key in the researcher's office. The right to autonomy and confidentiality was maintained in data handling to ensure that there was no untoward association of individuals with data. The information gathered was treated with the strictest confidentiality and was used for the purpose of the research study only. Anonymity was ensured by conducting the interviews in privacy, and not using participant`s identity information on the demographic survey sheet and interview guide, and voice recorder. The participants were identified with unique codes which allowed them to be linked to the data collected and documented.

The data sheets and audio tapes were stored in a locked cupboard and were removed only when the researcher needed to work with them. On completion of the study the hard copies of data sheets were kept in a lockable cupboard, and electronic data was kept in a computer which was protected with the use of a password, and which is to be deleted after five years. Hard copies will be shredded after five years. The voice recordings were deleted and the recycle bin information was emptied.

4.12.3 Beneficence and non-maleficence

The principle of beneficence and non-maleficence obligates the researcher to act for the benefit of others, and, therefore, the researcher must ensure that no harm comes to the participants (Burns and Grove 2011: 233). Beneficence means maximizing good outcomes for participants and minimizing harm (Polit and Beck 2017: 139).

Non-maleficence means ‘do no harm’ (Barrow *et al*. 2021). This is related to beneficence and the balancing of risks toward the participant. The principle of beneficence means doing good, acts of kindness or goodness, and avoiding harm. To follow this principle, the researcher needs to secure the well-being of the participants, be it physical, psychological, emotional, spiritual, economic, social, or legal (Brink, van der Walt and Van Rensburg 2012: 36). The full content of the study, its importance and how it is going to be conducted was explained to the key contacts and the potential participants.

The information about the purpose of this study, the process of data collection and analysis, and how the results would be disseminated were discussed with the participants. The participants were given an opportunity to ask questions about the research procedure and the purpose before giving consent to be part of the research study. Coercion means the actions of making someone do something that they do not want to do, using force, or threatening to use force (Oxford Advanced American Dictionary). In this study, no participants were forced or threatened in any way to participate. Participants were reassured there was no harm in participating in this study and that they were allowed to withdraw at any time during the data collection period, with no penalty on the withdrawal. The nature of the study did not expose the participants to any physical harm. However, the researcher remained constantly alert to any potential risks that might arise and act accordingly.

4.12.4 Respect

Respect refers to the participant's right to self-determination, which may be violated by deceiving participants, threatening them, or giving them an excessive reward to obtain compliance (Burns and Grove 2011: 233). To adhere to this principle, the researcher needs to secure the well-being of the participants, be it physical, psychological, emotional, spiritual, economic, social or legal. Participants were educated about their rights to participate in the study and were treated with respect during all the interactions of data collection processes. They were not promised any rewards for participation in the study. The researcher returned to the participants with the final findings and confirmed that the resultant report was an accurate and complete reflection of their perceptions of EBF.

4.12.5 Justice

Justice refers to participants' right to fair treatment and right to privacy (Barrow *et al*. 2021). The research questions and requirements provided a guide in the selection of participants. Inclusion and exclusion criteria were adhered to. All participants were treated the same regardless of differences in age, years of experience, race and ethnicity. The participants were advised to share information that they are comfortable with and not what they were uncomfortable with. Privacy was maintained by keeping collected data from participants anonymous and not linking them with the data.

4.13 SUMMARY OF THE CHAPTER

This chapter focused on the research methodology. A detailed descriptive report of the sampling techniques, data collection procedures, and data analysis was provided by the researcher. A tape recorder was used to capture the data, which was then transcribed on a Word document as researcher and participant responses, with the assistance of an interpreter for language translation during the interviews. Importantly, the researcher's efforts to promote the study's ethical considerations have also been outlined in this

chapter. This chapter formed the background for the next chapter where the findings of the study are presented.

CHAPTER 5
PRESENTATION OF FINDINGS

5.1 INTRODUCTION

In Chapter 4, the research methodology was discussed. This chapter presented the research findings derived from the data collected on the study topic, which employed a qualitative approach. After analysis, the researcher`s qualitative data findings aligned with the aim of the study, which was to explore the psychosocial factors influencing exclusive breastfeeding among the primigravida mothers at a public hospital in the uGu District. The interviews were analysed and categorized into themes and sub-themes as the findings emerged. The researcher got objective and subjective responses from the participants, who shared their perceptions on factors influencing exclusive breastfeeding. Bearing in mind the principles of a qualitative research approach, the researcher set aside preconceived notions and allowed the participants to share their experiences and perceptions on exclusive breastfeeding. Thus, the interview discussions were not subjected to researcher bias or influence. An interview guide (Appendices 8b; and 9b) guided the interview discussions, which considered the participants' demographic information (Appendices 8a; and 9a). The researcher used a research assistant approved by the hospital to assist with the language translation of isiZulu to English and English to isiZulu.

The following research questions had to be answered to achieve the aim of the study:

- What are the psychosocial factors that influence EBF?
- How the perceptions of primigravida mothers influenced EBF?
- How do socio-demographic factors influence EBF amongst primigravida mothers?

5.2 DEMOGRAPHICS OF THE STUDY

The study asked its participants to indicate their demographic details. The demographic details that were enquired about were race, ethnic group, marital status, highest education level, employment status, income level and risk factors. Table 5.1 presents the demographic data of the participants.

Table 5.1 Demographic data

No.	Race	Ethnic group	Age in years	Marital status	Highest education level	Employment status	Income level	Risk factors
P#1	Black	Zulu	20	Single	College student	Unemployed	Student allowance 1500	None
P#2	Black	Zulu	20	Single	Post school certificate	Unemployed	none	None
P#3	Black	Zulu	18	Single	Grade 10-at school	Unemployed	R480.00 Child support grant	None
P#4	Indian	Hindu	32	Common law	Post school certificate	Full time employed	>R2500	Anaemia
P#5	Black	Zulu	22	Single	Post school certificate	Unemployed	R1500-2500	None
P#6	Black	Xhosa	19	Single	Grade 11	Unemployed	<R1000-child support grant	None
P#7	Indian	Muslim	26	Married	Skill-no certification	Unemployed	>R2500 Spouse salary	None
P#8	Black	Zulu	22	Single	Grade 10	Unemployed	None	HIV since 2012 at age of 12
P#9	Black	Zulu	30	Single	Grade 11	Unemployed	None	HIV since 2020
P#10	Black	Zulu	18	Single	Grade 12	Unemployed	R1500-partner support	HIV since 3yrs from breast milk transmission
P#11	Black	Zulu	31	Single	Degree	Full time employed	>R2500	HIV since 2022

5.2.1 Race and ethnicity

Table 5.1 indicates a mix of nine Black and two Indian primigravida mothers who participated in the study. Among the Black racial group, seven belonged to the Zulu and two to the Xhosa ethnic groups. Amongst the Indians, one belonged to the Hindu and the other to the Muslim ethnic group. These were the only two race groups present at the time of the study. All were South African Nationals with diverse cultural backgrounds.

5.2.2 Age

Table 5.1 indicates eight participants belonged to age groups 18-26 years, and three were elderly primigravida mothers between 30-32 years of age.

5.2.3 Marital status

Table 5.1 indicates that out of eleven participants, nine were unmarried, single parents, one was married, and the other lived with her partner under common law marriage. The data in this study shows that single parenthood was more among the Black than the Indian racial group.

5.2.4 Highest education level

Table 5.1 indicates that out of the eleven participants, three possess post-matric certificates; five are still at school between grades 10-12, and one dropped out at grade 11 due to pregnancy. Another participant is at the college level and is still studying. Among the other two participants, one has a degree, and the other has a skill with no certifications.

5.2.5 Employment status

Table 5.1 indicates that out of eleven participants, eight are unemployed, one is a housewife with a spouse working, and two are employed on full-time basis. Of the eight unemployed participants, five are at the school level,

intending to return to school to complete their studies; three hold post-school certifications, with only one employed.

5.2.6 Income level

Table 5.1 indicates the income of level of each primigravida mother. Of the eleven participants, three have no income, two are on child support grant <R1000, three are on partner support income of R1500->R2500, and three are on a household income of >R2500, either through employment or spouse working or family support.

5.2.7 Risk factors

Table 5.1 outlines the risk factors of participants. Participants classified as high risk by their doctors were not part of the inclusion criteria for the study; however, immune-compromised participants met the inclusion criteria. This study identified the participants' risk factors as None, Diabetes, Hypertension, Allergies, Infections, Anaemia, or any other.

Six participants had no risk factors; one had diet control anaemia, and four were immune-compromised with human immunodeficiency virus over extended years. P#8 has been living with infection since 2012, since the age of 12; P#9, since 2020; P#10, since the age of three, been infected through breast milk; and P#11 learned that she was HIV-positive following the screening of her blood; after blood donation in 2022. All four immune-compromised participants reported being on antiretroviral therapy, for more than four weeks since being diagnosed.

5.3 THE OVERVIEW OF THEMES AND SUB-THEMES

The study was conducted on eleven postnatal primigravida mothers aged 18 and 32 who had given birth either by spontaneous vaginal delivery or caesarean section between day one and day four in the postpartum ward. All mothers attended an antenatal clinic during their pregnancy and initiated

breastfeeding at birth and during their inpatient stay. As per the interview guide, Appendices 8b and 9b, a total of seven questions was asked to explore: the maternal perceptions on breastfeeding, benefits of breastfeeding to mother and baby, challenges of EBF and factors influencing such difficulties, family and partner response to EBF, cultural factors influencing EBF, preparedness for EBF and what behavioural change is required by the healthcare worker to promote and sustain the practice of EBF. In this phenomenal exploratory study, a total of five broad themes indicated the lived experiences of the participants on exclusive breastfeeding, namely:

5.3.1 Factors influencing maternal self-efficacy.
5.3.2 Challenges to EBF.
5.3.3 Cultural Influence on EBF.
5.3.4 The role of support systems to EBF.
5.3.5 Breastfeeding support strategies.

Table 5.2 provides an outline of the summary of the emerged themes and sub-themes, which has been discussed in detail with direct quotations from the transcripts.

Table 5.2: Themes and sub-themes

	THEMES		SUB -THEMES
5.3.1	Factors influencing maternal self-efficacy.	5.3.1.1	Mothers' attitude towards EBF.
		5.3.1.2	Psychosocial factors influencing maternal self-efficacy.
		5.3.1.3	Lack of maternal knowledge on EBF, and its benefits for mother and baby.
		5.3.1.4	Mothers' practices around EBF (intent to EBF).
5.3.2.	Challenges to EBF.	5.3.2.1	Post-operative pain.
		5.3.2.2	Working mothers, demanding careers, nipple confusion.
		5.3.2.3	Lack of access to local clinic for ARVs collection.
		5.3.2.4	Inverted nipples.
		5.3.2.5	Nipple pain.
		5.3.2.6	Early school and college drop- outs.
		5.3.2.7	Unemployment; single mothers and low-income households.
5.3.3.	Cultural influence on EBF.	5.3.3.1	Hindu myths, beliefs and practice.
		5.3.3.2	Muslim myths, beliefs and practice.
		5.3.3.3	Zulu and Xhosa myths, beliefs and practice.
5.3.4.	The role of support Systems to EBF.	5.3.4.1	Family and partner support.
		5.3.4.2	Lack of Health care worker support.
5.3.5	Breastfeeding support strategies.	5.3.5.1	Behavioural change in Nurses attitudes.
		5.3.5.2	Improved antenatal services and effective utilization of ANC waiting times.
		5.3.5.3	Postpartum: Educational material hand-outs, clinical demonstrations, and pain relief measures.

5.3.1 THEME 1: FACTORS INFLUENCING MATERNAL SELF-EFFICACY

The study's findings indicated that several factors influenced the mother's confidence in EBF. Maternal attitude and intent to breastfeed were directly

affected by observing others perform the task successfully and encouragement from influential people such as their mother, grandmother, health care worker, aunts, friends, social media, and online breastfeeding apps. In addition, some participants' emotional states positively or negatively affected EBF initiations, promotion, and sustenance, and have been discussed under the following emerged sub-themes:

5.3.1.1 Sub-theme 1: Mothers' attitude towards EBF.

5.3.1.2 Sub-theme 2: Psychosocial factors influencing maternal self-efficacy.

5.3.1.3 Sub-theme 3: Lack of maternal knowledge on EBF, and its benefits for mother and the baby.

5.3.1.4 Sub-theme 4: Mothers` practices on EBF (intent to EBF).

5.3.1.1 Sub-theme 1: Mothers' Attitude towards EBF

The findings of this study indicated that primigravida mothers who intended to breastfeed longer had a positive maternal attitude. The mothers were inspired by being breastfed and learning from the positive shared lived experiences of EBF from family and friends and social media. The following excerpts from the participants allude to the above:

"I grew up in my family. My mom was breastfeeding me and my two brothers so it's the experience from family." (P#2)

"I do believe in breastfeeding 100%. I think breast is best. I have been advised by many of my family members as well that doing breastfeeding is much more effective than using formula. The information I got so far are solely from my sister and my two cousins that are nurses as well, and who said breast is best." (P#4)

"*She said that she came from not rich, but poor family. Her mother was not working, so she grew up with the breast, so she believed that; and her sisters and brothers believed that breastfeeding is good because they grow, always have grown using the breast feeding so, it is good."* (Interpreter for P#5)

5.3.1.2 Sub-theme 2: Psychosocial factors influencing maternal self-efficacy

Mothers with little or no intent to EBF feared that breastfeeding would alter their body image of being either “fat” or “too thin,” resulting in low self-esteem, leading to early cessation of EBF and mixed feeding. In addition, EBF was perceived to be a “hold up” in meeting their social needs. The following excerpts provide evidence of the above findings:

“*Yes, I don’t like it because I’m studying. Even if I’m not studying, I wasn’t going to give my baby breast milk. I wasn’t going to breastfeed her because I don’t like it. Some are eating too much. Fear of being fat. Yes, and losing shape. It affects me emotionally with low self-esteem. I like to maintain my body.”* (P#1)

“She said it is difficult the breastfeeding. You do not have time to like to go out. The baby holds one to the breast with that. So, you do not have time to go out and do your things.” (Interpreter for P#6)

“Because my weight will lose, and my uniform won’t fit me well. I mean I am not going to look the way I was.” (P#10)

In addition, to breastfeed the baby while at school and attending to school work was perceived to be very stressful, with the impact of mental confusion. Both roles were seen to be equally important, but the dilemma was not knowing which one to prioritize and focus on. The following excerpt allude the above:

“So, when I am breastfeeding the baby while I am going to school, my mind will be confused, because at school I have homework to do. I must breastfeed the baby, I must do the homework. The baby won’t be sleeping, how am I going to do my homework, now?” (P#10)

Furthermore, participants living with HIV infection had to embrace the psychological impact of stigma, shame, embarrassment, and humiliation of being HIV-positive. Table 5.2 indicates P#8 to P#11 living with HIV, with P#10 infected at the age of three through breast milk and P#8; at the age of 12. Both participants expressed no ill feelings towards living with the illness, even though they were both infected in early childhood and as teenagers. Acceptance of the infection, fear of HIV transmission to their babies through breast milk, and ARV drug adherence, were key factors described by these Participants to initiate, promote and support EBF. The quotes below confirm this:

"…. but I am used to it now, so there is no need to hide around the corner because of HIV. I am just living with it, so the child will also understand about everything HIV." (P#8)

"I think the biggest issue is acceptance. Acceptance is quite a big thing because once your mind does not accept your body follows." I think in my opinion, HIV is the least killer of people in our country, person can live with HIV and you would never know forever. People think if you are HIV-positive you have to change your entire life as the pill is there every day, but now you are still the same person, you still got your friends you can still party, you can still enjoy adventures. So, yes, I am good." (P#11)

In addition, though these participants have accepted their status, doubts and fear of potentially cross infecting their babies through breast milk remained a "daunting cloud" over them; which sometimes led to reluctance to breastfeed, and these perceptions were evidenced by the following excerpts:

"I have so thought about that, what if I infect the child, is it healthy? I am so scared about that, because it looks like the milk can spread the virus to a child, but I don't know, you never know, but yes, I will do my best." (P#8)

"You can't breastfeed the baby while you have HIV. First you must take injections, tablets to make the baby to not have HIV also?" (P#10)

Moreover, they also felt living with HIV is no longer a death sentence. With just one pill to take, participants found it much easier to be drug adherent, even if amongst friends, family, or the public. Furthermore, they emphasized that they needed access to ARVs to ensure drug adherence, maintain low CD4 and viral load counts, and PMTCT through breastfeeding. Mothers with no source of income had no choice but to EBF their babies so they could grow healthy. In addition, they also feared the lack of income would affect transportation costs to their local clinic to collect their treatment. This is noted in the participants' voices below:

"…. making it one pill, it also removes that fear people have of others seeing them take pills. So, you are now afraid take out these five pills in front of your friends. So, it is easier now, you have one pill to remember instead of five different ones." (P#11)

"…. no money, of course, there is no money. And also, my baby will grow healthy without complications, whatsoever." (P#8)

"So, I think I was really afraid and then I asked the nurse and she said, obviously, take your medication now and by the time you give birth you are undetectable then you can breastfeed, and I was very happy because like I said it is one of the foundations of a good relationship between a mother and child. Today was my first day breastfeeding and I felt it, I felt so close to this person just because I am breastfeeding, felt like she is still in my womb in a sort of way." (P#11)

Despite participants' acceptance of the infection, compliance with drug adherence, and choice to breastfeed, not all mothers were adequately knowledgeable about PMTCT postpartum; hence their anxiety over possible cross infection through breast milk, indicating a need to strengthen

breastfeeding education and support in the context of HIV. The responses from mothers, who had a negative attitude towards EBF, identified a need for further education to correct doubts, fears, or anxieties over EBF; and to promote EBF, even when mothers are separated from their babies.

5.3.1.3 Sub-theme 3: Lack of maternal knowledge on EBF and its benefits for the mother and the baby

Participant's general understanding of EBF; and the benefits for the mother and the baby were assessed amongst all primigravida mothers. While P#3 felt that she was still new at breastfeeding and did not have any knowledge thereof, other mothers indicated a fair understanding of EBF, such as: feeding the baby only breast milk for six months and promoting demand feeding. Mixed feeding was perceived not to be good practice because of potential harm to the baby. The following excerpts confirm the above:

"I do not have much knowledge because I have just started breastfeeding." (P#3)

"That is solely breastfeed. There is no formula feed. There is… that two, every two hours you give the baby the breast." (P#4)

"…. she believed that that is not good. Mixing is not good. If a baby, feels well when he is breastfeeding, the breast milk, then the milk that is bought from the shop, maybe people get some symptoms, maybe get sick or something like that, yes…" (Interpreter for P#5)

Furthermore, the researcher noted that the participants did know about sustaining step five of the WHO's Ten Steps to Successful Breastfeeding when separated from their babies, through their perception of storing expressed breast milk in the deep freeze for three months. In addition, time and distance weren't a barrier to sustaining EBF, and breast size was a

distinguishing factor for milk supply. Small breasts were perceived as not having enough milk. The following excerpts allude to the above:

"I did learn that if the breast is full, you must keep on sucking the baby, let the baby suck you or if it doesn't help, you can pour it in a container. That container must stay in the fridge. It can last; you can breastfeed even if your baby is in Durban while you're still in Joburg. They did give us a limit of time, like how many days in a fridge or freezer; they told us that it is three months. That's all I noticed, but in the fridge, I didn't notice anything." (P#2)

"It will depend, if the milk is there. I have very small breasts; I don't know if I will have a lot…" (P#8)

In addition, mothers away from their babies perceived painful, leaking breasts as a sign that their babies were crying, which compelled them to return to their babies and breastfeed. The following excerpts allude to the above:

"I was saying when you are not nearer or closer to the baby, maybe they are crying. You start to feel depressed and you become so painful a little bit and then you become sore a little bit and that's for sure, she is crying wherever she is, the baby." (Interpreter for P#3)

Despite the fact that all participant`s had a basic understanding of EBF, they all lacked knowledge on benefits of EBF for mother. Only one participant was able mention that EBF prevents cancer, whilst others felt that they are new at motherhood and yet to experience benefits of EBF. The quotes below confirm the above:

"From my understanding, I was told that it prevents cancer. In the long-term it will help me by preventing cancer, yes." (P#7)

"For now, I don't see anything, because I am still new with the baby." (P#10)

"*It will help increase our bond*;" "*healthy for my baby*"; "*my baby will grow strong*"; "*no need for money to buy milk*"; and; "*does not become easily infected by diseases*"; were amongst the most common benefits for the baby, communicated by majority of the participants. The following excerpts allude to the above:

"The baby grows well, healthy, strong. It doesn't need salary. You don't have to spend much money to buy milk." (P#2)

"…. the baby becomes healthier and she does not easily become infected by diseases." (P#6)

"It will help us to increase our bond. That's all I know from the research that I have. It increases the bond between the mother and the baby because the bond between the baby and the mother is not the same as the one from the formula and the one from the breastfeeding. (P #1)

"Breast milk is the healthiest, helps them with even activation of the brain, the physical." (P#11)

Although all participants attended the antenatal clinic and could share their perceptions of EBF, the majority described their knowledge of breastfeeding being acquired from family, friends, breastfeeding apps, internet television, and social media and not from health care institutions, which indicated a need to upscale health care provider support to promote exclusive breastfeeding.

5.3.1.4 Sub-theme 4: Mothers' practices around EBF (intention to EBF)

All participants had an intention to EBF, irrespective of immune status, literacy levels, age, and financial position, for at least six months except for P #1, who feared EBF would alter her body image; thus, she chose not to continue with EBF following her inpatient stay. Some mothers who were to return to school or college (P#2, P#3, P#5, P#6, P#8, and P#10) chose to either EBF for six

months or one year and then change to formula feeding. Their babies will be in the care of their grandmother or mother; or their partner`s mother. Mothers who opted to formula feed after six months or one year of EBF did not share their knowledge on milk feed preparation but communicated that their child-minders knew how to prepare formula milk feed.

Even though mothers of a younger age 18-22 years, were single parents and chose six months to one-year intention to EBF, mothers who remained at; ages 30 and 32 (P#7, P#9), either married or single with a partner support, appeared more passionate, and intended to EBF for 2 years and beyond; while the working mothers (P#4 and P#11), were also well educated with a tertiary qualification, and a much higher literacy level, preferred to continue EBF, with expressed breast milk(EBM) as they will return to work. This is noted in the participant's quotes below:

"I can breastfeed her until the end of this year, next year I go back to school." (P#3)

"She said you breastfeed the baby for the baby to become healthier and strong and she will take seven months. After seven months, she will mix the breast and the tin from the store, like the milk from the store. She said that her grandmother knows how to make the bottle for the baby and like, she will stop the baby like completely from breastfeeding him." (Interpreter for P#6)

"If I am correct, I think obviously, it is if you just breastfeed, you do not mix with formula. I actually wanted to exclusively pump, because I work as well but I have four months' leave, currently and I wanted to breastfeed until at least she is a year or minimum six months. So, I think exclusive breastfeeding is just, that is it, and it is the breast and nothing else." (P#11)

5.3.2 Theme 2: Challenges to exclusive breastfeeding

Post-operative pain following caesarean section; painful perineal sutures; demanding careers; nipple confusion; inverted nipples; lack of adequate income to access clinics for ARVs; early school; and college dropouts due to the focus on pregnancy and child minding; were the challenges experienced by the participants. Despite these challenges, all mothers, except for participant one, still preferred to breastfeed at least for the first six months of the infant`s life.

5.3.2.1 Sub-theme 1: Post-operative pain

While some mothers expressed no difficulty breastfeeding with post-operative pain following caesarean section, others described having pain despite regular analgesia intake, which created difficulty in properly positioning and latching the baby onto the breast. This activity delayed their intentions to breastfeed immediately after birth. Mothers with painful perineal sutures following vaginal birth also faced difficulty in breastfeeding in a “sitting up position”; and had to choose a position of comfort before commencing breastfeeding. Participant #11 felt that her purchase of a “wedge pillow”; assisted her with proper support of the baby during breastfeeding, which helped to reduce the pain on the operative site. The following responses allude to the above:

“…. and my Caesarean I was quite afraid because I wanted to do natural birth, so that my recovery time and postpartum is better. So, even though I am at home, I am alert, I can walk around, now I am still so sore, takes me almost an hour just to get to the nursery. So, that is going to hinder me as well, I cannot do.” (P#11)

“…. at the moment, it is very, very hard to put the baby on my stomach because of the pain or the cut, the incision. But other than that, I am not really facing any challenges except having the baby to latch on.” (P#4)

5.3.2.2 Sub-theme 2: Working mothers; demanding careers; nipple confusion

Jobs that permitted just four months of maternity leave and busy work schedules caused mothers to revert to EBM for a year and then use their breast milk just as fluid since the infant is now a toddler on full solid foods. P#11 preferred to EBM as soon as possible and feed the milk from a bottle to avoid nipple confusion, while P#4 reported that she planned to switch to EBM due to inverted nipples. However, both participants expressed a lack of understanding of how and when to express the breast using a breast pump and what were all the storage times in the fridge and deep freeze, which indicated a need for clinical demonstration and informational hand-outs on safe storage of milk, bearing in mind infection control and prevention measures when expressing, handling and storing EBM. The following responses allude to the above:

"…. as a working woman as well, I think it is so unfair if you have to work and be a mom at the same time. So, work would be an issue because like I said I travel a lot with my line of work. I wish you just stayed at home, but I am glad that I was given the time for four months to do this." (P#11)

"I think the earlier I start with expressing milk so that she gets used to bottle instead of my nipple, the better. So, I wanted to start now because obviously in the hospital cannot pump now. So, I want to go home and ask my nurses before I leave when I can start, should it be immediate, can I gradually swap my boob for a bottle but it will still be breast milk." (P#11)
"We were looking at complete breastfeeding like maybe a year, but because I work and I have to go back after maternity leave, it will still be breast milk, but it will be express breast milk." (P#4)

5.3.2.3 Sub-theme 3: Lack of adequate income to access clinics for ARVs

Although immune-compromised participants expressed their fear of potentially cross-infecting their babies with HIV through breast milk, they did not find breastfeeding challenging, as they chose to EBF. Their medical records

showed that they all were compliant with the ARVs since the initial diagnosis, with safe viral loads and CD4 counts, which permitted them to EBF their babies at birth. However, P# 9, with no source of income, feared that she might be unable to afford transport to collect her ARVs at the local clinic, which could increase the risk of HIV transmission to her baby through breast milk, with the decision to stop exclusive breastfeeding. The following excerpts allude to the above:

"Like if I don't have the money to go to the clinic and collect my pills, I will fall sick. My baby will fall sick. So bad, because I don't want my baby to fall sick, just like me. I will stop feeding." (P#9)

5.3.2.4 Sub-theme 4: Inverted nipples

The challenge often associated with inverted nipples is difficulty getting a baby to latch onto the breast. P#4 has inverted nipples and found latching the baby onto the breast difficult, which caused frustration in the baby and tension in the mother trying to meet the demand of feeding her child. Although the mother demonstrated the technique of "pin-roll" of the nipple 30 minutes before feeding time, whereby she held the inverted nipple between her thumb and index finger and pulled the nipple forward, and rolled it between her fingers, the baby still found it hard to latch on; hence; she chose to breastfeed using EBM exclusively. The following excerpts allude to the above:

"At the moment my nipples are inverted, so that is the issue that I am having with the baby, which he is not being able to latch on, but there is milk if I squeeze. We are trying to get the nipple out because I do want to breastfeed." (P#4)

5.3.2.5 Sub-theme 5: Nipple pain

Nipple pain was perceived as a breast condition that led to early cessation of breastfeeding, indicating a need to strengthen on-going education and support for correct positioning and latching of the baby onto the breast. This

subjective perception was concluded after P#11 shared her sister's negative experience with nipple pain and breastfeeding, which led to her early cessation of breastfeeding. Hence, the patient feared that the same experience might happen to her, so she opted to breastfeed using a breast pump rather than direct breastfeeding from the breast; and use a nipple cream to prevent or treat such breast conditions. The following excerpts attest the above:

"Funny enough, my sister did not breastfeed; her breasts hurt, like it was just painful every time; so, she stopped, literally. So, she said her nipples were sore and it felt like the baby was biting, I do not know how with no teeth. So, she stopped immediately after birth, like she did not even last a month." (P#11)

5.3.2.6 Sub-theme 6: Early school; and college dropouts

Another challenge school and college-attending Primigravida mothers faced was their inability to remain in school while pregnant. These were participants in the age category 18-22 years, with P#3 and P#6 dropping out of school as early as grade 10 and 11. All of them desired to return to school to complete their education. Their babies will be weaned onto formula feeding, which will be given while in the care of their child-minders by their mothers, grandmothers, or partner`s family. The following excerpts allude to the above:

"I'm living at the res currently because I'm going to stay with my baby for maybe three weeks or two and then I'm going to go back to school and then she's going to be left with my mother and the nanny." (P#3)

"I dropped Grade 11 this year because I want to spend the time with my child. There is no one to look after the baby." (P#6)

5.3.2.7 Sub-theme 7: Unemployment, single parenting and low-income households

The data indicates nine primigravida mothers were single parents, while only two are married, with the majority with low-income levels of ≤R1500. Alongside the stressors of being single mothers, low-income households, and unemployed, Participants #8, 9 and 10 also had to contend with living with HIV infection, increasing fear and anxiety with the uncertainty of health outcomes for themselves and their babies; and one participant though HIV-positive; was financially secure and did not find single parenting a problem to breastfeed exclusively. The following responses confirm the above:

"I'm getting NSFAS. I'm getting R1500.00 student allowance. And it's only accommodating groceries only. The father of the baby and my mother, they're going to provide for me because I won't be able to afford it, honestly." (P#1)

"*So, I am older, he is older, we are wiser at the fact that no matter what happens between you and I, we have got a child together. So, single parenting I am okay, my mom was a single parent*." (P#11)

5.3.3 Theme 3: Cultural influence on exclusive breastfeeding

The researcher explored the participants` perceptions of the myths, beliefs, and traditional practices in caring for the mother and baby postpartum. Participants belonged to the following cultures: among the Black participants were Zulu and Xhosa, and amongst the Indians were Muslim and Hindi. Though some cultures had no particular practice, they all supported the mother's feeding choice, regardless of her choice to breastfeed, mix feed, or formula feed exclusively. While some mothers felt that they were yet to experience the traditional practices carried out on them, others communicated their myths, beliefs, and practices that seemed more of an enabler to EBF than being against the practice EBF. Therefore, the following sub-themes

outlined the responses of participants on their cultural myths, beliefs, and traditional practice and how they influenced EBF:

- 5.3.3.1 Sub-theme 1: Hindu Myths; beliefs and practices.
- 5.3.3.2 Sub-theme 2: Muslim Myths; beliefs and practices.
- 5.3.3.3 Sub-theme 3: Zulu and Xhosa Myths; beliefs and practices.

5.3.3.1 Sub-theme 1: Hindu Myths; beliefs and practices

The Hindu culture believes that following the birth of the baby, whether by caesarean section or vaginal birth with or without perineal sutures, it's a customary practice that they go to a family member, either mother-in-law, mother, or aunt, for continued care where specific traditional meals and herbal aroma therapy are prepared that promotes wound healing, provides effective pain relief and supports breast milk production. Butter masala curry, soya beans, and jeera powder were among the spices described by Participant #4 to help with pain relief and wound healing, which then promotes mothers' comfort to EBF. Furthermore, the lighting of "Laban" is described as a scented stone that is burned over heated charcoal. It then gives off an aromatic smoke in the home to protect the mother and her baby from bad and negative spirits, or the "evil eye." This practice is performed daily at 1800hrs in the evening and will also help the baby sleep well and prevent body pains in the baby that arise when the baby is passed around from one visitor to the next. The house door is locked at 6pm for the first three months, postpartum, prohibiting any visitations from family or friends, except members from the house who are working.

Even though household members return from work, they are not exempted from the ritual practice. They need to light "camphor," which is a waxy colourless solid with a strong aroma, to ensure no evil spirit follows them into the house. In Hinduism, camphor is believed to be liked by their Gods and goddesses as it brings appeasement to reach the Goddess "Laxmi Puja`s" heart. Hence it is believed that protection is drawn from the Gods through the lighting of camphor. The following excerpts allude to the above:

“So, my partner's mother is late, so I am going to his aunties house, and she is preparing the butter masala curry and she is doing the, you know the soya seeds, the jeera powder and ought to help me heal faster. So, I will be able to breastfeed without any pain at the bottom; where the incision is.” (P#4)

“Also, there is lighting up the “Laban” and nobody coming in at a certain time because that will affect the child and affect me. It is a cultural belief that after a certain time, the door needs to be closed at 06:00pm and you cannot have visitors after that period for the first three months unless of course you are working, but when you come back you light your camphor. It is more of bad eyes or like that spirit of negativity coming into the house. (P#4)

You also want the baby to sleep comfortably so they do not, you know when you get visitors, they want to stay and then the baby is passed around, that could cause pain to the child. But I think it is more of eyes, as per se bad eyes. That is the reason.” (P#4)

5.3.3.2 Sub-theme 2: Muslim Myths; beliefs and practices

While significant myths, beliefs, and traditional practices have been observed in the Hindu culture, P#7 has yet to experience the Muslim cultural myths, beliefs, and traditional practices influencing exclusive breastfeeding. Placing a small amount of crushed date on a baby`s tongue positively influences breastfeeding; however, P#7 communicated that she did not know the reason behind the practice. Similarly, to Hindu culture, the lighting of “Laban*”* is also performed amongst Muslims, but their belief system differs. Hindus believe it chases away evil and harmful spirits, while Muslims believe it helps relieve pain and heal sutures. This is noted in the quotes below:

“They give the baby a small amount of date on the palate that I know.” (P#7)

“We do put “Laban”. It actually relieves the pain and it heals the stitching.” (P#7)

5.3.3.3 Sub-theme 3: Zulu and Xhosa Myths; beliefs and practices

Eight out of the remaining ten participants were Zulus, and two belonged to the Xhosa culture, respectively. While some Zulu participants shared that there was no traditional practice to breastfeeding, other Zulu mothers shared that drinking black tea and eating mealie meal porridge which must be well cooked for hours, will help increase milk production and supply. However, in the Xhosa culture, a traditional medicinal drink made up of barks or a twig, resembling a rice-like appearance is given to mother to drink; to help with milk flow. P#5 communicated that she was still young to know which ingredients her dad used, being a Xhosa herbalist. Despite both the Zulu and Xhosa cultures supportive behaviour to EBF for its unique benefits to grow babies; breast conditions; milk supply issues; and cessation of breastfeeding; was said to be treated by traditional healers or herbalist; for example, the application of herbal medicine called ‘*inhlaba*’ onto the mother's nipple area, to stop the baby from breastfeeding. The following excerpts allude to the above:

“For your breast to have milk you have to drink black tea and eat porridge the mealie meal porridge and it must be cooked for hours, it makes the milk inside for the child, so he can drink whenever she wants”. (P#8)

“She said that her father is a herbalist. Herb called iNhlaba, is used which is wrapped in the tit, to stop the baby from drinking the breast milk. It’s a traditional drink. Some people use bark, some people use twigs. So, she does not have an idea exactly, she said she was too young to understand.” (Interpreter for P#5)

In addition, cabbage leaves applied to the breast were perceived to be effective in preventing breast milk production. The following excerpt alludes to the above:

"You buy the cabbage, you take it and put it here, in your breasts to stop the breast milk" (P#10)

Although much literature exists on HIV management, communities remain ignorant and continue with stigmatization and stereotypical thinking. People are being judged according to their weight. Being thin was perceived as you were "HIV-positive." If you don't breastfeed, you are perceived as "acting rich" with a lot of money and are looked down upon. Therefore, mothers felt compelled to breastfeed, even if they had to EBF for six months, eat well, and look healthy to avoid stigma, stereotyping, and discrimination. The following excerpts allude to the above:

"*Well, it is like breastfeeding, you must do it, it is a must in the Zulu culture. It is like you are making yourself look down, sort of, or you are acting rich if you don't breastfeed. It is either you do have the money or you don't. Once you have had your baby, it is like a must that you must breastfeed."* (P#8)

"Yes. You are skinny; all of a sudden you are HIV-positive. And it is the weirdest thing because now I have actually gained weight from taking my medication. So, my biggest take on that was we are so ignorant that we use weight as a judgement. I cannot even gym and lose weight because you are positive." (P#11)

5.3.4 Theme 4: The role of support systems for EBF

Support systems play a very influential; and dynamic role in supporting the practice of EBF. They can either enable or disable maternal efficacy to EBF. In this study, family and partner support and support from the healthcare

worker were the key components that determined the intent and success to EBF. All participants perception`s responses were described under two sub-themes, namely:

5.3.4.1 Sub-theme 1: Family and partner support.

5.3.4.2 Sub-theme 2: Lack of Healthcare worker support.

5.3.4.1 Sub-theme 1: Family and partner support

All participants described family and partner responses to EBF as supportive and caring irrespective of immune status, marital status, cultural values or norms, and whether EBF was for twelve months only, directly from the breast or expressed breast milk fed in a bottle. Mothers who opted to practice early cessation of breastfeeding; and or mix feed as they needed to return to school or college; were also supported by their partners, mothers, and grandmothers (social grant) with formula purchase and feeding, while one mother verbalized uncertainty around partner support as he was at school, studying. Furthermore, in situations where both the mothers and their partners had similar socio-economic backgrounds; and where breastfeeding was the only means to grow babies, partner support for EBF was not seen as a problem. The following excerpts allude to the above:

"My partner wants breastfeeding. His opinion was it is going to be breastfeeding. We are not putting baby on formula at all." (P#4)

"She believes that her and her boyfriend or father of the baby grew up in the same situation, she does not believe that he is going to have a problem with breastfeeding." (Interpreter for P#5)

"They also think it is the best if I breastfeed, as long as my viral load is not high, to infect the child, then I can do the breastfeeding." (P#8)

"My brother, as well, he has got kids, but he was like you should breastfeed it is very healthy. My aunt is a retired nurse, matron, she is very for breastfeeding. She just told me you are breastfeeding that is it." (P#11)

5.3.4.2 Sub-theme 2: Lack of healthcare worker support

Although some participants communicated that they received breastfeeding education and support from healthcare workers, most reported that they received very little to no education during their pregnancy and postpartum on EBF. Education materials were merely placed at the back of their maternity case record and were explained on the first ANC attendance or not explained at all. In addition, the educational booklet focused more on pregnancy, with very little content on EBF. Participants also communicated that there was no issue of pamphlets or hand-outs on EBF and breast conditions, in the respective languages of English and isiZulu. The following excerpts allude to the above:

"Almost none conversation about breastfeeding and breasts, but basically they were focusing more on the pregnancy." (Interpreter for P#3)

"The clinic they help to determine which milk is good for the baby and which decision to take, when you have a baby. She did not get any information in brochures, in pamphlets at the clinic. The education at clinic was not enough." (Interpreter for P#5)

"They did give us a sheet on breastfeeding but we didn't go through it in the class." (P#7)

Furthermore, the educational material was also a language barrier for English-speaking patients as it was written in isiZulu, hence the lack of interest in reading the booklet. Though one would think that the isiZulu participants would be more receptive to reading and understanding the educational material, they also mentioned that they did not read it, and even if it was read; they could not finish it. The following excerpts allude to the above:

"I know from the hospital side of it, I do not think I was adequately trained, because the majority of what I am doing at the moment, an outsider has

shown me. And then if you go through my file, there was a whole pamphlet on breastfeeding and your baby, but the issue with that was it is in isiZulu. I learned today how to teach the baby to latch on if you have inverted nipples, which I was not taught. So, regarding the breastfeeding, had I been at home in Pietermaritzburg, possibly I could have learned more." (P#4)

"They never taught us, they just gave us the book and the sheets. I do, read but sometimes I am not finishing it." (P#10)

In addition, during the interviews, some participants began to ask questions like: "How must I hold the breast for my baby," "How do I know my baby is getting enough milk"; or stated: "I don't know anything about breastfeeding, as I am first time mother." These responses indicated that they were not adequately prepared for EBF and thus required reinforcement of EBF education from the healthcare workers. The following excerpts allude to the above:

"I will just like to know what causes the times when there is not enough milk out of the breast or there is no milk at all. What could cause that?" (P#3)

"So, I spoke to the nurse and then I will speak to my gynae as well about it. And I wanted to go and see a lactation as well if she could just say how long should I keep these because that was different times, it is different some is days, some is weeks, some is months." (P#11)

The fact that the majority of the participants communicated that they drew their knowledge of EBF from the internet, social media; Apps that showed the lived experience of EBF mothers; family, and friends, indicated, firstly; healthcare workers gave inadequate EBF education and support; and secondly; their lack of confidence and trust in the healthcare worker to be their primary source of EBF information, which led to early cessation and mix feeding practices. The following excerpts allude to the above:

"Google, yes, and I had pregnancy applications throughout my pregnancy, Instagram, Instagram played a big part in my pregnancy, ladies who shared their experience, who gave you hacks on how to breastfeed, hacks on how to express your breast milk, writing down your sachets, which bras to buy. So, yes, social media and just internet at large played a very large part." (P# 11)

While some nurses` attitudes were described as good with good patient experience outcomes, other participants described their experience with nurses as rude, not caring, often outbursts of shouting, despite being primigravida mothers, who required much patience; support and guidance to EBF. In addition, nurses with bad attitudes were viewed as HCWs without passion for providing effective EBF education. The immune-compromised mother shared; that she felt discriminated against through stereotypical comments about HIV by HCWs when attending ANC, which prompted her to seek better care at another healthcare facility. The fact that the HIV-infected participants demonstrated anxiety over potentially infecting their babies through breast milk indicated that they had little understanding of the PMTCT through breast milk, which identified yet another gap in EBF education in the context of HIV, hence the need to upscale more counselling and in-service education on HIV management during the antepartum, intrapartum and postpartum periods to promote safe feeding practice. The following excerpts allude to the above:

"If she came here at the hospital for the first time, she is young; she does not have information about how things work here when you are pregnant. She said that maybe nurses should stop shouting at them and try to sit down and explain how things work and what she should do." (Interpreter for P#5)

"So, the first clinic that I went to, which was close to my home, I felt it was inadequate care, especially with having HIV and just being a first-time mom. Literally it was quite bad. I had fallout with a nurse because she was just rude, condescending and this is what also makes people not want to

come out and speak. You just feel like you know what; I am going to stay at home, I am going to die; whatever this is because I am not going back there." (P#11)

5.3.5 Theme 5: Breastfeeding support strategies

While some participants verbalised that they were happy with the care received and had no suggestions to improve the practice of EBF among primigravida mothers, other mothers who did not receive any or little support were suggestive of ideas on how the health care worker can be more engaged in promotion of EBF, which gave insight to measures that were explained in the following sub-themes:

5.3.5.1 Sub-theme 1: Behavioural change in health care workers' attitudes.

5.3.5.2 Sub-theme 2: Improved antenatal services, and effective utilization of ANC waiting times.

5.3.5.3 Sub-theme 3: Postpartum: Educational material hand-outs, clinical demonstrations, and pain relief measures.

5.3.5.1 Sub-theme 1: Behavioural change in health care workers' attitudes

Although participants communicated that they do understand how stressed out nurses can be; and how their work environment can influence their attitudes towards things, nurses must, however, remain mindful of their attitudes towards patient care, which must be caring, non-judgemental, and non-discriminating; even if patients are HIV-positive. In addition, professionalism, including maintenance of nursing attributes namely; kindness, compassion, empathy, and emotional intelligence with practical communication skills, must be shown to understand the primigravida mother`s fears and concerns around their pregnancy and EBF. The following excerpts confirm the above:

“She said that other kids had babies while they’re still young, like 13 or 16. She mentioned that she believed that nurses should try not to shout at them, call them words, maybe try to make sessions to teach them how they should treat themselves, the baby, how to do things for the baby.” (Interpreter for P#5)

“I spoke to a friend of mine and she advised me to move to another clinic, and it was opposite. It was beautiful, beautiful experience, there was counselling, the way a nurse would tell me every day that you are not going to die, never mind whatever happens right now baby is important. So, I will not lie, where I was it changed my view of clinics as well.” (P#11)

“To also know that in the breastfeeding pool there is mothers who are HIV-positive who are scared, who do not even know I can breastfeed if I am positive, people do not know that.” (P#11)

5.3.5.2 Sub-theme 2: Improved antenatal services and effective utilization of ANC waiting times

Furthermore, participants who were HIV-positive; felt that they should not be treated indifferently or be prejudiced against; hence the idea of providing in-service education through antenatal classes will give them a sense of belonging, and oneness, with the instruction provided in one language, that will erase the stigma of being HIV-positive. The education on caring for HIV-negative and positive mothers must be communicated to all in the class. In addition, other suggestions from participants to improve the practice of EBF were: to have daily teachings on EBF on each visit to the clinic, correct myths and doubts around EBF, preventing early cessation and mixed feeding. Educational material on EBF must not just be placed in the maternity case record, but the content must be written and communicated in the correct language, easy to follow, and have clinical demonstrations to enhance preparedness to EBF; namely, EBM by breast pump or hand expression and how to preserve the milk; techniques on nipple establishment for inverted

nipples, how to hold the breast when breastfeeding; nipple insertion into baby`s mouth, how to position and latch the baby onto breast and nappy change. The frequency of in-service education should be monthly, not just once, and intensified closer to delivery on EBF preparedness. Although educational material in the form of posters on breastfeeding is seen at the clinics; participants felt that they would better understand what to do if it`s also explained to them by the health care worker. The following excerpts justify the above:

"Your antenatal classes should have like this practical, perhaps once every month just to remind you as well, this is how you put the boob in, because they did it once on day one when you first arrived, and my question was you are telling me this now and I am only three months pregnant, come nine months I have forgotten what this is about." (P#11)

"So, I think it will be good because a class is a crowd of people. Nobody is going to feel stigmas, nobody is going to feel signalled out, and nobody is going to feel like she is talking to me because you are in a class. Tell us about HIV, tell them that by the way you can breastfeed even if you are positive; and you will see the difference speaking to everyone, one language, we are going to be okay, we are going to learn." (P#11)

"How about you show me how to hold the breast while breastfeeding, because I am not sure how I can do that. Is it tickling on the baby while he's sucking the milk, or what? How does it feel, funny? I have seen the posters;" but it is something I would like to know more about." (P#8)

In addition, effective utilization of waiting times at the antenatal clinic for in-service education; was another suggestion communicated by a participant as she had observed both herself and other patients' early arrival at the clinic for their pregnancy check-ups, but no in-service education was given. The following excerpts allude to the above:

"…. because I used to come at very early in the morning to wait in the queue, so I do not have to sit the whole day. So, in that period, I am waiting, if somebody could speak and say, this is how you do it for inverted nipples; so, this is how you do it if your baby is not latching on. You know, in that time frame, so it is not wasting the time or efforts or money from the healthcare department. You are doing it while everyone is still waiting to be treated." (P#4)

5.3.5.3 Sub-theme 3: Postpartum: Educational material hand-outs, clinical demonstrations, and pain relief measures

Although all mothers-initiated breastfeeding at birth and during the inpatient stay up to day 3, having different intent to continue breastfeeding, participants communicated that the issuance of brochures, pamphlets, or hand-outs on exclusive breastfeeding would be beneficial to promote and sustain breastfeeding and minimize mixed feeding. Those mothers, who chose to feed directly from the breast or EBM, felt that they needed the healthcare worker to provide supportive care on inserting breast into the baby`s mouth and on breast pump application. In addition, one participant felt nipple creams should be provided to treat sore and cracked nipples; in-service education on the transition of milk to correct the misinterpretation of clear colostrum perceived as water and not breast milk; and to encourage the use of supportive wedge pillows during breastfeeding to alleviate pain on post caesarean incisional line. The following excerpts allude to the above:

"…. a demonstration you know of here is the boob, put it in the mouth, because I struggled in the first five minutes now and also tried push the nipple in the mouth, drop her mouth open that I did not get as an education from the clinic. And obviously they will tell you the hospital teach you." (P#11)

“I was just like nurse this is still watery, she is like yes, I was like it is not milk, so it means I do not have milk, she was like no it is how it starts.” (P#11)

5.4 SUMMARY OF THE CHAPTER

Chapter 5 presented the results of qualitative data using Creswell’s (2014) six steps in data analysis. The participants were coded P#1-P#11. The demographic factors were captured and illustrated in Table 5.1 and the themes and sub-themes are presented in Table 5.2. Two samples of interview transcripts are provided in Appendices 11 and 12. Chapter 6 will discuss the findings of the study in relation to the psychosocial factors influencing EBF in primigravida mothers by reviewing and interpreting the data obtained. The theoretical framework used to guide the study will also be discussed.

CHAPTER 6: DISCUSSION OF FINDINGS

6.1 INTRODUCTION

The previous chapters presented the results of the qualitative strands of the study. In Chapter 6, discussions of findings are presented concerning the research questions and objectives of the study. These discussions are presented in two sections and are aligned to two fundamental aspects of the study: Section A focuses on the discussion of results based on the theoretical framework, Bandura's Self-Efficacy Theory, and Section B presents the discussion of findings of the study.

6.2 SECTION A: DISCUSSION OF FINDINGS BASED ON THE THEORETICAL FRAMEWORK THAT GUIDED THE STUDY

Albert Bandura developed the concept of self-efficacy from his psychological research (Bandura 1977: 191), later called SCT (Bandura 1989). The stronger people's mental perception of self-efficacy, the higher they set their goals and commitment to achieve them (Bandura 1984: 231). Bandura believed self-efficacy played a significant role in the person`s self-regulation, self-evaluation, and self-control over potential threats. Through the selection process, people can select supportive social environments and exercise control over them as they can assess their capabilities of dealing with challenging activities (Bandura 1986). Parma *et al.* (2019: 69) defines breastfeeding self-efficacy as the ability of the mother to breastfeed her child confidently, noting that there was a direct relationship between breastfeeding self-efficacy and breastfeeding outcomes. A similar study in Indonesia by Awaliyah *et al.* (2019: 30) noted that self-efficacy associated with breastfeeding satisfaction is one of the essential factors and that breastfeeding is a complex social behaviour. Furthermore, the study mentioned that the mother's perception of a successful breastfeeding outcome also depended on whether breastfeeding problems arose and how she overcame them, even if she did gain satisfaction from breastfeeding her infant exclusively. In addition, a similar study concurred that breastfeeding self-efficacy is a

psychological factor in the initiation and duration of breastfeeding, which according to Bandura's Theory of Self-Efficacy (1977), is influenced by four sources, namely: performance accomplishments, vicarious experiences, verbal persuasion, and emotional/physiological responses (Ghasemi *et al.* 2019: 9939-9954). Bandura believed an individual's self-efficacy could be developed using correct interventions, education, training programmes, and adequate healthcare strategies. The results of this study were consistent with the current study's findings, which showed that most primigravida mothers lacked adequate self-confidence in EBF. Therefore, promoting the implementation of regular breastfeeding educational programmes during antenatal care would improve the practice of EBF, thereby improving breastfeeding self-efficacy. Hence, the current study reviewed interventions that the participants used and those still required to be implemented by HCWs to obtain breastfeeding self-efficacy through Bandura's four sources of Self-Efficacy Theory, namely a) performance accomplishments, b) vicarious experience, c) social persuasion and d) physiological and emotional states.

6.2.1 Performance accomplishments

According to Bandura (1986), successfully mastering a task or controlling an environment will build self-belief in that area, whereas failure will undermine that efficacy belief. A sense of self-confidence requires experience in overcoming problems through effort and perseverance. Hence, within this study, the mothers living with HIV accepted their status and remained favourable toward EBF, irrespective of the stigma raised against them in the community where weight gain or loss was used as an instrument of judgment to determine if the mother was HIV-positive. In addition, compliance with ARVs, achievement of suppressed viral loads, with a decision to continue EBF, despite the fear and anxiety of the potential risk of cross-infection to the baby, showed resilience and a positive maternal attitude to EBF. On the other hand, mothers reported a lack of health care support, with the repercussion of mixed feeding and early cessation of EBF, among the mothers aged 18 to 22 years, due to a lack of knowledge of the

benefits of EBF to mothers and baby, as well as maintaining lactation even when separated from their babies.

6.2.2 Vicarious experience

Bandura (1986) believed that experience is gained by observing others perform activities successfully. The second source of self-efficacy comes from observing people around us, especially those we consider role models. This is known as modelling, allowing observers to believe that they, too, have the potential to achieve a desired performance by learning from what they have observed. The study's findings showed that mothers who were breastfed and who had breastfed siblings; and learned about EBF online, using Breastfeeding Apps and social media, or observed practices taught to them by family and cultural practice, had a positive maternal attitude with longer intent up to two years to EBF.

6.2.3 Social persuasion

Furthermore, Bandura (1986) believed that influential people, such as parents, teachers, managers, family, or coaches, can motivate us to think we have what it takes to be successful. Allowing others to persuade us through suggestions makes us believe we can achieve specific tasks. Coaching and providing feedback, evaluated on performance, are common types of social persuasion. Therefore, the finding of the study concurred that all participants had significant people, aunts who were nurses, grandmothers, mothers, friends and siblings, and supportive partners or spouses; who directed; coached and encouraged them to breastfeed.

6.2.4 Physiological and emotional states

Bandura also believed that the individual's physical or emotional states influence self-efficacy judgments concerning specific tasks. Reacting emotionally (e.g., anxiety) can lead to negative reviews of one's capability to complete the tasks. A person's state will influence how the person judges one`s self-efficacy. Stress reactions or tension are interpreted as signs of vulnerability to poor performance,

whereas positive emotions can boost our confidence in our skills (Bandura 1986). Thus, the current study findings revealed that mothers at school simultaneously had difficulty coping with schoolwork and motherhood. They also faced the dilemma of prioritization of responsibilities, both as a mother and scholar, which led to mental confusion and frustration, with a negative maternal attitude limiting the duration of EBF to only six months. On the other hand, higher self-efficacy was observed among the older primigravida mothers, 26-32 years of age, those married, and the working mothers through EBM. Mothers from a poverty-stricken background faced the anxiety of providing for their families, resulting in early school dropouts. Not being well educated increased the risk of unemployment or low waged-jobs, exposing them to the further risk of gender-based employment disparities and social isolation, leading to formula feeding, not EBF.

According to literature on SCT by Boston University (2022), Bandura (1986) defines SCT as learning that occurs in a social context with a well-spirited and give-and-take interaction of the person, environment, and behaviour, as indicated in Figure 6.1 above. In addition, SCT considers the unique way in which individuals receive and sustain behaviours, while also considering the social environment in which they perform the behaviours and person's past experiences. These past experiences influence reinforcements, expectations, and expectancies, all of which determines whether a person will engage in a specific behaviour and the reasons, therefore. Thus, SCT was used to analyse and identify the predictors of EBF practices among primiparous mothers and make recommendations towards improving breastfeeding self-efficacy during the antenatal and postpartum periods.

6.3 SOCIAL COGNITIVE THEORY (SCT)

Despite the national efforts to promote exclusive breastfeeding (EBF), South Africa's EBF rate is only 32% (Witten *et al.* 2020:76). Several individual, social, and organizational predictors exist and play a vital role in enabling or being a barrier to the practice of EBF as per the WHO recommendations. Therefore, Bandura's SCT is applied to the study to identify the psychosocial and socio-

demographic factors among the primigravida mothers that influenced maternal self-efficacy to establish breastfeeding efficacy. Figure 6.1 below on Bandura`s SCT explains the dynamic of how personal factors and environmental factors influence a person's behaviour to achieve a desired task.

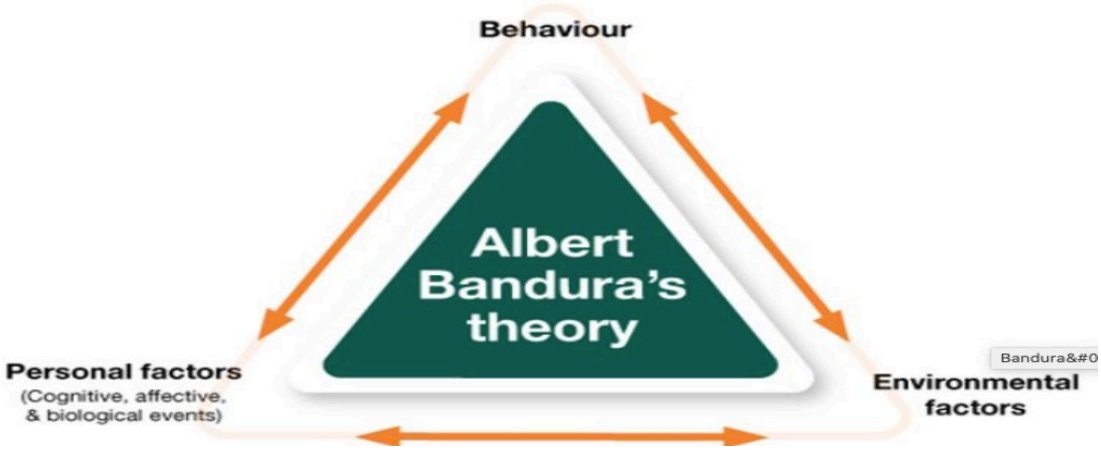

Figure 6.1: Bandura`s Social Cognitive Theory (1986)

6.3.1 Personal/Cognitive processes

In this study, maternal self-efficacy to EBF was closely associated with maternal age, maternal educational level, and the level of EBF knowledge she acquired for successful EBF outcomes. This study showed that the higher the maternal education, the greater the maternal knowledge and the stronger the maternal self-efficacy toward EBF. In addition, the practice of EBF among younger mothers was much lower, as they were single, unemployed, and focused on returning to school and career establishments. Furthermore, the younger mothers considered social acceptance with an ideal body image of more importance than EBF, which indicated a lack of EBF knowledge and low self-confidence in EBF. In addition, mothers living with HIV feared transmission of HIV to their babies via breast milk, despite compliance with ARVs and low viral loads suppression levels, indicating a lack of confidence in EBF, with a risk of early cessation and introduction of complementary foods before six months.

Therefore, HCWs must provide antenatal and early postpartum education, with periodic EBF counselling to improve maternal attitude and knowledge toward EBF practice. All levels of healthcare workers must be involved in EBF education and training. In addition, HCWs must employ patient involvement in on-going counselling and education on PMTCT, including polymerase chain reaction (PCR) tests on new-borns exposed to HIV and prophylaxis treatment according to current guidelines (NIH Preventing perinatal transmission of HIV after Birth July, 2023).

Furthermore, the study highlights a strong need to implement preventative strategies for unwanted pregnancies: access to contraception and sexual reproductive health education in schools by school health nurses. According to the National Department of Health Clinical Contraception Guidelines (2019), long-acting reversible contraception (LARC) is the most preferred contraceptive of choice against unwanted pregnancies, namely: 1) intrauterine contraception copper device (IUCD), (5 and 10 years, depending on the type); and levonorgestrel-releasing intrauterine system (LNG-IUS) (5 years); 2) sub-dermal progestogen implants (single-rod for three years; two-rods for 4 or 5 years, depending on the type).

In addition, education on safe motherhood and EBF practice should be included in the school curriculum to empower primigravida mothers with practical motherhood skills and experience the full benefits of EBF for themselves and the baby. This will combat early school dropouts, fear of altered body images; social rejection; and promote positive maternal mental health, with increased self-efficacy for longer intent to EBF; instead of early cessation of EBF and mixed feeding. Furthermore, access to youth-friendly reproductive health services that can accommodate young people during non-working hours, i.e., before or after school, must be promoted at local community health centres (Sobngwi *et al*. 2022: 10).

6.3.2 Behavioural process

This study showed that maternal employment, post-operative pain, and breast conditions such as nipple pain and inverted nipples influenced the behavioural process of EBF practice. Mode of delivery was not a barrier to EBF, though post-operative pain did delay initiation of EBF within one hour to later than an hour. Hence, adequate pain control during and after caesarean sections and perineal sutures is essential to impact successful breastfeeding, increase bonding times with mother and baby, and prevent the psychological burden of anxiety and potential postnatal depression (Paksoy *et al*. 2020: 55). A study that was conducted by Taylor (2022) argues that nipple shape could impact breastfeeding and that flat or inverted nipples increase the difficulty for the baby to latch onto the breast and determine how much milk the baby gets, with the potential risk of decreased milk production. This correlated with the finding of the current study whereby the mother with inverted nipples felt practice of EBF was time-consuming, with poor latching of the baby onto the breast, resulting in frustrations in the mother and child with maternal low self-efficacy, which led to EBM using a bottle.

Aldalili *et al.* (2021: 239) concur in their study in Dammam, Saudi Arabia, on factors associated with cessation of EBF that sore breasts or nipples were a risk factor associated with early weaning of EBF. This study's findings correlated with the current study's findings, whereby a primigravida mother shared her sibling's experience of painful breasts and nipple pain, with the resultant effect of early cessation of EBF in the first month following delivery. This experience generated fear in the participant and thus she chose to EBF using EBM in a bottle and not to stop EBF. Therefore, mothers with breast conditions must be closely monitored and supported during inpatient care and followed up upon discharge either at the local well-baby clinic or with a Lactation consultant and Paediatrician. In addition, the study by Mituki-Mungiria *et al*. (2020: 2719-2727) recommended that HCWs must link the mother with community caregivers to ensure continuity of care and support to EBF, which could help to achieve the 3rd Sustainable Development

Goal (SDG), which aimed to end preventable deaths of new-borns and under-fives by 2030.

6.3.3 Environmental

The study's results highlighted two key factors that impacted EBF self-efficacy: family and partner support and lack of HCWs support. Cultural practice was not a barrier to EBF self-efficacy, but the safety of herbal concoctions on breastfeeding used by traditional healers needs further investigative research. Mothers reported that HCWs showed little to no initiative to teach EBF practice, offering infrequent education and training sessions, and often with nasty attitudes. In addition, they felt long waiting times could be used for EBF in-service education. While mothers experienced a lack of support from HCWs, support from family, namely grandmothers, mothers, and aunts' friends, positively influenced positive maternal attitudes and increased breastfeeding efficacy; in contrast, some mothers were received little to no partner support.

A similar study that was conducted by Rohini *et al*. (2022: 125) mentioned that breastfeeding education interventions given by trained HCWs had significantly produced a positive effect on EBF. Examples of educational interventions included: teachings, group discussions, TV, short messages, and couple support during ANC and postnatal care. Additionally, other interventions included phone calls, for example, on feeding positions, demand feeding, and the management of sore nipples and breast engorgement. Bearing in mind the majority of participants in the current study reported a lack of knowledge on how to breastfeed, diaper change, treat minor breast conditions, identify composition and transition of breast milk, when to practice EBM, and how to use a breast pump, it is, therefore, recommended that antenatal classes be introduced at the antenatal care service facility. The antenatal class would be the ideal platform to achieve breastfeeding self-confidence, as it will be a monthly focus group that teaches mothers craft and EBF lessons. Mothers' learning would be more effective and tangible through direct contact and interaction in the antenatal class with the health care worker and other mothers (Spiby *et al*. 2022: 103295).

This was consistent with the findings of a similar study by Chehreh *et al*. (2021: 3417), whereby the effect of peer support on breastfeeding self-efficacy was examined among the Ilamian primiparous mothers. The study revealed that peer education and counselling positively impacted breastfeeding initiation and duration. It was therefore considered an excellent strategy to make the breastfeeding experience in young and inexperienced mothers pleasant during the first week's postpartum following discharge from the hospital.

6.4 SECTION B: DISCUSSION OF RESULTS BASED ON OBJECTIVES THAT GUIDED THE STUDY

The discussion of results in this section focused on the three objectives that the researcher identified at the beginning of the study towards achieving the aim of the study. These objectives were to:

- Explore psychosocial factors affecting EBF among primigravida mothers.
- Assess the perceptions of the primigravida mothers towards EBF.
- Determine how socio-demographic factors influence EBF among primigravida mothers.

6.4.1 Objective 1: To explore psychosocial factors affecting EBF among primigravida mothers.

Mothers face different challenges to EBF at an individual and societal level; in that breastfeeding problems can be painful and stressful for a new mom, which can cause a baby to become fussy, agitated, and frustrated during breastfeeding. Furthermore, a mother becomes anxious and fearful when faced with an unexpected problem that she does not know how to solve, which sometimes leads to early weaning (Murray 2020). Therefore, the current study identified maternal factors that influenced EBF both positively and negatively namely: lack of adequate knowledge on EBF, maternal attitude, unplanned pregnancy among the school and college attending mothers, need for social acceptance and ideal body image, stigma associated with being HIV-positive, maternal employment, nipple confusion, post-operative pain, inverted nipples, nipple pain, lack of access to a local clinic for ARVs collection, and early school and college dropouts.

Learning and understanding these problems at an individual and societal level would enable the mother to overcome them and improve EBF knowledge, maternal attitude, and practice of EBF for an extended duration.

6.4.1.1 Maternal factors

Maternal education is associated with EBF knowledge, attitude, and duration. Previous studies, by Laksono *et al*. (2021: 1-6) in Indonesia; and Tang *et al*. (2019: e028485) in China, revealed that mothers with higher educational levels were more likely to EBF than mothers with little or no education; and highly educated mothers can easily accept, promote and implement information about exclusive breastfeeding. These findings supported the current study's findings, which indicated that out of the eleven participants, only two were highly educated mothers with tertiary qualifications and opted to breastfeed beyond one year using expressed breast milk (EBM) exclusively. At the same time, the majority were scholars and opted to breastfeed for six months only. Mothers who completed secondary and tertiary education had access to social media information and practices of EBF and were thus able to practice EBF as compared to those who did not have access to media. Hence, this study showed that the higher maternal education, the greater the maternal knowledge, and the stronger the maternal self-efficacy toward EBF.

a. Lack of adequate maternal knowledge on EBF

Considering that the majority of public health facilities in South Africa are being accredited as Mother Baby Friendly Institutions and mothers are delivering at hospitals, maternal knowledge, and attitudes on EBF should have been well established (Witten *et al*. 2020: 76). However, maternal knowledge and attitudes remain a disparity among participants of the current study. In addition, mixed feeding appears to be a norm and reflects on the disempowering and harsh environments breastfeeding mothers are exposed to. In addition, it has been evidenced from a previous study that the lack of adequate knowledge of EBF is associated with the poor practice of EBF, potentially due to poor access to maternal services (Moshi *et al*. 2021: 82-90).

In contrast, the results of the current study revealed that all participants did have access to maternal services. While a proportion of the primigravida mothers stated that they did receive breastfeeding education during antenatal care, the majority reported that HCWs did not provide adequate educational material, the teachings were inconsistent or none at all, it was in wrong language, created a language barrier with no interest in reading the educational material; showed a lack of patience to teach primigravida mothers; had poor nursing attitudes; and treated HIV-positive mothers indifferently. They also noted that there were no ANC classes. Hence, most retrieved their knowledge on EBF from their mother, grandmother, aunt, friends, social media such as Twitter, internet, Google, Breastfeeding Apps, and health facilities.

Research in America, at Cleveland Clinic Ohio, on the "Benefits of breastfeeding for you and baby" (2023) suggested that benefits of EBF for the baby included a reduction in certain infant diseases and promotion of a healthy immune system. The literature mentioned that EBF for six months and beyond a year up to two years protects the infant against respiratory infections, namely, pneumonia, whooping cough, asthma, bacterial infections, diarrhea, dental cavities, sudden infant death syndrome (SIDS), eczema, type 11 Diabetes mellitus, childhood leukemia, and inflammatory bowel disease and benefits (Cleveland Clinic, Benefits of breastfeeding for you and baby", 2023). In addition, short-term benefits for mothers included reduced risk of postnatal depression, increased bonding, and quicker recovery from childbirth. Furthermore, the long-term benefits were cancer prevention, such as breast, ovarian, and thyroid cancers, high blood pressure, and Type 2 Diabetes, and reduced social and behavioural problems. This finding was consistent with a similar study in Ireland by Murphy *et al*. (2023:140), which showed EBF for a minimal period of 90 days, offered protection against childhood morbidity, and reduced hospital admission and length of stay.

Despite all of these known benefits of EBF, when comparing them to the current study's findings, it was revealed that the mothers` knowledge of the benefits of EBF was limited to just a few factors, namely, robust immune system, promoting growth, cost-effectiveness, and increased bonding for the baby and none for the

mother. None of them mentioned the benefits of colostrum. As most mothers indicating reduced intent to EBF beyond six months, including mothers living with HIV, this meant that their babies will be more likely to be deprived of all the goodness and the wholesome nutrients breast milk has to offer to foster healthy growth and development. This could lead to increased vulnerability of the infant to illnesses that warranted hospital admissions and possibly increased length of stay.

Concerning the participants` excerpts as outlined in Chapter 5, a mother (Participant #1) who feared social rejection from not having an ideal body image opted for early cessation of breastfeeding within the first week post-delivery, indicating a lack of knowledge of the benefits of EBF for her and her baby. In contrast, quite interestingly, a study in Limpopo, South Africa, by Motadi *et al.* (2019: 119) revealed quite the opposite finding, that very few mothers breastfed their infants exclusively for six months, despite a high level of awareness of the benefits of EBF. This can be further argued if knowledge of EBF is the only contributing factor for early cessation of EBF and thus requires further research.

Research by Wisner (2023) on the benefits and nutrition of a baby's first milk, namely colostrum, and by Jozsa *et a*l. (2023) on the anatomy of colostrum provided rich information on the benefits of colostrum. Wisner (2023) mentioned that colostrum is often viewed as “liquid gold,” the yellowish milk that’s available for your baby right after birth, and is the baby’s first “super food’, and can be typically seen in other colours, namely clear, white or orange. Wisner further mentioned that only five to fifteen millilitres (ml) of colostrum is manufactured during the first 24 hours of the baby’s life and is adequate to match the baby’s stomach capacity at birth and increases as the baby grows. In addition, if the mother notices at least one wet diaper with urine and one with stool within the first day, two of each on the second day, and three on the third day after birth, it indicates that the baby has received enough colostrum. Furthermore, the study elaborated on other benefits of colostrum that help the baby pass the first stool, namely meconium, which protects against neonatal jaundice, and lowers blood sugars.

Similarly, Jozsa *et al*. (2023) describes "colostrum" as the initial milk produced during pregnancy, which is secreted in larger volumes after birth. Transitional milk begins at two to three days postpartum. As the baby breastfeeds, this milk gradually changes from colostrum to mature milk and increases faster in volume. The lactose, fat, and calories increase, and the mature milk contain 20 kcal/ounce and nutrients the infant needs to grow with immunoglobulin and other antibacterial components to promote immunity against infection. However, despite these facts on the benefits of colostrum, the current study's findings clearly indicated that Participant # 11 did not have any insight into colostrum and thus perceived it as water and discarded it, along with its nutritive value, indicating a need to promote breastfeeding education on milk composition and transition.

Working mothers' attitudes towards EBF beyond one year were encouraging as they sought to continue EBF through EBM. However, they lack knowledge on how and when to apply the breast pump and preserve EBM. This finding correlated with a similar study in Kenya by Edemba *et al.* (2022: 33), which showed that there were significant knowledge gaps around the expression and preservation of breast milk and therefore recommended that all health facilities educate and assist mothers on EBM and lactation challenges.

Interestingly, literature on "pumping schedule samples" by Healthline (2020) provided an outline of when and how long to pump the breast, which is illustrated in the table below, Table 6.2. This serves as a guide that nursing mothers could use. In addition, it highlighted that breastfeeding mothers must know that they are all different and produce milk at different storage capacities; thus, they must not compare themselves to others. While some mothers can pump large volumes of milk, others may get just enough for the required feed and may have to pump more frequently.

Table 6.2: Breast Pumping Schedule Sample by Healthline (2020)

Exclusive pumping for a newborn schedule	Exclusive pumping for an older baby schedule	Schedule for building freezer storage	Schedule for pumping at work	Schedule for power pumping (to increase milk supply)
7 a.m.	7 a.m.	7 a.m. (nurse)	7 a.m. (nurse baby)	20 minutes pumping
9 a.m.	9 a.m.	8 a.m. (pump)		
11 a.m.	2 p.m.	10 a.m. (nurse)	10 a.m. (pump at work	10 minutes rest
1 p.m.	5 p.m.			
3 p.m.	8 p.m.	11 a.m. (pump)	2 p.m. (pump at work	10 minutes pumping
7 p.m.	5 a.m.	1 p.m. (nurse)	5:30 p.m. (nurse)	10 minutes rest
10 p.m.		4 p.m. (nurse)		5 minutes pumping
3 a.m.		7 p.m. (nurse)	8 p.m. (nurse)	10 minutes rest
		10 p.m. (nurse)	11 p.m. (nurse)	
		2 a.m. (nurse)	2 a.m.(nurse) 5 a.m. (nurse)	
		5 a.m. (nurse)		Cycle can continue depending on your need

Once EBM is obtained, it must be safely stored. The Centre for Disease Control and Prevention (CDC) provided guidelines on adequately storing and preparing breast milk, illustrated in Figure 6.3 below. The CDC explained that storing human milk safely at different temperatures depends on several factors, namely, the amount of milk, the room temperature when milk is expressed, irregular refrigerator and freezer temperatures, and the cleanliness of the environment. Therefore, HCWs and lactation consultants should educate mothers on the safe storage of EBM using the CDC guidelines illustrated in the table below.

Table 6.3: Proper storage and preparation of breast milk by CDC (2022)

Storage Place and Temperatures			
Breast milk type	**Countertop 77°F (25°C) or colder (room temperature)**	**Refrigerator 40°F (4°C)**	**Freezer 0°F (-18°C) or colder**
Expressed or pumped (fresh)	Up to **4 Hours**	Up to **4 Days**	Within **6 months** is best Up to **12 months** is acceptable
Defrosted or frozen before	**1–2 Hours**	Up to **1 Day** (24 hours)	NEVER refreeze human milk after it has been thawed
Leftover milk feed (baby unable to complete feed)	Use within **2 hours** after that feed		

Although EBF is the best form of infant feeding in the first six months, and then up to two years, with complimentary feeding; mixed feeding is a common practice worldwide (Monge-Montero *et al.* 2020:914; and Papadopoulos *et al*. 2022: 2190). Literature on “Mixed Feeding, Pregnancy, Birth and Baby”, defines mixed feeding as the baby being both fed breast milk and formula. In addition, regular practice of formula feeding can lead to low milk supply and cause the baby to prefer drinking from the bottle. Reasons why mothers choose to mixed feed, could be attributed to breastfeeding issues, among other reasons, such as mastitis, oral thrush, being uncomfortable feeding in public, low birth weight of infant and low breast milk

supply. However, the findings of this study were inconsistent with the current study findings as mothers wanted to mixed feed, irrespective of HIV status, due to psychosocial reasons, leaving their babies in care of their grandmother on formula feeding. Preparation of formula feeds and dangers thereof were not known by mothers who chose to mixed or formula feed.

Interestingly, recent literature on “HIV/AIDS Infant feeding and nutrition”, by the WHO (2021) recommended that all mothers living with HIV should receive life-long Anteretroviral Treatment (ART) to support their health and to ensure the wellbeing of their infants. In addition, use of ART has been scientifically proven to be very effective at preventing HIV transmission through breastfeeding as long as the mother is compliant with the ARVs adherence. Therefore, the WHO (2021) supports the practice of mixed feeding since it’s better than no breastfeeding. Thus, these findings correlated with the current study findings as all HIV-positive mothers were on ARVs and achieved successful suppressed viral loads for EBF to be practiced.

Despite the WHO’s support for mixed feeding, they still strongly recommend that EBF for six months up to two years be practiced and that parents be informed about the health risks associated with formula feeding. Therefore, literature by INFACT Canada (2002) on the “Fourteen risks of formula feedings”, mentioned that formula fed infants are 16.7 times more likely to have pneumonia, and a risk of infection from formula milk contaminated with the bacteria “cronobacter”. In addition, other health risks of formula feeding included: Celiac bowel disease, allergies such as hay fever, the onset of Type 1 Insulin dependent juvenile Diabetes, Type 2 Adult-onset Diabetes, and SIDS. A similar study by Bloomfield *et al*. (2020: 526) revealed that formula feeding predisposed the infant to overweight or obesity, which is due to the high protein, fats and carbohydrate contents found in formula milk. Therefore, in view of the current study findings, the researcher suggests that HCWs educate mothers on safe preparation of formula feeding and its risks or dangers to lifelong health in the infant.

b. Unplanned pregnancy and mental confusion

Adolescent mothers in this study found it very stressful and frustrating to commit to EBF for extended duration beyond six months. Young, unemployed, inexperienced at motherhood, riddled with poverty, and from single parenting homes, the women suffered from poor maternal mental health. This finding was consistent with the findings of a recent study conducted in Saudi Arabia by Ibrahim *et al*. (2023: 3051), which revealed that women with unplanned pregnancies experienced psychosocial stress that often hindered the practice of EBF; and which indicated a need for HCWs, namely maternity nurses, to screen all pregnant women for unplanned pregnancies and offer counselling and support during their ANC visits to increase their intent to EBF.

c. Maternal employment

The current study showed that the working mothers earned salaries of more than R2500.00 per month and chose to sustain EBF, even though separated from their babies after four months of maternity leave, through EBM in a bottle; and despite challenging jobs, busy work schedules and the breast condition of inverted nipples. However, this was contrary to the studies in Ethiopia which showed that employment was related to low EBF practice, and unemployed mothers were more likely to breastfeed than employed mothers exclusively (Zewdie *et al*. 2022: 222). Also, the higher the mothers' income level, the lower the EBF rate, as they would spend more time away from their babies, affecting the duration of EBF (Awoke *et al*. 2021: 100108).

The low EBF practice was observed amongst the younger school and college attendance mothers in low-income households, with financial aid from child support grants, family or partner and student allowances, and mothers who feared the negative effect EBF had on their body image. It remains uncertain whether the young primigravida mothers would stay committed to EBF for six months as they sought career establishments, worried over social acceptance, and cultivated an ideal body image. Interestingly, both the mothers who were housewives and the working mothers opted to breastfeed for more than a year exclusively. In addition,

mothers living with HIV infection were unemployed. They had no choice but to EBF due to lack of adequate income and avoidance of the community pressures arising from the stigma and stereotyped assumptions of being HIV-positive.

In addition, further literature on 'Breastfeeding as a Working Mother' (Health Hub Breastfeeding 2021) showed that it is imperative for working mothers to have established their milk supply before they start work in order to combine work and breastfeeding successfully. Establishing their milk ought to be done by building a good milk supply through initiating EBF as soon as possible after delivery, expressing and storing milk, weaning from the breast, and preparing for the caregiver. This study correlated with current findings whereby working mothers could establish their milk supply before returning to work within four months of maternity leave. They chose to EBF via exclusively pumping the breast, making it easier for work adjustment and caregiver continuation of care.

Moreover, working mothers must deal with work fatigue, caring for their babies after work, and attending to day-to-day household chores, which cause physical, mental, and emotional exhaustion. This could limit or prevent their ability to express their breast milk, leading to breast conditions, for example, and breast engorgement. This finding was supported by a similar study by Kadale *et al*. (2018: 2905), which revealed that a lack of balance between work and family life impacted breastfeeding mothers' physical health. Support from family and spouse was essential for successful EBF rates among working mothers. This finding was consistent with the current study's findings as mothers reported cheerful family and spouse support in assisting with household chores, which allowed them quality time to EBF.

d. Nipple confusion

The current study findings showed that working mothers chose to EBF using EBM in a bottle from as early as three weeks since their milk supply would be established in the four months of maternity leave. However, mothers still need to be educated on choosing the right nipple and bottle, as babies' preferences differ

according to shape, size, and textures to make the milk feed effortless and satisfying. This finding was consistent and supported by the findings of a similar study by Taylor (2021) that described nipple confusion as a behaviour seen in babies who are used to sucking from bottles; and have difficulty getting back on the breast. When a baby demonstrates more acceptance of bottle feeding than the breast, it does not mean the baby is confused; instead, the baby indicates his/her preference to drink from a bottle to a faster and easier feed that's more filling in his /her tummy, rather than working hard on the breast that can often be very frustrating.

e. Post-operative pain

The current study findings examined postpartum mothers who delivered by Caesarean section and vaginal birth; and the results showed that mothers experienced pain on the operative site, irrespective of mode of delivery with a delay in initiating EBF immediately within the first hour at birth. Furthermore, mothers experienced difficulty latching and positioning their baby on the breast, as well as difficulty sitting or walking. In addition, the mother's ability to EBF depended on her readiness to breastfeed, effective pain relief with analgesia, and supportive breastfeeding positions.

This finding contrasted with a study finding by Paksoy *et al*. (2020: 55), which showed that mode of delivery is among the determinants that play an essential role in breastfeeding practices. Caesarean section significantly increases the risk of non-compliance to EBF as compared to vaginal birth; in that it negatively affects the physiology of lactation; limits maternal contact with the neonate; and the mother can have a low tolerance to post-operative pain; all of which negatively affects EBF.

Similar studies examined the relationship between post-operative pain after caesarean section; and perineal pain following episiotomy in primiparous mothers who exclusively breastfed (Babazade *et al.* 2020: 109697; He *et.al.* 2020: e033354). (Babazade *et al.* 2020: 109697) mentioned the raised post-operative

pain scores after caesarean section, plus reduced breastfeeding initiation, was positively linked to postpartum depression, and resulted in an almost one day increase in the length of stay each time the pain score increased; while on the other hand; He *et.al*. (2020: e033354) showed that perineal pain in post episiotomy mothers exerted limitations on the mother's postpartum daily activities, including sitting; interfered with breastfeeding initiation, and showed lowered EBF rates on the first day after delivery, then in mothers with intact perineum; influenced maternal mood; and increased fatigue and headaches, with the potential risk of postpartum depression.

However, findings of the current study showed that despite the experience of fatigue and post-operative pain, mothers were determined to continue EBF, even if it was after the first hour of birth and showed no signs of altered mood swings or postnatal depression as a result of post-operative pain. The physiology of breast milk was not a barrier to EBF, as colostrum was noted at birth, and there was no increased length of stay in post caesarean section mothers.

f. Breast conditions

The current study findings showed that the mother challenged with flat and inverted nipples faced difficulty latching her baby onto her breast and did not receive optimum education and support to promote EBF. Despite this, she remained positive and demonstrated willingness to continue with EBF, using EBM in a bottle. This finding was supported by a study conducted by Taylor (2022) who argued that nipple shape could impact breastfeeding and that flat or inverted nipples increase the difficulty for the baby to latch onto the breast and determine how much milk the baby gets, with the potential risk of decreased milk production. However, EBF can still be practiced with much patience using various techniques to establish nipple formation; for example, nipple stimulation by touching them or the use of cold compressors, use of nipple shields, pre-feed pumping, and massage to areolar if breast engorgement is experienced.

Aldalili *et al.* (2021: 239) concurs with their study in Dammam, Saudi Arabia, on factors associated with cessation of EBF that sore breasts or nipples was a risk factor associated with early weaning of EBF. This study's findings correlated with the current study's findings, whereby a primigravida mother shared her sibling's experience of painful breasts and nipple pain, with the resultant effect of early cessation of EBF in the first month following delivery. This experience generated fear in the participant and thus she chose to EBF using EBM. Hence, the current study indicates that lactation problems must be identified and treated as early as possible to prevent secondary breast conditions related to sore and cracked nipples and to avoid early weaning of EBF. Treatments for sore and cracked nipples include rubbing breast milk over the area as it contains antibacterial agents, use over the counter antiseptic creams, like lanolin, keeping breasts clean, air-drying nipples, and applying warm compressors like a warm towel as they promote healing while easing sore nipples, implementation of correct breast pumping times and techniques, and correct positioning and latching of baby onto breasts (Cleveland clinic, Nipple fissures 2022).

g. Lack of adequate income to access clinics for ARVs

The current study's findings showed that the HIV-positive mothers demonstrated anxiety and fear toward breast milk transmission of HIV to their babies, which was congruent to a similar study which showed that HIV-positive mothers desire a HIV negative healthy baby, and therefore will do all that is required to ensure their babies are HIV-negative (Samburu *et.al* 2021: 39). According to the guidelines by NIH. gov. July (2023) on 'Preventing perinatal transmission of HIV after Birth,' HIV transmission to babies through breast milk can be reduced to lower than 1% if their viral loads are undetectable. This is achieved when ARVs are taken throughout pregnancy and during breastfeeding. The study highlighted that HCWs must identify poverty-challenged patients and offer support services through mobile health clinics to reach these remote areas, to achieve successful prevention of mother-child transmission rates.

6.4.1.2 Social environmental factors

This study revealed the following social environmental factors: Early school and college dropouts, need for social acceptance and ideal body image, and HIV stigma and weight.

a. Early school and college dropouts

In the current study, mothers dropped out of school early to take care of their babies. Furthermore, all were unemployed, from low-income households dependent on child support grants to provide for themselves and their babies. The current study findings were supported by similar studies by Sobngwi *et al.* (2022:10); and Miquilena *et al.* (2021), which revealed that pregnancy and childbearing are among the main determinants of school dropout levels in teenage adolescents, leaving them vulnerable to coerced sexual relationships; gender power inequality; lack of sexual education and the non-use of contraception. Other consequences included hindrance in their formal education, resulting in unemployment and vulnerability to poverty, violence, crime, and social isolation.

The results of the current study highlighted the need for policymakers to adopt an integrated multi-disciplinary approach to develop strategies for continued schooling for young mothers, which will combat employment disagreements, gender-based power inequality, and social isolation. Stakeholders include the Department of Health; namely; School Health, Department of Education, and Social Services; in liaison with school governing bodies and school guidance counsellors. Furthermore, sexual reproductive health must be taught, and family planning services should be offered at schools, universities, and colleges to create sexual awareness and prevent unplanned pregnancies. Contraception of choice should be long-term, namely the Implanon and the IUCD, as per the National Department of Health Clinical Contraception Guidelines (2019: 6).

b. Need for Social acceptance and ideal body image.

The study findings indicated that although all mothers, initiated breastfeeding during the inpatient stay, the lack of breastfeeding self-efficacy was common among younger mothers who were still at school and college and who feared EBF would affect their beauty through altered body image of being either too fat or too thin, which leads to early cessation of breastfeeding. This was consistent with a recent study conducted in Limpopo Province South Africa, by Mudau (2022: 8-13), which revealed that among the factors that contributed to the non-adherence to EBF were negative perceptions of breastfeeding among younger women, lack of knowledge; and a desire for social acceptance and pressure to maintain ideal body shape. Furthermore, a study by Krol *et al.* (2018: 977) revealed that psychological disorders that occur among young pregnant and lactating mothers affected the relationship between mother and baby and the duration of EBF. This finding supported the current study findings whereby some mothers felt EBF beyond six months was a limitation to their freedom. Hence, they opted for formula feed which was to be given by the caregiver of choice, namely grandmother, mother, or partner's family.

c. HIV stigma and weight

The current study findings showed that mothers were concerned about the high stigma related to extreme weight loss in the context of HIV. In addition, promoting EBF among Black HIV-positive mothers created a perception among mothers and their community that EBF was meant for those who are positive. The Black community labelled excessive weight loss as being HIV-positive. As a result, mothers living with HIV felt embarrassed and pressured to 'keep the weight on', to avoid being ostracized; and treated indifferently. This concurred with a similar study by #SAAIDS (2019) “When HIV and weight stigma collide”, where Black South African women associated being thin with HIV infection and did not feel motivated to exercise because they feared that losing weight increased their chances of being stigmatised as HIV-positive and thus prevented HIV testing.

In contrast, excessive weight can also predispose women to poor health outcomes such cardiovascular and metabolic disorders, which was consistent with the study findings in Uganda by Alhassan *et al.* (2022: 246) 'It's only fatness, it doesn't kill", which showed that Ugandan mothers disliked thin body size and wanted to put on extra weight to improve body image, social acceptance and hide their HIV status. Therefore, the findings of the current study indicate that HCWs are accountable for the mothers` perceptions of weight loss or gain through effective counselling, weight and any related illness monitoring. In addition, HCWs should revisit strategies to address community awareness on HIV stigma and weight.

6.4.1.3 Role of support systems for EBF

First time mothers are generally inexperienced at motherhood, which affects breastfeeding initiation, hence they require timeous professional and social support that must be clinically practical to have successful EBF outcomes (Theodora *et al.* 2021: 119). The current study identified two support systems as alluded to by the participants namely: family and partner support, and health care worker support.

a. Family and partner support

The current study showed a conflict of interest in partner support. Mothers who were married mentioned that their husbands fully supported EBF, hence husband support was not a barrier to EBF; however; in contrast; a proportion of single mothers reported that the only support they received from their partner was financial aid, while other single mothers reported no partner support as he was also at school. This finding was supported by a similar study which revealed that the opinions of husbands significantly influence the choices that mothers make about breastfeeding (Agrawal *et al*. 2022: e30363). Initiation and intent to EBF are both influenced by the emotional and physical assistance that fathers provide, which empowers, increases moral support; and strengthens the mother's self-confidence to EBF. Housework, caring for the mother's well-being, meal preparation, noticing an infant's hunger cues, burping the baby, and changing the

infant's diaper after feeding should all be part of the responsibilities taken up by the father. This will allow a positive maternal attitude and EBF beyond six months. In addition, the father must be knowledgeable about EBF practice to demonstrate wanting to get the baby breastfed.

Interestingly, literature by Gharaei *et al.* (2020: 84) correlated and supported the current study finding and showed that partners were not the only source of support but that support from the family influenced breastfeeding self-efficacy. Grandmothers tend to share their infant care practices and beliefs with the new mothers and thus tremendously influenced EBF outcomes. Furthermore, while some mothers chose their grandmothers, others were coached and directed to EBF by aunts, mothers, friends, siblings, and HCWs to a certain degree. Hence family involvement in breastfeeding education must be encouraged to promote EBF when mothers are separated from their babies, and in addition, the dangers of formula feeding, and the preparation and preservation of milk feeds must be taught.

b. Lack of healthcare worker support

The current study findings showed that even though mothers did attend health care clinics, they lacked effective EBF support. This finding contrasted to the study findings by Witten *et al.* (2020: 76), which concurred that South Africa has a high coverage of PHC facilities with relatively high utilization rates especially for antenatal care and child health services, and a very well established 25-year history of BFHI, and mothers should therefore be well prepared for EBF, and be able to EBF up to two years. Mothers are dependent on health workers for advice to make infant feeding decisions. Confusing, incoherent, or misleading advice can lead to substandard feeding practices (Nieuwoudt *et al.* 2018: 20). Thus, this study finding was consistent with the current study findings, except that further study is required to understand the healthcare workers' perception of the challenges they encounter that limit or prevent support to the EBF practice.

While mothers were satisfied with the quality of their care received from their family; and others from their partners, most of the mothers were very unhappy with the lack of adequate breastfeeding support from HCW. Disparities in nurses' attitudes, inconsistent frequency and quality of EBF education at ANC, lack of EBF knowledge and PMTCT maternal counselling and support, were some of the shortfalls, amongst others, perceived by mothers as lack of support from the HCWs to promote, support and sustain EBF. These findings appeared consistent with a similar study in Mpumalanga South Africa, by Seabela *et al*. (2023: 1062817), which showed when mothers attended child health centres, HCWs' comments on EBF wrongly interpreted breastfeeding practice, and in addition encouraged formula feeding more than EBF in HIV-positive mothers, indicating that confusion about EBF in context of HIV still exists. Furthermore, maternal desire to EBF, and the support of HCWs was linked to raise EBF initiation rates. Therefore, the researcher suggests HCWs be trained in the proficiency of EBF practices, in conjunction with relevant infant feeding policies in order to be able to educate all mothers on correct infant feeding practices in a professional manner.

6.4.1.4 Cultural factors influencing EBF

In the current study, mothers were questioned on the cultural and traditional beliefs that influence the decision to EBF; and it was noted that the cultural environment of the mothers played an essential role in their initiation and sustenance of EBF. This includes the use of traditional herbal medicine which is used in many African population groups to treat and prevent evil spirits. It is also prevalent amongst Hindus and Muslims in the Indian race group, and the Zulu and Xhosa in the Black racial group. The study findings were consistent with a similar study by Modjadji *et al.* (2023: 1513), which showed that life with a new-born can be complicated, energy-draining, and overwhelming for the new mom; thus, support from the family and significant other is critical in ensuring the well-being of the new mother and her baby and successful breastfeeding outcomes. Also, the belief systems of individuals, families, significant others, and society play a vital role in mothers' decision-making about infant feeding practices, including EBF.

a. Hindu

Findings of the current study revealed that the Hindus had a customary practice for the mother and her baby to go to her mother-in-law or aunt's home for continued care after childbirth. Ayurvedic remedies in the form of spices, herbs; and aromatherapy were used to embrace maternal and new-born health physically, emotionally, and spiritually; and to promote, support, and sustain EBF while in the care of family. Traditional meals were prepared with specific spices, namely butter masala curry, soya beans, and jeera powder, which aimed to help with milk production, pain relief, and wound healing on post-operative incision lines, in addition to the medication received at the healthcare facility.

Furthermore, cultural beliefs led to the prohibition of visitors after 6pm for the first three months after delivery. They also informed the lighting of incense, namely, the "Laban" and "camphor"; to appease Hindu Gods, in exchange for protection from bad spirits, or the "evil eye"; in order to promote infant well-being. Similar studies showed that pre-lacteal feeds given to the newborn were thought to have positive effects on the baby's gastrointestinal and genito-urinary systems like: "honey" or "vasambu" (Acorus calamus). "Vasambu" is an herb that is burnt and rubbed over a stone mixed with water or breast milk and fed to the baby, reducing colic pain and improving babies' appetite. Furthermore, the "Vengai Pottu" (Coconut shell kajal; a natural and traditional eye cosmetic from burning coconut shells) is applied on the baby's forehead, cheek, and eye to repel evil and show that the mother has a protective net over the baby (Reddy *et al.* 2019: 29; and Divya, 2023).

b. Muslim

The current study showed that the Hindu culture sought to appease their Gods with incense worship to receive maternal and new-born protection for successful EBF durations, while the Muslim culture was guided by the Holy Qur'an's recommendations on EBF. In addition, while "laban" was used by Hindus to chase away evil and harmful spirits, the Muslims believed that it had a medicinal effect to relieve pain and heal perineal sutures. Furthermore, a clinical trial by Jubara

(2019) on ‘Effect of Tahneek on Hypoglycaemia in New-born Infants” showed that a pre-lacteal feed of a small number of crushed dates is applied to the palate of the baby's mouth, called "Taḥneek," soon after the baby is born and before initiation of breastfeeding to exercise the muscles of the mouth and promote blood circulation in the mouth, which will help the baby to breastfeed and prevent neonatal hypoglycaemia.

Furthermore, the Holy Book does not only provide spiritual growth but strictly mandates mothers to exclusively breastfeed for up to two years (Mehrpisheh *et al*. 2020:37-41). In addition, the study mentioned that Muslims believed that when the mother gives birth and begins breastfeeding the baby, a glowing light will glitter for the mother in Day of Judgment for each time the baby suckles from the breast. The father of the child is held accountable to support the mother in EBF; and if he has died, then his heir must support the mother to EBF. In addition, cessation of breastfeeding is done by mutual consent and should be after two years. Mothers are encouraged to hold and breastfeed their babies on the left side as the baby will be close to the mother's heart full of love; thus, the babies will feel that love and breastfeed successfully.

c. Xhosa and Zulu

The current study findings showed that in the Xhosa and Zulu culture, mothers would consult their community herbalist to treat breast conditions, milk supply issues, and cessation of breastfeeding. Interestingly, black tea and meali meal porridge cooked for several hours was believed to increase milk supply. These findings were supported by a similar study which showed that the traditional healer provides health services based on his community's culture, religious beliefs, knowledge, and attitudes (Josephine-Ozioma *et al.* 2019). Although herbal medicine was once named "primitive "by Western medicine, the understanding of its therapeutic activities was discovered through scientific investigations and led to many pharmaceuticals derived from its phytonutrients. However, the African medicinal plant's poor quality and safety, namely microbial contamination due to poor sanitary techniques during preparations, the potential herb-drug interaction

when herbal medications are given simultaneously with conventional drugs, and the non-reporting of adverse events remain significant limitations for its use (Josephine-Ozioma *et al.* 2019).

Nevertheless, the subjective observation of all ethnic groups in the current study indicated that they all sought to be supportive to EBF practice by ensuring both maternal and infant wellbeing. Mothers were submissive to their cultural belief, practice or myth, which provided for rest, relaxation, protection, wound healing through herbal and aromatherapy and good nutrition. Good nutrition increased milk production. However, despite these positive influences on EBF, traditional healers and conventional health practitioners must work together towards safe healthcare provision and service with transparency, including the safe implementation of herbal concoctions during breastfeeding.

6.4.2 Objective 2: To assess the perceptions of the primigravida mothers towards EBF

This study aimed to explore the perception of primigravida mothers around EBF. Mothers` perceptions of EBF were explored on knowledge, intent to practice, breast size, painful leaking breasts, role of support systems, working mothers, and what recommendations they could offer to improve EBF practice and support from HCWs or health care facilities. The barriers identified were supported with literature that provided insight into recommendations required to improve the HCWs support towards improved EBF practice. The WHO aims to have at least 50% of all mothers worldwide exclusively breastfeeding their infants in the first six months of life by 2025 (WHO 2014b). While breastfeeding mothers are aware of the benefits of EBF, they face barriers at personal, social, and organizational levels to practice EBF. Thus, HCWS must identify these barriers and implement supportive strategies to improve their EBF experiences to a more meaningful and positive one, gain insight into how these personal and organizational factors impact their decision-making to EBF, and improve breastfeeding rates as required by WHO (Beggs *et al.* 2021: 2169). In addition, Douglas *et al.* (2019: 1-18) mentioned that the perception and intent of

significant others to promote EBF is essential in understanding their perceived behaviour and their state of mind toward EBF practice.

6.4.2.1 Knowledge

Knowledge is an essential factor for perception and practice in breastfeeding. The current study showed that mothers' attitude and intent to practice EBF was influenced by adequate knowledge of EBF. Mothers perceived breastfeeding to be suitable and acknowledged the nutritional properties of breast milk for their babies; however, ten out of eleven mothers did not know the benefits for the mother. In addition, one mother was yet to learn everything about breastfeeding as a first-time mother. In contrast, the other mothers knew that EBF is for the first six months of the baby's life and that EBF meant feeding the baby only breast milk and no other feeds during this period. Hence, the current study findings correlated with similar studies conducted in East Africa by Dukuzumuremyi *et al*. (2020: 70), in Italy by Cascone *et al. (*2019: 2118), and in China by Hamze *et al.* (2019: 68) that although mothers thought they had a fair knowledge on EBF, significant knowledge deficits still exist regarding the duration of feeding, colostrum, breastfeeding on-demand, benefits to mothers and babies, and the danger of bottle-feeding. This requires HCWs to provide more education on EBF as they were observed to be a stronger predictor of increased knowledge, changing attitudes and for successful initiation and sustenance of EBF practice.

6.4.2.2 EBF Practice (Intent)

Even though the majority of mothers reported a strong intention to breastfeed, and actually initiated EBF within the first hour after birth, a small proportion could not meet the WHO recommendations of EBF and breastfeeding duration, which indicated suboptimal knowledge and attitudes towards breastfeeding. In addition, the study identified many psychosocial, socio-demographic, and cultural factors that influenced the practice of EBF, and showed the more educated the mother was, there more enthusiastic she was about employing EBF knowledge. This increased a positive maternal attitude and boosted breastfeeding self-efficacy encouraging the intent to EBF over an extended period. In addition, ethnicity,

previous EBF experience of being breastfed, and positive family and partner support in EBF strongly influenced intent to EBF. These findings were consistent with the findings of similar studies (Naja *et al*. 2022:15; Shohaimi *et al*. 2022: e0262401).

Although all four mothers living with HIV intended to exclusive breastfeed for six months, only one desired to EBF beyond one year, suggesting that although mothers living with HIV accepted their status and were already on ARTs with suppressed viral loads, they still experienced barriers to EBF, namely the potential risk of HIV transmission to their babies via breast milk. This result was consistent with finding of a previous study in South Africa by (Remmert *et al*. 2020: 127-134) and suggested that HCWs must address these concerns prenatally before childbirth in order to make sure that patients fully understand the teachings thereof. In addition, HCWs, lay counsellors or social workers must educate mothers on continuing ARV adherence during post-partum visits. Individual health counselling and mHealth interventions can be used to increase knowledge of and improve adherence to HIV-related health behaviours.

6.4.2.3 Breast size and painful leaking breasts

a. Breast size

The current study showed mothers perceived small breasts to have an inadequate milk supply, which was consistent with a similar study on "Breastfeeding with small breasts" by Murray (2021), which showed new mothers can still breastfeed on small breasts although they tend to worry from time to time. However, successful EBF outcomes will be achieved if the baby is demand-fed and well latched onto the breast. In addition, the number of wet or soiled diapers will reassure the mother that the baby is getting enough feed, indicating a need for HCWs to strengthen breast education to erase all myths around breast size and milk supply.

Several studies have shown that breast size, be it large or small breasts, does not matter when it comes to the amount of milk the breast can produce and store; instead, milk supply depends on the amount of glandular tissue (milk-making

tissue) in the breast, and how much, and often the baby feeds from the breast. Larger breasts have more fatty tissue than smaller breasts. However, women with hypoplastic breasts have underdeveloped glandular tissue and thus may not produce adequate milk supply (Australian Breastfeeding Association 2022: Small Breast, Large Breast, Does it matter? United States Department of Agriculture 2022: Breast and Nipple Size Shape; and Leach 2023: Is it true that small-breasted mums produce less breast milk?) Interestingly, Murray (2021) mentioned that breast augmentation did not affect milk production compared to breast reduction, where glandular tissue may be reduced and affect milk supply and storage.

b. Painful leaking breasts

The current study's findings, showed mothers who were away from their babies perceived painful, leaking breasts as a sign that their babies were crying, which compelled them to return to their babies and breastfed. This finding was supported with literature which revealed that the "let-down reflex" is a physiological response stimulated by the hormone oxytocin, released by the breastfeeding mother's brain in response to her hearing or seeing her baby or when she thinks about her baby. The breast muscles contract, causing the milk ducts to open and release milk. In addition, large amounts of the hormone Prolactin are produced during pregnancy and remain high after childbirth until breastfeeding is established. Together with Oxytocin, they are responsible for producing and letting down breast milk (Murray, 2021). These findings highlight that HCWs or lactation consultants should provide guidance and support to the mother should she experience any problems with breastfeeding or let-down reflex.

6.4.2.4: Role of support systems

a. Family and partner support

The current study's findings showed mothers with husbands felt supported physically, financially, spiritually, and emotionally, and therefore had intent to EBF beyond one year. This finding was supported by similar study which showed that

support from partners or fathers and families plays a vital role in a mother's decision to initiate, continue, or cease breastfeeding postpartum (Ogbo *et al.* 2020: 413). In addition, the study concurs that father or partner support increased EBF through verbal motivation by being sensitive to the nursing mother's needs and through helping with household duties. Therefore, to ensure adequate EBF knowledge of breastfeeding policies and interventions among primigravida mothers; fathers, and partners should be included in breastfeeding programmes and tasked with specific roles.

Interestingly, the South African government has legislation in place which provides parental support both physically and financially by granting employees parental leave, and access to unemployment fund benefits. This is evidenced in the CCMA (2022) “Parental leave and Benefits”, section 25A of the Basic Conditions of Employment Act (BCEA), which mandates that an employee who is a parent of a child is entitled to 10 days of parental leave, commencing on day the child is born. These are calendar days, and not working days. In addition, the employee is entitled to financial benefit if contributions have been made to the Unemployment Insurance Fund. Fathers are now privileged to spend quality time with their families and to provide the physical, financial and moral support the mother needs to focus on EBF practice.

Despite these measures of support, Hunt *et al.* (2021:83) showed that socioeconomically challenged single mothers are least likely to breastfeed and negatively impact breastfeeding initiation and continuation rates. Early cessation of EBF was higher in the socioeconomically marginalized mothers than in the socioeconomic privileged. This result was consistent with the current study's findings, whereby mothers of low-income households lacked adequate financial support from partner and chose either early cessation of EBF or mixed feeding with the intent to return to school or seek employment to provide for both themselves and the baby. Hunt *et al.* (2021: 83) revealed that access to EBF information at the right time was essential and suggested linking marginalized socioeconomically mothers to peer support from their social and community networks in the early postpartum period. This will provide the informational,

emotional, and practical support they need to establish and sustain an extended duration of EBF.

b. Health care worker support

The mother's perception of healthcare worker support was mixed. Some perceived that they did get educated on EBF. At the same time, the majority showed dissatisfaction with HCWs because they felt HCWs were not committed to teaching the skills required for successful EBF. These findings were consistent with the findings of a similar study by Theodorah *et al*. (2021: 119) which showed that professional, and practical support for primigravida mothers is essential in the initiation and sustenance of exclusive breastfeeding for the first six months, since primigravida mothers are bound to experience EBF challenges if left unsupported. The study further concurs that HCWs expected the patient to know how to put the baby onto the breast without any demonstration or supervision. Some received a demonstration on positioning and latching while others did not, showing disparities in EBF support. In addition, HCWs were unable to assist patients in initiating EBF due to ward routine. Since breastfeeding is not easy for primigravida mothers, linking them to a breastfeeding support group will provide much-needed support.

Another study in Sub-Sahara South Africa by Kinshella *et al*. (2021:21) revealed that the under-5-year mortality rate in Sub-Sahara was 55-75% due to poor breastfeeding practices. Staff shortages, infrastructure challenges with overcrowding in the postnatal ward, quick movement of patients in and out of the delivery room resulted in patients having a shorter length of stay, with no EBF counselling and support. In addition, lack of access to water, reliable power supply, and unavailability of adequate supplies were barriers to promote EBF practice, indicating a need for health care facilities to revisit strategies to correct the resource shortages and strengthen the maternal care services.

6.4.2.5 Working mothers.

Working mothers were of the opinion that returning to work was not conducive to breastfeeding, and four months of maternity leave was not enough to spend quality time with the baby. This result was supported by a similar study in Kenya which revealed there is a strong relationship between maternity leave length and EBF practices, such as milk expression, which makes EBF for six months non-achievable (Ickes *et al*. 2021: e13194). Findings of this study revealed that mother's action of alternating caregivers and day-care centres resulted in lowered EBF rate, hence, the employer extended paid maternity leave beyond current 14 weeks, which proved to be effective in increasing EBF prevalence by 5.9% and the BF duration extended to 2.2 months longer, with a reduction in infant mortality by 13%.

Alongside this study, Maponya *et al*. (2021: 339-346) examined the challenges South African working mothers faced to EBF and revealed that South African working mothers lacked the support to EBF at workplace. Therefore, recommendations arising from these studies were that South African government re-evaluate employment policies to support working mothers who want to continue working, and EBF following maternity leave, and for on-site day-care centres, flexible work schedules and counselling and supplies for EBM be the top priorities for responsible stakeholders, which must be developed and evaluated.

In addition, according to the CCMA (2022): South African Maternity And Other Parental Leave And Benefits, section 25A of the Basic Conditions of Employment Act (BCEA), pregnant women are allowed to take maternity leave from four weeks before their due date of delivery. They are entitled to four consecutive months' unpaid maternity leave, which may start at any time from one month before their expected date of birth or from an earlier date if a medical practitioner or midwife certifies that leave is necessary for the health of the mother or child. In addition, an employee is not allowed to work for six weeks after the child's birth unless a doctor certifies that she is fit to do so. Employees on maternity leave can claim

Unemployment Fund (UIF) for maternity benefits before or after childbirth. The claim must be made within twelve months after the child's birth.

The studies above have deduced that extended maternity leave is critical for optimal maternal and infant well-being and reduced infant morbidity and mortality outcomes. Hence, the researcher suggests that the government and policymakers re-evaluate the legislation around maternity leave and award employees paid maternity leave for up to six months rather than unpaid leave and minimal UIF benefit gain. The mother should be at home with her baby for at least five months post-delivery to fully comply with WHO recommendations of exclusive breastfeeding.

6.4.2.6 Participant's perceptions on how HCWs can improve EBF support.

Motherhood and breastfeeding are intimately linked such that performance and experiences in one will significantly affect performance and experiences in the other. When mothers experienced breastfeeding as a duty and individual responsibility, it affected their confidence in their abilities as mothers when breastfeeding problems arose (Jacobzon *et al.* 2022: 35). In addition, the study revealed that the belief that breastfeeding is a natural process is replaced with the experience that breastfeeding is difficult. Giving up on breastfeeding is accompanied with mixed feelings of failure and guilt and feelings of inadequacy, which can predispose to negative breastfeeding experiences, affecting breastfeeding initiation and duration (Jacobzon *et al.* 2022: 35).

Hence fostering a healthy patient-HCW environment conducive to EBF will positively increase EBF compliance. Therefore, the current study allowed participants an opportunity to suggest what strategies HCWs can employ to improve EBF support, that is maternal knowledge, breastfeeding self-efficacy and extended duration of EBF up to two years. The participants' responses were grouped into four categories: a) behavioural changes in health care workers' attitudes; b) improved antenatal classes; c) effective utilization of long waiting

times at ANC; and d) educational material hand-outs, and are explained as follows:

a. Behavioural changes in health care workers' attitudes

Participants in this study felt there must a change in nurses' attitudes towards them. Instead of been shouted at for being late at clinic or over defaulted ANC visits or discriminated against and treated differently for being HIV-positive, HCWs should take the time to address the patients in a professional manner, with the aim to empower these soon-to-be mothers around breastfeeding self-efficacy and safe motherhood practices. The participant`s response was consistent with the Regulatory Body of South African Nursing Council (SANC) Code of Ethics for Nursing Practitioners of South Africa (2021), which dictates a code based on the belief that the nurse must among other directives, show value for human life; dignity and kindness for one`s self; and ensure provision of accurate and truthful information in accordance with informed consent or refusal of treatment to enable individuals to make informed decisions on matters affecting their health. HCWs are both morally and ethically obligated to uphold the standards of their profession as regulated by SANC.

b. Improved antenatal services.

The current study findings showed that participants requested for improved antenatal services through the introduction of antenatal classes that are well structured and allow consistency in the frequency of such support services during ANC visits to the early postpartum period. Patients felt that antenatal classes would be of tremendous benefit to strengthen EBF knowledge and clarify all anxieties, doubts, and fears as new mums-to-be. These findings were consistent and supported by literature that showed primigravida mothers often have many questions and worries: for instance, 'Will the baby know how to breastfeed?' 'How do I care for a new-born?' Therefore, classes are necessary to prepare mothers with their partners for childbirth, breastfeeding, infant care, and parenting. These classes are a great way to reduce anxiety and build confidence (Office on Women's Health, Birthing, Breastfeeding, and Parenting Classes 2021).

Similar literature by ANC classes on "Breastfeeding Matters" supported this finding, revealing that interactive classes equip parents with all the information and skills required to make informed decisions during their pregnancy, birth, and postpartum. In addition, organizations that run antenatal classes recommend that patients should start attending classes between 25- and 30-weeks' gestation in pregnancy, as they grow closer towards delivery for a minimum of two hours, two days per week, across five to six weeks (Antenatal Classes, Pre and Postnatal Support; and Well Mother and Child Clinic 2023).

Furthermore, literature, by Tran (2020), on the "Seven Things to Know about Breastfeeding," revealed that an excellent antenatal class would set mothers up for breastfeeding joy, avoid disappointments, inform them on what is expected and reassuring, and what to look out for as warning signs without overwhelming them with every detail. Classes should provide information and skills on the importance of breastfeeding, readiness for breastfeeding, breastfeeding positions, the latching of the baby onto breasts, the importance of skin-to-skin, when milk is expected to come in, how to have a good milk supply, how to know baby is getting enough milk, management of breast, conditions, pumping breasts, infant weight concerns, support groups, and breastfeeding must-haves, for successful EBF outcomes. Moreover, the results appeared consistent with a similar study by Spiby *et al*. (2022: 103295), which focused on pregnant women expecting their first child and what they expected at antenatal classes. The classes were intimate focus groups, which allowed face-to-face contact between the HCW and the patient. Furthermore, the ANC classes were seen as a platform to alleviate fears and promote normalizing experiences and social support. It allowed the father or co-parent to help with labour, postnatal, and EBF preparations.

c. Utilization of long waiting times at ANC

Moreover, another participant suggested long waiting times at the ANC be effectively utilized for EBF in-service education. However, it was uncertain what the reasons were for increased waiting times at the clinic, indicating the need for further research studies and investigations to help find solutions to the concern

raised. Interestingly, a study in the Western Cape, South Africa, examined the perspective of waiting time in ANC, and the aetiology was reported as multifactorial, namely staff related; patient-related, communication issues; equipment, or infrastructure related. Nevertheless, the finding of the study indicated corrective measures were carried out by implementing relevant workflow strategies, improved communication, and increased equipment availability (Baron *et al.* 2021: 1513).

d. Educational material hand-outs

Cutili (2020: 267-282) defines patient education as an “art” and “science’ using evidence-based strategies to effectively educate. Thus, education materials help educate the patients on their health needs, improve their health literacy, and enhance and promote informed decision-making based on the most current and updated medical and clinical evidence and patient preferences (Bhattad *et al*. 2022: e 27336). In addition, Betschart *et al. (*2019: 64-69) mentioned that educational materials that are well-formulated and well-presented on health information encourage self-care and improve clinical care effectiveness; therefore, the findings of the above studies support the participants’ requests for the issue of informational booklets on EBF to improve and support the EBF practice.

6.4.3 Objective 3: To determine how socio-demographic factors influence EBF among primigravida mothers.

From a public health perspective, new-borns must be EBF during their first six months of life (Magnano San Lio *et al.* 2021: 103). Although the WHO recommends EBF for six months and up to two years, compliance with this recommendation in this study, depended on several demographic and psychosocial determinants. The demographic data collected from participants were: race, ethnic group, age in years, marital status, highest educational level, employment status, income level, and risk factors. All were found to have a profound effect on the initiation, promotion, and sustenance of EBF. Maternal education level and maternal employment are explained under maternal psychosocial factors influencing EBF.

6.4.3.1 Race and ethnicity

The current study findings indicated that the prevalence of HIV appeared to impact racial and ethnic minorities. Out of the eleven participants, four were HIV-positive, with the majority socioeconomically challenged, which was consistent with the findings by U.S. Statistics (2023) on the "Impact of HIV on Racial and Ethnic Minorities" which showed that HIV can affect anyone regardless of sex, race, ethnicity, gender, age, or where they live. However, some racial/ethnic groups are more affected than others, because some communities have higher rates of HIV, increasing the risk of new infections with each sexual encounter or use of injectable drugs.

Furthermore, breastfeeding discrepancies continue to persist among diverse racial or ethnic groups despite ongoing public health efforts (Quintero *et al*. 2023: 50). However, this was not supportive of the findings of the current study, which showed race or ethnicity were not barriers to the practice of EBF. Additionally, social, economic, and demographic factors such as stigma, discrimination, income, education, and geographic region can affect people's risk for HIV and their HIV-related outcomes. In the United States, Blacks/African Americans represented 13% of the US population but 40% of people with HIV. Hispanics/Latinos represented 18.5% of the population, but 25% of people with HIV (U.S. Statistics 2023. The "Impact of HIV on Racial and Ethnic Minorities").

Likewise, in South Africa, a similar study by Bell *et al*. (2022: 114755) supported, and was consistent with the current study findings, which showed that the prevalence of HIV was higher among Black South Africans than other race groups. HIV prevalence was thus: Black South Africans (20.54%), followed by Coloured (4.06%), Asian (0.90%), and White South Africans (0.37%), due to structural and historical factors related to the specific geographical locations and demographic distribution of HIV.

6.4.3.2 Maternal age

The current study findings showed that primigravida mothers between the ages of 18 and 20 years chose to EBF for six months only and then opted for mixed feeding, as they focused on returning to school or college; while others with post-school certifications planned to seek employment to meet their financial needs. Furthermore, one mother aged 20 years opted to practice early cessation of EBF due to the psychosocial effect of altered body image. These findings were consistent with literature which showed that maternal age had a significant effect on the duration of EBF. In Nigeria, a study by Adebayo *et al.* (2021: 31-39) revealed that the practice of EBF in younger women was much lower than in older women because younger women are more interested in pursuing their career-building with reduced time and commitment to EBF practice. In Australia, mothers under 20 years terminated EBF faster in the early postnatal period than mothers aged 20-34 (Ogbo *et al.* 2019: 1611).

6.4.3.3 Marital status

The current study findings, which showed eight out of the eleven mothers were unmarried, living in poor socioeconomic conditions, faced financial hardships, and sought employment to provide financial stability for the well-being of the baby and herself, which negatively impacts the duration of EBF practice, beyond six months as they planned to mixed feed. These findings were supported by a study by Koops *et al*. (2021: 825) which showed single parenthood occurs disproportionately among those from poor socioeconomic backgrounds than those from higher socioeconomic status. Poverty is much higher among these families than among two-parent families due to mothers who never married and fathers who did not involve themselves in co-parenting of children financially and never lived with the mother and children. Therefore, single mothers face economic hardship, unemployment, and the possibility of remaining single for prolonged periods.

In contrast, a previous study in Ethiopia by Muluneh (2023: e0281576) mentioned that married mothers were more likely to practice EBF for extended periods than unmarried mothers, which correlated with the findings of the current study where the extended duration of EBF was related to a supportive spouse in favour of EBF and a good source of income.

6.4.3.4 Single parenting, and low-income households, unemployment

The current study findings showed that the prevalence of EBF was low (six months only) among the unemployed, unmarried single mothers who intended to return to school and among those who planned to seek employment to meet their financial needs for survival. This finding was supported by literature published in the Parenthood Times (2023) which showed inadequate financial support is a reality for many single moms, and while it is true that "money cannot buy happiness," insufficient money can cause stress, anxiety, and limited choices to live happier, healthier lives. Furthermore, single moms feel guilty for not providing enough for their families, and this finding correlates with the current study's findings, which showed that most participants perceived unemployment, low-income households, and early school dropouts as social determinants that affected infant feeding choices. Formula-feeding mothers based their decision on what will be most convenient rather than knowing the benefits of breastfeeding.

Furthermore, previous studies by Tadesse *et al.* (2019: 1015) mentioned breastfeeding was the only option for mothers with a lower monthly income, as they could not afford the purchase of alternative foods, while Shrestha *et al*. (2021: 56) in Somalia revealed that EBF practices are fewer among employed mothers than among unemployed mothers. However, these studies were not in support of the current study findings, as working mothers chose to breastfeed longer moreover than the unemployed mothers who chose to mixed feed. Therefore, young unemployed primigravida mothers should be financially supported through Government financial aid schemes and child welfare organizations, and HCW to reinforce EBF education. This education for young

primigravida mothers should encourage them to EBM for longer duration to prevent morbidities and mortalities in the child as a result of mixed feeding.

6.4.3.5 Maternal risk factors

The study also explored the maternal risk factors influencing EBF practice. Risk factors identified were HIV infection, allergy to coke, and anaemia. In a previous study, new mothers' concerns about breastfeeding are less around their babies' physical condition than their own (Healthy Children 2021). Since some infectious diseases like HIV, Hepatitis B, Hepatitis C, and Tuberculosis can be transmitted to the baby through breast milk, medical examinations by a physician and notification thereof to the Paediatrician were considered essential for safe infant feeding practices. This correlates with the current study in the context of HIV infection as a risk factor, more so than anaemia in pregnancy, and allergy to coke. All these risk factors identified had no limitations to rooming babies with their mothers; including initiation, promotion; and sustenance of EBF. PMTCT through breast milk was promoted through the initiation of ARVs, with resultant suppressed viral loads and PCR testing and prophylactic ARVs treatment on all exposed babies, as per the guidelines by NIH. gov. Preventing perinatal transmission of HIV after Birth July (2023) was referenced in a similar study by Faustine *et al.* (2022: 29) in Tanzania.

7.5 SUMMARY OF CHAPTER

In this chapter, a discussion of the findings of this study was presented. The theoretical framework also guided the discussion and was supported by the relevant literature. The discussion also focused on the related themes and sub-themes outlined in Chapter 5 and aligned with the study's objectives. Chapter 7 will summarize the study findings and its conclusions, limitations, and recommendations for the study.

CHAPTER 7: SUMMARY, LIMITATIONS, RECOMMENDATIONS AND CONCLUDING REMARKS

7.1 INTRODUCTION

The previous chapter discussed the study results in relation to the theoretical framework. This final chapter will present the summary of the study findings, limitations, recommendations, areas for further research, and conclusion. The study aimed to explore the psychosocial factors influencing exclusive breastfeeding among primigravida mothers at a public hospital in the uGu District, KZN, South Africa, and the limitations of the study are specified to prevent any generalization of the conclusions.

7.2 SUMMARY OF THE STUDY

In this study, the five broad themes and nineteen sub-themes that emerged from data analysis, as discussed in Chapter 5, assisted the researcher in analysing the psychosocial factors influencing EBF among primigravida mothers at the selected healthcare facility. The study also explored maternal perceptions of EBF and how the socio-demographic characteristics of race and ethnicity, maternal age, highest educational levels, employment status, and income level influenced EBF among the Primigravida mothers. Therefore, guided by the chosen theoretical framework, the researcher proposes recommendations to positively promote, support, and sustain EBF among Primigravida mothers.

Successful EBF outcomes were closely linked to maternal age, highest educational level, maternal knowledge, and support. The results showed that higher maternal education levels were among the older primigravida mothers aged 26-32yrs, who had excellent employment status with good household incomes of more than R2500, and were able to access EBF knowledge, contributing to a positive motherly attitude and a longer duration of practicing EBF, up to two years; as compared to, the younger mothers aged 18-22 years, still at school or college with no post-school certifications, unemployed,

unsupported with low socio-economic households, on social grants or household income less than R2500, who had a shorter duration of EBF of just six months. Another mother opted for early cessation due to the psychological anxiety about social acceptance and ideal body image. Despite the rippling impact of single parenting, unemployment, poor socio-economic living conditions, early school dropouts, and the burden of breastfeeding, four participants were further challenged with living with HIV. Mothers living with HIV remained open to EBF. Still, they feared transmission of HIV to their babies through breastmilk, even though they were compliant with ARV adherence and had suppressed viral loads.

Furthermore, challenges such as post-operative pain, either by caesarean section or vaginal birth with perineal sutures, the demands of work, nipple confusion, nipple pain, and inverted nipples were among the other determinants that strongly influenced the intent to EBF. Moreover, support groups' role was a critical factor in breastfeeding self-efficacy. Mothers felt more supported to EBF by positive encouragement from significant role models, such as their spouses, grandmothers, mothers, aunts, Breastfeeding Apps, social media, friends, and cultural practices, than the support from HCWs. While a tiny proportion of mothers described their support from HCWs as positive, most mothers felt HCWs were unsupportive, had bad attitudes, and were not interested in teaching EBF. Therefore, due to a lack of education, these behaviours were seen as barriers to establishing a positive maternal attitude and intent toward EBF.

In addition, while some primigravida mothers demonstrated no knowledge of how to use EBF, others indicated little knowledge of the benefits of EBF for the baby and none for the mother. Interestingly, mothers recommended introducing antenatal classes and using the long waiting times in the morning at the antenatal clinic to teach EBF. They wanted to see a change in HCWs' approach and attitude toward mothers living with HIV. In addition, they requested adequate educational material on EBF, availability of prophylactic nipple cream to treat sore and cracked nipples, and wedge pillows to assist with breastfeeding in a post caesarean mother.

7.3 LIMITATIONS OF THE STUDY

According to Jansen (2022), research limitations are the weaknesses or shortcomings of the study that are outside the researcher's control, for example, time, access to funding, equipment, data or participants, and research design. Limitations could act as barriers or constraints that weaken or decrease the credibility of the study results. According to de Vos *et al*. (2011: 288), limitations of the study are to be made explicit so that precautionary measures may be applied to reduce any possible negative impact that the study could have. Grove and Gray (2019: 603) argue that limitations can be identified before conducting a research study. In this current study, the researcher used a limited sample size and provided a detailed description of the methodology of the study. The limitations experienced in this study were:

- The sample in this study was limited to the primigravida mothers of the local hospital of uGu District, KZN. Therefore, the findings must be expounded cautiously and not generalized to all public healthcare facilities.
- Although the sample size for this study was limited to 10 participants, eleven participants were interviewed until data saturation was reached.

7.4 RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made with reference to improving HCWs' support of EBF at healthcare facilities, implementing preventative strategies for unplanned pregnancies, and further research.

7.4.1 Improving HCWs' support of EBF at healthcare facilities.

- HCWs should take the time to address the patients professionally and empower mothers on breastfeeding self-efficacy and safe motherhood practices.
- HCWs should provide antenatal and early postpartum education, with periodic EBF counselling to improve maternal attitude and knowledge toward EBF practice. All levels of healthcare workers should be involved in EBF education and training of mothers.

- EBF informational hand-outs, in the form of pamphlets and booklets, should be available at ANC and the post-partum wards in the correct languages and issued according to the patient's spoken language to ensure continued education and support of EBF practice. The EBF information must be simple, easy to understand, and cover all essential knowledge and skills for practical breastfeeding efficacy. In addition, the information booklet attached to maternity case records must be referred to by the HCW with the patient on every ANC visit to promote EBF knowledge, positive maternal attitude, and increased maternal efficacy to EBF beyond six months.
- ANC classes with intimate focus groups, which allow face-to-face contact between the HCW and the patient, should be promoted at antenatal clinics to alleviate fears and promote normalizing experiences and social support. Access to the father or co-parent should be allowed to help with labour, postnatal, and EBF preparations.
- Education teachings in the ANC class should be consistent and frequent throughout all trimesters of the antenatal period for successful EBF outcomes in postpartum period. Patients should be seen as "one," ensuring HIV-positive patients are not singled out or made to feel ostracized.
- The teachings provided during the ANC classes should include, among other teachings, ongoing clinical demonstrations on EBM techniques, use of breast pumps and nipple shields; reinforcement of in-service education on EBM and its preservation times and methods; positioning and latching baby onto the breast, breast milk composition and transition (colostrum), and how to remove the breast from baby's mouth following a feed, to promote; support; and sustain EBF in the postpartum period.
- HCWs should utilize the long waiting times at antenatal clinics in the morning for EBF in-service education.
- Mothers with breast conditions must be closely monitored and supported during inpatient care and followed up upon discharge at the local well-baby clinic or with a Lactation consultant and Paediatrician.
- Lactation problems must be identified and treated as early as possible to prevent secondary breast conditions related to sore and cracked nipples and to avoid early weaning of EBF.

- Family involvement in breastfeeding education must be encouraged to promote EBF when mothers are separated from their babies. In addition, the dangers of formula feeding, and the preparation and preservation of milk feeds must be taught.
- Non-pharmacological pain relief measures to assist with EBF in the caesarean section mothers, namely, the wedge pillows, should be available in postpartum wards.
- HCWs should correct anxieties experienced by mothers living with HIV regarding breast milk transmission of HIV to their babies by:
  a) Promoting patient involvement in education on PMTCT through on-going counselling, testing, and retesting of HIV status, ARVs initiation, and adherence, including PCR and prophylaxis treatment according to current guidelines by the NIH and the use of mHealth interventions.
  b) Providing access to ARVs through mobile clinic services for financially challenged mothers who cannot afford transport to their local clinics to collect ARVs.

7.4.2 Implementing preventative strategies for unplanned pregnancies.

- Maternity nurses to screen all pregnant women for unplanned pregnancies and offer counselling and support during their ANC visits to increase their intent to EBF.
- Improved access to long-acting reversible contraception and sexual reproductive health education must be taught at schools by school health nurses.
- Education on safe motherhood and EBF practice should be included in the school curriculum to empower primigravida mothers with practical motherhood skills and the benefits of EBF for themselves and the baby.
- Access to youth-friendly reproductive health services that accommodate young people during non-working hours, i.e., before or after school, must be promoted at local community health centres.

7.4.3 Policy Recommendations

- South African government and employers should re-evaluate employment policies to support working mothers who want to continue working. EBF following maternity leave, on-site day-care centres, flexible work schedules and counselling and supplies for breast milk expression are the top priorities for responsible stakeholders, which must be developed and evaluated.
- Government, and policymakers should re-evaluate the legislation around maternity leave and award employees paid maternity leave for up to six months rather than unpaid leave and minimal UIF benefit gain. The mother should be at home with her baby for at least five months post-delivery to fully comply with WHO recommendations of exclusive breastfeeding for at least six months.

7.4.4 Further research

- Further studies to ascertain the safety of herbal medicine concoctions in breastfeeding are recommended.
- In addition, the Holy Quran has mandated the practice of EBF for up to two years, with both parents having the responsibility to support the practice of EBF. It would be interesting to know the compliance rate to this cultural EBF support strategy and what factors influence compliance among the Muslim ethnic group.
- Furthermore, though the current study revealed the gaps in HCWs' support, it did not examine the HCW's challenges towards being supportive of EBF practice; hence, further research is required to understand this phenomenon and for the data to be used to strengthen HCW support to promote and sustain the practice of EBF.

7.5 CONCLUDING REMARKS

Psychosocial and demographic factors were the main predictors of the duration of EBF practice, which indicated a need to channel supportive measures through a system-wide approach. Moreover, the primiparous mothers with no or less

education indicated that they needed a one-on-one session with HCW to make them better aware of the benefits and skills of EBF to enhance exclusive breastfeeding practice. Support and care from family and spouse and cultural practices can help alleviate the stress of dealing with household chores, schoolwork, busy work schedules, and breastfeeding. MTCT through breastfeeding remains essential to eliminating mother-to-child transmission in high-incidence areas by 2030. Therefore, HIV counselling, testing, and retesting during each ANC visit, arrival to the labour ward and during breastfeeding must be checked to prevent any missed opportunities in ARV initiation and viral load suppression.

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APPENDICES

Appendix 1: Research Ethics Certificate

TRREE

Zertifikat

Certificado

Certificat

Certificate

Promouvoir les plus hauts standards éthiques dans la protection des participants à la recherche biomédicale
Promoting the highest ethical standards in the protection of biomedical research participants

Certificat de formation - Training Certificate

Ce document atteste que - this document certifies that

Clinical Trials Centre
The University of Hong Kong

Jessica Naicker

a complété avec succès - has successfully completed

Introduction to Research Ethics

du programme de formation TRREE en évaluation éthique de la recherche
of the TRREE training programme in research ethics evaluation

Release Date: 2022/08/05

CID : yHDdUZsWn

Professeur Dominique Sprumont
Coordinateur TRREE Coordinator

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[REV : 20220217]

Appendix 2: DUT Ethics clearance

DUT

INSTITUTIONAL RESEARCH ETHICS COMMITTEE

Institutional Research Ethics Committee
Research and Postgraduate Support Directorate
2nd Floor, Berwyn Court
Gate 1, Steve Biko Campus
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2375
Email: lavishad@dut.ac.za
http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

23 February 2023

Ms J Naicker
P.O Box 718
Umzinto
4200

Dear Ms Naicker

Psycho-social factors influencing exclusive breastfeeding among the primigravida mothers at a public hospital in the uGu District, KwaZulu-Natal, South Africa
Ethical Clearance number IREC 282/22

The DUT-Institutional Research Ethics Committee acknowledges receipt of your gatekeeper permission letters.

Please note that FULL APPROVAL is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the DUT-IREC according to the DUT-IREC Standard Operating Procedures (SOP's).

Please note that any deviations from the approved proposal require the approval of the DUT-IREC as outlined in the DUT-IREC SOP's.

Yours Sincerely

Prof J K Adam
Chairperson: DUT-IREC

ENVISION 2030 transparency · honesty · integrity · respect · accountability fairness · professionalism · commitment · compassion · excellence

THE

Appendix: 3a: Letter of request of gatekeeper permission to the uGu District Manager

P O Box 718
Umzinto
4200
[Date]

UGu District Manager
P.O Box 33
28 Connor Street
Port Shepstone
4240

Dear Sir/Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am currently studying towards my Master's Degree in Health Sciences. My proposed topic of study is: ***Psycho-social factors influencing exclusive breastfeeding among the primigravida mothers at public hospital in the uGu district, KZN, South Africa.***

I am hereby seeking your consent to conduct the study at G.J. Crookes Hospital and the study will involve primigravida mothers from postpartum ward. Semi-structured interviews will be conducted to collect data from the participants. I have provided you with a copy of my proposal which includes copies of the data collection tools, letter of information, consent form to be used in the research process, as well as a copy of the approval letter which I received from the Institutional Research Ethics Committee (IREC).

If you require any further information, please do not hesitate to contact me or my supervisor Professor M.N. Sibiya. Her email address is nokuthulas@dut.ac.za

Thank you for your time and consideration in this matter.

Yours sincerely,

_____
Jessica Naicker (Ms)
(Masters Health Sciences Candidate)
Durban University of Technology
Cell Number: 081 083 7669

Appendix 3b: Approval letter from the uGu District Manager

KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

DIRECTORATE:
Ugu District Health Office

Postal Address
Physical Address 41 Bisset Street, Port Shepstone
Tel: 039688300
Email address: femi.olowookorun@kznhealth.gov.za

Ms Jessica Naicker
Masters Health Sciences Candidate Durban
University of Technology

Re: Request for permission to conduct research in Ugu District

This letter is written in response to the request you submitted to the office of the District Director to conduct a study in GJ Crookes Hospital in Ugu District titled: Psycho-social factors influencing exclusive breastfeeding amongst primigravida mothers at public hospital in Ugu District, KZN, South Africa.
In addition to the request letter, you provided a copy of the research proposal which includes copies of the data collection tools, letter of information, consent form to be used in the research process as well as the approval letter from the Institutional Research Ethics Committee (IREC)
The findings of this research will not only be of great benefit to Ugu District, but to the province as a whole as it hopes to provide information regarding those psychosocial factors mitigating against exclusive breastfeeding within the communities, hereby enabling the department to come up with realistic remedial actions where possible. Promotion of exclusive breastfeeding remains a priority of the department as we constantly strive towards improving infant and early childhood outcomes.
In light of the above, I here recommend the request to conduct this research be granted and the findings shared with the Ugu Health District Office.

Warmest regards
Recommended by

Dr OO Olowookorun
Head Clinical Unit: Family Medicine
Ugu Health District
24/01/2023

Supported by

Mrs Linda Dlamini
District Director: Ugu Health District
24/01/2023

GROWING KWAZULU-NATAL TOGETHER

Appendix: 4a: Letter of request of gatekeeper permission to the Department of Health

P O Box 718
Umzinto
4200
[Date]

Department of Health
Natalia Building
Room 102, South Tower
Pietermaritzburg
3200

Dear Dr Lutge

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am currently studying towards my Master's Degree in Health Sciences. My proposed topic of study is: ***Psycho-social factors influencing exclusive breastfeeding among the primigravida mothers at public hospital in the uGu district, KZN, South Africa.***

I am hereby seeking your consent to conduct the study at uGu district and the study will involve primigravida mothers from the postpartum ward. Semi-structured interviews will be conducted to collect data from the participants. I have provided you with a copy of my proposal which includes copies of the data collection tools, letter of information, consent form to be used in the research process, as well as a copy of the approval letter which I received from the Institutional Research Ethics Committee (IREC).

If you require any further information, please do not hesitate to contact me or my supervisor Professor M.N. Sibiya. Her email address is nokuthulas@dut.ac.za

Thank you for your time and consideration in this matter.

Yours sincerely,

_____
Jessica Naicker (Ms)
(Masters Health Sciences Candidate)
Durban University of Technology
Cell Number: 081 083 7669

Appendix 4b: Approval letter from the KwaZulu-Natal Department of Health

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

Physical Address: 330 Langalibalele Street, Pietermaritzburg
Postal Address: Private Bag X9051
Tel: 033 395 2805/ 3189/ 3123 Fax: 033 394 3782
Email: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

DIRECTORATE:
Health Research & Knowledge Management

NHRD Ref: KZ 202301 014

Dear Ms J. Naicker (UKZN)

Approval of research

1. The research proposal titled 'Psycho-social factors influencing exclusive breastfeeding among the primigravida mothers at a public hospital in the UGU District, KwaZulu-Natal, South Africa was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH),

The proposal is hereby approved for research to be undertaken at GJ Crookes Hospital,

2. You are requested to take note of the following:

a. *Kindly liaise with the facility manager BEFORE your research begins. This is to ensure that conditions in the facility are conducive to the conduct of your research. These include, but are not limited to, an assurance that the numbers of patients attending the facility are sufficient to support sample size requirements, and that the space and physical infrastructure of the facility can accommodate the research team and any additional equipment required for the research.*

b. *All research conducted in KwaZulu-Natal/ must comply with government regulations relating to Covid-19- These include but are not limited to: regulations concerning social distancing, the wearing of personal protective equipment, and limitations on meetings and social gatherings*

c. *Please ensure that you provide your letter of ethics re-certification to this unit when the current approval expires.*

d. *Provide an interim prowess report and final report (electronic and ham copies) when your research is complete to HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200 and e-mail an electronic copy to hrkm@kznhealth gov.za*

e. *Please note that the Department of Health shall not be held liable for any Injury that occurs as a result of this study*

For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely

Dr E Lutge
Chairperson, Provincial Health Research Committee Date
17/04/2023

Fighting Disease. Fighting Poverty. Giving Hope

Appendix: 5a: Letter of request of gatekeeper permission to the Hospital Manager

P O Box 718
Umzinto
4200
[Date]

The Hospital Manager
G.J. Crookes Hospital
Private Bag X5501
Scottburgh
4180

Dear Sir/Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am currently studying towards my Master's Degree in Health Sciences. My proposed topic of study is: ***Psycho-social factors influencing exclusive breastfeeding among the primigravida mothers at public hospital in the uGu district, KZN, South Africa.***

I am hereby seeking your consent to conduct the study at your hospital and the study will involve primigravida mothers from the postpartum ward. Semi-structured interviews will be conducted to collect data from the participants. I have provided you with a copy of my proposal which includes copies of the data collection tools, letter of information, consent form to be used in the research process, as well as a copy of the approval letter which I received from the Institutional Research Ethics Committee (IREC).

If you require any further information, please do not hesitate to contact me or my supervisor Professor M.N. Sibiya. Her email address is nokuthulas@dut.ac.za

Thank you for your time and consideration in this matter.

Yours sincerely,

_____
Jessica Naicker (Ms)
(Masters Health Sciences Candidate)
Durban University of Technology
Cell Number: 081 083 7669

Appendix 5b: Approval letter from the Hospital Manager

KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

DIRECTORATE:

GJ CROOKES HOSPITAL
1 HOSPITAL ROAD
Tel: 039 978 7000 Email address: Sebenzile.Khathi@kznhealth.gov.za
www.kznhealth.gov.za

GJ CROOKES HOSPITAL

Enquires: Mrs M. S. Khathi
Ext 7063

03 - 03 - 2023

ATTENTION: Health Science Faculty
5th floor Desmond Clarence Building
Durban University of Technology
DURNAN
4001

Dear Miss Jessica Naicker (22290668)

Re: Support to conduct Research :"Psycho-social factors influencing exclusive breastfeeding among the primigravida mothers at a public hospital in the Ugu District, KwaZulu-Natal, South Africa"

Be advised that GJ Crookes Hospital hereby acknowledges the receipt of the request to conduct research in our establishment which is one of the district hospitals in Ugu district on the topic above.

Please note the following:

1 Adherence to ethics, policies, procedures, protocols and guidelines of the Department of Health has to be maintained at all stages.

2. The study will resume after the office has been notified about green light from higher Department of Health authorities (Provincial & District).
3. Ensure that the office will be notified before the research is conducted.
4. GJ Crookes Hospital will not provide any research material nor other resources.
5. You are hereby given approval to conduct the research at GJ Crookes Hospital and we request a report of the research once it has been completed in order to see how the data that will be gathered and recommendations will impact positively in mental health care.

Sincerely

Mrs M.S Khathi

03 / 03/ 2023

Chief Executive Officer

GROWING KWAZULU-NATAL TOGETHER

Appendix 6a: Letter of information for participants

Title of the Research Study: Psycho-social factors influencing exclusive breastfeeding among the pimigravida mothers at a public hospital in the uGu district, KwaZulu-Natal, South Africa.

Principal Investigator/s/researcher: Jessica Naicker (Masters of Health Science Candidate).

Co-Investigator/s/supervisor/s: Prof M.N. Sibiya, D Tech: Nursing (Supervisor); Dr K. Chetty, PhD: Health Sciences (Co-supervisor).

Brief Introduction and Purpose of the Study: The World Health Organization recommends that for optimal health and development, all infants worldwide should be exclusively breastfed for the first six months of life. Although exclusive breastfeeding has been shown to reduce the occurrence of adverse health outcomes to the infant and mother, the duration of exclusive breastfeeding remains relatively low in South Africa predominantly among primigravida mothers. Much less is known about the influence of psychosocial factors on exclusive breastfeeding among primigravida mothers within the context of South Africa. Therefore, the aim of the study is to explore the various psychosocial factors influencing exclusive breastfeeding among Primigravida mothers at a public hospital in the uGu district, KwaZulu-Natal, in South Africa.

Greeting: Good day. Warm greetings to you.

Introduce yourself to the participant my name is Mrs. Jessica Naicker, I am a 1st year student at DUT doing research for my Master's degree in Health Sciences.

Invitation to the potential participant I would like to invite you to participate in the research.

What is Research: Research is a systematic search or enquiry for generalized new knowledge. Research entails collecting of data; documenting, analysis and interpretation of the data collected.

Outline of the Procedures: You are required to complete the consent form attached to this document to consent to partaking in this study. The data collection tool is an interview including collection of demographic data within duration of 20-30 minutes at in the antenatal

clinic and postpartum ward. Your responses will be documented and recorded by the interviewer.

Risks or Discomforts to the Participant: There are no anticipated risks for participating in this study.

Explain to the participant the reasons he/she may be withdraw from the Study: Participation is voluntary. You may decide to withdraw from this study at any time by advising the researcher. There will be no consequences to you should you wish to withdraw. The researcher may withdraw you from the study due to non-compliance, an adverse event or in the event of you being ill and cannot complete the interview.

Benefits: The findings of the study will aim to provide antenatal breastfeeding education and support strengthened by strategies that build a woman's confidence to promote exclusive breastfeeding. In this area of the study, it will also provide evidence-based study for governments, policy makers and nurse leaders, midwives and nurses about the current situation and detail any potential enhancements and make recommendations and suggested strategies to improve exclusive breastfeeding amongst Primigravida mothers.

Remuneration: There will be no remuneration to you for partaking in the study.

Costs of the Study: There are no costs to you partaking in this study.

Confidentiality: All information you provide is considered completely confidential. You can be assured that your name will not appear on the interview guide, you will be allocated a number in a code form. Neither will your details be in any report that will result from this study; however, with your permission anonymous quotations may be used. Data collected during this study will be retained for a period of five years in a locked cupboard. Only researchers associated with this project will have access.

Results: Results will be available in the final copy of the dissertation. These will also be published in accredited journals. A copy will also be provided to you upon request.

Research-related Injury: There are no anticipated research-related injuries.

Storage of all electronic and hard copies including tape recordings: Hard copies of the research materials will be stored in a locked cupboard in the nursing administration office for a period of 5 years. Only the researcher and supervisor will have access to the data. The data will be securely shredded after 5 years. Electronic data will be password protected and stored on a secure laptop.

Persons to contact in the Event of Any Problems or Queries: Please contact the researcher, Mrs. Jessica Naicker (+966547841642, 081 083 7669), my supervisor Professor M.N. Sibiya at 031-373 2284 or the Institutional Research Ethics Administrator on: 031-373 2375. Complaints can be reported to the Acting Director: Research and Postgraduate Support Prof K. Motaung on TtiDirector@dut.ac.za

Appendix 6b: Consent

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, Ms J. Naicker about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____	_____	_____	_____
Full Name of Participant	**Date**	**Time**	**Signature / Right Thumbprint**

I, Jessica Naicker herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____	_____	_____
Full Name of Researcher	**Date**	**Signature**
_____	_____	_____
Full Name of Witness (If applicable)	**Date**	**Signature**
_____	_____	_____
Full Name of Legal Guardian (If applicable)	**Date**	**Signature**

Isithasiselo 7a: Incwadi yolwazi

Isihloko Socwaningo Locwaningo: Izici zengqondo nezenhlalo ezinomthelela ekunceliseni ibele kuphela komama abakhulelwa okokuqala esibhedlela sikahulumeni esise-uGu district KZN, eNingizimu Afrika.

Umphenyi Oyinhloko/aba/umcwaningi: Jessica Naicker, Ikhandidethi Yezingcweti Zesayensi Yezempilo.

Umphenyi/abaphenyi/abaqondisi: UProf M.N. Sibiya, D Tech: Nursing (Umphathi); UDkt K. Chetty, PhD: Isayensi Yezempilo (Co-supervisor).

Isingeniso Esifushane Nenhloso Yocwaningo: Inhlangano Yezempilo Yomhlaba incoma ukuthi ukuze kube nempilo engcono nentuthuko, zonke izinsana emhlabeni wonke kufanele zinceliswe ibele kuphela ezinyangeni eziyisithupha zokuqala zokuphila. Nakuba ukuncelisa ibele kuphela kuye kwaboniswa kunciphisa ukwenzeka kwemiphumela emibi yezempilo enganeni nomama, isikhathi sokuncelisa ibele kuphela sihlala siphansi uma kuqhathaniswa eNingizimu Afrika ikakhulukazi komama be-primigravida. Kuncane kakhulu okwaziwayo ngomthelela wezinto ezingokwengqondo nenhlalakahle ekunceliseni ibele kuphela komama be-primigravida ngaphakathi komongo waseNingizimu Afrika. Ngakho-ke, inhloso yocwaningo ukuhlola izici ezihlukahlukene zengqondo nezenhlalo ezinomthelela ekunceliseni ibele kuphela komama bakwaPrimigravida esibhedlela sikahulumeni esisesifundeni sase-uGu KwaZulu-Natal (KZN), eNingizimu Afrika.

Sawubona: Sanibonani. Imikhonzo efudumele kuwe.

Zazise kulowo obambe iqhaza igama lami nginguNkk Jessica Naicker, ngingumfundi obenza unyaka wokuqala e-DUT ngenza ucwaningo ngeziqu zami zeMastazi kumkhakha wezempilo.

Isimemo kongaba umhlanganyeli ngithanda ukukumema ukuthi ubambe iqhaza ocwaningweni.

Luyini Ucwaningo: Ucwaningo wusesho oluhlelekile noma uphenyo lokuthola ulwazi olusha olujwayelekile. Ucwaningo lubandakanya ukuqoqwa kwedatha; ukubhala, ukuhlaziya kanye nokuchazwa kwedatha eqoqiwe.

Uhlaka Lwezinqubo: Uyacelwa ukuba ugcwalise ifomu lemvume elifakwe kulombhalo ukuze uvume ukubamba iqhaza kulolu cwaningo. Ithuluzi lokuqoqa idatha yinhlolokhono ehlanganisa ukuqoqwa kwedatha yezibalo phakathi kwemizuzu engama-20-30 emtholampilo

wabakhulelwe nasewodini langemva kokubeletha. Izimpendulo zakho zizobhalwa futhi zirekhodwe ngumuntu obuza imibuzo.

Ubungozi noma ukungaphatheki kahle kobambe iqhaza: Azikho izingcuphe ezilindelekile zokubamba iqhaza kulolu cwaningo.

Chazela umhlanganyeli izizathu zokuthi angahoxa ocwaningweni: Ukubamba iqhaza kungokuzithandela. Unganquma ukuhoxa kulolu cwaningo nganoma yisiphi isikhathi ngokweluleka umcwaningi. Ngeke kube nemiphumela kuwe uma ufisa ukuhoxa. Umcwaningi angase akuhoxise ocwaningweni ngenxa yokungalandeli, isigameko esingesihle noma uma kwenzeka ugula futhi ungakwazi ukuqeda inhlolokhono.

Inzuzo: Okutholwe kulolu cwaningo kuzohlose ukuhlinzeka ngemfundo yokuncelisa ngaphambi kokubeletha kanye nokwesekwa okuqiniswe ngamasu akha ukuzethemba kowesifazane ukukhuthaza ukuncelisa ibele kuphela. Kule ndawo yocwaningo, kuzophinde kuhlinzeke ngocwaningo olusekelwe ebufakazini kohulumeni, abenzi bezinqubomgomo nabaholi abahlengikazi, ababelethisi nabahlengikazi mayelana nesimo samanje kanye nemininingwane noma yiziphi izithuthukisi ezingase zibe khona futhi benze izincomo kanye namasu aphakanyisiwe okuthuthukisa ukuncelisa ibele kuphela phakathi komama abakhulelwa okokuqala.

Umholo: Angeke ube khona umholo ozokuthola ngokubamba iqhaza ocwaningweni.

Izindleko zocwaningo: Azikho izindleko zokuthi ubambe iqhaza kulolu cwaningo.

Ukugcinwa kuyimfihlo: Lonke ulwazi olunikezayo lubhekwa njengoluyimfihlo ngokuphelele. Ungaqiniseka ukuthi igama lakho ngeke livele kumhlahlandlela wenhlolokhono, uzonikezwa inombolo efomini lekhodi. Imininingwane yakho ngeke ibe kunoma yimuphi umbiko ozovela kulolu cwaningo; nokho, ngemvume yakho izingcaphuno ezingaziwa zingasetshenziswa. Idatha eqoqwe phakathi nalolu cwaningo izogcinwa isikhathi esiyiminyaka emihlanu ekhabetheni elikhiyiwe. Abacwaningi abahlotshaniswa nale phrojekthi kuphela abazokwazi ukufinyelela.

I**miphumela**: Imiphumela izotholakala kukhophi yokugcina ye-dissertation. Lezi zizoshicilelwa kumajenali agunyaziwe. Ikhophi uzonikezwa yona uma uyicela.

Ukulimala Okuhlobene Nocwaningo: Akukho ukulimala okuhlobene nocwaningo okulindelekile.

Ukugcinwa kwawo wonke amakhophi okuhlanganisa aqoshiwe: Amakhophi angamaphepha ezinto zocwaningo azogcinwa ekhabetheni elikhiyiwe ehhovisi lokuphatha abahlengikazi isikhathi esiyiminyaka emi-5. Umcwaningi nomphathi kuphela abazokwazi ukufinyelela idatha. Idatha izosikwa ngokuvikelekile ngemva kweminyaka emi-5. Idatha ye-elekthronikhi izovikelwa ngephasiwedi futhi igcinwe kukhompuyutha ephathekayo evikelekile.

Abantu ongabathintana nabo esimeni sanoma iziphi izinkinga noma imibuzo: Ngicela athinte umcwaningi, uNkk Jessica Naicker (+966547841642, 081 083 7669), umphathi wami uProfessor M.N. Sibiya kule nombolo 031-373 2284 noma uDkt. K. Chetty ku +27795864135, noma uMlekeleli womnyango wocwaningo ku 031-373 2375. Izikhalo zingabikwa kuMqondisi: wocwaningo nokwesekwa kweziqu uSolwazi K. Motaung ku-TtiDirector@dut.ac.za

Isithasiselo 7b: Imvume

Isitatimende Sesivumelwano Sokuba Iqhaza Ocwaningweni Locwaningo:

•Ngiyaqinisekisa ukuthi ngaziswe umcwaningi, uJessica Naicker (Umcwaningi), mayelana nesimo, ukuziphatha, izinzuzo kanye nobungozi balolucwaningo - ukucaciswa kwezimiso zokucwaninga Inombolo: _____

- Ngiphinde ngathola, ngifunde futhi ngaqonda imininingwane ebhalwe ngenhla (Incwadi Yombambiqhaza ka Jessica Naicker
- Ulwazi) mayelana nocwaningo.
- Ngiyazi ukuthi imiphumela yocwaningo, okuhlanganisa imininingwane yomuntu siqu mayelana nobulili bami, ubudala, usuku lokuzalwa, amagama okuqala kanye nokuxilongwa kuzocutshungulwa ngokungaziwa kwenziwe umbiko wocwaningo.
- Ngenxa yezidingo zocwaningo, ngiyavuma ukuthi idatha eqoqwe phakathi nalolu cwaningo ingacutshungulwa ohlelweni lwekhompuyutha ngumcwaningi.
- Ngingakwazi, kunoma yisiphi isigaba, ngaphandle kokubandlulula, ngihoxise imvume yami nokubamba iqhaza ocwaningweni.
- Ngibe nethuba elanele lokubuza imibuzo futhi (ngokuzithandela kwami) ngazitshela ukuthi ngikulungele ukubamba iqhaza ocwaningweni.
- Ngiyaqonda ukuthi okutholakele okusha okubalulekile okuthuthukiswe phakathi nalolu cwaningo okungenzeka
- Okuhlobene nokubamba kwami iqhaza kuzokwenziwa kutholakale kimina (igama lomcwaningi) ngakho ngiyaqinisekisa ukuthi umhlanganyeli ongenhla ubegcwele.

_____ _____ _____ _____

Igama Eligcwele Lomhlanganyeli Usuku Isikhathi Isiginesha / Kwesokudla
Izigxivizo zesithupha

Mina, Jessica Naicker ngazise mayelana nemvelo, ukuziphatha kanye nobungozi bocwaningo olungenhla.

Jessica Naicker

_____ _____ _____

Igama Eligcwele Lomcwaningi Usuku Isiginesha

_____ _____ _____

Igama Eliphelele Lofakazi (Uma likhona) Usuku Isiginesha

_____ _____

Igama Eligcwele Lomnakekeli Wezomthetho (Uma likhona) Usuku Isiginesha

Appendix 8a: Demographic data for the interview participants

SECTION A: DEMOGRAPHIC DATA

Participant code: ☐

Date of interview: ……..

Please answer the following questions in the spaces provided by placing X in the most appropriate option or providing an appropriate answer.

SECTION A: DEMOGRAPHIC DATA FOR PRIMIGRAVIDA MOTHERS

Please answer the following questions about yourself. This data is needed to help us to build a picture of the overall staff mix and characteristics. Please tick in the appropriate box. Note that for some questions it may be necessary to write the information required in the appropriate box or space provided.

Q1. What is your age?

Below 21	
21-30	
31-40	
41-50	
Above 50	

Q2. What is your marital status?

Never married	
Married	
Divorced	
Other *(Specify)*_____	

Q3. What is your highest level of education?

Some secondary school	
Standard 10 or equivalent	
Post-school certificate	
Diploma	
Degree/ Masters/ PhD	
Other *(Specify)*_____	

Q4. What is your employment status?

Full-time employee	
Contract/Part time employee	
Unemployed	
At school	
Other *(Please specify)* _____	

Q5 What is your income level?

None	
<R1000	
R1000 – R2500	
>R2500	
Social grant	

Q6. Unit where you are allocated (Tick ONE option only)

Obstetrics Clinic	
Antenatal Unit	
Postpartum Unit	

Q7. Which ethnic group you belong to?

Indian	
White	
Coloured	
Black	
Other *(Please specify)* _____	

Q8. Do you have any risk factors? Please tick the risk factors you have.

None	
Diabetes	
Hypertension	
Allergies	
Infections	
Anaemia	
Other *(Please specify)* _____	

Appendix 8b: Interview guide

SECTION B:

- Can you share your thoughts about exclusive breastfeeding?
- How do you think exclusive breastfeeding will benefit you and your baby? What are your intentions to breastfeed exclusively?
- What are the challenges you might experience in breastfeeding exclusively? What factors influences this?
- How does your partner or family respond to exclusive breastfeeding?
- Can you share any cultural factors influencing your ability to breastfeed exclusively?
- Do you believe you were adequately prepared for exclusively breastfeeding as a first-time mother? Please tell me more.
- How can healthcare improve to help you exclusively breastfeed?

Isithasiselo 9a: Izibalo zabantu

Ikhodi Yombambi qhaza: ☐

Usuku lwenhlolokhono: ……

ISIQEPHU A: IDATHA YEDEMOGRAPHIC YOMAMA BE-PRIMIGRAVIDA

Sicela uphendule imibuzo elandelayo ngawe. Le datha iyadingeka ukuze isisize sakhe isithombe sengxubevange yabasebenzi kanye nezici. Sicela uphawule ebhokisini elifanele. Qaphela ukuthi kweminye imibuzo kungase kudingeke ukuthi ubhale imininingwane edingekayo ebhokisini elifanele noma endaweni enikeziwe.

Q1. Uneminyaka emingaki?

Ngaphansi kuka-21	
21-30	
31-40	
41-50	
Ngaphezu kwama-50	

Q2. Siyini isimo sakho somshado?

Soze ashade	
Ushadile	
Uhlukanisile	
Okunye (Cacisa) _____	

Q3. Iliphi izinga eliphezulu lemfundo yakho?

Isikole samabanga aphezulu	
Ibanga leshumi noma okulingana nebanga leshumi	
Isitifiketi osithole emva kokuphasa ibanga leshumi	
Idiploma	
Iziqu/Mastazi/Zobudokotela	
Okunye (Cacisa)_____	

Q4. Sinjani isimo sakho sokuqashwa?

Isikhathi esigcwele	
Itoho/Inkontileka	
Angisebenzi	
Ngisafunda	
Okunye (Ngicela ucacise) _____	

Q5 Lingakanani izinga lakho lemali engenayo?

Ayikho	
<R1000	
R1000 – R2500	
> R2500	
Isibonelelo sikahulumeni	

Q6. Iyunithi lapho wabelwe khona (Thikha inketho EYODWA kuphela)

Umtholampilo wokubelethisa	
Igumbi labakhulelwe	
Igumbi lasebetetile	

Q7. Ungowasiphi isizwe?

NgiwumNdiya	
NgiMhlophe	
NgiyiKhaladi	
NgiMnyama	
Okunye (Ngiicela ucacise) _____	

Q8. Ingabe unazo izici zobungozi? Sicela uphawule izici zobungoz onazo.

Lutho	
Isifo sikashukela	
Umfutho wegazi ophezulu	
Umuthi noma umjovo ongazwani negazi lakho	
Amagciwane	
I-anemia	
Okunye (sicela ucacise) _____	

Isithasiselo 9b: Umhlahlandlela wezingxoxo

ISIQEPHU B:

- Ungakwazi yini ukwabelana ngemicabango yakho mayelana nokuncelisa ibele kuphela?
- Ucabanga ukuthi ukuncelisa ibele kuphela kuzokuzuzisa kanjani wena nengane yakho?
- Ziyini izinhloso zakho zokuncelisa ibele kuphela?
- Yiziphi izinselele ongase ube nazo ekunceliseni ibele kuphela? Yiziphi izici ezithonya lokhu?
- Umlingani wakho noma umndeni wakho usabela kanjani ekunceliseni ibele kuphela?
- Ungakwazi ukwabelana nanoma yiziphi izici zesiko ezithonya ikhono lakho lokuncelisa ibele kuphela?
- Ingabe ukholelwa ukuthi ubuzilungiselele ngokwanele ukuncelisa ibele kuphela njengomama wokuqala? Ngicela ungitshele okwengeziwe.
- Ukunakekelwa kwezempilo kungathuthuka kanjani ukuze kukusize uncelise ibele kuphela?

Appendix 10a: Letter of approval for Research Assistant from GJ Crookes Hospital

KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

DIRECTORATE: HUMAN RESOURCE MANAGEMENT

Physical Address: 1 Hospital Road, Scottburgh, 4180
Postal Address: Private Bag X 5501, Scottburgh,4180
Telephone: (039) 978 7236 Fax: (039) 978 1295
Email Address: Patrick.khuzwayo@kznhealth.gov.za

GJ CROOKES HOSPITAL

Enquiries: 0399787236
Date: 28 August 2023

LETTER OF CONFIRMATION FOR HOSPITAL INTERPRETER FOR PURPOSE OF LANGUAGE TRANSLATION DURING RESEARCH STUDY

TO: WHOM IT MAY CONCERN

This serves to confirm that I, Mr P.K. Khuzwayo, Senior Labour relations Practitioner of GJ Crookes Hospital, Scott burgh, 4180, was requested by Human Resource Development of the institution in March and April 2023 to assist with language translation for the purpose of research study, conducted at our hospital by DUT Student, Ms. Jessica Naicker, student number 22290668. I am fully aware of ethical considerations and hold the said responses of participants during the interview in total confidence.

Title of research: To explore the psychosocial factors influencing exclusive breastfeeding among Primigravida mothers at a public hospital, in UGu District, Kwa-Zulu Natal, South Africa

Date of study: Across two months March and April 2023.

Method: Semi- structured interviews

Sample size: Eleven purposive sampled participants, post -delivery between Day one and Day four

Venue: Postpartum Ward Maternity Department

Role: Assisted with Language translation namely: IsiZulu and English during the interviews with the researcher and participant.

Thank you

Yours Sincerely

Mr PK Khuzwayo
Senior Labour Relations Practitioner
GJ Crookes Hospital

G.J. CROOKES HOSPITAL
Human Resources
28 AUG 2023
P/Bag X5501
SCOTTBURGH
4180

Mr NS Nyawo
Human Resource Development Practitioner
GJ Crookes Hospital

GROWING KWAZULU-NATAL TOGETHER

Appendix 10b: Research Assistant Certificate of Qualification

CAREERS BY DESIGN
placing people first

CERTIFICATE

This hereby certifies

Patrick K Khuzwayo

.....

has successfully completed the

CAREER DEVELOPMENT WORKSHOP

.....

Anna Martyn
Managing Director

18th July 2007

.....

Date

CITY OF CHOICE
PIETERMARITZBURG
MSUNDUZI

Appendix 11: Sample of a transcript Number 1

Participant #4

INTERVIEWER: Good morning Participant and welcome to the study. I am Jessica Naicker, Masters Student at Durban University of Technology. I have explained the information letter and the informed consent with you. The informed consent has been signed by you, indicating that you are willing to participate in the study. Is this correct?
PARTICIPANT: Yes, thank you.

INTERVIEWER: Thank you. Please, may I ask if you can speak into the recorder so we can hear you.
PARTICIPANT: Okay.

INTERVIEWER: How old are you?
PARTICIPANT: 32 years of age.

INTERVIEWER: I understand this is your first pregnancy, first baby?
PARTICIPANT: Correct.

INTERVIEWER: Are you married, never married or divorced?
PARTICIPANT: I am not married at the moment.

INTERVIEWER: What is your highest level of education?
PARTICIPANT: Matric.

INTERVIEWER: Are you working at present?
PARTICIPANT: Yes, I am.

INTERVIEWER: Do you have a diploma, degree or Masters PhD? What kind of qualification do you hold at present?
PARTICIPANT: I do not hold any university qualification. Just matric.

INTERVIEWER: Are you a fulltime or part time employee?
PARTICIPANT: Fulltime employee.

INTERVIEWER: Okay, what is your income level?
PARTICIPANT: More than R2500 per month.

INTERVIEWER: Which department are you presently from?
PARTICIPANT: Postpartum ward

INTERVIEWER: You are Indian, by race?
PARTICIPANT: Correct.

INTERVIEWER: Do you have any risk factors example, like diabetes?
PARTICIPANT: No.

INTERVIEWER: Any high blood pressure, any allergies, any infections?
PARTICIPANT: I had three infections.

INTERVIEWER: How do you feel about them, and are you healed from them?
PARTICIPANT: I am healed from them. It was uncomfortable. The majority of them came with age.

INTERVIEWER: Okay.
PARTICIPANT: It was the hormone changes of the body while pregnant.

INTERVIEWER: Do you feel you better now?
PARTICIPANT: Yes.

INTERVIEWER: Do you have any other conditions, like anaemia for example?
PARTICIPANT: I am anaemic. So, my iron was increased during the pregnancy.

INTERVIEWER: Is there anything else, like any other medical conditions?
PARTICIPANT: I am asthmatic, but I have not had had any attack in the last two or three years.

INTERVIEWER: Okay, so basically you are still healthy and breathing fine.
PARTICIPANT: Yeah.

INTERVIEWER: Thank you. Can you share your thoughts about exclusive breastfeeding?
PARTICIPANT: Regarding that statement?

INTERVIEWER: Yes.
PARTICIPANT: I do believe in breastfeeding 100%. I think breast is best. I have been advised by many of my family members as well that doing breastfeeding is much more effective than using formula.

INTERVIEWER: The term exclusive breastfeeding, what do you understand about that?
PARTICIPANT: That is solely breastfeed. There is no formula feed. There is… that two, every two hours you give the baby the breast.

INTERVIEWER: Tell me a little bit more about exclusive breastfeeding. How do you get your information to understand breastfeeding?
PARTICIPANT: The information I got so far are solely from my sister and my two cousins that are nurses as well. My sister had a baby in January last year, but her baby is allergic to the breast milk. She always says that if

she had the choice, she would give breast instead of formula. And then I have got my two cousins that said breast is best.

INTERVIEWER: So, you have a lot of support from your family in terms of what you are saying?
PARTICIPANT: Yes.

INTERVIEWER: How do you think exclusive breastfeeding will benefit you and your baby?
PARTICIPANT: I just learned today about jaundice and about how the nutrients from the breast, helps the growth of the child. So, that is new to me that is why I would go for breastfeeding. That is why I want to do breast feeding.

INTERVIEWER: How do you think breastfeeding can help you?
PARTICIPANT: I do not think it helps me. I think it helps the baby more than me.

INTERVIEWER: What are your intentions of breastfeeding exclusively? How long do you intend to breastfeed your baby?
PARTICIPANT: We were looking at complete like maybe a year, but because I work and I had to go back from maternity leave, it will still be breast milk, but it will be express breast milk.

INTERVIEWER: That is very good. What are the challenges you think you might experience in breastfeeding exclusively, and what factors influences this?
PARTICIPANT: At the moment my nipples are inverted, so that is the issue that I am having with the baby, which he is not being able to latch on, but there is milk if I squeeze. We are trying to get the nipple out because I do want to breastfeed.

INTERVIEWER: I understand that you had a caesarean section by mode of delivery. How do you feel about caesarean section and breastfeeding?
PARTICIPANT: At the moment it is very, very hard to put the baby on my stomach because of the pain or the cut, the incision. But other than that, I am not really facing any challenges except having the baby to latch on.

INTERVIEWER: How does your partner or family respond to exclusive breastfeeding?
PARTICIPANT: My partner wants breastfeeding. His opinion was it is going to be breastfeeding. We are not putting baby on formula at all.

INTERVIEWER: How do you feel about that?
PARTICIPANT: I fully support that decision because I myself spoke about it. I wanted breastfeeding as a process. I was not going to take a chance with formula or anything else.

INTERVIEWER: Can you tell me is there anything in your culture that influences your ability to breastfeed exclusively?
PARTICIPANT: I know one of the steps that we take after giving birth, is that you go to your in-law's house. So, my partner's mother is late, so I am going to his auntie's house, and she is preparing the butter masala curry with the soya seeds, the jeera powder to help me heal faster. So, I will be able to breastfeed without any pain at the bottom, where the incision is. Also, there is lighting up the Laban and nobody coming in at a certain time because that will affect the child and affect me. So, in terms of supporting the culture wise of it, that is how they do it.

INTERVIEWER: How does this affect you and the baby if somebody comes in?
PARTICIPANT: It is a cultural belief that after a certain time, the door needs to be closed and you cannot have visitors after that period.

INTERVIEWER: Do you have a certain time frame?

PARTICIPANT: Yeah, it is at 06:00pm. You cannot have visitors at 06:00pm and anybody found in the house like, once you are in, you are in, unless of course it is like work, you are working, then you obviously leave but when you come back you light your camphor.

INTERVIEWER: So, by 6 o'clock all visitations should be stopped?

PARTICIPANT: For the first three months.

INTERVIEWER: And what is the belief behind this?

PARTICIPANT: It is more of bad eyes or like that spirit of negativity coming into the house. You also want the baby to sleep comfortably so they do not, you know when you get visitors, the baby is passed around, and that could cause pain to the child. But I think it is more of bad eyes. That is the reason.

INTERVIEWER: Thank you, that was very informative. Is there anything negative in the cultural practices that will not allow you to breastfeed?

PARTICIPANT: From our side, no, but I think maybe another family would see it different like, for example, my sister, she cannot breastfeed, even if she wanted to and she does not have the problem that I have with inverted nipples. But her kid, as soon as he latches on, his entire body is filled with hives and pimples, and he is like allergic to that specific milk. So, for my baby, he is okay.

INTERVIEWER: So, it seems that you are not negatively affected by your sister`s experience?

PARTICIPANT: Yeah.

INTERVIEWER: Do you believe you are adequately prepared for exclusive breastfeeding as a first-time mother? Please tell me more.
PARTICIPANT: I know from the hospital side, I do not think I was adequately trained, because the majority of what I am doing at the moment, an outsider has shown me. It is not something that was taught to me. And then if you go through my file, there was a whole pamphlet on breastfeeding and your baby, but the issue with that was, it is in Zulu. So, that was a factor for me, like when I was getting tingling sensations on my fingers, I kept asking people, but I did not know that in that booklet it says you get your tingling feelings. I learned today how to teach the baby to latch on if you have inverted nipples, which I was not taught, and I do not think my family would have known that, because they do not know that I have inverted nipples. I did not know things until today.

INTERVIEWER: You are saying you had no support and teaching about breastfeeding. How does that make you feel and how many clinic visits have you attended?
PARTICIPANT: From 28 weeks, every week I would go. I think there is a language barrier between patients and staff members. I think they should consider diversities of patients.

INTERVIEWER: So, from what you have shared with me on this point, you have not received adequate information and the information that was shared was in a different language, which you did not understand?
PARTICIPANT: Yes.

INTERVIEWER: And also, the content of what you had received, you said that it was not adequate enough.
PARTICIPANT: Yes.

INTERVIEWER: Judging from what you have just shared in the previous question, how do you think, as healthcare workers, we can help you exclusively breastfeed?

PARTICIPANT: I think, it is more of for first time mothers, like my pregnancy was not planned. I used to come very early in the morning to wait in the queue, so I do not have to sit the whole day. So, in that period, I am waiting, if somebody could speak and say, this is how you do it for inverted nipples; so, this is how you do it if your baby is not latching on. You know, in that time frame, so it is not wasting the time or efforts or money from the healthcare department. You are doing it while everyone is still waiting to be treated.

INTERVIEWER: So, you are saying that the education on the breast conditions, positioning, and latching of the baby, are some of the things that you would like to be taught on?

PARTICIPANT: On how to breastfeed.

INTERVIEWER: You are sharing that you did not receive enough information on that. Did you have any brochures or pamphlets, anything that is issued to you?

PARTICIPANT: No. Only that one booklet, but I think it is taken out of my file because it was in isiZulu.

INTERVIEWER: I have heard you share that your partner is really for breastfeeding. How else does he support you?

PARTICIPANT: We live together in our own home, like we married and share all the expenses and responsibilities together, but we not legally married.

INTERVIEWER: Okay, so the income that you have, do you feel it is okay to support you through with baby and the family?

PARTICIPANT: Yes.

INTERVIEWER: Thank you very much for your participation. You have been a great support to the study.

Appendix 12: Sample of a transcript Number 2

Participant # 10

INTERVIEWER: Good morning Participant and thank you for participating in the study. I am Jessica Naicker Masters student in Health Sciences at Durban University of Technology. We have both have gone through the information letter an interview guide, which have understood and you have signed the informed consent.
PARTICIPANT: Good morning, how are you?

INTERVIEWER: I am fine, thank you, and, how are you?
PARTICIPANT: I am okay thank you.

INTERVIEWER: So, you fully understand the nature of the interview, right?
PARTICIPANT: Ja! I do.

INTERVIEWER: Can you tell me; how old are you?
PARTICIPANT: I am eighteen years old.

INTERVIEWER: Are you married?
PARTICIPANT: No.

INTERVIEWER: Were you divorced at any time?
PARTICIPANT: No.

INTERVIEWER: Okay. Never married, hey? What is your highest level of education? Have you been to school?
PARTICIPANT: Ja! I have.

INTERVIEWER: What standard did you complete?
PARTICIPANT: I completed them all.

INTERVIEWER: Okay, so you finished matric?
PARTICIPANT: Ja! I did.

INTERVIEWER: Did you pass matric?
PARTICIPANT: No, I did not

INTERVIEWER: Have you been to any other school for studying?
PARTICIPANT: No.

INTERVIEWER: Okay. Are you employed?
PARTICIPANT: No.

INTERVIEWER: A part-time job?
PARTICIPANT: No.

INTERVIEWER: What is your income level at home? Is it nil income? Less than R1000.00?
PARTICIPANT: Yes, there is an income.

INTERVIEWER: Between R1000.00 and R2500, or more than R2500.00, or you are getting a social grant?
PARTICIPANT: R1 500.00.

INTERVIEWER: R1500.00. If I may ask; you are not working, how do you receive this income, from where do you get it?
PARTICIPANT: From the father of the baby.

INTERVIEWER: Okay, thank you. You are Black by race and you from the postpartum ward, right? And your language of speaking is Zulu?
PARTICIPANT: Ja!

INTERVIEWER: Okay. Tell me, do you have any risk factors, like diabetes, you know, when your sugar levels go high? Any high blood pressure? Are you allergic to anything, if you take medication you get rashes on your body, for example your chest gets tight? Is there anything like that?
PARTICIPANT: No.

INTERVIEWER: How about infections? Do you have any infections?
PARTICIPANT: No, I do not.

INTERVIEWER: Okay. Your file states that you are HIV-positive. Is this correct?
PARTICIPANT: Ja! It is.

INTERVIEWER: If I may ask; how long have you been HIV-positive for?
PARTICIPANT: Since I was young, I was about three to four, years.

INTERVIEWER: Three to four years. Okay. And I understand you were born in the year 2005.
PARTICIPANT: Yes.

INTERVIEWER: So, from 2005 till now, you have been HIV-positive?
PARTICIPANT: Yes.

INTERVIEWER: Okay, and are you on any treatment?
PARTICIPANT: Yes, I do.

INTERVIEWER: Okay. What treatment are you on?
PARTICIPANT: I am on ARV's and TB.

INTERVIEWER: Okay. Did you have TB recently?
PARTICIPANT: Yes.

INTERVIEWER: Okay. How long ago was this? So, now we are in the month of April, can you recall when the last time you had TB?
PARTICIPANT: February.

INTERVIEWER: This year?
PARTICIPANT: Yes, this year.

INTERVIEWER: Were you healed by March?
PARTICIPANT: Ja! I was healed.

INTERVIEWER: How do you feel now in your body? Are you able to breathe easy?
PARTICIPANT: Ja! I am fine.

INTERVIEWER: Okay. Do you have any idea of how you became HIV-positive?
PARTICIPANT: Ja! I do, but it is family stuff. My mother told me that she was dating another guy while she was breastfeeding me.

INTERVIEWER: Okay.
PARTICIPANT: Ja! She breastfed me while she got that. She didn't know that she was HIV-positive.

INTERVIEWER: Okay. So, basically, you became positive through her breast milk. How old were you at that time?
PARTICIPANT: I was three.

I**NTERVIEWER** How do you feel about being breastfed for that length of time?

PARTICIPANT: I don't feel anything, I am just fine.

INTERVIEWER: Okay, thank you for that information. So, tell me; can you share your thoughts about exclusive breastfeeding? What do you understand when we say; exclusive breastfeeding?

PARTICIPANT: I understand it is important for the baby to breastfeed, because if the mother has got something, the nurse can help her and she can breastfeed the baby while she is HIV-positive.

INTERVIEWER: Okay. So how long do you think breastfeeding should be for?

PARTICIPANT: About six months.

INTERVIEWER: Okay. So, you understand that the term; exclusive, means six months.

PARTICIPANT: Ja!

INTERVIEWER: How do you think exclusive breastfeeding would benefit you and your baby? Let's start with you, what are the benefits for you if you breastfeed your baby?

PARTICIPANT: For now, I don't see anything, because I am still new with the baby.

INTERVIEWER: Okay.

PARTICIPANT: It is the first time.

INTERVIEWER: So, you seem to not have any information on that.

PARTICIPANT: Ja.

INTERVIEWER: Okay. How about the baby? How do you think breastfeeding can benefit your baby? Remember you are HIV-positive and you are on treatment, so how do you think this can benefit your baby?
PARTICIPANT: She will be healthy and strong.

INTERVIEWER: It's okay, try.
PARTICIPANT: And have a good life.

INTERVIEWER: Okay. So, you do understand that breastfeeding is healthy for your baby?
PARTICIPANT: Ja!

INTERVIEWER: Is there any other ways in which breastfeeding can help your baby?
PARTICIPANT: No.

INTERVIEWER: You don't know, or you…
PARTICIPANT: I don't know.

INTERVIEWER: Okay, so you don't fully understand the benefits for you and for your baby?
PARTICIPANT: Yes.

INTERVIEWER: Okay. How long do you intend to breastfeed your baby for?
PARTICIPANT: About six months.

INTERVIEWER: You say you want to breastfeed your baby for six months, what makes you say this?
PARTICIPANT: Because it will be healthy for her.

INTERVIEWER: Okay. So, after six months, what do you intend to do?
PARTICIPANT: I want to go back to school.

INTERVIEWER: What are your intentions, do you want to go back to school to repeat matric, or which school are you referring to?
PARTICIPANT: I want to go back to school. I will go where I was going.

INTERVIEWER: Okay. So, who will care for the baby?
PARTICIPANT: I will talk to the father; he said he is going to take her to family while I am still in school.

INTERVIEWER: So, does he have a responsible person to take care of your baby, and who is this person?
PARTICIPANT: It is his mother.

INTERVIEWER: Okay. So how do you plan to feed your baby?
PARTICIPANT: I am going to buy the milk.

INTERVIEWER: So, you are going to formula feed?
PARTICIPANT: Ja!

INTERVIEWER: Okay. Do you not think that breastfeeding the baby can still happen while you are at school?
PARTICIPANT: No.

INTERVIEWER: Okay. So, you don't like to breastfeed your baby while you are at school?
PARTICIPANT: Ja!

INTERVIEWER: Okay. So, what makes you say that?
PARTICIPANT: Because my weight will lose and my uniform won't fit me well.

INTERVIEWER: Okay. So, you are worried about how you are going to look, in other words, your body image. You feel that you are going to lose weight and your uniform is not going to fit you.
PARTICIPANT: Yes.

INTERVIEWER: But if you lose weight your uniform will fit you. So, I don't follow you in that way, how do you mean?
PARTICIPANT: I mean I am not going to look the way I was. So, when I am breastfeeding the baby while I am going to school, my mind will be confused, because at school I have homework to do. I must breastfeed the baby, I must do the homework. The baby won't be sleeping, how am I going to do my homework, now?

INTERVIEWER: Okay. So, basically you are going to mix feed after six months?
PARTICIPANT: Yes.

INTERVIEWER: Thank you for feeding her for six months. So how do you feel about mix feeding? Are you happy to mix feed the baby?
PARTICIPANT: Ja! I will be happy.

INTERVIEWER: So, once you have finished six months, are you going to only formula feed, or are you going to go back to breastfeeding?
PARTICIPANT: Ja! I am going to continue with the other one.

INTERVIEWER: The formula?
PARTICIPANT: Ja! With the formula.

INTERVIEWER: Okay. So, what will happen to your breasts then, because you most probably will still be secreting milk? Do you have any knowledge or understanding of how that milk will eventually dry and how you are going to deal with that problem of your breasts?
PARTICIPANT: Ja! I do, but first I will ask my mother what I am going to do, because she knows.

INTERVIEWER: Okay. So, coming back to that point, you said your mom knows. Now we are looking at what culture is doing in a situation like this. What do you think are some of the practices that culture will do to stop breastfeeding since in this case, you don't want to continue breastfeeding?
PARTICIPANT: You buy the cabbage; you take it and put it here, in your breasts then it will stop.

INTERVIEWER: Okay, so you use cabbage leaves to stop the breast milk?
PARTICIPANT: Ja!

INTERVIEWER: Okay. Do you believe in that, that it is a good way of stopping breast milk?

PARTICIPANT: Ja! I do because I saw my other friend, she was doing it, and it helped.

I**NTERVIEWER**: Okay. Are there any other ways that culture has taught you anything about breastfeeding?
PARTICIPANT: No.

INTERVIEWER: Okay. Are there any traditional practices you do to stop breastfeeding, besides the cabbage leaves?
PARTICIPANT: No.

INTERVIEWER: So, are there any particular foods that your culture encourages you to eat, to keep your milk flowing?
PARTICIPANT: No, just eat everything to make the milk.

INTERVIEWER: Okay. So, there are no special foods that your culture gives you that your mom will cook for you, perhaps, to say; you had your baby now, you need to eat this, you need to do this? So, is there any kind of practices that culture does for you, as a first-time mom?
PARTICIPANT: No.

INTERVIEWER: What are the challenges you think you might experience in breastfeeding exclusively? Because remember, you are a scholar, you have money from your partner, as you say of R1 500.00. Do you think this money will be enough?
PARTICIPANT: No, I don't because I will put her in a social grant, so the money will see to everything.

INTERVIEWER: Okay. And how much do social grants pay for your baby?
PARTICIPANT: It is R500.00.

INTERVIEWER: Okay. So, in other words, you are looking at that R1 500.00 plus R500.00 for social grant, you have R2 000.00. Do you feel that will be enough for you?
PARTICIPANT: Ja! I do.

INTERVIEWER: Okay. Do you know how to make formula feed?
PARTICIPANT: No.

INTERVIEWER: Okay. So, did you have any in-services during your clinic attendance where you are taught about formula feeding and mixed feeding?
PARTICIPANT: No, they have not taught us.

INTERVIEWER: Okay. So, I also want to ask you; the challenges basically that I see that you might experience with breastfeeding is: you need to go back to school. Two, you need to keep the baby at your in-law's place. Three, you also need added income to meet the demands of your baby, and your ability to cope emotionally with your school and the baby care. So, these are some of the challenges that you feel that you might experience. Being HIV-positive, do you feel that is a challenge for breastfeeding?
PARTICIPANT: Ja! It is because you must do everything to protect the baby. You can't breastfeed the baby while you have HIV. First you must take injections, tablets to make the baby to not have HIV also.

INTERVIEWER: Okay. When you say; injections, what do you mean?
PARTICIPANT: They put it to me while the baby is still inside.

INTERVIEWER: Okay. How about when the baby was born, did the baby receive any treatment for HIV?
PARTICIPANT: No.

INTERVIEWER: Okay. Were there any tests done for your baby when the baby was born?
PARTICIPANT: No, not yet.

INTERVIEWER: Okay. So, you have been on ARV'S since the age of three years till now. That is over ten years of ARV's. Do you feel that your breast milk is safe enough for baby to be breastfed?
PARTICIPANT: Ja! It's safe because I am taking tablets for it.

INTERVIEWER: Okay, alright, and tell me; how does your partner or family feel about you feeding your baby breast milk for six months, exclusively breastfeeding?
PARTICIPANT: They don't say anything because they know it will be healthy for the baby.

INTERVIEWER: So, in other words they are supportive with you?
PARTICIPANT: Ja!

INTERVIEWER: Okay, good. Can you share any cultural factors influencing your ability to breastfeed exclusively? So, is there any cultural practice that will help you to breastfeed, or not help you to breastfeed? Let's start with those things that you would do to breastfeed baby.
PARTICIPANT: For now, I don't know. I never saw any of my culture people do, they just ate the food and have milk.

INTERVIEWER: Okay. So, any kind of food, there is no specific kind of food?
PARTICIPANT: Ja!

INTERVIEWER: Okay, thank you. Do you believe you are adequately prepared for exclusive breastfeeding as a first-time mother? Please tell me more.
PARTICIPANT: Yes.

INTERVIEWER: Do you feel that you have enough information about breastfeeding, being HIV-positive? Do you feel that they taught you enough?
PARTICIPANT: Ja! They have taught me enough.

INTERVIEWER: Okay. Tell me more about it, what were some of the things they taught you?
PARTICIPANT: They taught me I must breastfeed the baby while I am still in the hospital. When I went out, I am not changing the baby. Ja, because the baby will have something that won't go well in the body. So, they say I must breastfeed the baby up till six months, and I can change.

INTERVIEWER: Okay. How about the methods, besides the formula feeds? Is there any other ways or any other teachings you had about your breast milk, to give baby? Let's say you are going to school, were you taught anything about expressing your milk and keeping it for baby? Or about heat treating your milk and still breastfeeding? Were you taught anything about that?
PARTICIPANT: Ja! They said I must take the bottle and squeeze the milk in there, so when the baby is crying she can get it.

INTERVIEWER: Okay. So how do you feel about expressing your milk?
PARTICIPANT: For now, I don't feel anything.

INTERVIEWER: Okay. So, do you understand how to safe-keep the milk? How many hours can you keep the milk out of the room, or in the fridge, or in the freezer? Were you taught anything about the time interval?
PARTICIPANT: No, they never taught.

INTERVIEWER: Okay. So, did you get information at the clinic? Like written information about breastfeeding?
PARTICIPANT: Ja, there is, but it is in my book, they never said it.

INTERVIEWER: Okay. So, you say they never said it, what do you mean by this?
PARTICIPANT: They never taught us, they just gave us the book and the sheets. Ja.

INTERVIEWER: Okay. How do you feel about that?
PARTICIPANT: I do not feel anything.

INTERVIEWER: Okay. Were you able to read that in your own time?
PARTICIPANT: Ja, I do, but sometimes I am not finishing it.

INTERVIEWER: Okay. Do you feel it would have been better if you had some form of teachings of that which is exactly in the form for you, so that you can understand it, even from an education part?

PARTICIPANT: Yes.
INTERVIEWER: How can healthcare workers, best help you to? I want you to think about the knowledge that you have now, how can we better it?
PARTICIPANT: Nothing.

INTERVIEWER: Okay. Let me just help you there. For example, you said that the nurses gave you the education sheet.
PARTICIPANT: Yes.

INTERVIEWER: But it was just placed in a book and it wasn't taught to you. Do you think we can do something better? Do you prefer us rather putting it in a book and still educating you, or just leaving it there for you to read?
PARTICIPANT: Ja, I think it is better to put it and say it.

INTERVIEWER: Right, so education?
PARTICIPANT: Yes.

INTERVIEWER: Alright, and in the context of being HIV-positive and the feeding of your baby, okay, what do you think we can do there to help you? Do you feel you had enough knowledge on preservation of breast milk, the different forms of still feeding your baby exclusive breast milk even though you are at school, because there are ways in which that can be done? How do you feel about that, did you get enough information there?
PARTICIPANT: I am fine for breastfeeding the baby, yes.

INTERVIEWER: For a period of six months?
PARTICIPANT: Yes.

INTERVIEWER: Okay. So, you have no intentions to feed after six months?
PARTICIPANT: No, I do not.

INTERVIEWER: Okay. Alright, thank you so much, I appreciate your support. Is there anything else that you would like to share?
PARTICIPANT: No.

INTERVIEWER: Are there any questions you have for me?
PARTICIPANT: No.

INTERVIEWER: Okay. Thank you so much.

Appendix 13: Certificate from the professional editor

Sarah Frost

B.A. (Hons in English Literature) (UCT), Masters in English Literature (UKZN)

Editing Services

Cell: 074 384 2772

Email: sfrost@juta.co.za

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22 September 2023

Re: Editing services rendered

Please be advised that I edited a thesis written by Jessica Naicker (Student number 22290668), written as part of her Master of Health Sciences in the Faculty of Health Sciences at the Durban University of Technology.

Regards

Sarah Frost

Editor

Appendix 14: Turnitin report