

**KNOWLEDGE, ATTITUDES AND PRACTICES OF NURSES' REGARDING
MOTHER-BABY FRIENDLY INITIATIVE IN NON-ACCREDITED PRIMARY
HEALTHCARE FACILITIES OF MAKHUDUTHAMAGA SUB-DISTRICT IN
LIMPOPO PROVINCE**

BY

MGOLOZELI SIYABULELA ERIC

UNIVERSITY OF VENDA

2017



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LIMPOPO PROVINCE**

By

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CO-SUPERVISOR: PROFESSOR LB KHOZA

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*“While breastfeeding may not
seem the right for every
parent, it is the best choice
for every baby.”*

- Amy Spangler

Student Number: 11605518

Declaration of plagiarism

I, **Mgolozeli Siyabulela Eric**, hereby declare that this work on **'KNOWLEDGE, ATTITUDES AND PRACTICES OF NURSES REGARDING MOTHER-BABY FRIENDLY INITIATIVE IN NON-ACCREDITED PRIMARY HEALTHCARE FACILITIES OF MAKHUDUTHAMAGA SUB-DISTRICT IN LIMPOPO PROVINCE'** is my own original work and has not, in whole or in part, been submitted towards another degree at this university or elsewhere. Where the work of others has been used, it has been attributed and acknowledged.

Signature: Date:

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DEDICATION

- *To Professor Lunic Base Khoza, my role model and mentor whose support and wisdom made it possible for me to achieve self-actualisation. If it wasn't for your support, I would have deregistered in 2015. 'Manana ndzi khensa rirhandzu na tintswalo ta n'wina'.*
- *My study leader, 'Mhani Hohova, amiri tani hi huku loko yi sirhelela swihukwana swa yona eka magama. Ndzi khensa rirhandzu na matimba ya n'wina. Hinkwaso aswi nga ta antswa handle ka vukona bya n'wina'.*
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ABSTRACT

Background: The Mother-Baby Friendly Initiative (MBFI) promotes and supports breastfeeding in environments such as clinics, community health centres and hospitals that have fully-functioning maternity units. The implementation of the Mother-Baby Friendly Initiative in hospitals is associated with significant increases in the initiation and duration of exclusive breastfeeding (EBF). The Mother-Baby Friendly Initiative also leads to improved healthcare for infants, children and provides improved maternal health to all mothers. The main aim of this study was to assess the knowledge, attitudes and practices (KAP) of nurses regarding the Mother-Baby Friendly Initiative in non-accredited primary healthcare (PHC) facilities of Makhuduthamaga Sub-district.

Method: Descriptive, cross-sectional and correlational study designs were used with the quantitative method. All the 18 non-accredited primary healthcare facilities were purposively selected and a total sampling method was used to select all the nurses working in these non-accredited primary healthcare facilities. Permission to conduct the study was sought from the University of Venda Research Ethics Committee and the Limpopo Department of Health Research Committee. Data was collected using a structured self-administered questionnaire. Content and face validity were enhanced before the actual data collection process. One hundred and ninety questionnaires were distributed and 164 responded, giving a response rate of 86.3%. Cronbach's alpha test determined the reliability and reflected 0.981, indicating high reliability. Data was analysed using the Statistical Package for Social Sciences (SPSS) 23.0 and the Pearson coefficient of correlation established the relationship between variables. The study followed ethical considerations such as privacy, autonomy, confidentiality, fair treatment and right to self-determination.

Results: In this study, 50.6% were professional nurses (PNs), 6.7% were nursing managers (NMs), 15.2% were enrolled nurses (ENs) and 27.4% were enrolled nursing assistants (ENAs). This study found that 100% of NMs, 65.1% of PNs, 54.2% of ENs and 26.7% of ENAs had received formal training on lactation management. Seventy-two percent (72%) of NMs, 90.4% of PNs, 72% of ENs

and 66.7% of ENAs were knowledgeable about the duration of exclusive breastfeeding. This analysis found that the majority of nurses agreed that MBFI increases breastfeeding rates. Results showed that 63.6% of NMs, 69.6% of PNs, 56% of ENs and 46.7% of ENAs teach and demonstrate hand-milk expression to breastfeeding mothers. Furthermore, this research revealed that there was a significant relationship between the knowledge, attitudes and practices of nurses with a p-value of (p-00.01).

Recommendations and Conclusion: This study recommends that all nurses should receive formal training on MBFI implementation and this should be conducted to improve ENs and ENAs' awareness about MBFI. MBFI should be integrated into the training curriculum for all nursing categories. This study further recommends that a support model for implementation of MBFI be developed and implemented.

KEY TERMS: Attitude, breastfeeding, knowledge, mother-baby friendly initiative, nurse, practice

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LIST OF ABBREVIATIONS

| | |
|-----------------|---|
| ANC | Antenatal Care |
| ART | Antiretroviral Therapy |
| ARV | Antiretroviral |
| BAQ | Breastfeeding Attitude Questionnaire |
| BFHs | Baby-Friendly Hospitals |
| BFHI | Baby-Friendly Hospital Initiative |
| BSES-SF | Breastfeeding Self-Efficacy Scale Short Form |
| CMR | Child Mortality Rate |
| DoCGTA | Department of Cooperate Governance and Traditional Affairs |
| DoH | Department of Health |
| EBF | Exclusive Breastfeeding |
| EN | Enrolled Nurse |
| ENA | Enrolled Nurse Assistant |
| HAART | Highly Active Antiretroviral Therapy |
| HIV/AIDS | Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome |
| IF | Infant Feeding |
| IMR | Infant Mortality Rate |
| INP | Integrated Nutrition Programme |
| IYCF | Infant and Young Child Feeding |
| HDACC | Health Data Advisory and Coordinator Committee |
| KAP | Knowledge, attitudes and practices |
| MBFI | Mother-Baby Friendly Initiative |
| MBFHI | Mother-Baby Friendly Hospital Initiative |
| MDG | Millennium Development Goals |
| MF | mixed feeding |
| MFP | Mother-Friendly Practices |
| MNCWH | Maternal, New-born, Child and Women's Health |
| MNCWHN | Maternal, New-born, Child and Women's Health and Nutrition |
| NFCS-FB | National Food Consumption Survey-Fortification Baseline |
| NIYCF | National Infant and Young Child Feeding Policy |
| NM | Nursing Manager |

| | |
|---------------|--|
| PHC | Primary Healthcare |
| PMTCT | Prevention of Mother to Child Transmission |
| PN | Professional Nurse |
| SAMRC | South African Medical Research Council |
| SANC | South African Nursing Council |
| SPSS | Statistical Package for Social Sciences |
| STIs | Sexually Transmitted Infections |
| UN | United Nations |
| UNICEF | United Nations Children's Fund |
| UNIVEN | University of Venda |
| USA | United States of America |
| WHO | World Health Organisation |
| WIC | Women Infants and Children |

CHAPTER ONE

ORIENTATION INTO THE STUDY

1.1 INTRODUCTION AND BACKGROUND OF THE STUDY

The Baby-Friendly Hospital Initiative (BFHI) is a global United Nations Children's Fund (UNICEF) and World Health Organization (WHO) sponsored effort to promote breastfeeding by ensuring that all women are provided with sound information regarding infant-feeding choices (UNICEF,2009a:26). The initiative was launched in 1991 by the WHO/UNICEF following the publication of the Innocenti Declaration in 1990 (UNICEF, 2009a:26). The main aim of the initiative was to implement practices that protect, promote and support breastfeeding and the WHO/UNICEF made a global call for all the states to implement the initiative in hospitals (UNICEF, 2009a:26). South Africa responded and launched the initiative in 1994 (Department of Health (DoH), 2011b:5). In 2006, the BFHI strategy was revised to reflect the realities faced by the healthcare providers and the WHO encouraged all the states to reinvigorate, restore or launch BFHI in the global context (DoH, 2014:33).

Initially, the initiative focussed on the ten steps to successful breastfeeding and it was decided during the 2006 revision to include three additional items. These were Human Immune Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS), mother-friendly care and the international code of marketing for breastmilk substitutes (DoH, 2014:33; WHO, 2010b:33). In 2011, the South African government changed the name of the BFHI to the Mother-Baby Friendly Initiative (MBFI) to reflect the inclusion of the mother and to avoid limiting the initiative to being facility based and extending it to the community care. Consequently, it is mandatory for primary healthcare (PHC) facilities to implement the initiative at the community level (DoH), 2014:33; Du Plessis & Pereira, 2013:122).

As per MBFI principles, mothers who elect to breastfeed their infants should be given prenatally physiologically-sound, evidence-based advice and skilled assistance, as they begin nursing during their postpartum-hospital period

(UNICEF, 2009a:57). The initiative has a confirmed impact on increasing the likelihood of babies being exclusively breastfed for six months (WHO, 2010a:37). The launch of MBFI by the WHO has helped to reduce the high rates of child mortality globally and increased awareness about breastfeeding as an optimal feeding choice (Heads, 2005:65).

All key medical organisations recommend EBF for the first six months after birth with continued breastfeeding for at least one year (Du Plessis & Pereira, 2013:123; WHO, 2010a:28; DoH, 2014:30). Infant-feeding has been a great concern internationally and scientists have proven that safe infant-feeding practices reduce high mortality rates amongst children. The MBFI promotes and supports breastfeeding in environments such as clinics, community-health centres and hospitals that have fully-functioning maternity units (Daniels & Jackson, 2011:35). The South African government has declared that all health facilities that assist pregnant women, conduct deliveries and provide child health care should be accredited as 'Mother-Baby Friendly' by 2015 (DoH, 2011b:7). The MBFI emphasises the ten steps to successful breastfeeding and the three additional items that must be fulfilled by a health facility to become accredited as a 'Mother-Baby Friendly facility'. Globally, only 20,000 hospitals are designated as 'Baby-friendly' (UNICEF, 2009a:26).

Knowledge of nurses about the MBFI is the key to the successful implementation of its policy. The understanding of nurses about MBFI has been reported by Meyer, van der Spuy and Du Plessis (2007:276) as having a significant influence on the successful implementation of MBFI in many health facilities. They argued that for health professionals to be effective in their work areas, knowledge should be reinstated as a basis for practice (Meyer et al., 2007:271). The incidence and success of breastfeeding are attributed to several factors including the provision of accurate information and continuous support to the breastfeeding mother (OlaOlorun & Lawoyin, 2006:189).

Internationally, a high level of breast-feeding knowledge is associated with more consistent and positive professional practices (OlaOlorun & Lawoyin, 2006:189). Moore, Gauld and Williams (2007:4) in their study in New Zealand explored the barriers encountered when applying the first two steps of the BFHI, developing

and communicating BFHI policy, and providing the necessary training to staff. The study illustrated that implementing policy could be more straightforward in smaller hospital organisations and those with more stable workforces (Moore et al., 2007:4). They suggested that the existence of interdisciplinary and advocacy groups that cover hospitals and communities may also assist with policy dissemination and compliance (Moore et al., 2007:7). They further recommended that if the facilities do not have a campaign to become baby-friendly, external motivation is necessary (for example, incentives from the provincial or national office).

In South Africa, more than 70% of hospitals are accredited as baby-friendly hospitals and the aim of the National DoH aim is to integrate the MBFI strategy in PHC facilities (DoH, 2011a:25). Hospital policy and attitudes of health-care workers are crucial in the promotion and support of safe infant-feeding practices (DoH, 2011a:31). A qualitative research by Fairbrother and Stranger-Ross (2010:157) indicated that women relied on health-care workers to guide them with infant-feeding choices and had confidence in the nurses as their only source of information. Nurses have a central role in breastfeeding education. In small local studies in South Africa, 70% of mothers in a peri-urban settlement in Cape Town identified nurses as the people who encouraged breastfeeding (Daniels & Jackson, 2011:36).

A study by Mushaphi, Mbhenyane, Khoza and Amey (2008:41) in the Limpopo Province found that 30% of the mothers identified only health-care workers and 42% identified health care workers and parents as those who encouraged them to breastfeed. Mushaphi et al. (2008:43) argue that health-care workers are essential in educating family members and this is important since family members often influence infant feeding choices. There are, however, also documented cases of negative associations with these key role-players. Mothers from southern Africa reported that health-care workers sometimes gave conflicting infant feeding messages, which led to confusion and mistrust in their advice (Mushaphi et al., 2008:42).

As stated by Daniels and Jackson (2011:38), infants born in Baby-Friendly Hospitals (BFHs) are more likely to be breastfed in the first hour of life and this

also correlated with significant less pacifier use. Protecting, promoting and supporting infant and young-child feeding is essential for the healthy growth and development of children (Register, Eren, Lowdermilk, Hammond & Tully, 2000:213). PHC facilities play a pivotal role in promoting breastfeeding by following MBFI principles (Daniels & Jackson, 2011:38; UNICEF, 2013:45). In South Africa, nationally, 36% of infants born in 2009 were exclusively breastfed up to three months and 16% up to six months; these figures fall short of the Healthy People 2020 targets of 46% and 26%, respectively (WHO, 2012b:13; DoH, 2011a: 29).

A study by Meyer et al. (2007:271) found that sub-optimal breastfeeding rates incur R2.2 billion in direct paediatric-medical costs each year in Southern Africa. Furthermore, there are also substantial disparities with the lowest breastfeeding rates seen among all African cultures. The Makhuduthamaga Sub-district is not an exception, as 90% of children are not exclusively breastfed. Hence the current study intended to assess the knowledge, attitudes and practices (KAP) of nurses regarding MBFI in the non-accredited primary-healthcare facilities of Makhuduthamaga Sub-district in Limpopo Province. Unfortunately, no studies have been conducted in Limpopo about MBFI implementation, specifically in the Sekhukhune district.

1.2 STATEMENT OF THE PROBLEM

The researcher works in one of the non-accredited PHC facilities in Makhuduthamaga Sub-district and is an MBFI assessor and facilitator for Limpopo Province. While conducting internal assessments as part of the appraisal reports, it was evident that many nurses in the five non-accredited baby-friendly facilities of Makhuduthamaga Sub-district were not adhering to the MBFI principles. There were no infant and young-child feeding policies with the ten steps including the three additional items as outlined in the National Infant and Young-Child Feeding Policy in their facilities. There are no detailed health education programmes in these institutions for mother-baby friendly care practices and information about breastfeeding is not shared with women. This inspired the researcher to conduct this study where the KAP of nurses regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district will be

explored and described. Furthermore, there is little trace of research focussing on the implementation of MBFI in PHC facilities in the Limpopo Province.

1.3 RATIONALE OF THE STUDY

Studies on KAP of nurses regarding MBFI in non-accredited PHC facilities have been conducted internationally. However, most took place in urban areas unlike this current study, which focusses on the remote-rural clinics of Makhuduthamaga Sub-district. This region is in the broader Sekhukhune District of Limpopo province where there has been no research on this subject. Studies focussing on nurses' KAP about MBFI in PHC facilities are limited to the available literature. Thus, this study should be pivotal as it would capture the KAP of nurses regarding MBFI in rural non-accredited PHC facilities of Makhuduthamaga Sub-district. Also, it supports the agreement signed during Tshwane Declaration of 2011 by the South African DoH and other stakeholders to support and promote breastfeeding (DoH, 2011b:16).

The National DoH endeavours to promote and support breastfeeding and measures have been established to make all health facilities mother-baby friendly by 2015 and health professionals such as nurses are the driving force behind these actions (DoH, 2011a:16; Du Plessis & Pereira, 2013: 120). The researcher wants to assess the comprehension and practices of nurses regarding MBFI in non-accredited rural PHC facilities of Makhuduthamaga Sub-district in the Limpopo province.

1.4 AIM OF THE STUDY

The aim describes what a researcher plans to achieve by conducting research. Fouche and De Vos (2011:94) explain the aim and objectives as follows: 'The aim is the "dream" and the objectives are the steps one has to take to attain the dream'. The purpose of this study is to extensively increase the implementation of MBFI in Makhuduthamaga Sub-district and in the country, as appropriate by identifying the level of KAP of nurses towards MBFI implementation and determine if significant associations exist between MBFI practices and their level of knowledge and attitudes.

1.4.1 Research purpose

A research purpose is a clear, concise statement of the specific goal or focus of a study (Burns & Grove, 2011:146). The purpose of the study is to assess the KAP of nurses regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district.

1.4.2 Research objectives

Botma, Greeff, Mulaudzi and Wright (2010:93) assert that the research objectives 'specify what will be known by the end of the research that was not known at the beginning and had been revealed by the research; in other words, the evidence generated.'

The specific objectives of this research were to:

- 1) assess nurses' knowledge regarding MBFI,
- 2) determine nurses' attitudes towards MBFI implementation,
- 3) identify nurses' practices towards MBFI strategy implementation, and
- 4) determine if a relationship exist between nurses' MBFI practices and their levels of knowledge and attitudes.

1.5 SIGNIFICANCE OF THE STUDY

The objective of this research is to make all primary health care facilities mother-baby friendly, actively encourage nurses' participation and equip them with MBFI principles. This will assist in reducing cases of child-malnutrition and lead to an overall improvement in children and maternal health. This assessment of MBFI in practice may have the following benefits:

To the Nursing Education Directorate: it may help the Directorate to include MBFI in the curriculum for nurses as the issue affects all the categories of the nurses.

To Nursing Practice: this study on the assessment of KAP of nurses regarding MBFI could help nursing practitioners in creating mother-baby friendly environments in their respective clinics. This could combat and curb infant mortality caused by mixed feeding (MF) and malnutrition. The findings will also help nursing practice in strengthening collaboration amongst all categories of nursing to use MBFI as a strategy for improving the care of mothers and babies.

To Maternal-Child and Women's Health (MCWH) Directorate: this may reduce the high mortality rate of infants caused by unsafe feeding practices and ultimately lead to improved maternal healthcare services, as the MBFI strategy has a strong emphasis on mother-friendly care.

1.6 DEFINITION OF KEY TERMS

- **Nurse**

'A nurse is a highly skilled health-care professional who combines the art of caring with scientific knowledge and skills developed through such specialised education and career experience' (Wehmeier, 2007:155). In this study, a 'nurse' is a person working in any of the non-accredited PHC facilities and currently registered with the South African Nursing Council.

- **Knowledge**

Knowledge is the 'familiarity, awareness or understanding of someone or something, such as facts, information, descriptions, or skills; those are acquired through experience or education, by perceiving, discovering, or learning' (Gerrig & Zimbardo, 2010:550). In this study, the researcher defines 'knowledge' as a familiarity, awareness and understanding of nurses' regarding MBFI.

- **Attitudes**

Wehmeier (2007:13) describes 'attitude is the way one thinks and feels towards someone or something'. The researcher defines 'attitude' as the way a nurse feels about and her behaviour towards MBFI.

- **Practice**

Wehmeier (2007:185) defines practice as the actual application or use of an idea, belief or method, as opposed to theories relating to it. In this study, the researcher

defines 'practice' as the application or use of the MBFI strategy to increase breastfeeding and; to improve mother and child health.

- **Mother-Baby Friendly Initiative (MBFI)**

The BFHI/ MBFI is a worldwide programme of the WHO and UNICEF, which was launched in 1991 following the adoption of the Innocenti Declaration on breastfeeding promotion in 1990 (UNICEF, 2009a:7). 'The initiative is a global effort for improving the role of maternity services to enable mothers to breastfeed babies for the best start in life' (WHO, 2010a:15). The BFHI/ MBFI are used interchangeable in this study.

- **Non-accredited primary healthcare facility**

In this study, a non-accredited PHC facility is a facility that has not been assessed and designated as 'Mother-Baby Friendly' facility by the National Health Department.

1.7 RESEARCH DESIGN AND METHOD

1.7.1 Design

In this study, a quantitative, descriptive cross-sectional design was adopted to assess the KAP of nurses regarding the MBFI in the non-accredited PHC facilities of the Makhuduthamaga Sub-district. The purpose of descriptive studies is to provide an accurate portrayal or account of characteristics of an individual, situation or group. This study aimed to examine KAP of nurses' regarding the MBFI, as well as to determine the possible relationship between nurses' practices, knowledge and attitudes towards MBFI.

1.7.2 Methods

1.7.2.1 Population

As defined by Burns and Grove (2011:342), a population is the total set of study individuals or elements. The population of this study was all nurses working in non-accredited PHC facilities of Makhuduthamaga Sub-district registered with the South African Nursing Council (SANC). The Makhuduthamaga Sub-district has

190 nurses permanently employed in all the non-accredited PHC facilities (see Table 3.1).

1.7.2.2 Sample and sampling techniques

All non-accredited facilities were purposively selected for this study. The total population sampling method was used to select participants as there are few nurses working in each PHC facility of Makhuduthamaga Sub-district. Each of the 18 non-accredited PHC facilities of Makhuduthamaga Sub-district has less than 15 nurses. Thus, it remained paramount to this study that all nurses currently working in these non-accredited PHC facilities of Makhuduthamaga Sub-district be recruited to participate in the study (see Table 3.1).

1.7.2.3 Data collection instrument

A structured and self-administered questionnaire was used to collect the required data for this study (see ANNEXURE A).

The questionnaire is comprised of four sections as follows:

- Socio-demographic characteristics
- Knowledge about MBFI
- Attitudes towards MBFI
- Practices towards MBFI

The validity of the questionnaire was enhanced by submitting it to experts for evaluation and approval. The questionnaire contained questions on the MBFI strategy implementation with emphasis on the ten steps to successful breastfeeding, compliance to the code of marketing for breast milk substitutes, mother friendly care and HIV and infant feeding.

1.7.2.4 Data analysis

The data was reviewed and captured to a Microsoft Excel spreadsheet and the researcher checked and verified the captured data for mistakes and errors. The data was then sent to a statistician for analysis using the Statistical Package for Social Sciences (SPSS) programme version 23.0 and Correlation analysis was

used to establish the extent of the relationship between the variables. The results were then presented in tables and charts.

1.8 ETHICAL CONSIDERATIONS

All principles of ethical considerations were adhered to throughout this study.

1.8.1 Institutional rights

Ethical approval was obtained from both the University of Venda Research Ethics Committee and the Limpopo Department of Health Research Ethics Committee (ANNEXURE B & D).

1.8.2 Right to participate in the study

In this study, ethical considerations were ensured by respecting the right of each respondent to self-determination, to participate in the study, keeping each respondent information anonymous and confidential. The study used a self-administered questionnaire, so there were no risks associated with data collection and no harm generated from the research process.

1.8.3 Integrity

During this study, all records of data collected were kept safe in a secure and locked cabinet. The researcher ensured that no unauthorised person could access the information and assured respondents that the information would not be shared. All the sources of information were acknowledged by the researcher.

1.9 SCOPE AND LIMITATIONS OF THE STUDY

This study was limited to one Sub-district in Limpopo Province and nurses in those PHC facilities. Accordingly, the findings cannot be generalised to the whole province or other parts of the country. Since the data collection instrument was also self-reported, responses could be biased regarding respondents' feelings at the time that they filled out the questionnaire, so these results cannot be generalised.

1.10 LAYOUT OF THE STUDY

The study is divided into five chapters.

Chapter 1 outlines the background information and motivation of the study. It highlights the problem statement, the aim of the study, significance of the study, narrative of the research methodology underpinning the study and ethical considerations.

Chapter 2 discusses the literature review conducted for the study. This includes an overview of MBFI, implementation of MBFI in South Africa, relevant literature addressing KAP of nurses regarding MBFI or exclusive breastfeeding (EBF).

Chapter 3 explains the research methods that were followed to execute the study. The methods include study design, study population, sampling, instrument development, data collection procedures, ethical considerations and data analysis.

Chapter 4 shows the analysis and interpretation of the results. The results are presented under different headings guided by the objectives of the study. Discussion of results includes how this research relates to other studies undertaken.

Chapter 5 briefly presents the summary and makes recommendations for practice and further research.

A detailed list of all cited references and appendices is attached at the end of the dissertation.

1.11 CONCLUSION

This chapter discussed the purpose, objectives and significance of the study, described the research design and methodology, defined key terms and briefly discussed the ethical considerations of the study. Nurses remain the focal group on the implementation of MBFI and promotion of safe infant feeding practices. The researcher wished to assess and determine KAP of nurses working in the non-accredited PHC facilities of Makhuduthamaga Sub-District about MBFI.

Chapter Two discusses the literature review undertaken for the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The literature review is the thorough and detailed exposition of existing research to identify potentially relevant sources on a study (Terre Blanche, Durrheim & Painter, 2012:168). The literature review process is used to select documents on a topic that contain shared information, ideas and evidence followed by the evaluation of these documents in relation to one piece of research. The available literature is organised in a meaningful order. Therefore, this section carefully explores the global and national overview, the KAP of nurses in relation to MBFI. Further, this review includes the general trends and patterns of the phenomenon from a global perspective to the local level under study.

2.2 GLOBAL CONTEXT OF BREASTFEEDING AND CHILD SURVIVAL

In 2001, the WHO and UNICEF recommended that mothers worldwide should initiate breastfeeding within the first hour after birth, 'exclusively breastfeed their infants for the first six months and introduce appropriate complementary foods at six months in addition to continuing breastfeeding to achieve optimal growth, development and health' (WHO, 2001:5). Jones, Steketee, Black, Bhutta, Morris and Bellagio Child Survival Study Group (2003:67) in their action study to prevent child mortality, argued that 'breastfeeding far outweighs the number of deaths that can be prevented from any other single public health intervention and they stated that EBF could save six million lives annually'. 'The benefits of universal coverage of EBF for the first six months and continuation of breastfeeding for up to two years, on a population level, could reduce the child mortality rate (CMR) by 13% globally, even within the context of HIV' (Jones et al., 2003:68).

According to Black, Allen, Bhutta, Caulfield, de Onis, Ezzatti, Mathers, Rivera and Maternal and Child Undernutrition Study Group (2008:248), 'suboptimal breastfeeding practices were estimated to be responsible for 800 000 child deaths

or 11.6% of all deaths globally'. The WHO (2012c:32) reported that the major causes of death among children under five worldwide are acute respiratory infections, diarrhoeal diseases, prematurity and low birth weight, neonatal infections, birth asphyxia, trauma and malaria. 'Under nutrition (Foetal growth restriction, suboptimum breastfeeding, stunting, wasting, and deficiencies of vitamin A and zinc) causes 45% of all deaths of children younger than five years, representing more than three million deaths each year (3.1 million of the 6.1 million child deaths in 2011)' (Black, Victora, Walker, Bhutta, Christian, De Onis, Ezzati, Grantham-McGregor, Katz, Martorell, Uauy and Maternal and Child Nutrition Study Group, 2013:438). Black et al. (2013:440) also state that, 'foetal growth restriction and suboptimum breastfeeding together cause more than 1.3 million deaths, or 19% of all deaths of children younger than five years, representing 43% of all nutrition-related deaths'.

Nutritional studies suggest that the impact on the infant mortality rate (IMR) could be reduced by 0.5% per 1000 live births, for every 1% increase in the number of infants that are exclusively breastfed for six months (Abrahams, Mchiza & Steyn, 2011:801). Save the Children (2012:15) reported that 'breastfeeding and complementary feeding are listed as two of the lifesaving solutions that, globally, could prevent more than two million child deaths per year'. A report by UNICEF (2009b:38) revealed that globally, '38% of infants are exclusively breastfed for six months, the number decreases to 31% in Sub-Saharan Africa and only 8% of infants in South Africa are exclusively breastfed for the recommended six months'.

2.3 NATIONAL CONTEXT OF BREASTFEEDING AND THE NUTRITIONAL STATUS OF INFANTS AND YOUNG CHILDREN IN SOUTH AFRICA

The DoH strategic plan for Maternal, New-born, Child and Women's Health and Nutrition (MNCHW) in South Africa 2012-2016 advocates a reduction in IMR from 40 to 32 deaths per 1000 live births by 2016, and recommends EBF and continued breastfeeding as an intervention that will positively impact the infant mortality rate (DoH, 2011a:15). Bamford (2013:118) in their review study between 2012 and 2013 found that 'under five mortality rates have declined by 25% since 2008, and by 2011 had exceeded the targets for 2014 recommended by Health Data

Advisory and Coordinator Committee (HDACC), though this was still insufficient to achieve the Millennium Development Goal (MDG) of four of an under-five mortality rate of 20 per 1000 live births by 2015’.

In 2006, South Africa was identified as one of the 12 countries where the under-five mortality rate increased from the report baseline when the MDGs were launched and there has been steady decline since 2007 (Bamford, 2013:118). Bamford (2013:20) reported that ‘South Africa currently ranks 77 out of 176 countries in terms of the highest under-five mortality rate’. The National Food Consumption Survey-Fortification Baseline (NFCS-FB) conducted in 2005 found that 18% of children were stunted, 9.3% were underweight and 4.5% were considered wasted (DoH, 2005:11). According to the South Africa Medical Research Council (SAMRC) review study undertaken from 1997 to 2007, ‘the main causes of death in under-fives was diarrhoeal disease and lower respiratory infections and malnutrition’ (Nannan, Dorrington, Laubscher, Zinyakatira, Prinsloo, Darikwa, Matzopoulos & Bradshaw, 2012:35).

In South Africa, ‘infant feeding practices are sub-optimal, with rates of EBF remaining low and high mixed-feeding rates’ (Nannan et al., 2012:35). In South Africa, ‘the current average duration of breastfeeding is reported as 5.9 months with only 35.8% and 13.4% of children still breastfed at 12-15 months and 20-23 months respectively’ (Shisana, Labadarios, Rehle, Simbayi, Zuma, Dhansay, Reddy, Parker, Hoosain, Naidoo, Hongoro, Mchiza, Steyn, Dwane, Makoe, Maluleke, Ramlagan, Zungu, Evans, Jacobs, Faber, & SANHANES-1 Team, 2013:23).

In response to the WHO recommendations on infant feeding and HIV, ‘the South African National DoH has adopted the single strategy approach of promoting EBF with ARVs for women who are HIV positive, to optimise HIV free survival of infants exposed to HIV during the postnatal period’ (WHO, 2010b:13, DoH, 2013a:14).

2.4 OVERVIEW OF MOTHER-BABY FRIENDLY INITIATIVE

Over the past few decades, the awareness of the importance of breastfeeding has grown worldwide. The international instruments and guidance documents that guided work on protecting, promoting and supporting breastfeeding started in 1981 when the WHO/UNICEF launched the international code of marketing of breastmilk substitutes (UNICEF, 2009a:12). The aim of 'the code' is to contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breastfeeding, and by ensuring the proper use of breastmilk substitutes, when these are necessary based on adequate information and through appropriate marketing and distribution (UNICEF, 2009a:26). In a 1989 joint statement, the WHO and UNICEF developed 'Ten Steps to Successful Breastfeeding' to support the initiation and continuation of breastfeeding (UNICEF, 2009a:27).

In 1990, policy-makers from 40 countries produced the Innocenti Declaration, which called on governments to undertake programs to protect, promote and support breastfeeding (UNICEF, 2009a:25; WHO, 2013a:23; DoH, 2014:32). The declaration, endorsed by all participants including South Africa, concluded that to achieve a global goal for optimal maternal, child health and nutrition, all women should be encouraged 'to practice exclusive breastfeeding and all infants should be fed exclusively on breast milk from birth to six months of age. Thereafter, children should continue to be breastfed, while receiving appropriate and adequate complementary foods, for up to two years of age or beyond' (UNICEF, 2009a:37; DoH, 2014:31). This child-feeding strategy was to be realised by creating an appropriate environment of awareness and support so that women can breastfeed in the prescribed manner and operational targets were developed to meet this goal and updated in 2006 (DoH, 2014:34; WHO, 2012a:28).

The Baby-Friendly Hospital Initiative (BFHI) was launched in 1991, based on the 'Ten Steps to Successful Breastfeeding', the Innocenti Declaration and the WHO International Code of Marketing of Breast-milk Substitutes (UNICEF, 2009a:26; DoH, 2014:32). Maternity facilities receive the BFHI accreditation when they adhere to all ten steps and fully comply with the international code of marketing for breastmilk substitutes (UNICEF, 2009a:27). To be designated as Baby-

Friendly, an institution needs to apply each of the ten steps to at least 80% of all women and babies cared for by the institutions (WHO, 2012a:38). Globally, over 20,000 maternity facilities and health authorities have this designation (UNICEF, 2009a:26). This figure is not inclusive of all health facilities as, for example, in Canada as of February 2012 only ten hospitals, three birthing centres and 22 community health centres and health authorities implement the policy (Wambach, Campbell, Gill, Dodgson, Abiona & Heinig, 2005:258). 'The majority of these facilities are in Quebec, the first province with a provincial breastfeeding strategy that includes BFHI implementation. The Breastfeeding Committee for Canada is the national authority responsible for conferring Baby-Friendly designation' (Wambach et al., 2005:258).

In 2006, 'the BFHI strategy was revised to include the three additional items, namely the code of marketing of breastmilk substitutes, mother-friendly care and; infant feeding and HIV' (DoH, 2014: 33). According to UNICEF (2009a:31) and DoH (2014:33), every facility providing maternity services and care to new-born infants should meet the following ten steps to successful breastfeeding and the three additional items:

1. 'Have a written breastfeeding policy that is routinely communicated to all health care staff,
2. Train all health care staff in the skills necessary to implement this policy;
3. Inform all pregnant women about the benefits and management of breastfeeding,
4. Help mothers initiate breastfeeding within half an hour of birth;
5. Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants,
6. Give new-born infants no food or drink other than breast milk, unless medically indicated,
7. Practice rooming-in (that is, allow mothers and infants to remain together) 24 hours a day,
8. Encourage breastfeeding on demand,
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfed infants, and

10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.’

The three additional items as outlined by UNICEF (2009a:32) and DoH (2014:33) include:

1. ‘Adherence to the International code of marketing of breastmilk substitutes,
2. Mother-Friendly Care,
3. HIV and infant feeding’.

2.4.1 International code of marketing of breastmilk substitutes

The UNICEF (2009a:33) and the DoH (2014:33), outline the following important aspects regarding the international code of marketing for breastmilk substitutes:

- ‘No employees of manufacturers or distributors of breastmilk substitutes, bottles, teats or pacifiers, must have any direct or indirect contact with pregnant women or mothers,
- The health facility should not receive free gifts, non-scientific literature, materials or equipment, money, or support for in-service education or events from manufacturers or distributors of breastmilk substitutes, bottles, teats or pacifiers,
- No pregnant women, mothers or their families, are given marketing materials or samples or gift packs, by the facility that include breastmilk substitutes, bottles/ teats, pacifiers, other infant feeding equipment or pamphlets,
- The international code of marketing of breastmilk substitutes prohibits the display of posters or other materials, provided by the manufacturers or distributors of breastmilk substitutes, bottles, teats and dummies or any other materials that promote the use of these products.’

2.4.2 Mother-Friendly Care

The second addition item aimed to improve mother-friendly care focusses on improving the maternal care during labour and delivery. The UNICEF (2009a:33) and DoH (2014:34) outlined the following important aspects about mother-friendly care:

- Women should be encouraged to have companions of their choice to provide continuous physical and emotional support during labour and birth, if desired,
- Allowing women to drink and eat light foods during labour, if desired,
- Encouraging women to consider use of non-drug methods of pain relief, unless analgesic or anaesthetic drugs are necessary because of complications and respecting their personal preferences,
- Encouraging women to walk and move about during labour, if desired, and assume position of their choice while giving birth, unless a restriction is specifically required for a complication, and the reason is explained to the mother, and
- Care should not involve invasive procedures, such as rupture of the membranes, episiotomies, acceleration or induction of labour, instrumental deliveries, or caesarean sections, unless specifically required for a complication and the reason is explained to the mother.

2.4.3 HIV and infant feeding

'Due to the high prevalence of HIV in South Africa, the MBFI supports that healthcare personnel are trained on the risks of HIV transmission during pregnancy, labour and delivery; and breastfeeding' (DoH, 2014:34; UNICEF, 2009:). As stated by UNICEF (2009a:33), the following important aspects on HIV and infant feeding should be given special attention:

- The importance of testing and counselling for HIV,
- Local availability of feeding options,
- The dangers of MF should be explained in detail,

- Facilities/provision for counselling HIV positive women on advantages and disadvantages of different feeding options; assisting them in EBF and Exclusive Formula Feeding (EFF),
- Assist and encourage HIV positive mothers to make decision to breastfeed their infants and assist them on how to transition to replacement feeds at the appropriate time,
- Healthcare personnel should minimise the likelihood that a mother whose status is unknown or HIV negative will be influenced to change to replacement feeding. Breastfeeding information should be made available to all women, irrespective of their HIV status.

2.5 MILESTONE EVENTS FOR BREASTFEEDING IN SOUTH AFRICA

On a global level, the latest undertaking to address infant and young child malnutrition began with the Millennium Declaration in September 2000, in which member states agreed to work towards the Millennium Development Goals (MDGs) (Faber & Benade, 2007:16). Appropriate breastfeeding and complementary feeding practices can contribute to the achievement of all eight of the MDGs, providing ample motivation for countries to actively promote exclusive and continued breastfeeding (Faber & Benade, 2007:16; WHO, 2012:12).

The National Breastfeeding Consultative Meeting, held in August 2011, was a very important milestone event for breastfeeding in South Africa (Du Plessis & Pereira, 2013:120; DoH, 2011b:3). It was convened by the National Minister of Health, Dr Aaron Motsoaledi, and included representatives from non-governmental, non-profit and academic organisations and institutions, as well as government officials and independent experts (DoH, 2011b:3). This landmark meeting culminated in the signing of the Tshwane Declaration of Support for Breastfeeding in South Africa (DoH, 2011b:4). 'The Tshwane Declaration symbolises the commitment of political will at the highest level, as well as the dedication by all stakeholders in South Africa, to work together to ensure the promotion, protection and support of breastfeeding. This declaration has received extensive media coverage and is an essential reference tool' (DoH, 2011b: 8).

The Tshwane Declaration's resolutions begin by calling on South Africa to declare itself a country that actively protects, promotes and supports EBF (Du Plessis & Pereira, 2013:122; DoH, 2011b:10). The Integrated Nutrition Programme (INP), Nutrition Directorate and the South African DoH have increased their commitment and capacity since 2007 towards this breastfeeding initiative at a national level (Du Plessis, 2013:4-5; Du Plessis & Pereira, 2013:124). The programme has identified and demonstrated its priorities with a focus on maternal care and infant and young child-feeding as strategies to safeguard infant feeding practices (DoH, 2011b:15; Du Plessis & Pereira, 2013:124).

The first South African infant and young-child feeding policy was signed by the Minister of Health in February 2008 and the purpose of this policy was to standardise and harmonise feeding messages of infants and children from birth to the age of five years to guide healthcare providers on how to address threats and challenges to infant feeding and promote optimal infant feeding practices (DoH, 2013a:10). This document included recommendations both on HIV and infant-feeding (DoH, 2013a:10). This policy has subsequently been updated to include the resolutions of the 2011 Tshwane Declaration, as well as revised HIV and infant-feeding recommendations (DoH, 2013a:10). To support the Tshwane Declaration of 2011, the International code of marketing of breastmilk substitutes was legislated in South Africa on the regulations relating to foodstuffs for infants and young children (R991) in 2012, under the Foodstuffs, Cosmetics and Disinfectants Act of 1972 (DoH, 2014:31).

According to Du Plessis and Pereira (2013: 122) South Africa, was classified as one of the high-burden countries in 2009 and a landscape analysis was undertaken to identify impediments to the development of responsive solutions and opportunities to accelerate good practices in nutrition programming. The authors report that the WHO developed the landscape analysis in its efforts to accelerate progress towards the achievement of the MDGs, in particular, numbers 1, 4 and 5. South Africa strives to promote and support safe infant-feeding practices and the DoH has taken serious endeavours to strengthen MBFI implementation in hospitals and primary health care facilities to curb the high infant mortality rate (DoH, 2014:40).

2.6 THE SUCCESS OF MOTHER-BABY FRIENDLY INITIATIVE IN SOUTH AFRICA

In South Africa, the UNICEF/WHO MBFI strategy documents were revised, updated and expanded for integrated care in 2009 (DoH, 2014:33). The most important revisions were to:

- the training course for maternity staff (increased from 18 to 20 hours),
- the implementation of global criteria for each of the ten steps (and three additional items: compliance with the code, mother-friendly care, and HIV and infant feeding), and
- the alignment of the BFHI documents with The Global Strategy for IYCF, and updated recommendations on HIV and infant feeding (DoH, 2014:33).

Resolution Seven of the Tshwane Declaration states that human-milk banks should be promoted and supported as a source of breastmilk for babies who cannot breastfeed or be breastfed (DOH, 2011b:14:243). The updated South African IYCF Policy describes human-milk banks as a practical approach to reducing early neonatal and postnatal morbidity and mortality in babies who cannot be breastfed (Du Plessis & Pereira, 2013:125; DoH, 2013a:22). It calls for human-milk banks to be established in facilities for high-risk infants, including low-birth weight infants (<1 500 g), preterm infants (infants born at <32 weeks of gestational age), low-birth weight infants (<2 500 g), and HIV-exposed babies who cannot suckle, or whose mothers are too sick to breastfeed (Du Plessis & Pereira, 2013:125; DoH, 2013b:234).

The Eighth Resolution of the Tshwane Declaration is for all public hospitals and health facilities to be MBFI-accredited by 2018, for private hospitals to be 'partnered' to become 'Mother-Baby friendly' by 2019 and for communities to be supported to be baby-friendly (DOH, 2011b:16). In 2007, South Africa had 225 (41%) baby-friendly facilities out of a possible 545 (UNICEF, 2009a:15; WHO, 2010a:54). The initiative is gaining momentum and includes attempts to improve breastfeeding rates through the implementation of the MBFI strategy in all the health facilities (DoH, 2014:40). The BFHI was renamed the 'Mother and Baby-

Friendly Initiative' (MBFI) by the national integrated nutritional programme (INP) to accentuate the fact that the BFHI is also a strategy used to reduce maternal morbidity and mortality and to shift the focus from only considering the MBFI in the hospital context, but to also stretch its wings to community level (DOH, 2014:15).

This links with Resolution Nine, which calls for community-based interventions and support to be 'implemented as part of the continuum of care, with facility-based services to promote, protect and support breastfeeding' (Du Plessis & Pereira, 2013:125).

2.7 KNOWLEDGE OF NURSES ABOUT MOTHER-BABY FRIENDLY INITIATIVE

Nurses' lack of knowledge about the MBFI has been reported by Meyer et al. (2007:176) as the primary factor hindering the successful implementation of MBFI in many health facilities. It has been argued that for health professionals to be sufficiently competent in their work areas, knowledge should be reinstated as the basis for practice. 'The incidence and success of breastfeeding have been attributed to several factors, including the provision of accurate information and continuous support to the breastfeeding mother' (OlaOlorun & Lawoyin, 2006:189).

Internationally a high level of breastfeeding knowledge has been found to be associated with more consistent and positive professional practices (OlaOlorun & Lawoyin, 2006:189). Moore et al. (2007:277) in their study in New Zealand explored the barriers encountered when implementing the first two steps of the BFHI, developing BFHI policy and communicating this while providing the necessary training to staff. The study illustrated that 'implementing policy could be more straightforward in smaller hospital organisations and hospitals with more stable workforce' (Moore et al., 2007:228).

A study was undertaken in Nigeria's Nassarawa State by Okolo and Ogbonna (2002:438) to assess the KAP of health workers towards BFHI practices and they

found that, '20.8% of health professionals were aware of the need for initiating breastfeeding within 30 minutes of birth and 92 (36.8%) were aware of breastfeeding support groups'. However, 'there were significant in the level of awareness among the doctors compared to the other categories of health staff ($p < 0.05$) and the study revealed a general lack of awareness of some major recommended practices in hospitals to promote and sustain breastfeeding' (Okolo & Ogbonna, 2002:438).

In a study by Silvestre, Carvalhaes, Venâncio, Tonete and Parada (2009:958) more than a third (34.8%) of the reviewed population knew three or more steps for breastfeeding success. The most cited step was to provide no artificial nipples to breastfeeding infants (step nine) and the least mentioned to show mothers how to breastfeed and maintain lactation even if separated from their infants (step five). 'With regards to other variables addressing knowledge, there were generally good results in relation to the composition of breast milk and reasons to discontinue breastfeeding and most interviewees correctly indicated the duration of breastfeeding' (Silvestre et al., 2009:960).

A study by Petit (2010:28) assessed the perceptions and knowledge on Exclusive Breast Feeding (EBF) practice among all mothers and multi-gravidae pregnant women attending antenatal and infant follow-up clinics in Mbarara Hospital, Uganda in August 2008. It revealed that perception of EBF was good among the women attending an antenatal clinic in the Mbarara regional hospital, as 55% of participants understood that EBF was nutritional for their babies and 66% perceived that EBF had no disadvantage (Petit, 2010:28). 'The study also showed that these women were knowledgeable about EBF as 73.3% of the participants knew that exclusive breastfeeding is for the first six months of the baby's life. Furthermore, it revealed that about half of the women (49.8%) practice EBF for six months and 12% for more than six months' (Petit, 2010:29).

Research in rural Kwa-Zulu Natal by Shah, Rollins, Bland and Child Health Group (2005:34) assessed breastfeeding knowledge amongst health workers in an area with high HIV prevalence. 'The results indicated that 93% of doctors knew that breastfeeding should be initiated within 30 minutes of delivery, 71% recommended

water and 50% recommended solids to breastfed infants under six months of age. Only 44% of staff nurses and 56% of professional nurses knew that breastfeeding should be on demand' (Shah et al., 2005:34). Their study revealed large gaps in knowledge about breastfeeding practices in workers who care for women and infants in Kwa-Zulu Natal (Shah et al., 2005:36). In addition to breastfeeding knowledge and attitudes, several studies suggest that the personal and professional breastfeeding training experience of professionals significantly influences their behaviour (Daniels & Jackson, 2011:39).

Dhandapany, Bethou, Arunagirinathan and Ananthakrishnan (2008:5) conducted a study to assess the antenatal services on breastfeeding counselling in Pondicherry and their report revealed that out of the 108 booked mothers, 23 (21%) had received antenatal counselling on breastfeeding while 85 (79%) had not received counselling. 'Only four (4%) booked mothers had undergone breast examination during antenatal visits. In the counselled group, 87% were aware that breastfeeding should be initiated immediately after birth and 78% knew that breastfeeding should be continued exclusively for six months while the non-counselled group was not aware of the duration of exclusive breastfeeding' (Dhandapany et al., 2008:5).

A South African study by Ladzani, Pelzer, Mlambo and Phaweni (2011:540) found that more than 92% of women who participated in their study received counselling on infant feeding. Also, 'information on HIV transmission through breastmilk, dangers of MF and preparation of infant formula were extensively discussed. More than 70% knew that HIV could be transmitted during pregnancy, labour and through breastfeeding. The same percentage of women were aware that HIV could be transmitted through pregnancy, during delivery and through breastfeeding indicated some degree of awareness on HIV transmission from mother to child' (Ladzani et al., 2011:542). Similar findings were reported by Buskens, Jaffe and Mkhathshwa (2007:1107) in Swaziland, Namibia and South Africa where a strong link was apparent regarding the knowledge on HIV transmission and formula feeding. Their study revealed that Prevention of Mother to Child Transmission (PMTCT) knowledge scores, specifically on HIV

transmission through breastfeeding, showed to be a strong predictor for formula feeding (Buskens et al., 2007:1107).

2.8 ATTITUDES OF NURSES REGARDING MOTHER-BABY FRIENDLY INITIATIVE

A study conducted by Daniels and Jackson (2011:38) in Cape Town revealed that most nurses had a positive attitude toward BFHI principles and practices. Fifty-three percent (53%) of the respondents believed incorrectly that a mother should stop breastfeeding if she developed mastitis. The correct management of mastitis is that mothers should not rest the breast, but rather remove the milk by continuing with demand breastfeeding and hand-milk expression (Daniels & Jackson, 2011:38).

Daniels and Jackson (2011:38) reported that most of the staff participating in their study understood the importance of MBFI and breastfeeding, as well as the benefits for the mother and baby. The MBFI implementation does not necessarily represent additional work for the nursing staff but is a better way of performing tasks (Moore et al., 2007:7). Daniels and Jackson (2011:39) assert that the implementation of 'step seven' of the 'ten steps' (rooming-in), enables the mother to be the main provider of the baby's basic needs and the first-line monitor of the baby's health. This relieves the nursing staff of many routine activities, for example, feeding and monitoring the baby. Some of the staff, unfortunately, felt that it was more work for them and that they needed an additional person to help with the BFHI (Daniels & Jackson, 2011:37).

A study by McCann, Baydar and Williams (2007:315) on Women, Infants and Children (WIC) revealed that participants had infant feeding concerns that ranged from concern about whether the child was receiving sufficient milk or not. They found that 61% of mothers showed concern about infant health and wellbeing and that breastfeeding was declared convenient and accessible by 50% (McCann et al., 2007:318). However, 76% claimed that it was convenient to bottle feed milk and to know whether the infant gets sufficient nutrition. Other concerns regarding behavioural attitude of mothers included pain, time-consuming fear of public

breastfeeding, breast sagging, excessive breast milk leakage, husband will feel left out, inability to purchase special clothes and interference in sexual life, nipple too small to feed and being a student or working (McCann et al., 2007:323).

Laanterä, Pietilä and Pölkki (2010:325) investigated the attitudes of Finnish parents regarding breastfeeding during pregnancy and their relationship with demographic characteristics using an electronic scale measuring knowledge attitude. They found that many new mothers felt breastfeeding was complicated and expressed a negative attitude and fear of breastfeeding (Laanterä et al., 2010:326). A further impending associative study of the Influence of Adolescent mothers' breastfeeding confidence and attitudes on breastfeeding initiation and duration was investigated in Manitoba, Canada. Results indicated that the young mothers breastfeeding attitudes for practice relies on the level of confidence, intention and 'breastfed oneself', which automatically has results on the initiation and duration (Mossman, Heaman & Dennis, 2008:276.) Mossman et al. (2008:276) demonstrated a quantitative correlational study with 103 pregnant adolescents between the ages of 15 to 19 years considering breastfeeding and they were brought into the sample for Breastfeeding Self-Efficacy Scale Short Form (BSES-SF) and the Breastfeeding Attitude Questionnaire (BAQ). Their study concluded that many mothers who gained confidence and lasted the duration of breastfeeding were those followed up by health professionals (Mossman et al., 2008:276).

A study by Walsh, Pincombe and Henderson (2011:598) suggest that 'staffs' understanding and personal views are often discordant with BFHI aims. Perceived difficulties include the accreditation process, hospital dynamics, and the Ten Steps implementation, plus a bottle-feeding culture and maternal employment that impacts upon continued breastfeeding' (Walsh et al., 2011:599). A study by Nagamori, Doeda, Kobayashi, Nakagawa, Horiuchi, Kataoka and Shimizu (2010:22) on the attitudes and actions of healthcare professionals revealed that some interactions with health care professionals were described as: 'unhelpful', 'causing anxiety', and 'results in confusion'. 'Five categories of behaviour by healthcare professionals were identified that failed in supporting the breastfeeding mother, thus, contributing to her sense of confusion and anxiety about nursing her

infant. These included the intrusive behaviour of healthcare professionals dismissing the mother's wishes and intentions to breastfeed, insufficient help to become independent with breastfeeding, dismissing the mothers' feelings, discordant advice from the mothers' expectation, and provision of inconsistent information' (Nagamori et al., 2010: 25). Mothers desired to institute frequent breastfeeding including the addition of human milk substitute provided by healthcare professionals and unfortunately, those health care providers did not heed their wishes nor react empathically to the mother's awareness and anxiety about breastfeeding and child rearing (Nagamori et al., 2010:25).

2.9 NURSES' PRACTICES RELATING TO MOTHER-BABY FRIENDLY INIATIVE STRATEGY IMPLEMENTATION

Daniels and Jackson (2011:38) argue that it is critical that nursing staff in a facility can show mothers the right way to practice breastfeeding and manage any problems encountered, as staff are the first line of contact with a mother who has just given birth. 'In their study,89% of the nursing staff interviewed could demonstrate the correct positioning of the baby for breastfeeding and a high proportion (91.1%; 41/45) of nursing staff (21 trained and 20 staff without prior training) could correctly attach the baby to the breast' (Daniels & Jackson, 2011:39).

A survey study conducted by Kelleher (2006:2732), on women's experiences of breastfeeding physical challenges during the first month found that postpartum mothers experience sore nipples and some shared the experiences of three episodes of mastitis (breast infection), which had serious emotional and physical consequences for the mother that led to cessation of early breastfeeding. Shah et al. (2005:36) found that only few staff could demonstrate the correct positioning and attachment of babies during the breast-feeding process, since the staff interviewed had no BFHI training.

Another study carried out in rural Uganda by Nankunda, Tumwine, Soltvedt, Semiyaga, Ndeezi and Tylleskär (2006:19) used several initiatives to improve EBF but with varying degrees of success as many health professionals showed

reluctance to support breastfeeding. In research by D'Artibale and Bercini (2013:588), on early contact and breastfeeding in a baby friendly hospital, it was observed that despite the presence of a companion during childbirth was a practice only experienced by few participants, it became a favourable factor for realising the fourth step. The puerperal women were quite receptive to completing the fourth step; however, they had little knowledge of this practice and in some instances, they were surprised and unprepared (D'Artibale & Bercini, 2013:589).

A cross-sectional survey was conducted in Phnom Penh, Cambodia to identify the predictors of EBF in early infancy on mothers with infants between 6 to 24 months visiting the immunisation clinic in December 2005 to February 2006. Results indicated 83% EBF during the first month and 39% initiating after delivery. Up to 6months, EBF was 51.3% (Sasaki, Kakimoto, Saroeun, Kanal & Kuroiwa, 2010:463). Various factors determine these percentiles, mainly inexperience and ignorance, therefore, the researcher advocates for the significance of knowledge amongst breastfeeding mothers to subsequently advance EBF outcomes (Sasaki et al., 2010:465).

Tarrant, Wu, Fong, Lee, Wong, Sham, Lam and Dodgson (2011:240) in their study found that only 46.6% of women breastfed for more than eight weeks, and only 4.8% of mothers experienced all six Baby-Friendly practices. 'After establishing all other Baby-Friendly practices and possible confounding variables, EBF while in hospital protected against early breastfeeding cessation as compared with mothers who experienced all six Baby-Friendly practices. Those who experienced one or fewer Baby-Friendly practices were almost three times more likely to discontinue breastfeeding' (Tarrant et al., 2011:241).

2.10 THE RELATIONSHIP BETWEEN NURSES' KNOWLEDGE, ATTITUDES AND MOTHER-BABY FRIENDLY INITIATIVE PRACTICES

A study by Owoaje et al. (2002:137) assessed the effect of BFHI training on knowledge, attitudes and support practices of nurses regarding exclusive breastfeeding. 'A higher proportion of BFHI-trained nurses reported support practices for the initiation and establishment of exclusive breastfeeding among mothers. The overall knowledge score of the BFHI-trained nurses was significantly higher than those untrained and nurses who participated in BFHI training were significantly more knowledgeable about aspects of exclusive breastfeeding. They had more positive attitudes and were more likely to employ correct practices' (Owoaje et al., 2002: 138). Daniels and Jackson (2011:38) also noted an increase in staff knowledge after a three-day breastfeeding course. Globally, high levels of breastfeeding knowledge are associated with more consistent and positive professional practices (OlaOlorun & Lawoyin, 2006:188). These studies add to the body of evidence that MBFI training is associated with the increase in the KAP of staff.

A randomised cross-sectional study in the Keffi local government, Nigeria was conducted to assess KAP of health workers toward BFHI. 'The staff interviewed had no BFHI training, resulting in a lack of awareness among the staff regarding the recommended BFHI practices that promote and sustain breastfeeding' (Okolo & Ogbonna, 2002:439). They reported that 21% of staff were aware of the need to initiate breastfeeding within 30 minutes after delivery and 36.8% were aware of breastfeeding support groups (Okolo & Ogbonna, 2002:439). However, 'only 52.2% could demonstrate correct positioning and attachment, while 19.2 % of staff believed that babies less than six months of age should be given water' (Okolo & Ogbonna, 2002:439).

2.11 CONCLUSION

This section reviewed material concerning global and national trends for breastfeeding, an overview of MBFI, developmental milestones of MBFI in South Africa and lastly the KAP of nurses' related MBFI strategy globally, nationally and locally. A literature review is very important for research because it is used as a

reference in most of the other chapters of the research. It is evident from the previous research or studies on this topic that adequate knowledge plays a major role in disseminating information. The literature review showed that breast feeding lacked credibility among nurses and other workers and revealed a deficit of knowledge. Negative attitudes, cultural background and personal experiences influenced nurses' behaviour and practices. Nurses must be educated and continually updated on MBFI standards.

However, little literature on the KAP of nurses towards MBFI was found. This lack of information cannot be overlooked as research has also revealed an incomplete understanding of EBF in the attitudes and knowledge of nurses. Therefore, it is important that to evaluate the KAP of nurses towards MBFI to improve the uptake of safe infant feeding in the country.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The methodology section provides a description of the practical execution of the research process of the study (Fouche & De Vos, 2011:142; Terre Blanche et al., 2012:6). This chapter describes the research design and methodology of the study and includes the research setting, population, sample and sampling, data collection and analysis, validity and reliability, and ethical considerations. The study focussed on the KAP of nurses regarding MBFI in non-accredited PHC facilities in Makhuduthamaga Sub-district, Limpopo Province.

3.2 RESEARCH SETTING

As stated by Polit and Beck (2012:47), a research setting is the location where the data is collected. The authors referred to a setting as the exact place where data is gathered (Polit & Beck, 2012:47).

This study was conducted in PHC facilities of Makhuduthamaga Sub-district, Limpopo Province. The Makhuduthamaga Sub-district is situated in the Sekhukhune District of Limpopo Province. The District has five Sub-districts, namely: Makhuduthamaga, Fetakgomo, Greater Tubatse, Greater Marble Hall and Elias Motsoaledi (Sekhukhune District Municipality, 2007/2008).



Figure 3.1 Map showing Sekhukhune district (Source: Sekhukhune District Municipality 2007/2008)

3.2.1 Makhuduthamaga Sub-district demographic information

The Makhuduthamaga Local Municipality is a Category B4 municipality located within Sekhukhune District Municipality of the Limpopo Province. In the overview report from the State of Local Government in South Africa, the Department of Cooperative Governance and Traditional Affairs (DoCGTA, 2012:16) describes 'category B4 municipalities as municipalities which are mainly rural with communal tenure and with, at most, one or two small towns in their area'.

The municipality is completely rural in nature, dominated by traditional land ownership and comprises of a land area of approximately 2 096.9 square meters. There are 189 settlements with a population of 274 358 people and 65 217 households, which amounts to more than 24% of the District 1 076 840: Census 2011. Like most rural municipalities in the Republic of South Africa, Makhuduthamaga is characterised by a weak economic

base, poor infrastructure, major service delivery backlogs, dispersed human settlements and high poverty.

The Municipality shares borders with Fetakgomo on the north-east, Ephraim Mogale to the west, Elias Motsoaledi in the south and Lepelle-Nkumpi local municipality in the north. Jane Furse, the headquarters of Makhuduthamaga Local Municipality, is located 347km north-east of Johannesburg, 247km north-east of Pretoria, 189km south-east of Polokwane, and 70km south west of Burgersfort (Sekhukhune District Municipality, 2007/2008).

3.3 RESEARCH DESIGN

A research design is ‘a blueprint for conducting a study that maximizes control over factors that could interfere with the validity of the findings’ (Burns & Grove, 2011:253). It guides the researcher in implementing a study most likely to achieve the intended goal (Burns & Grove, 2011:218; Joubert & Katzenellenbogen, 2007:77). Polit and Beck (2012:74) define a research design as an outlined plan that addresses both the research question and how the researcher will scientifically carry out the research to enhance the integrity of the study. The study design should yield the strongest possible evidence to answer the research question (Polit & Beck 2012:74).

In this study, the researcher adopted a quantitative, descriptive design to assess the KAP practices of nurses regarding MBFI in accredited PHC facilities of Makhuduthamaga Sub-district. The choice of research design depends on the problem and purpose of the study, as well as the researcher’s desire to generalise the findings (Brink, van der Walt & Van Rensburg, 2011:53).

3.3.1 Quantitative Study

A quantitative study is a systematic and objective process where numerical data is collected from a population group to simplify and summarise the findings to the concept being studied (Maree & Pietersen, 2012:145). Polit and Beck (2012:18) describe quantitative research as ‘the investigation of phenomena that lend

themselves to precise measurement and quantification, often involving a rigorous and controlled design’.

This study used a quantitative research design because the numerical values collected from respondents were used to assess the level of KAP of nurses towards MBFI implementation systematically. The design was also chosen because it enables control of the study through imposing conditions on the research situation to minimise any bias, maximise precision and validity (Polit & Beck, 2012:65). A quantitative approach also makes use of deductive reasoning. Cooper and Schindler (2008: 655) state that deductive reasoning is a form of analysis in which the conclusion must necessarily follow from the reason given and is valid if it is impossible for the conclusion to be false if the premises are true. The study utilised deductive reasoning to test whether the KAP of nurses regarding MBFI differed in each nursing category. Maree and Pietersen (2012:147) state that quantitative studies have the following advantages and disadvantages:

3.3.1.1 Advantages of quantitative studies

- Can be used for the collection of large quantities of data,
- The result is usually numerical (quantifiable) and considered more objective,
- The data is quantifiable and often generalised to a larger population,
- It can allow researchers to see changes overtime and help develop quantitative indicators, and
- Quantitative studies provide clear, quantitative measure for grants and proposals.

3.3.1.2 Disadvantages of quantitative studies

- Results need to be analysed using data analysis software such as SPSS which may not always be available,
- Time-consuming as the researcher needs to enter, clean and analyse the data,
- The larger the sample, the more time required to analyse the data and results,

- The larger the sample, the more time it takes to collect the data, and
- Quantitative studies ignore the most important part of a human element.

For this research, the quantitative design was considered ideal as it involved all the PHC facilities of the Makhuduthamaga Sub-district. The data was collected by the researcher within a reasonable time frame and there were no constraints, as the statistician was hired for analysing data using the electronic statistical package. This study used a total population due to the low number of nurses working in the rural PHC facilities. The researcher did not experience any of the disadvantages or shortcomings listed above.

3.3.2 Descriptive Study

A descriptive study is designed to gather more information about characteristics of a field of study (Burns & Grove, 2011:256). The purpose of descriptive studies is to provide an accurate representation of characteristics of an individual, situation or group (Polit & Beck, 2012:45). Descriptive studies are a method of discovering new meanings, describing what exists, determining the frequency with which something occurs and categorising information. 'Descriptive studies are conducted when little is known about a phenomenon' (Burns & Grove, 2011:26). A quantitative descriptive design was chosen as an appropriate method to assess the KAP of nurses regarding MBFI. Within the available literature, there is little evidence of what is known about KAP of nurses regarding MBFI in Makhuduthamaga, and Limpopo Province. The WHO/UNICEF Ten Steps to successful breastfeeding guided the study and the development of the questionnaire. As indicated by Neuman (2006:35) in descriptive research, the aim is to give an account of a situation by using words, numbers or both to provide answers to queries relating to the topic.

3.3.2.1 Advantages of a descriptive study

Descriptive study designs have several advantages as spelt out by Burns and Grove (2011: 258), which include:

- Collection of data using methods like questionnaires, interviews, diaries and observation. In the current research, data was collected using a self-designed questionnaire,
- The study is carried out in natural settings without any manipulation. The current research was conducted in the Makhuduthamaga Sub-district PHC facilities where the respondents worked and there was no intervention before data was collected,
- In this study, data was collected and analysed by descriptive statistics that included frequency distribution and relational statistics.

3.3.2.2 Disadvantages of a descriptive study

Descriptive studies cannot provide information on cause and effect relationships (Burns & Grove, 2011:258; Aday & Cornelius, 2006:36; Botma et al., 2010:45). The implication was that the researcher could not relate causes to any observations made or information derived from the study and no assumptions could be made.

3.3.3 Cross-sectional study

A cross-sectional study was adopted as data was collected only once from the sampled group within a brief period. In this type of analysis, any variable of interest that exists in each population is measured once at a specific point in time (Brink et al., 2011:86). Leedy and Ormrod (2014:194) assert that a cross-sectional study examines several groups of people at one time whereas a longitudinal study examines one group of people repeatedly over time. The result of cross-sectional study is quantifiable data on more than one variable. Burns and Grove (2011:146) describe cross-sectional research as a quantitative method where the aim is to gather information on several study elements at one moment in time. It is normally the easiest and cheapest research process yielding results in a relatively short period (Leedy & Ormrod, 2014:195; Polit & Beck, 2012:168). The cross-sectional study used here had the following advantages and disadvantages as outlined by Polit & Beck (2012:170).

3.3.3.1 Advantages of a cross-sectional study

- This research aimed at determining frequencies of the attributes of KAP of nurses regarding MBFI,
- The researcher was a novice, so this study was easy to conduct at one given point in time (cross-sectional studies are easy to conduct),
- It was relatively cheap for the researcher to undertake the current research, and
- The population in the current research was contacted once during the time and point of data collection.

3.3.3.2 Disadvantages of a cross-sectional study

As explained earlier, this is usually undertaken once at a given point of time, so it is not possible to use cross-sectional study if the purpose is to determine changes that have taken place over a period in a phenomenon of interest. It is also not suitable if the purpose is to examine rare conditions (Brink et al., 2011:87).

3.3.3.3 Survey research

Polit and Beck (2012:746) describe survey research as non-experimental research that involves gathering information about people's activities, beliefs, preferences and attitudes through direct questioning. According to Leedy and Ormord (2014:195), survey research involves acquiring information about one or more groups of people regarding their characteristics, opinions, attitudes or previous experiences by asking questions and tabulating answers. In this case, the survey method was used to determine the nurses' KAP regarding MBFI by asking them to respond to a questionnaire. The unit of analysis was an individual from whom data was collected and there were no interventions with respondents before collection of data. The current study aimed to assess the attributes of KAP of nurses regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district, therefore, a survey was the most relevant data collection tool of choice. The respondents could complete the questionnaire without any assistance and it was written in clear and concise terms. No vague or complicated terms were used in the survey tool.

3.3.3.4 Correlational Research

The fourth objective of this study was to establish if a relationship exists between the KAP of nurses regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district and to achieve this a correlational research was carried out using the Pearson correlation coefficient test. Correlational research is a method used to determine relationships between two or more variables (Salkind, 2012:12). According to Creswell (2014:144), researchers in correlational designs describe and measure the degree or association (or relationships) between two or more variables or sets of scores. In this study, correlational research was applied to determine the relationship between nurses' KAP regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district.

3.4 RESEARCH METHODOLOGY

Polit and Beck (2012:743) refer to 'research methodology as the techniques used to structure a study and to gather and analyse information in a systematic way'. Burns and Grove (2011:719) define research methodology as 'the process or plan for conducting the specific steps of the study'. This study used quantitative research methods to assess the nurses' KAP regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district. The following sections describe and discuss each of the components of the research method employed in this study: the population, sample and sample size, method of data collection and analysis.

3.4.1. Population

The term 'population' refers to individuals who possess specific characteristics (Strydom, 2012: 233). The target population is a set of individuals or elements who meet the sampling criteria, whereas the accessible population refers to the portion of the target population to which the researcher has reasonable access (Burns & Grove, 2011:290). The population for this study consisted of Nursing Managers (NMs), Professional Nurses (PNs), Enrolled Nurses (ENs) and Enrolled Nursing Assistants (ENAs) working in non-accredited PHC facilities of Makhuduthamaga Sub-district registered by the South African Nursing Council. They are permanently employed and were willing to participate in the study. A

total of 190 nurses were recruited to participate in the study for a period of a month.

The sampling frame is a list of or some representation of the study population, either individually or groups of individuals (Joubert & Katzenellenbogen, 2007:95). The researcher could not find the list of nurses by name. Therefore, the sampling frame in this study was created from the list of all the non-accredited PHC facilities of Makhuduthamaga Sub-district. All the PHC facilities in this study belonged to the public sector since the Makhuduthamaga Sub-district was mostly rural and in a remote area and; there were no private PHC facilities that could be located.

3.4.1 Sampling

Joubert and Katzenellenbogen (2007:94) and Polit and Beck (2012:744) agree that sampling is the process of selecting a portion of the population to represent the entire population. The key concepts of sampling theory include populations, target population, sampling or eligibility criteria, accessible population, representativeness, sampling frames and sampling plans or methods (Burns & Grove, 2011:145). Each of these are discussed below.

3.4.3 Sample and sampling

Polit and Beck (2012:743) assert that a sample is a subset of a population comprised of those selected to participate in a study. A sample consists of 'elements of the population considered for actual inclusion in the study or a subset of measurements drawn from a population in which the researcher is interested' (Fouche & De Vos, 2011:167).

Polit and Beck (2012:743) define sampling as the process of selecting a portion of a population to represent the entire population. Researchers select study subjects from the sampling frame or list of every member of the population, using a sampling plan or methods (Burns & Grove, 2011:290).

3.4.3.1 Sampling of primary healthcare facility

All non-accredited facilities were purposively selected for this study. A non-accredited facility has not yet been assessed and designated as a 'Mother-Baby Friendly facility'. A purposive sampling method is based on the judgment of the

researcher regarding the subjects or objects that are typical of the subject being considered (Brink et al., 2011:58). The Makhuduthamaga Sub-district has 18 non-accredited PHC facilities and one accredited PHC facility. All 18 non-accredited clinics were sampled for this study.

3.4.3.2 Sampling of participants

In this analysis, a census of the population was taken, that is all the 190 nurses who participated in the study. The total population sampling method was used in this study due to the limited number of nurses working in Makhuduthamaga Sub-district. All the 18 non-accredited PHC facilities of Makhuduthamaga Sub-district have a total number of fewer than 15 nurses in each facility (Table 3.1). Thus, it became paramount that all nurses working in non-accredited PHC facilities in this Sub-district were recruited to participate in the study. This approach enabled the researcher to have the most representative sample, which served as an accurate replica of the target population making it a total-population study. This approach is justified because of the small number of nurses working in Makhuduthamaga Sub-district PHC facilities, less than 15 in each. If some nurses were not included, this would not provide a real reflection of the total population of nurses in Makhuduthamaga Sub-district. According to Leedy and Ormrod (2014:221), the following guidelines should be used when sampling participants:

- If a population is 100 or fewer do not sample but rather use the whole population for your sample, and
If the population size is around 500, 50% should be sampled; if the population size is around 1 500, 20% should be sampled and if it's beyond a certain point (about N = 5 000), the population size is almost irrelevant and a sample size of 400 will be adequate.

Table 3.1. The list of non-accredited primary healthcare facilities with the number of nurses working in each facility

| FACILITY NAME | NMs | PNs | ENs | ENAs | FACILITY TOTAL |
|-------------------------|------------|------------|------------|-------------|-----------------------|
| 1. Dichoeng Clinic | 1 | 3 | 1 | 3 | 8 |
| 2. Eensaam Clinic | 1 | 5 | 2 | 4 | 12 |
| 3. Klipspruit Clinic | 1 | 8 | 1 | 3 | 13 |
| 4. Madibong Clinic | 0 | 4 | 0 | 3 | 7 |
| 5. Magalies Clinic | 1 | 7 | 2 | 4 | 14 |
| 6. Mamone Clinic | 1 | 4 | 1 | 3 | 9 |
| 7. Mampana Clinic | 0 | 5 | 2 | 3 | 10 |
| 8. Manganeng Clinic | 1 | 5 | 2 | 4 | 12 |
| 9. Marishane Clinic | 1 | 6 | 0 | 3 | 10 |
| 10. Marulaneng Clinic | 1 | 4 | 1 | 2 | 8 |
| 11. Phaahla Clinic | 1 | 4 | 3 | 4 | 12 |
| 12. Phatatswane Clinic | 1 | 3 | 2 | 3 | 9 |
| 13. Phokoane Clinic | 1 | 6 | 1 | 4 | 12 |
| 14. Probeerin Clinic | 1 | 7 | 2 | 2 | 12 |
| 15. Rietfontein Clinic | 0 | 6 | 3 | 3 | 12 |
| 16. Schoonoord Clinic | 1 | 5 | 3 | 4 | 13 |
| 17. Setlaboswana Clinic | 1 | 4 | 1 | 2 | 8 |
| 18. Tswaing Clinic | 0 | 5 | 1 | 3 | 9 |
| TOTAL | 14 | 91 | 28 | 57 | 190 |

A database with the staff development profile was obtained from the Sub-district manager and it was concluded that all nurses should participate due to the shortage of nurses in the Makhuduthamaga Sub-district PHC facilities (Table 3.1 reflects the number of nurses in each facility per nursing category). The sub-district has a total of 190 nurses: 14 operational managers (NMs), 91 professional nurses (PNs), 28 enrolled nurses (ENs) and 57 enrolled nurse assistants (ENAs). All nurses were recruited to participate through the Sub-district manager, the local managers and operational managers.

3.5 DATA COLLECTION

This study used a structured data-collection approach. Polit and Beck (2012:766) maintain that a structured approach often takes considerable effort to develop and refine, but yields data that is relatively easy to analyse. In a quantitative study, data collection proceeds per a pre-established plan. The researcher specifies these procedures for the collection of data (Polit & Beck, 2012:767). Structured methods are appropriate for in-depth examination of a phenomenon. A self-administered structured questionnaire was developed specifically for this study to collect data from respondents (ANNEXURE A). Burns and Grove (2011:257) indicate that forms can be designed to determine facts about the subjects or persons known by the subject, about events or situations known by the subject or the beliefs, attitudes, opinions, levels of knowledge or intentions of the subject. A self-administered structured questionnaire was used to gather data about KAP regarding MBFI amongst nurses in the non-accredited PHC facilities of Makhuduthamaga Sub-district.

The questionnaires were self-administered after consultation with operational managers to ensure that clinic's routines were not disturbed. Questionnaires were chosen because they were 'less expensive than interviews in terms of time and money; the respondents felt a greater sense of anonymity and were more likely to provide honest answers, and the format was standard for all the respondents' (Brink et al., 2011:147). At the same time, the researcher was aware that questionnaires also have some drawbacks. For example, 'the researcher was unable to use probing strategies to obtain in-depth answers; the respondents could not elaborate or ask for clarification of questions or could fail to answer some questions and the respondents might not be representative of the population' (Brink et al., 2011:147). Care was taken to develop a questionnaire that addressed the most important aspects of MBFI to reduce the impact of these disadvantages. The issue of clarity of questions was addressed through pre-testing of the questionnaire for clarity and content.

3.5.1 Data-collection instrument

The researcher developed a self-administered structured questionnaire guided by the purpose and objectives of the study and the literature review (ANNEXURE A). The questionnaire was written in English and no translation was required. English was chosen as the language of choice for the survey based on the assumption that all nurses have at least Grade 12 and can read and write in English. Simple English and straightforward terminology was used. The questionnaire was developed from the 2009 UNICEF/WHO 20-hour lactation management manual, the 2013 National Infant and Young Child policy (NIYCF) and the researcher's experience as an MBFI assessor and facilitator. The questionnaire was given to the district MBFI Assessors, MBFI provincial coordinator, academics at the University of Venda (UNIVEN), study leaders and a statistician for evaluation and comment. The form questionnaire was altered based on their remarks. The questionnaire took approximately 30 minutes to complete.

The survey addressed the fundamental principles of the ten steps for successful breastfeeding, mother-friendly care, code of marketing for breast milk substitutes and HIV and infant feeding.

The questionnaire consists of four sections and a total of 67 items as follows:

Section 1: Demographic information

Section 1 covered the respondents' age, job category and highest academic qualification and included three questions on demography.

Section 2: Knowledge about MBFI

Section 2 consisted of two sub-sections, namely: the orientation into MBFI consisting of six questions and a knowledge test consisting of 18 close-ended questions aimed to assess the knowledge of nurses regarding MBFI. Participants had to choose the correct answer out of four given options.

Section 3: Attitudes about MBFI

To determine the attitudes of nurses, a four-point Likert-scale ranging from 'strongly agree' to 'strongly disagree' was used and this section had 19 items in total.

Section 4: Practices regarding MBFI

Section four consists of questions to identify practices of nurses regarding MBFI. This section has a five-scale point ranging from 'always' to 'never'. Participants were expected to indicate whether they implement the given practices which were based on MBFI principles. This section consists of 23 items as follows:

- eight items for MBFI practices for successful breastfeeding,
- seven items for mother-friendly care practices,
- eight practices related to HIV and infant feeding.

3.5.2 Pre-testing data collection instrument

Burns and Grove (2011:546) define a pilot study as a smaller account of a proposed study carried out to develop and improve the methodology, such as the treatments, instruments or data collection process to be used in the later study. Botma et al. (2010:275) stated that the usability of an instrument can be determined by a pre-test to see if the participants understand the questions and what is expected of them. The data collection instrument was pre-tested with ten nurses at the Ngoabe clinic. Ngoabe clinic is a non-accredited facility situated in the Greater-Tubatse Sub-district. The researcher communicated with the local manager and the operational manager of the facility to obtain approval to conduct the pre-test study at their facility.

Permission to conduct the pre-test was obtained by submitting a copy of the research proposal, ethics clearance documentation, the questionnaire and consent form. Approval was granted by their Sub-district manager. The ten nurses that participated in the pre-test consisted of five PNs, two ENs and three ENAs; and each completed the questionnaire. These nurses were also given a covering letter explaining the purpose of the research and why respondents were chosen, elaborating on the anonymity and confidentiality, referring to the ethical approval of the study and the researcher provided his position and contact details (Botma et al., 2010:137). All shortcomings identified with the questionnaires during the pre-testing such as ambiguity, relevance and consistency of the questions were corrected. The quality of the questionnaire was discussed with the supervisors and checked by a qualified statistician to determine whether it would yield

expected results or not. These ten nurses were not included in the study since they were from another Sub-district.

3.5.3 Data collection procedure

Burns and Grove (2011:546) define data collection as the ‘identification of subjects and the precise, systematic gathering of information relevant to the research purpose or the specific objectives, questions or hypothesis of the study’. Data was collected by the researcher and two research assistants (one dietitian and one nutritionist). Research assistants were trained regarding the purpose of the study, data collection instruments and procedures and ethical considerations during the data collection period. During the gathering of information, the researcher and research assistants as data collectors were allocated to work together at the facility each day. Before commencing data collection activity, the researcher communicated with each facility for a convenient day and time within the period, April to May 2016. Respondents were provided with brief orientation and information leaflets (ANNEXURE H) regarding the purpose and significance of the study. Self-administered questionnaires were then provided for those who consented to participate in the study. All responded were asked to drop the completed questionnaires in a box that was left at the reception of each facility. The box was sealed and was labelled with a note saying “do not open” was attached in the box to ensure that the box will not be open by anyone except the researcher when he collects the box after a month. In some facilities where the researcher could not reach for collection of boxes, the operational managers were asked to collect the boxes and were requested to drop them at the sub-district office where only the researcher would open when he collects.

3.5.4 Data capturing and cleaning

The first step that follows data collection is data capturing and cleaning, where the researcher organises the data into appropriate units for the analysis process. This is the most crucial step as it helps to simplify data and make it available to the statistician for analysis. The data capturing and cleaning process includes coding of data, entering it into a computer spreadsheet and the cleaning of data (Polit & Beck, 2012:463; Terre Blanche et al., 2012:490). In this study, each

questionnaire was allocated a number for identification purposes and coded by the researcher.

Polit and Beck (2012:463) refers to the coding of data as the process where data is transformed into numbers. Numbers were allocated per the nurses' socio-demographic characteristics, knowledge test responses and the Likert scale indicator responses for attitudes and practices. The researcher captured the data from the 164 questionnaires in a Microsoft Excel spreadsheet and checked and verified the captured data for accuracy and consistency by comparing the hardcopies of questionnaire with the captured data. A friend who is close to the researcher assisted in checking and verifying the spreadsheet after these were captured in a spreadsheet. This was done to ensure that there were no mistakes that were made by the researcher as human errors happen everywhere. Both the researcher and the friend checked all the data sets from the raw data and no mistakes or errors were found during the checking and verification process. The data in the spreadsheet was then sent electronically to the statistician for analysis. The researcher informed the statistician about the type of statistics he was looking for to ensure that the objectives of the study are met or answered.

3.6 RELIABILITY AND VALIDITY

The quality of a research instrument is determined by its reliability and validity.

3.6.1 Reliability

Reliability refers to the consistency of the measurement result and a measuring instrument's ability to yield consistent numerical results each time it is applied; it does not fluctuate unless there are variations in the variable being measured (De Vos et al., 2011:562; Grove, Burns & Gray, 2013:389; LoBiondo-Wood & Haber, 2010:295). The researcher used a self-administered structured questionnaire which ensured that all respondents answered the same questions (Botma et al., 2010:273; Polit & Beck, 2012:305). The questionnaire was used to avoid bias and the researcher used quality control checks, such as checking data during collection and analysis for completeness and internal consistency, and assessing that the data within each field of the data set contained valid responses consistent with the meaning and content of the specific data field (Polit & Beck, 2012:306).

3.6.1.1 Measuring the reliability of the instrument

To determine the reliability of the study instrument, the Cronbach alpha coefficient test was used and the results calculated using a statistical value. The Cronbach alpha coefficient test was the only test used to assist in measuring the internal consistency of the instrument. LoBiondo-Wood and Haber (2010:295) provided the following basic rules: if Cronbach alpha is $\geq .9$ – excellent, $\geq .8$ – good, $\geq .7$ – acceptable, $\geq .6$ questionable, $\geq .5$ poor and < 0.5 unacceptable. The general agreed lower limit is .7 and it may decrease to .6 in exploratory research (LoBiondo-Wood & Haber, 2010:295; Hair, Black, Babin & Anderson, 2014:123). Here, .7 was also used as an acceptable level. The reliability of the instrument is given in Table 3.2.

Table 3.2: Reliability results of the dimensions

| Table 3.2: Reliability results of the dimensions | | | |
|---|---------------------|-------------------------|-------------------------|
| Aspect | No. of items | Cronbach's alpha | Acceptable level |
| Orientation on MBFI | 6 | .884 | Good |
| Knowledge on MBFI | 18 | .954 | Excellent |
| Nurses attitudes | 17 | .918 | Excellent |
| Practices for successful breastfeeding | 8 | .969 | Excellent |
| Mother-friendly care practices | 7 | .974 | Excellent |
| Practices related to HIV and infant feeding | 8 | .956 | Excellent |
| All practices | 23 | .985 | Excellent |
| Total | 64 | .981 | Excellent |

A Cronbach's alpha of 0.7 or more depicts a reliable scale. No item had low reliability and thus all items were used in the analysis. All dimensions achieved the minimum threshold as proposed by Hair et al. (2014:124). The overall reliability of the instrument was .981, which is excellent and thus, the data collection instrument for this study was very reliable.

3.6.2 Validity

The validity of an instrument is the degree to which it measures the variable it claims to measure (De Vos et al., 2011:160; Maree & Pietersen, 2012:216). Delpont and Roestenburg (2012:173) describe two factors in the definition of validity, namely that the instrument measures the construct in the research question and that it is measured accurately. A high validity shows that the instrument that is being measured reflects the real meaning of the concept under consideration. Grove, Burns and Gray (2013:393) point out that no instrument can be completely valid, it can only indicate a degree of measurement to the researcher. The researcher used validity to determine if the instrument indeed accurately measured the KAP of nurses regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district. The first step by the researcher was to determine if the instrument measured the KAP of nurses about MBFI, by first examining face validity and content validity before collecting data (Polit & Beck, 2012: 316; Botma et al., 2010:137).

3.6.2.1 Face Validity

According to Botma et al. (2010:137), face validity requires experts from the field being studied to evaluate the questionnaire. In this study, experts in MBFI policy implementation, infant feeding, HIV and maternal healthcare were identified by the researcher. The readability and clarity of the items and instructions were also evaluated by the experts during the process to address content validity (Botma et al., 2010:137). Face validity does not deliver strong evidence of validity on its own, but it should be used in combination with other types of validity measures such as content and construct validity (Botma et al., 2010:138; Polit & Beck, 2012:336).

3.6.2.2 Content Validity

Polit and Beck (2012:458) describe content validity as the degree to which an instrument has the appropriate sample of items for the construct being measured and adequately covers the construct domain. Content validity focusses on the content that is included and evaluates it to see if the points in the questionnaire indeed represent the content of what is being measured and include all the right items. Goddard and Melville (2013:47) argue that more people should be involved

in this process, specifically experts in that field. The researcher presented the instrument to experienced researchers (study supervisors, senior academics, dieticians and a statistician) for evaluation to guarantee that all constructs to be appraised are represented. Grove et al. (2013:173) state that the experts who evaluate the questionnaire, do this by answering the following two questions, namely, 'does the instrument measure the construct we assume it is?' and 'does the instrument provide an adequate sample of items that represent the concept being measured?'

In this research, experts also checked for bias or misinterpretation present in the first draft of the instrument. Polit and Beck (2012:337) state that at least three experts should be available to evaluate a questionnaire, though more are preferable for content validity. Ten experts were identified by the researcher to look at both the face and content validity of the questionnaire. The experts were knowledgeable on MBFI, breastfeeding, IYCF policy, mother-friendly care, code of marketing of breastmilk substitutes and HIV. Questionnaires were emailed and hand-delivered to some professionals and a time frame of 10 working days for returning feedback was indicated. The experts responded to each item by indicating whether the item should be included, excluded or maybe included from the questionnaire or if the item should be moved to another section. All the experts gave feedback on the first draft of the questionnaire. See Table 3.3 for the summary of the expertise and responses of each expert on face and content validity.

3.3 Summary of expert responses on face and content validity

| Table 3.3 Summary of expert responses on face and content validity | | | |
|--|-----------------------------------|---|-----------|
| Number | Position held | Response | Responded |
| 1 | Professor at University level | Questionnaire design | Yes |
| 2 | Professor at University level | Questionnaire design | Yes |
| 3 | Dietician in tertiary hospital | Infant and Young child feeding policy | Yes |
| 4 | Doctor (PhD) at University level | Mother-Friendly Care | Yes |
| 5 | Professor at University level | MBFI policy | Yes |
| 6 | MBFI Provincial Coordinator | Questionnaire design and MBFI practices | Yes |
| 7 | Chief Dietician at District level | MBFI Knowledge test & child nutrition | Yes |
| 8 | Medical doctor at district level | Mother-Friendly care and HIV | Yes |
| 9 | Doctor (PhD) at University level | Attitudes towards MBFI and questionnaire design | Yes |
| 10 | Nutritionist at Provincial level | Practices for successful breastfeeding and questionnaire design | Yes |

The feedback from experts is summarized as follows:

- The main concern of the experts was that the questionnaire was too long, and all the items that were considered irrelevant for the study such as race, gender and open-ended questions were removed, as they stated that this could lead to a poor response rate as these issues were difficult to answer, and
- The experts suggested and recommended Likert-scale questions for attitudes and practices.

The draft questionnaire from experts was modified into a final questionnaire as per their suggestions and recommendations. The statistician was also included during the reviewing of the questionnaire to look at the content and possible

means of analysis and coding of data. The researcher took all the recommendations into consideration and some changes were made as suggested. Some recommendations like removal of the long open-ended questions were only removed when the researcher received feedback from nurses in the Schoonoord local area who felt the long questions needed a lot of time and writing and complained that they did not have time. The following are example of questions in the questionnaire were removed afterwards and the statistician and supervisors agreed that they will not have bearing on the finding of the study:

- What are your perceptions about the implementations of MBFI?
- What are your views about the implementation of skin-to-skin contact?
- What are your perceptions about the involvement of fathers/ male partner's role in breastfeeding/ infant feeding?

It is worth noting that some of these questions were open-ended questions which were reported to be more qualitative by some experts and the data generated from these questions was not discarded as we (myself and study supervisors) felt they captured important aspects about MBFI and therefore such qualitative data was worth capturing in order to write papers for publication out of them. Following this, the researcher reduced the number of questions from 75 to 68 and the questionnaire was re-evaluated for reliability and validity. The Questionnaire was submitted to the University of Venda Ethics Committee and Limpopo Department of Health Research Board for approval.

3.7 DATA ANALYSIS

Data analysis is defined as a process that organises and gives meaning to the gathered data (Grove et al., 2013:46). This is a very extensive rigorous analytical process that is performed by a qualified statistician who is familiar with the specialised computer software. Polit and Beck (2012:336) state that the researcher should first look at the reliability of an instrument before data analysis because a questionnaire cannot be valid if it is not reliable, although it can be reliable but not valid. In this study, the Statistical Package for the Social Sciences (SPSS) 23.0 was used to obtain descriptive statistics, which were used to

describe and synthesize data (Polit & Beck, 2009:556). The results were presented in tables and graphs.

Descriptive statistics were used to determine the patterns and trends in the data using frequencies. Orientation into MBFI score was created by giving 1 to those who indicated yes and 0 to those who indicated no. The sum of the questions was obtained to get the orientation into MBFI score. A knowledge score was created with 1 for the correct answer and 0 for an incorrect or unanswered question. The total of the items provided the knowledge score for MBFI. Composite variables were created for the Likert type of questions on attitudes and practices using averages. Correlational analysis was used to determine the extent of the relationship between the variables.

The last objective of the study was to determine the relationship between knowledge on MBFI, nurses' attitudes and practices. The Pearson correlation coefficient was used to determine the extent of the relationship between the variables. Pearson's coefficient of correlation measures the linear association between two variables measured on an interval or ratio scale (Polit & Beck, 2012:458). Hair et al. (2014:152) assert that 'the correlation coefficient indicates the strength of the association between two metric variables where a positive sign or a negative sign shows the direction of the relationship. The value ranges from -1 to 1.' Furthermore, Hair et al. (2014:153) state that 'if $r = .10 - .29$ then there is a low effect (low correlation); $r = .30 - .49$ has a medium effect (moderate correlation) and $r = .50 - .99$ has a large effect (strong correlation).' The test was done at the 5% level of significance and the p-value approach was used. A p-value of less than .05 would signify a lack of correlation between the variables, whereas a p-value of less than .01 would signify a highly significant relationship (Hair et al., 2014:154).

A literature search was carried out throughout the study period and the results compared to available literature and the related discussion is in Chapter Four. It is coupled with findings from other researchers relating to the KAP of nurses regarding MBFI and breastfeeding promotion. Literature that supports the

research findings of this study and the literature studies that differ from these results have been coordinated in the discussion section in Chapter Four.

3.8 ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. Research that involves human beings as subjects should be conducted in an ethical manner to protect their rights. Polit and Beck (2012:167) emphasise that when people are used as study respondents, 'care must be exercised in ensuring that the rights of the respondents are protected'. Accordingly, the researcher obtained permission to conduct the study and respected the respondents' right to self-determination, privacy, anonymity, confidentiality, fair treatment, the right to be fully informed about the research and the right not to be harmed in any manner (Burns & Grove 2011:152).

The rights of the respondents were protected. The researcher explained the nature and purpose of the study to the respondents. It was also explained that there was no harm foreseen to be experienced during the process of the study. The researcher reassured the respondents that participation was voluntary and that they could terminate their participation in the study at any time (Polit & Beck, 2012:169).

3.8.1 Permission to conduct the study

Ethical approval was sought from the UNIVEN Research Ethics Committee and Limpopo Department of Health Research Ethics Committee. A letter was written to the Sekhukhune District Office, Sub-district manager, local managers and operational managers of the 18 clinics requesting permission to conduct the study in the institutions and a copy of the approval letter from the provincial department was attached. The Limpopo Department of Health Research Committee had the right to terminate the study if the safety and confidentiality of the respondents was not protected.

3.8.2 Informed consent

The right to self-determination is based on the ethical principle of respect for persons as autonomous agents, who have freedom to conduct their lives as they choose without external control (Burns & Grove, 2011:181). The respondents' right to self-determination was assured by explaining the purpose and significance of the study, obtaining their informed consent, emphasising that participation was free and voluntary, and that they had the right to withdraw from the study at any time (Burns & Grove, 2011:181). A covering letter with information on the study was provided to the respondents. It also contained the researcher's contact details for any questions required for clarification (Polit & Beck, 2012:169).

After the respondents were informed about the nature and scope of the study, and they signed informed consent forms. Informed consent is prospective respondents' agreement to voluntarily participate in a study, which is reached after they have assimilated essential information about the study (Burns & Grove, 2011:201). The respondents had the opportunity to refuse to participate in the study. The final report containing anonymous information would be available to all at the end of the study (Burns & Grove, 2011:201).

3.8.3 Fair treatment, privacy, anonymity, confidentiality

The respondents' right to fair treatment included privacy, anonymity and confidentiality (Polit & Beck, 2012:173). 'The informed consent letters were kept separately from the questionnaires. Their privacy and anonymity were assured by using numbers instead of names. All respondents were asked to drop the questionnaire in a box that was left in each facility. This box was only opened by the researcher after a month and arrangements were made with the operational managers to collect the box from their clinics and drop it at the sub-district office. The box was labelled with a note (please do not open-strictly confidential) and no one was allowed to open it. Furthermore, the researcher informed them that all information would be treated as strictly confidential and no information would be shared with anyone. All the respondents were treated equally, fairly and there was no remuneration for the respondents' (Polit & Beck, 2012:173)

3.8.4 Beneficence

'The right to protection from discomfort and harm is based on the ethical principle of beneficence, which holds that one should do good and, above all, do no harm' (Burns & Grove, 2011:190). The respondents might 'experience exhaustion and psychological discomfort when completing questionnaires', but during the pre-test the questionnaire was judged to be simple and easy to complete' (Burns & Grove, 2011:190).

3.8.5 Scientific integrity of the research

The researcher did not misrepresent or fabricate the findings of the study. All the information was acknowledged to prevent plagiarism (Burns & Grove, 2011:201; Polit & Beck, 2012:174).

3.9 LIMITATIONS OF THE STUDY

The study was conducted only in one sub-district in Limpopo Province, namely Makhuduthamaga Sub-district, which could jeopardize generalisation of the findings. This study also used a descriptive study design to describe the KAP of nurses regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district. Descriptive study designs do not attempt to generalise the findings to populations outside of the study participants (Botma et al., 2010:135; Polit & Beck, 2012:335). So, the results of this study cannot be generalised outside of the participants in Makhuduthamaga Sub-district and the rest of nurses working in other regions. Another limitation of this study was that it used a structured questionnaire to collect data from participants and this limited the responses to be chosen by respondents and did not allow for in-depth answers (Polit & Beck, 2012:335). The data collection tool was self-reported meaning that responses could be biased as per respondents' feelings at the time that they filled out the questionnaire.

3.10 CONCLUSION

This chapter discussed the research design and methodology of the study, including the setting, population and sample, data collection and analysis, ethical considerations and limitations.

Chapter 4 discusses the data analysis and interpretation, and research findings.

CHAPTER FOUR

RESEARCH RESULTS

4.1 INTRODUCTION

The chapter presents the findings of the empirical investigation based on the data analysis. The purpose of this study was to assess the KAP of nurses regarding MBFI in the non-accredited PHC facilities of Sekhukhune district in Limpopo Province. The study had four objectives. The first objective was to assess nurses' knowledge regarding MBFI and these results are presented in 4.3. The second objective was to determine nurses' attitudes towards implementation of MBFI principles and these are reflected in 4.4. The third objective was to identify nurses' practices related to MBFI strategy implementation and the results are presented in 4.5. The last objective was to determine if a relationship exists between nurses' MBFI practices and levels of knowledge and attitudes. Section 4.6 shows these results and the discussion is summarised in 4.7.

4.2 BIOGRAPHICAL DATA

Initially, a total of 190 nurses were recruited for the study. However, 164 (86.3%) responded to the instrument, which was deemed acceptable. The demographic variables included nursing category, age and academic qualifications. The items in this section attempted to obtain personal information about the respondents to contextualise the responses concerning KAP of nurses regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district.

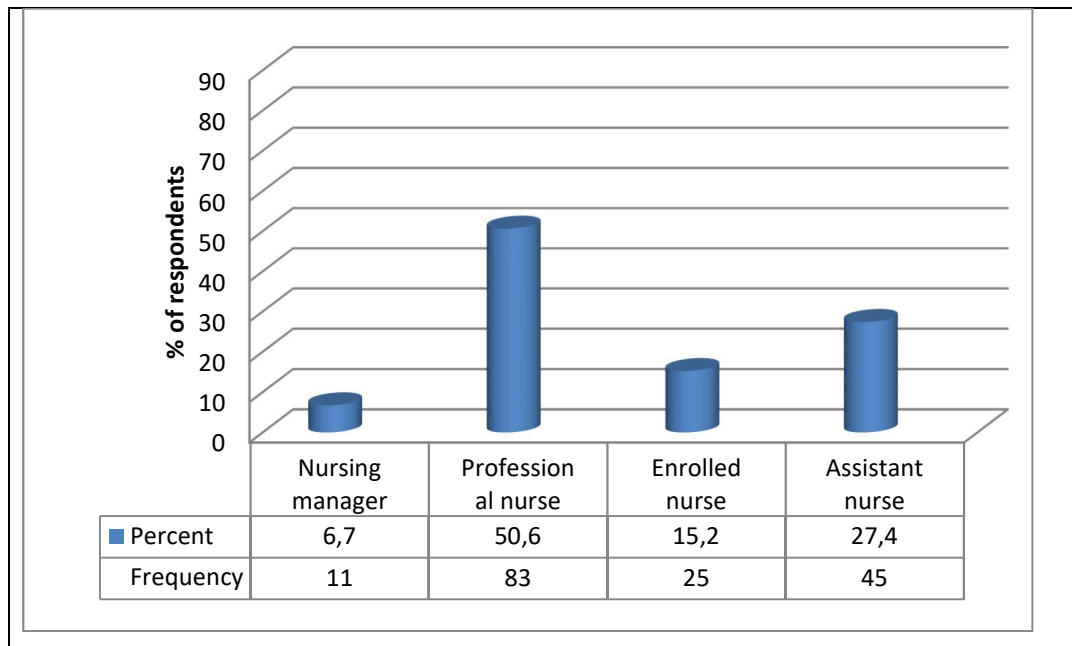


Figure 4.1 Distribution of respondents by nursing categories (N: 164)

Figure 4.1 reveals that 6.7% of respondents were nursing managers (NMs), 50.6% were professional nurses (PNs), 15.2% were enrolled nurses (ENs) and 27.4% were assistant nurses (ENAs).

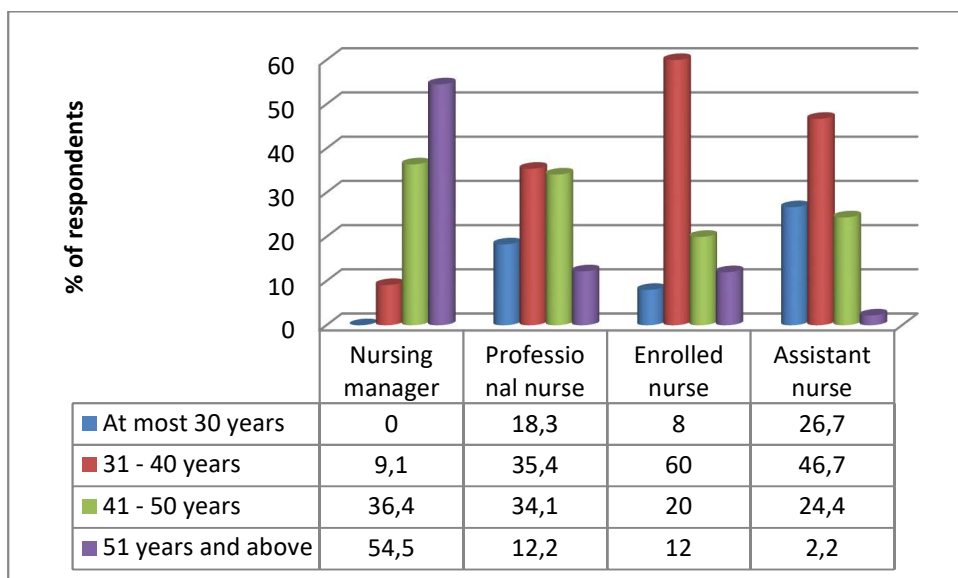


Figure 4.2 Percentage distribution of age of respondents by nursing category (N: 164)

The largest proportion of the nurses were aged between 31–40 years and comprised of NMs (9.1%), PNs (35.4%), ENs (60%) and ENAs (46.7%). The second largest group was between 41–50 years old and comprised of NMs (36.4%), PNs (43.1%), ENs (20%), and ENAs (24.4%). The respondents of up to 30 years of age were PNs (18.3%), ENs (8%) and ENAs (26.7%). The majority of NMs (54.5%) were older than 51 years.

| | Nursing Manager | Professional Nurse | Enrolled Nurse | Enrolled nurse assistant |
|----------------------|----------------------------|-------------------------------|---------------------------|---|
| Master's degree | 3% | 5% | - | - |
| Bachelor's degree | 61% | 30% | - | - |
| Diploma | 9.1% | 54% | 68% | 38% |
| Advanced diploma | 27.3% | 11% | - | - |
| Certificates | | | 32% | 62% |

Figure 4.1: Percentage distribution of highest academic qualification of respondents by nursing category (N: 164)

Figure 4.1 reveals that NMs (61%) and PNs (30%) had bachelor degrees while 3% of NMs and 5% of PNs had master's degree. Regarding advanced diplomas, only 27.3% of NMs and 11% of PNs had these qualifications. Figure 4.3 shows that 9.1% of NMs, 54% of PNs, 68% of ENs and 38% of ENAs had diplomas. Regarding certificates, 32% of ENs and 62% of ENAs had certificates. The respondents were only asked to indicate their academic qualifications and no further questions asked about the details of the diplomas or degrees.

4.3 KNOWLEDGE OF NURSES REGARDING MOTHER-BABY FRIENDLY INITIATIVE

The MBFI knowledge of nurses was tested using a questionnaire based on the updated UNICEF (2009a) 20-hour breastfeeding course manual, the DoH (2014) breastfeeding course manual and the NIYCFP of South Africa (DoH, 2013a). This section starts with the orientation into MBFI with five questions and one follow-up question included. The last section focusses on knowledge and consists of 18 test questions.

4.3.1 Orientation into Mother-Baby Friendly Initiative

The respondents were asked how they have been oriented into MBFI. Questions requiring 'yes' or 'no' answers were invited to indicate their awareness of the implementation of MBFI in their facilities.

Table 4.1: Nurse’s orientation on MBFI (N: 164)

| Table 4.1: Nurse’s orientation on MBFI (N:164) | | | | | | | | |
|--|---------------------|-----------|----------------|------------|----------------|-----------|-----------------|------------|
| Statement | Job Position | | | | | | | |
| | NM (11) | | PN (83) | | EN (25) | | ENA (45) | |
| | Yes | No | Yes | No | Yes | No | Yes | No |
| Do you teach pregnant women about benefits of breastfeeding? | 11 (100%) | - | 78 (93.9%) | 5 (6.1%) | 23 (91.7%) | 2(8.3%) | 31(68.9%) | 14(31.1%) |
| Have you heard of the Mother-Baby Friendly Initiative (MBFI)? | 10 (90.9%) | 1 (9.1%) | 58 (70.0%) | 25 (30%) | 15 (58.3%) | 10(41.7%) | 16(35.6%) | 29(64.4%) |
| Have you received formal training in lactation management since you started working here or in the last 5 years? | 11 (100%) | - | 54 (65.1%) | 29 (34.9) | 14 (54.2%) | 11(45.8%) | 12(26.7%) | 33 (73.3%) |
| Do you know the infant and young child feeding policy (IYCF) of your facility? | 8 (72.7%) | 3 (27.3%) | 52 (62.2%) | 31 (37.8%) | 9 (36.0%) | 16(64%) | 15(33.3%) | 30(66.7%) |
| Were you ever orientated to your facility's IYCF Policy? | 8 (72.7%) | 3 (27.3%) | 50 (59.8%) | 33 (40.2) | 9 (36.0%) | 16(64%) | 17(37.2%) | 28(62.8%) |

Table 4.1 reveals that 100% of NMs, 93.3% of PNs, 91.7% of ENs and 68.9% of ENAs indicated that they teach pregnant women about the benefits of breastfeeding. Approximately 90.9% of NMs, 70.0% of PNs, 58.3% of ENs and 35.6% ENAs had heard of MBFI. This study found that 64.4% of ENAs who participated had never heard of MBFI. Furthermore, all the NMs (100%), about 65.1% of PNs, 54.2% of ENs and 26.7% of ENAs reported that they had received formal training in lactation management. One group of ENs (45.8%) and ENAs

(73.3%) indicated that they had no formal training such as the 20-hours lactation management.

In this study, 72.7% of NMs and 62.2% of PNs reported that they know the IYCF policy of their facilities, whereas ENs (64%) and ENAs (66.7%) stated that they did not know the IYCF policy. Table 4.1 reveals that 72.7% of NMs and 59.8% of PNs indicated that they were orientated to their facility IYCF policy; whereas 64% of ENs and 62.8% of ENAs were never familiarised with their facility policy.

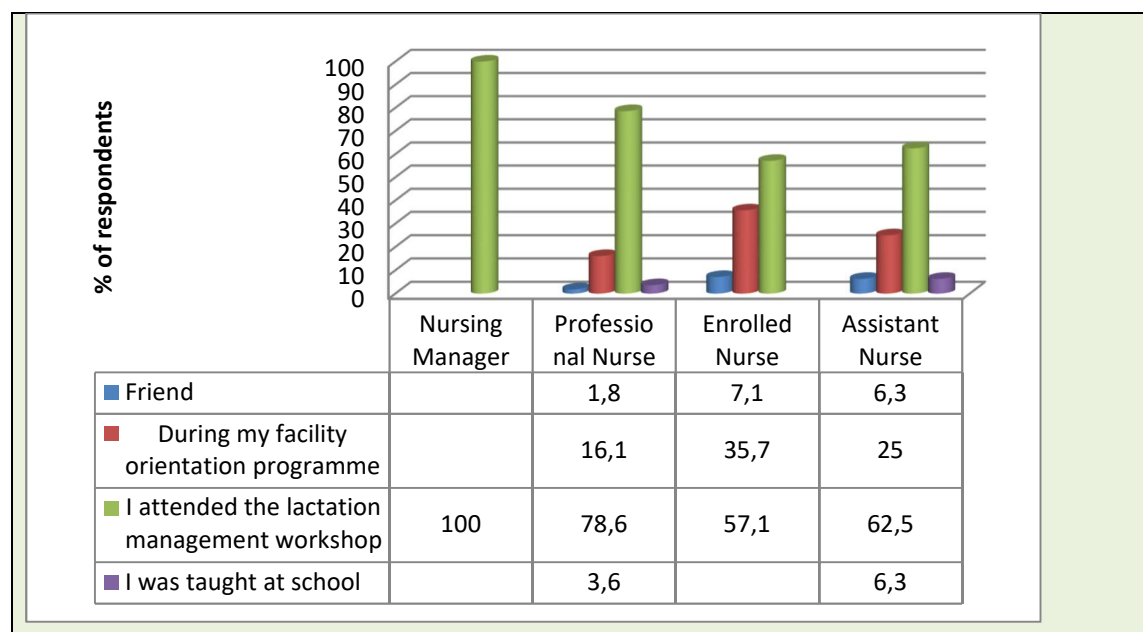


Figure 4.4: Sources of information about MBFI

A follow-up question was asked to the respondents who indicated that they have heard about MBFI and Figure 4.4 represents the results of the reported sources of information about MBFI. In this study, NMs (100%), PNs (78.6%), ENs (57.1%) and ENAs (62.5%) reported that they have heard about MBFI from the lactation management workshop. About 16.1% of PNs, 35.7% of ENs and 25% of ENAs stated that they have heard about MBFI during their facility orientation programme. Three point six per cent (3.6%) of PNs and 6.3% of ENAs said that they were taught at school during their nursing training about MBFI. Only 1.8% of PNs, 7.1% of ENs and 6.3% of ENAs reported that they have heard about MBFI from their friends. It is clear from Figure 4.4 that the 20-hour lactation

management workshop was the main source of information regarding MBFI amongst the respondents in this study.

4.3.2 Knowledge scores of nurses regarding Mother-Baby Friendly Initiative

The respondents were asked questions to determine their level of knowledge on MBFI and 18 multiple choice questions were given where respondents had to choose the correct answer. A score of one (1) was given for each correct designation of a knowledge statement and zero (0) was given to those respondents who gave an incorrect response or did not respond. The overall highest possible score was 18 points.

Table 4.2 Results of the knowledge scores for all nursing categories

See next page

Table 4.2: Nurses' knowledge regarding MBFI (N:164)

| Question | NM (11) | | PN (83) | | EN (25) | | ENA (45) | |
|--|------------|-----------|------------|------------|------------|-----------|------------|------------|
| | Correct | Incorrect | Correct | Incorrect | Correct | Incorrect | Correct | Incorrect |
| Explain the duration of EBF | 8 (72.7%) | 3 (27.3%) | 75(90.4%) | 8 (9.6%) | 18(72.0%) | 7 (28%) | 30 (66.7%) | 15 (33.3%) |
| Explain benefits of breastfeeding | 9 (81.8%) | 2 (18.2%) | 73 (88.0%) | 10(12.0%) | 19(76.0%) | 6 (24.0%) | 28 (62.2%) | 17 (37.8%) |
| Explain the benefits of 'skin-to-skin' | 9 (81.8%) | 2 (18.2%) | 68 (81.9%) | 15 (18.1%) | 16 (64.0%) | 9 (36%) | 32 (71.1%) | 13 (28.9%) |
| Mention the routine/ invasive procedures that should be avoided during labour. | 10 (90.9%) | 1 (9.1%) | 69 (83.1%) | 14 (16.9%) | 17 (68.0%) | 8 (32.0%) | 30(66.7%) | 15 (33.3%) |
| Explain what should be done in labour to maintain privacy and confidentiality of pregnant women and mothers who are HIV positive | 10 (90.9%) | 1 (9.1%) | 69 (83.1%) | 14 (16.9%) | 18 (72.0%) | 7(28.0%) | 28 (62.2%) | 17 (37.8%) |
| Define MBFI | 9 (81.8%) | 2 (18.2%) | 68 (81.9%) | 15 (18.1%) | 20 (80.0%) | 5 (20.0%) | 27 (60.0%) | 18 (40.0%) |
| Explain the reasons for feeding the baby when she/he is hungry | 8 (72.7%) | 3 (27.3%) | 68 (81.9%) | 15 (18.1%) | 17 (68.0%) | 8 (32.0%) | 27 (60.0%) | 18 (40.0%) |
| Define roaming in | 9 (81.8%) | 2 (18.2%) | 65 (78.3%) | 18 (21.7%) | 17 (68.0%) | 8 (32.0%) | 27 (60.0%) | 18 (40.0%) |
| Mention the components of MBFI | 7 (63.6%) | 4 (36.4%) | 67 (80.7%) | 16 (19.3%) | 20 (80.0%) | 5 (20.0%) | 26 (57.8%) | 19 (42.2%) |

Table 4.2: Nurses' knowledge table continues

| Question | NM (11) | | PN (83) | | EN (25) | | ENA (45) | |
|---|------------|-----------|------------|------------|------------|------------|------------|------------|
| | Correct | Incorrect | Correct | Incorrect | Correct | Incorrect | Correct | Incorrect |
| Define EBF | 9 (81.8%) | 2 (18.2%) | 61 (73.5%) | 22 (26.5%) | 17(68.0%) | 8 (32.0%) | 25 (55.6%) | 20(44.4%) |
| Explain the information to be given to an HIV positive mother regarding infant feeding. | 7 (63.6%) | 4 (36.4%) | 64 (77.1%) | 19 (22.9%) | 16 (64.0%) | 9 (36.0%) | 27 (60.0%) | 18 (40.0%) |
| Explain the causes of cracked nipples | 8 (72.7%) | 3 (27.3%) | 64 (77.1%) | 19 (22.9%) | 16 (64.0%) | 9 (36.0%) | 26 (57.8%) | 19 (42.2%) |
| Explain the dangers of mixed feeding | 7 (63.6%) | 4 (36.4%) | 63 (75.9%) | 20 (24.1%) | 19 (76.0%) | 6 (24.0%) | 25 (55.6%) | 20 (44.4%) |
| Define Skin to skin contact | 8 (72.7%) | 3 (27.3%) | 57 (68.7%) | 26 (31.3%) | 18 (72.0%) | 7 (28.0%) | 27 (60.0%) | 18 (40.0%) |
| Explain the advice to be given to a woman with engorged breasts | 7 (63.6%) | 4 (36.4%) | 63 (75.9%) | 20 (24.1%) | 17 (68.0%) | 8 (32.0%) | 26 (57.8%) | 19 (42.2%) |
| Explain the causes of insufficient milk | 10 (90.9%) | 1 (9.1%) | 61 (73.5%) | 22 (26.5%) | 16 (64.0%) | 9 (36.0%) | 23 (51.1%) | 22 (48.9%) |
| Define demand feeding | 7 (63.6%) | 4 (36.4%) | 52 (62.7%) | 31 (37.3%) | 14 (56.0%) | 11(44.0%) | 19 (42.2%) | 26 (57.8%) |
| Explain why the code of marketing for breast milk substitutes prohibits acceptance of free gifts and samples from formula manufacturers by healthcare professionals | 7 (63.6%) | 4 (36.4%) | 49 (59.0%) | 34 (41.0%) | 15 (60.0%) | 10 (40.0%) | 22 (48.9%) | 23 (51.1%) |

Table 4.2 reveals that 72.7% of NMs, 90.4% of PNs, 72% of ENs and 66.7% of ENAs could correctly answer that the duration of EBF is six months. About 27.3% of NMs, 9.6% of PNs, 28% of ENs and 33% of ENAs did not know the duration of EBF. When asked to explain the benefits of skin-to-skin contact between the mother and the baby after birth, about 81.8% of NMs, 81.9% of PNs, 64% of ENs and 71.1% of ENAs correctly answered that it calms the baby and the mother, promotes bonding and provides a good start for successful breastfeeding. About 90.9% of NMs, 83.1% of PNs, 68% of ENs and 66.7% of ENAs could correctly mention that invasive procedures to be avoided during birth are frequent vaginal examinations, episiotomies, rupturing of membranes and instrumental deliveries such as forceps. However, 32% of ENs and 33% of ENAs did not know the invasive procedures to be avoided during labour that interfere with successful breastfeeding.

Table 4.2 reveals that 90.9% of NMs, 83.1% of PNs, 72% of ENs and 62.2% of ENAs could correctly explain how to maintain the privacy and confidentiality of pregnant women and mothers who are HIV positive. This includes each woman being counselled privately and always maintaining confidentiality. However, 9.1% of NMs, 16.9% of PNs, 28% of ENs and 37.8% of ENAs did not know how to preserve the privacy and confidentiality of pregnant women and mothers who are HIV positive. The findings revealed that 63.6% of NMs, 80.7% of PNs, 80% of ENs and 57.8% ENAs knew the components of MBFI, namely the ten steps to successful breastfeeding, mother-friendly care, code of marketing for breast milk substitutes and HIV and infant feeding.

Findings revealed that 81.8% of NMs, 73.5% of PNs, 68% of ENs and 55.6% of ENAs could correctly define that EBF means that the infant receives only breast milk from birth to six months, given no water and only medicines prescribed by a health professional are used. Respondents were asked to explain the information to be given to an HIV-positive mother regarding infant feeding. Findings revealed that 63.6% of NMs, 77.1% of PNs, 64% of ENs and 60% of ENAs could correctly explain that they would encourage the woman to take ARVs, continue EBF and explain the risks of MF. Figure 4.2 reveals that 63.6% of NMs, 75.9% of PNs,

76% of ENs and 55% of ENAs could correctly explain the risks of MF including that makes the baby prone to infections and does not provide proper nutrition for the baby. About 63.6% of NMs, 75.9% of PNs, 68% of ENs and 57.8% of ENAs could correctly explain that the advice to be given to a woman with engorged breasts is to encourage frequent feeding and use of hand-milk expression. Sixty-three comma six per cent (63.6%) of NMs, 59% of PNs, 60% of ENs and 48% of ENAs could correctly explain why the code of marketing of breast-milk substitutes prohibits acceptance of free gifts and samples from formula manufacturers by healthcare professionals. This is because it discourages and undermines breastfeeding, promotes mixed-feeding and is against the law.

4.4 NURSES ATTITUDES REGARDING MOTHER-BABY FRIENDLY INITIATIVE

The second objective of this report was to determine nurses' attitudes towards implementation of MBFI. There were 19 items listed to measure the attitudes of nurses on MBFI issues. The respondents rated the aspect on a four-point scale from one (1) strongly disagree to four (4) strongly agree. Strongly agree and agree were combined to indicate the agreement level, and strongly disagree and disagree to give the disagreement level. The attitude frequencies and percentages for all nursing categories are presented in Table 4.3. Attitudes that are in line and support MBFI strategy are referred to as positive whereas views that are not in line with MBFI are negative. The results in this section represent the attitude responses from NMs, PNs, ENs and ENAs respectively.

Table 4.3 Nurses' attitudes regarding MBFI (N: 164)

See next page

| Statement | NM (11) | | PN (83) | | EN (25) | | ENA (45) | |
|---|-----------|-----------|-----------|----------|-----------|-----------|----------|----------|
| | Agree | Disagree | Agree | Disagree | Agree | Disagree | Agree | Disagree |
| I teach women about benefits of EBF. | 8 (72.7%) | 3 (27.3%) | 70(84.3%) | 13 (16%) | 21(84.0%) | 4 (16.0%) | 20 (44%) | 25 (56%) |
| Babies less than six months should be exclusively breastfed. | 8 (72.7%) | 3 (27.3%) | 67(80.7%) | 16(19%) | 18(72.0%) | 7 (28.0%) | 15(33%) | 30 (67%) |
| All nurses must promote, protect and support breastfeeding. | 9 (81.8%) | 2 (18.2%) | 66(79.5%) | 17(20%) | 16(64.0%) | 9 (36%) | 5(11%) | 40(89%) |
| MBFI increases breastfeeding rates. | 8 (72.7%) | 3 (27.3%) | 64(78.0%) | 18(22%) | 18(72.0%) | 7 (28.0%) | 23(51%) | 22 (49%) |
| Exclusive breastfeeding is the optimal feeding for healthy child. | 8 (72.7%) | 3 (27.3%) | 58(69.9%) | 25(30%) | 15(60.0%) | 10 (40%) | 7(16%) | 38 (84%) |
| A woman should be encouraged to walk during labour. | 9 (81.8%) | 2 (18.2%) | 62(74.7%) | 21(25%) | 13(52%) | 12 (48%) | 17 (38%) | 28 (62%) |
| A woman must come with her husband during labour for support. | 9 (81.8%) | 2 (18.2%) | 62(74.7%) | 21 (25%) | 5 (20%) | 20 (80%) | 8 (18%) | 37 (32%) |
| Complementary feeding should be done after six months only. | 9 (81.8%) | 2 (18.2%) | 48(58%) | 35(42%) | 17(68.0%) | 8 (32.0%) | 15 (33%) | 30 (67%) |

| | | | | | | | | |
|---|-----------|-----------|-----------|-----------|------------|-----------|----------|----------|
| MBFI is time consuming and different from our daily practice. | 2 (18.2%) | 9 (81.8%) | 36(43.0%) | 47(57%) | 20 (80.0%) | 4 (20%) | 39 (87%) | 6 (13%) |
| Dummies undermine breastfeeding. | 6 (54.5%) | 5 (45.5%) | 46(55.4%) | 37(45%) | 11(44.0%) | 14(56%) | 5(11%) | 40 (89%) |
| Implementation MBFI is complicated and a serious burden to nurses. | 1 (9.1%) | 10(90.9%) | 33(39.8%) | 50(60%) | 18(72%) | 7(28.0%) | 41(91%) | 4 (9%) |
| MBFI is for dieticians and midwives only. | 1 (9.1%) | 10(90.9%) | 30(36%) | 53(63.9%) | 15(60%) | 10(40%) | 43(96%) | 2(4%) |
| Breastfeeding is for poor people. | 2 (18.2%) | 9 (81.8%) | 25 (30%) | 58(69.9%) | 14(56%) | 11(54.0%) | 30 (67%) | 15 (33%) |
| Babies should be given water, food, formula before six months. | 1 (10.0%) | 9 (90%) | 20(24%) | 63(75.9%) | 18 (72%) | 7(28%) | 35 (78%) | 10 (22%) |
| A woman in labour should be starved. | 1 (9.1%) | 10(90.9%) | 18(22%) | 65(78%) | 11 (44%) | 14(56%) | 39 (87%) | 6(13 %) |
| I always avoid invasive procedures like frequent PVs and early rupture of membranes during labour | 9 (81.8%) | 2 (18.2%) | 30(36%) | 53(64%) | 3(12%) | 22(88%) | 2 (4%) | 43 (96%) |
| A woman should assume her position of choice | 9 (81.8%) | 2 (18.2%) | 47 (56%) | 37(44%) | 6 (24%) | 19 (76%) | 12 (27%) | 33 (73%) |
| Skin-to-skin causes hypothermia. | 2 (18.2%) | 9 (81.8%) | 20 (24%) | 63(76%) | 19(76%) | 6(24.0%) | 37 (82%) | 8 (18%) |
| Working mothers are not allowed to breastfeed. | 2 (18.2%) | 9 (81.8%) | 16(19%) | 67(80.7%) | 19 (76%) | 6(24%) | 32(71%) | 13(21%) |

As reflected in Table 4.3, the majority of nurses agreed that they taught women about the benefits of EBF although there were few who disagreed. About 4.8% of PNs and 4.4% ENAs were neutral. Most nurses in this study also agreed that babies up to the age of six months should be exclusively breastfed. According to Table 4.3, 72.7% of NMs, 78% of PNs, 72% of ENs and 51% of ENAs agreed that MBFI increases breastfeeding rates. These nurses had positive attitudes to MBFI and its contribution to increasing breastfeeding rates. Table 4.3 also shows that most agreed that a woman must bring her husband during labour for support. Also, these nurses were positive about the presence of spouses for support during labour. Table 4.3 reveals that the majority of ENs and ENAs agreed that MBFI is time-consuming and different from their daily practice, and most NMs and PNs were in disagreement with the statement.

In this study, 81.8% of NMs, 69.9% of PNs, 54% of ENs and 33% of ENAs did not agree with the statement that breastfeeding is for poor people. They were positive about breastfeeding for all women, irrespective of socioeconomic status. Table 4.3 reveals that the majority of nurses disagreed that skin-to-skin causes hypothermia. This statement aimed to determine the attitude of nurses with regards to skin-to-skin contact and these results show a positive attitude towards skin-to-skin contact between the mother and the baby as they did not perceive it to cause hypothermia. There were few nurses who agreed that skin-to-skin causes hypothermia and these nurses were negative toward skin-to-skin contact between the mother and the baby. Furthermore the results revealed that most nurses in this study disagreed with the statement that working mothers are not allowed to breastfeed. This shows that these nurses had positive attitudes towards the continuation of breastfeeding even if the mother is working although there were few who agreed that working mothers are not allowed to breastfeed.

4.5 NURSES PRACTICES TOWARDS MOTHER-BABY FRIENDLY INITIATIVE

The third objective of this study was to determine the attitudes of nurses regarding MBFI implementation. The respondents were asked to indicate the level of occurrence of practices related to MBFI. The Likert scale ranged from

one (1 = never) to five (5 = always). This section on methods is divided into three sub-sections, namely: practices for successful breastfeeding, mother-friendly care and; practices related to HIV and infant feeding.

4.5.1 Practices for successful breastfeeding

This section shows the frequencies and percentages of all nursing categories with regards to practices for successful breastfeeding. This aimed at identifying the practices of nurses' that would support successful initiation of breastfeeding and continuation of EBF up to at least six months after birth. The responses of nurses with regards to practices for successful breastfeeding are represented in Table 4.4.

Table 4.4 Nurses Practices for successful breastfeeding (N: 164)

See next page

Table 4.4. Nurses' practices for successful breastfeeding (N: 164)

| Practices | NM (11) | | | PN (83) | | | EN (25) | | | ENA (45) | | |
|------------------------------------|--------------|-----------|--------------|--------------|-----------|--------------|--------------|-----------|--------------|--------------|-----------|--------------|
| | Always/Often | Sometimes | Never/Rarely | Always/Often | Sometimes | Never/Rarely | Always/Often | Sometimes | Never/Rarely | Always/Often | Sometimes | Never/Rarely |
| Referring mother to support groups | 7 (63.6%) | 3 (27.3%) | 1 (9.1%) | 60(72.5%) | 6 (7.5%) | 17(20.0%) | 13(52.0%) | 4 (16.0%) | 8(32.0%) | 21(46.7%) | 7 (15.6%) | 17(37.8%) |
| Exclusive breastfeeding | 6 (54.5%) | 3 (27.3%) | 2 (18.2%) | 59(70.9%) | 15(17.7%) | 9 (11.4%) | 16(64.0%) | 2 (8.0%) | 7(28.0%) | 19(42.2%) | 9 (20.0%) | 17(37.8%) |
| Demonstrate hand-milk expression | 7 (63.6%) | 2 (18.2%) | 2 (18.2%) | 58(69.6%) | 7 (8.9%) | 18(21.5%) | 14(56.0%) | 3 (12.0%) | 8(32.0%) | 21(46.7%) | 8 (17.8%) | 16(35.6%) |
| Early initiation of breastfeeding | 6 (54.5%) | 3 (27.3%) | 2 (18.2%) | 58(69.6%) | 11(13.9%) | 14(16.5%) | 15(60.0%) | 3 (12.0%) | 7(28.0%) | 20(44.4%) | 5 (11.1%) | 20(44.4%) |
| Encourage roaming-in | 5 (45.5%) | 3 (27.3%) | 3 (27.3%) | 55(67.1%) | 14(16.5%) | 14(16.5%) | 13(52.0%) | 4 (16.0%) | 8(32.0%) | 21(46.7%) | 5 (11.1%) | 19(42.2%) |
| Assistance with breastfeeding | 5 (45.5%) | 4 (36.4%) | 2 (18.2%) | 59(70.9%) | 8 (10.1%) | 16(19.0%) | 14(56.0%) | 3 (12.0%) | 7(28.0%) | 19(42.2%) | 8 (17.8%) | 18(40.0%) |
| Promote feeding on demand | 8 (72.7%) | 2 (18.2%) | 1 (9.1%) | 54(65.0%) | 11(13.8%) | 18(21.3%) | 12(48.0%) | 3 (12.0%) | 10(40.0%) | 14(31.1%) | 11(24.4%) | 20(44.4%) |
| Doing early skin-to-skin | 5 (45.5%) | 5 (45.5%) | 1 (9.1%) | 53(63.7%) | 12(15.0%) | 18(21.3%) | 11(44.0%) | 5 (20.0%) | 9(36.0%) | 19(42.2%) | 6 (13.3%) | 20(44.4%) |

Table 4.4 reveals that 63.6% of NMs, 72.5% of PNs, 52% of ENs and 46.7% of ENAs indicated they referred mothers to support groups for help with breastfeeding. About 9.1% of NMs, 20% of PNs, 32% of ENs and 37.8% of ENAs never referred mothers to support groups.

Table 4.4 reveals that 54.5% of NMs, 70.9% of PNs, 64% of ENs and 42.2% of ENAs indicated they practiced EBF. About 63.6% of NMs, 69.6% of PNs, 56% of ENs and 46.7% of ENAs teach and demonstrate hand-milk expression to women for maintenance of breastfeeding. Only 18.2% of NMs, 21.5% of PNs, 32% of ENs and 35.6% of ENAs never taught and demonstrated hand-milk expression to breastfeeding mothers. Table 4.4 reveals that 45.5% of NMs, 63.7% of PNs, 44% of ENs and 42.2% of ENAs indicated they practiced early skin-to-skin contact between the mother and the baby immediately after birth. About 9.1% of NMs, 21.3% of PNs, 36% of ENs and 44% ENAs never practiced skin-to-skin contact between the mother and the baby immediately after birth.

4.5.2 Mother-Friendly Care

Seven items aimed to identify the practices of nurses with regards to mother-friendly care. Mother-friendly is one the three additional items on the global IYCF policy and the primary goal of mother-friendly care is to improve the wellbeing of all pregnant women, labouring women and postpartum women (DoH, 2014:34). This section shows the practice frequencies and percentages of all nursing categories with regards to the important aspects of mother-friendly care. The nurses' mother-friendly care practices are represented in Table 4.5.

Table 4.5 Nurses' mother-friendly care practices (N: 164)

See next page

Table 4.5 Nurses' mother -friendly care practices (N:164)

| Practices | NM (n-11) | | | PN (n-83) | | | EN (n-25) | | | ENA (n-45) | | |
|---|--------------|-----------|--------------|--------------|-----------|--------------|--------------|-----------|--------------|--------------|--------------|--------------|
| | Always/Often | Sometimes | Never/Rarely | Always/Often | Sometimes | Never/Rarely | Always/Often | Sometimes | Never/Rarely | Always/Often | Always/Often | Never/Rarely |
| Allow the woman to take light meals and water during labour. | 6 (54.5%) | 1 (9.1%) | 4 (36.4%) | 57(68.7%) | 9 (11.3%) | 17(20.0%) | 14(56.0%) | 1 (4.0%) | 10(40.0%) | 21(46.7%) | 6 (13.3%) | 18(40.0%) |
| Teaching and demonstrating to the woman about positioning, attachment and feeding cues. | 8 (72.7%) | 1 (9.1%) | 2 (18.2%) | 57(68.7%) | 6 (7.5%) | 20(23.8%) | 12(48.0%) | 4 (16.0%) | 9 (36.0%) | 20(44.4%) | 4 (8.9%) | 21(46.7%) |
| Teaching and demonstrating to the woman how to do hand-milk expression. | 8 (72.7%) | 2 (18.2%) | 1 (9.1%) | 54(64.9%) | 15(18.2%) | 14(16.9%) | 15(60.0%) | - | 10(40.0%) | 20(44.4%) | 4 (8.9%) | 21(46.7%) |
| Advise her on non-pharmacological techniques for pain. | 7 (63.6%) | 2 (18.2%) | 2 (18.2%) | 59(70.9%) | 8(10.1%) | 16(19.0%) | 12(48.0%) | 3 (12.0%) | 10(40.0%) | 18(40.0%) | 10(22.2%) | 17(37.8%) |
| Encourage woman to bring a companion during labour. | 7 (63.6%) | 3 (27.3%) | 1 (9.1%) | 52(62.5%) | 11(13.8%) | 20(23.8%) | 13(52.0%) | 2 (8.0%) | 10(40.0%) | 20(44.4%) | 7 (15.6%) | 18(40.0%) |
| Encouraging the woman to walk around during labour. | 7 (63.6%) | 1 (9.1%) | 3 (27.3%) | 55(66.2%) | 9(11.3%) | 19(22.5%) | 14(56.0%) | 1 (4.0%) | 10(40.0%) | 15(34.1%) | 11(25.0%) | 18(40.9%) |
| Let the woman assume her position of choice. | 6 (54.5%) | 2 (18.2%) | 3 (27.3%) | 55(66.2%) | 9(11.3%) | 19(22.5%) | 15(58.3%) | 2 (8.3%) | 8 (33.3%) | 17(37.8%) | 8 (17.8%) | 20(44.4%) |

Table 4.5 reveals that 54.5% of NMs, 68.7% of PNs, 56% of ENs and 46.7% of ENAs allow women to take light meals and water during labour. However, about 36.4% of NMs, 20% of PNs, 40% of ENs and 40% of ENAs never allow labouring women to take light meals and water. In this study, 72.75% of NMs, 68.7% of PNs, 48% of ENs and 44% of ENAs asserted that they were teaching and demonstrating positioning, attachment and feeding cues to the women. About 18.2% of NMs, 23.8% of PNs, 36% of ENs and 46.7% of ENAs never taught and demonstrated positioning, attachment and feeding cues.

Table 4.5 also shows that 63.6% of NMs, 62.5% of PNs, 52% of ENs and 40% of ENAs encouraged women to bring companions during labour. Only 9.1% of NMs, 23.8% of PNs, 40% of ENs and 40% of ENAs did not encourage women to bring companions during labour. The findings revealed that 63.6% of NMs, 66.2% of PNs, 56% of ENs and 40% ENAs were encouraging women to walk around during labour. However, 27.3% of NMs, 22.5% of PNs, 40% of ENs and 40.9% of ENAs never encouraged women to walk during labour.

4.5.3 Practices related to HIV and Infant Feeding

Eight factors were asked to identify nurses' practices regarding HIV and infant feeding. HIV and infant feeding are also one of the additional items on the ten steps for successful breastfeeding (DoH, 2014:34). This section shows the frequencies and percentages of all nursing categories with regards to HIV and infant feeding. The nurses' practices on HIV and infant feeding are represented in Table 4.6.

Table 4.6 Nurses' practices on HIV and infant feeding (N: 164)

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Table 4.6 Nurses' practices on HIV and infant feeding (N:164)

| Statement | NM (n-11) | | | PN (n-83) | | | EN (n-25) | | | ENA (n-45) | | |
|--|---------------|-----------|---------------|---------------|------------|---------------|---------------|-----------|---------------|---------------|-----------|---------------|
| | Always/ often | Sometimes | Never/ rarely | Always/ often | Sometimes | Never/ rarely | Always/ often | Sometimes | Never/ rarely | Always/ often | sometimes | Never/ rarely |
| Encouraging woman to use ARVs during breastfeeding. | 8 (72.7%) | 1 (9.1%) | 2 (18.2%) | 60 (72.2%) | - | 23 (27.7%) | 16 (64.0%) | - | 9 (36.0%) | 23 (51.1%) | - | 22 (48.9%) |
| Advise woman to use condoms during breastfeeding. | 8 (72.7%) | 2 (18.2%) | 1 (9.1%) | 58 (69.8%) | - | 25 (30.1%) | 15 (60.0%) | - | 10 (40.0%) | 25 (55.6%) | - | 20 (44.4%) |
| Advise woman to avoid mixed-feeding. | 8 (72.7%) | 2 (20.0%) | - | 52 (62.6%) | - | 31 (37.3%) | 13 (52.0%) | - | 12 (48.0%) | 26 (57.8%) | - | 19 (42.2%) |
| Promote exclusive breastfeeding only. | 8 (72.7%) | 1 (9.1%) | 2 (18.2%) | 55 (66.2%) | - | 28 (33.7%) | 14 (56.0%) | - | 11 (44.0%) | 25 (55.6%) | - | 20 (44.4%) |
| Counsel the woman about HIV and safe infant feeding. | 8 (72.7%) | 2 (18.2%) | 1 (9.1%) | 57 (68.6%) | - | 26 (31.3%) | 13 (52.0%) | - | 12 (48.0%) | 22 (48.9%) | - | 23 (51.1%) |
| Encourage woman to avoid nipple damage. | 8 (72.7%) | 1 (9.1%) | 2 (18.2%) | 54 (65.0%) | - | 29 (34.9%) | 14 (56.0%) | - | 11 (44.0%) | 22 (48.9%) | - | 23 (51.1%) |
| Encourage the woman to disclose her HIV status. | 9 (81.8%) | 1 (9.1%) | 1 (9.1%) | 47 (56.6%) | 12 (14.4%) | 24 (28.9%) | 10 (40.0%) | - | 15 (60.0%) | 17 (38.6%) | 5 (11.1%) | 23 (51.1%) |
| Promote and create a conducive environment for male partner participation in infant feeding. | 7 (63.6%) | 2 (18.2%) | 2 (18.2%) | 34 (40.9%) | - | 49 (59.0%) | 7 (28.0%) | - | 18 (72.0%) | 14 (31.8%) | 3 (6.0%) | 28 (62.2%) |

Table 4.6 reveals that 72.7% of NMs, 72.2% of PNs, 64% of ENs and 51.1% of ENAs indicated they encourage women to use ARVs during the breastfeeding period. However, 18.2% of NMs, 27.7% of PNs, 36% of ENs and 48.9% of ENAs never encouraged women to use ARVs during the breastfeeding period.

About 72.7% of NMs, 69.8% of PNs, 60% of ENs and 55.6% of ENAs indicated they advised women to use condoms during breastfeeding. Only 9.1% of NMs, 30.1% of PNs, 40% of ENs and 44.4% of ENAs never recommended that women use condoms during breastfeeding. About 18.2% of NMs sometimes counselled women to use condoms during breastfeeding.

Also, Table 4.6 reflects that 81.8% of NMs, 56.6% of PNs, 40% of ENs and 38.6% of ENAs indicated that they encouraged women to disclose their HIV status. In this study, 60% of ENs and 51.1% of ENAs never encouraged women to disclose their HIV status.

Table 4.6 reveals that 63.6% of NMs, 40.9% of PNs, 28% of ENs and 31.8% ENAs promoted and created conducive environment for male partner participation in infant feeding. However, 18.2% of NMs, 59% of PNs, 72% of ENs and 62.2% of ENAs indicated that they did not promote a conducive environment for male partner participation in infant feeding. The findings show that 18.2% of NMs and 6.0% of ENAs sometimes supported and created a favourable environment for male partner involvement in infant feeding.

4.6 DETERMINING THE RELATIONSHIP BETWEEN KNOWLEDGE, ATTITUDES AND PRACTICES OF NURSES REGARDING MBFI USING PEARSON'S CORRELATION COEFFICIENT

The last objective of the study was to determine the relationship between KAP of nurses regarding MBFI. The Pearson correlation coefficient was used to ascertain the extent of the relationship between the variables. Pearson's coefficient of correlation measures the linear association between two variables measured on an interval or ratio scale (Polit & Beck, 2012:365). Hair et al. (2014:134) state that the correlation coefficient indicates the strength of the association between two metric variables

where a positive (+) or negative (-) indicates the direction of the relationship. The value ranges from -1 to 1. Furthermore, they assert that, 'if $r = .10 - .29$, then there is a low effect (low correlation); $r = .30 - .49$ has a medium effect (moderate correlation) and $r = .50 - .99$ has a large effect (strong correlation)' (Hair et al., 2014:134). The test was carried out at the 5% level of significance and the p-value approach was used to determine the degree of the correlation between the variables. A p-value less than .05 would indicate a lack of correlation between the variables, however, here a p-value of less than .01 indicated a highly significant relationship. The results of the correlations appear in Table 4.7.

Table 4.7: Pearson correlation coefficients of the dimensions

| Table 4.7: Pearson correlation coefficients of the dimensions | | | | | | |
|---|-----------------------|-------------------|-----------|---|--------------------------------|---|
| Item | Orientation into MBFI | Knowledge on MBFI | Attitudes | MBFI practices for successful breastfeeding | Mother-friendly care practices | Practices related to HIV and infant feeding |
| Orientation into MBFI | - | | | | | |
| Knowledge on MBFI | .454** | - | | | | |
| Nurses attitudes | .402** | .835** | - | | | |
| Practices for successful breastfeeding | .379** | .831** | .860** | - | | |
| Mother-friendly care practices | .351** | .811** | .802** | .913** | - | |
| Practices related to HIV and infant feeding | .379** | .810** | .835** | .875** | .844** | - |
| * $p < .05$ and ** $p < .01$ | | | | | | |

The results are as follows:

- Orientation into MBFI had a moderately significant positive relationship to all knowledge on MBFI ($r = .454; p < .001$), nurse's attitudes ($r = .402; p < .001$), practices for successful breastfeeding ($r = .379; p < .001$), mother-friendly care practices ($r = .351; p < .001$), and practices related to HIV and infant feeding ($r = .379; p < .001$).
- Knowledge about MBFI has a strong positive significant relationship to nurses' attitudes ($r = .835; p < .001$), practices for successful breastfeeding ($r = .831; p < .001$), mother-friendly care practices ($r = .811; p < .001$), HIV and infant feeding related practices ($r = .810; p < .001$) and practices ($r = .853; p < .001$).
- Nurses' attitudes had a strong positive significant relationship with practices for successful breastfeeding ($r = .860; p < .001$), mother-friendly care practices ($r = .802; p < .001$) and those related to HIV and infant feeding ($r = .835; p < .001$).
- MBFI practices for successful breastfeeding had a strong positive significant relationship with mother-friendly care practices ($r = .913; p < .001$), practices related to HIV and infant feeding ($r = .875; p < .001$).
- Mother-friendly care practices have a strong positive significant relationship with practices related to HIV and infant feeding ($r = .844; p < .001$).

4.7 DISCUSSION

This study found that the four nursing categories, namely, NMs (100%), PNs (93.9%), ENs (91.7%) and ENAs (68%) indicated that they teach pregnant women about benefits of breastfeeding and have heard about MBFI. The ENAs (64.4%) said that they have never heard of MBFI and this could be due to a lack of training on breastfeeding management amongst ENAs. According to step two of the global steps for successful breastfeeding, all clinical staff should be trained on 20-hour course for breastfeeding management and the MBFI package recommends that orientation of staff to MBFI implementation should take place within the first six months of their employment (UNICEF, 2009a:24). The three nursing categories, NMs (100%), PNs (65.1%) and ENs (54.2%) further reported that they had received formal training in lactation management while the ENAs (73.3%) indicated they never received formal training on lactation management. This is not in line with step two from the UNICEF/WHO

(2009a:32) global steps for successful breastfeeding, which requires that all clinical staff should receive formal training on 20-hours lactation management within their first six months of their appointment. Furthermore, the lower nursing categories, namely ENs (64%) and ENAs (66.7%) indicated that they do not know the IYCF policy of their facilities because they did not attend any orientation. Also, it is a known fact that senior nurses do not give the juniors reports after attending meetings and workshops. Daniels and Jackson (2011:64) agree as the enrolled nurses and assistant nurses who participated in their study were never orientated on their facility regarding IYCF policies irrespective of the WHO/UNICEF's (2009a:32) recommendation. They state that staff should be orientated to their IYCF policy within the first six months of their appointment.

Regarding the duration of EBF, all the nursing categories knew that the duration of EBF is six months although the PNs (90.4%), NMs (72.7%) and ENs (72%) scores were higher than those of the ENAs (66.7%) score. This is similar to the study conducted by Daniels and Jackson (2011:34) where they found that most professional nurses (92.3%) and nursing managers (87.5%) knew the benefits of EBF and its duration. WHO/UNICEF (2009a:34) states that all pregnant women and breastfeeding women should be taught about EBF and its duration. This implies that all nurses, irrespective of nursing category, should have basic information about the duration of breastfeeding to avoid mixed-feeding practices before the baby's age reaches six months. In South Africa, the NIYCFP recommend that all women should be encouraged to breastfeed their infants for six months exclusively, irrespective of HIV status and all nurses who assist women during pregnancy and after birth should have information on basic infant feeding practices (DoH, 2013a:20).

The findings revealed that NMs (81.8%), PNs (81.9%), ENs (64%) and ENAs (71%) could explain the benefits of skin-to-skin contact between mother and baby. It is evident from the results that NMs and PNs were more knowledgeable about the benefits of skin-to-skin between the mother and the baby than ENs and ENAs. A study conducted by Napoli (2015:74) found that 97% of nurses who participated in her study perceived skin-to-skin to have benefits to mother and baby, although her study did not ask them to indicate the benefits of skin-to-skin. UNICEF (2009a:89) recommends that babies should be placed skin-to-skin immediately after birth without any delay and this is associated with many health benefits such as bonding, prevention of

hypothermia and providing the basis for successful breastfeeding. The findings of this study revealed that NMs (90.9%) and PNs (83.1%) were more knowledgeable about the invasive procedures to be avoided in labour that may interfere with successful breastfeeding than ENs (68%) and ENAs (66.7%). This may be associated with the fact that ENs and ENAs do not have midwifery background and their scope of practice does not allow them to perform such procedures on labouring women (South African Nursing Council (SANC), 2015:15).

This study found that NMs (81.8%), PNs (73.5%), ENs (68%) and ENAs (55.6%) could correctly define EBF. Nwosu and Eke (2011:660) concur with this as the majority (80%) of respondents in their study were knowledgeable about EBF and could explain the difference between EBF and complementary feeding. It is also important to take note that more than (40%) of ENAs could not define EBF and this can be associated with the fact that the level of training of ENAs is lower than that of other nursing categories. About 73.3% of ENAs stated that they never received formal training on lactation management. Furthermore, NMs (63.6%), PNs (77.1%), ENs (64%) and ENAs (60%) could explain that the information to be given to an HIV-positive woman regarding infant feeding is to encourage the woman to take ARVs, continue EBF and explain the risks of mixed-feeding.

Although all nursing categories scored more than 50% on the information to be given to HIV positive women about infant feeding, PNs (77.1%) were more knowledgeable than other nursing categories. This differs from the study by Janson and Wakäng (2010:26) who established that few nurses adhered to WHO recommendations on infant feeding for HIV-positive women and they lacked knowledge about the association between HIV and infant feeding. Research conducted by Goga, Doherty, Jackson, Sanders, Colvin, Chopra and Kuhn (2012:06) found that 271 HIV-positive women avoided breastfeeding and 67% of them fed their infants formula milk and other nutritive and non-nutritive liquids and solids. The reason was attributed to the little information given to them by health professionals during the postpartum period (Goga et al., 2012:08). The WHO (2010b:16) recommends that all HIV-infected pregnant women are encouraged to exclusively breastfeed their infants for at least six months with proper highly active antiretroviral therapy (HAART) in high-income and

low-income countries owing to the established advantages of breastfeeding for both mother and infant.

In this study, all the nursing categories could explain the dangers of MF, although ENs (76%) and PNs (75.9%) were more knowledgeable than NMs (63.6%) and ENAs (55.6). Nevertheless, all nurses in this item scored more than 50% though it is not a good indicator because all nurses should have basic knowledge of the dangers of MF as it poses serious health risks to the neonate. UNICEF (2009b:34) states that all clinical staff should have information about safe infant feeding methods and mixed-feeding practices be discouraged by all healthcare professionals. A study conducted by Mgolozeli and Shilubane (2015:85) in a rural community in Limpopo amongst mothers and caregivers of neonates found that a lack of knowledge about safe infant feeding practices was the primary contributory factor leading to the MF of neonates. This was attributed to lack or limited information received from the health professionals by these mothers (Mgolozeli & Shilubane, 2015:86). The WHO (2012a:13) and DoH (2013a:20) recommends that babies should be given only breastmilk or formula before six months and that any other food or milk is regarded as MF unless medically prescribed by a health practitioner. Kuzma (2013:16) established that most rural mothers (98%) in their study breastfed their babies, but EBF up to the age of six months was not commonly understood and only practiced by 17% of mothers. They further argued that the main cause was the lack of knowledge from healthcare professionals who never warned them about MF and when to start complementary feeding (Kuzma, 2013:18).

The three nursing categories, namely NMs (63.6%), PNs (59%) and ENs (60%) could explain why the code of marketing for breast milk substitutes prohibits acceptance of free gifts and samples from formula manufacturers by healthcare professionals. The reason for this was that it discourages and undermines breastfeeding, promotes mixed-feeding and it is against the law. Only the ENAs (48.9%) could not clarify the reasons. However, although the three categories, namely NMs, PNs and ENs scored more than 50% on code compliance for breastmilk substitutes, this is still not acceptable as MBFI strategy has zero tolerance for anything that undermines breastfeeding. All health professionals are expected to have basic background information on code compliance for breastmilk substitutes and the UNICEF

(2009a:77) strictly prohibits the acceptance of free gifts from formula manufacturers as it is a way of promoting and supporting breastmilk substitutes. A study by Witherspoon (2013:72) found that the majority (87%) of nurses who participated in their study had inadequate knowledge of the code and some of them accepted free gifts from formula manufacturers. The ENAs lower knowledge score may relate to the fact that they did not attend training on lactation management that highlights the important aspects of the code of marketing of breastmilk.

This analysis reflected that most nurses agreed that they teach women about benefits of EBF. From these findings, it is obvious that more than 70% in all nursing categories were positive about teaching women about benefits of EBF. Radzynski and Callister (2015:107) agree as in their qualitative study where three of the four (75%) certified nurse-midwives, who participated stated they routinely provided information to women prenatally who enquired about infant feeding and always explained the benefits of breastfeeding to all women. Mitchell (2011:67) also asserted that more than 70% of dietetics interns who participated in their study supported and taught women about benefits of EBF. Swerts, Westhof, Bogaerts and Lemiengre (2016:36) found that Midwives valued breastfeeding education and support as a significant part of their role as postnatal midwives. Diop, Uys, Ugochukwu, Karani and Okoronkwo (2013:125) further argued that one of the roles of nurses is to teach the community about health-related issues that may threaten their survival.

Results showed that the majority of nurses in this study agreed that babies less than six months should be exclusively breastfed. This implies that all nursing categories have a positive attitude towards EBF and would promote EBF for all babies who are less than six months. The study by Daniels and Jackson (2011:33) corresponds as it found that most of the nurses agreed that a baby of less than six months should not be given water, only breastmilk up to six months. This also concurs with the research by Gyampoh, Otto and Aryeetey (2014:4) where most mothers agreed that babies less than six months should be given breastmilk only and could indicate the appropriate age of introduction of foods. This is further supported by Kramer and Kakuma (2012:8) who found that infants exclusively breastfed for six months experienced less morbidity from gastrointestinal infection than those who were mixed breastfed as of three or four months. Furthermore, from either developing or

developed countries, there were no deficits in growth among infants who were exclusively breastfed for six months or longer. A study by Sigman-Grant and Kim (2016:350) found that many of the nurses who participated in their study showed an above average outlook in talking to women about EBF for babies less than six months as this often prevents gastro-intestinal infections and pneumonia.

All the nursing categories agreed that MBFI increases breastfeeding rates although their attitude scores differed. This shows that respondents were aware of the impact of MBFI on breastfeeding rates and were optimistic about its association. This agrees with the research conducted by Atchan, Davis and Foureur (2013:15) who argued that the MBFI implementation in most developed countries has demonstrated an increase in rates of breastfeeding initiation and duration. Munn, Newman, Mueller, Phillips and Taylor (2016:227) state that the breastfeeding duration also appears to increase when mothers have better exposure to Baby-Friendly practices and the ten steps of the MBFI, step three, prenatal education and step ten, postnatal breastfeeding support have the potential to significantly impact maternal breastfeeding decisions. This also concurs with Yotebieng, Labbok, Soeters, Chalachala, Lapika, Vitta and Behets (2015:547) who found that the implementation of MBFI had significant increase on EBF before six months and promoted optimal child survival. Schmied, Gribble, Sheehan, Taylor and Dykes (2011:208) qualitative study reported that most health professionals who participated indicated that MBFI had health benefits for infants and women from increased breastfeeding rates to the benefits to society from healthier children and later as adults.

This study found that the majority of nurses agreed that the woman should bring her husband for support during labour. These nurses have positive attitudes towards support and promotion of companionships during labour as they have been proven to play a significant role in the provision of emotional support during the delivery process (Yargawa & Leonardi-Bee, 2015:608). A study conducted by Alexander, Mustafa, Emil, Amekah, Engmann, Adanu and Moyer (2014:678) found that 29 out of 50 women (58%) preferred a lay companion during facility-based labour and delivery, whereas 21 (42%) preferred to deliver alone with the nurses in a facility. Male partners were expected to provide emotional support and 'witness her pain' (Alexander et al., 2014:678). Female companions were supposed to provide emotional support, as well

as instrumental, informational and appraisal support (Alexander et al., 2014:678). Yargawa and Leonardi-Bee (2015:608) also asserted that male involvement as companions during intrapartum care was significantly associated with reduced odds of postpartum depression and with improved utilisation of maternal health services.

The findings revealed that most of nurses in all categories disagreed with the statement that MBFI is time-consuming and different from their daily practice. This alludes to the fact that NMs and PNs have real insight into the MBFI strategy implementation and they understand the implications for not adhering to the global call for breastfeeding promotion. Another reason may be that NMs and PNs have training on 20-hour lactation management that emphasises MBFI strategy implementation. This is similar to the report by Daniels and Jackson (2011:36) in which most unit managers and professional nurses showed positive attitudes towards MBFI implementation and highlighted that it increases breastfeeding rates. However, there were few nurses who agreed that MBFI is time-consuming and different from their daily practice. Lower nursing categories had a more negative attitude towards MBFI, irrespective of its efforts to increase breastfeeding rates globally. This may be because ENs and ENAs do not have insight into the implications for not meeting the good practice standards prescribed by the WHO (2012a:46) and are not actively involved in policy implementation since they work under supervision. Research by Witherspoon (2013:67) differed as most nurses who participated demonstrated a positive attitude towards the implementation of MBFI.

The findings revealed that the two nursing categories, namely NMs and PNs agreed that dummies undermine breastfeeding. This positive attitude showed that these respondents supported step nine for successful breastfeeding, which states that infants should not be given dummies or pacifiers as it undermines breastfeeding (UNICEF, 2009a:77). However, the majority of ENs and ENAs disagreed to the statement that dummies undermine breastfeeding. This implies that these participants supported the use of dummies and pacifiers and would eventually recommend dummies to breastfeeding mothers. A study conducted by Jaafar, Ho, Jahanfar and Angolkar (2016:8) found that dummy use in healthy term breastfeeding infants did not significantly affect the prevalence or duration of exclusive and partial breastfeeding up to four months of age. They further argued that pacifier or dummy

use before or after breastfeeding does not affect the duration of breastfeeding if the mother is motivated to breastfeed her infant (Jaafar et al., 2012:8).

This study found that the majority of nurses disagreed that breastfeeding is only for poor people. This was a negative statement that aimed to determine the attitude of nurses with regards to breastfeeding and socioeconomic status. This implies that respondents in this study would support and promote breastfeeding irrespective of socioeconomic status. This is supported by Petry (2013:3) who stated that breastfeeding rates were low amongst the women from poorer socioeconomic backgrounds and higher amongst the richer women. They further argued that women from a poor socioeconomic background were eager to breastfeed but stigmatised by their communities (Petry, 2013:4). A study by Hansen (2016:416) found that breastfeeding was associated with life investments for all women irrespective of the socioeconomic background. They further argued that breastfeeding was the optimal feeding choice for all children and all mothers should be motivated and supported, regardless of their economic class, race and religion (Hansen, 2016:416).

The results revealed that most nurses disagreed with the statement that a woman in labour should be starved. This implies that the respondents were negative about the starvation of women during labour and believed a woman in labour should be given light meals and water as recommended by UNICEF (2009a:97). The researcher believes these nurses were in support of good 'mother-friendly care practices' and would encourage all labouring women under their care to take enough fluids and light meals during labour for energy. Singata, Tranmer and Gyte (2013:98) support this as they found no evidence for benefits of restricting food and water to labouring women and further argued that giving fluids and light meals is a great practice leading to positive outcomes during labour.

Regarding the statement that skin-to-skin cause's hypothermia, the majority of NMs and PNs disagreed to the statement whereas most ENs and ENAs were in agreement. This implies that respondents in this study were aware that skin-to-skin prevents hypothermia instead of causing it. This assertion aimed to determine their attitude towards skin-to-skin contact and the participants were positive as they did not agree that skin-to-skin causes hypothermia. The benefits of skin-to-skin contact

between mother and baby within the first hour after delivery are also supported by Ferreira, Vaz, Aparício and Duarte (2016:70). They found evidence that early skin-to-skin contact immediately after birth is a potential sensory stimulus, which includes new-born warming, tactile and active stimulation, respiratory rates and level of blood glucose, reduces crying and promotes breastfeeding. According to Hughes, Rodriquez-Carter, Hill, Miller and Gomez (2016:486), skin-to-skin contact in the early postpartum period is an effective intervention to increase EBF during the hospital stay and foster future positive breastfeeding outcomes.

In this study, the majority of nurses disagreed with the statement that working mothers are not allowed to breastfeed. This negative statement aimed to determine the nurse's attitudes with regards to breastfeeding and working. Respondents were positive about the continuation of breastfeeding amongst working mothers. A study by Dagher, McGovern, Schold and Randall (2016:194) on determinants of breastfeeding initiation and cessation among employed mothers found that the chances of breastfeeding initiation were higher for women who held professional jobs, had graduate degrees and family or friends who breastfeed. They also found that women who took shorter maternity leave were more likely to stop breastfeeding in the first six months postpartum while those who had longer maternity leave could breastfeed up to six months (Dagher et al., 2016:194). Kumar, Arora, Midha and Gupta (2015:7) found that working women showed a typical preference for institutional deliveries which increased breastfeeding rates. About 95% of working women who participated showed a positive attitude towards breastfeeding and the majority (87%) were exclusively breastfeeding despite being permanently employed (Kumar et al., 2015:7). Danso (2014:22) asserted that professional working mothers have good knowledge about EBF practice and its benefits, but their full-time employment status and family members' influences undermine and impede the practice of EBF. In South Africa, all breastfeeding women are entitled to two thirty (30) minutes breastfeeding breaks and this was approved to promote and support breastfeeding amongst employed women (DoH, 2013a:23; DoH, 2013b:14).

This study found that NMs (63.6%), PNs (72.5%), ENs (52%) and ENAs (46.7%) indicated that they always referred breastfeeding mothers to support groups for help with breastfeeding. PNs and NMs had higher practice scores than ENs and ENAs. The

influence of nurses to mothers regarding the use of support groups for breastfeeding has been reported by Fox, McMullen and Newburn (2015:147) as the main reason for joining breastfeeding support groups. All women in their study were attending a Baby Cafe breastfeeding support group at the time of the interviews and were, therefore, likely to be those referred and more determined to breastfeed their infants. A study conducted by Renfrew, McCormick, Wade, Quinn and Dowswell (2012:165) found that all forms of support to mothers about breastfeeding increased the time women continued to breastfeed, as well as how long women breastfed without introducing any other types of liquids or foods. Support by both lay supporters and professionals positively impacted breastfeeding outcomes and support only offered if women seek help is usually ineffective (Renfrew et al., 2012:165). A study conducted by Brown, Raynor and Lee (2011:1998) reported that one of the major reasons contributing to the cessation of breastfeeding was the lack of support from health providers and community. They further highlighted that women who were breastfeeding reported that they did not know where to go to when they needed help with breastfeeding, hence they decided to formula feed their infants (Brown et al., 2011:1998). Step ten for successful breastfeeding requires that all health facilities should foster the establishment of breastfeeding support groups and refer mothers on discharge from the hospital or birth centre (UNICEF 2009a:199).

In this study, NMs (54.5%), PNs (70.9%), ENs (64%) and ENAs (42.2%) indicated that they always practiced EBF. PNs had a higher practice score than NMs and ENs and the ENAs had the lowest practice score. Mogre, Dery and Gaa (2016:12) in their study found that mothers with higher levels of education were more likely to report increased practice of EBF than their counterparts. Daniels and Jackson (2011:46) found that more than 80% of nurses who participated practiced EBF and completely promoted EBF for all babies less than six months. These nurses knew the duration of EBF and the benefits thereof, both for mother and baby (Daniels & Jackson, 2011:46). This differs from a report by Dachew and Bifttu (2014:3) on the practices of nurses and midwives indicated that only 35.9% of participants practiced EBF and the majority could breastfeed only up to six months. A study conducted in the North-West Province by Siziba, Jerling, Hanekom and Wentzel-Viljoen (2015:176) found that only 12% of infants of less than six months were exclusively breastfed by their mothers and the rest were on MF.

In this survey, NMs (63.6%), PNs (69.6%), ENs (56%) and ENAs (46.7%) indicated that they teach and demonstrate hand-milk expression to women for maintenance and continuation of breastfeeding. PNs had the highest practice score compared to NMs and ENs, whereas the ENAs had the lowest practice score for demonstrating hand-milk expression. However, Daniels and Jackson (2011:46) found that only 8.9% of the nursing staff could adequately describe the correct hand-milk expressing technique to the breastfeeding mothers. The hand-milk expression technique should be taught to all breastfeeding mothers so that they can continue with EBF even if they are separated from their babies (UNICEF, 2009a:163; DoH, 2013a:23). A study conducted by Williams, Young, Kearney and Keogh (2013:8) on breastfeeding management found hand-milk expression to be the primary technique that can be used by all mothers to continue EBF when separated from their babies due to sickness, school and employment reasons. In their study, Witherspoon (2012: 45) found that more than 90% of nurses assisted women with early initiation of breastfeeding and demonstrated hand-milk expression.

This research found that NMs (45.5%), PNs (63.7%), ENs (44%) and ENAs (42.2%) practiced early skin-to-skin contact between the mother and the baby after birth. PNs had higher practice scores than NMs, ENs and ENAs. A study by Napoli (2015:74) found that 97% of nurses in their group perceived skin-to-skin to have benefits for mother and baby, and most of them would advocate it to their patients. Lucas, Smith and Gephart (2015:135) in their study recommended that EBF should involve frequent mother-infant skin-to-skin contact requiring support and guidance from the nursing staff. The immediate, uninterrupted skin-to-skin care for a minimum of an hour is among the most efficient strategies in maternity settings to promote EBF. Breastfeeding reflexes 'awaken' during skin-to-skin care (Widstrom, Lilja, Aaltomaa-Michalias, Dahllöf, Lintula & Nissen, 2011:82). Ferreira et al. (2016:70) found that early skin-to-skin contact immediately after birth is a potential sensory stimulus, which covers the new-born warming, tactile and active stimulation, respiratory rates and level of blood glucose, reduces crying and promotes breastfeeding.

This study found that NMs (54.5%), PNs (68.7%), ENs (56%) and ENAs (46.7%) indicated that they allowed women to take light meals and water during labour. PNs

had a higher practice score than NMs and ENs and ENAs had the lowest practice score. A study by Singata et al. (2013: 98) found no evidence for benefits of restricting food and water to labouring women. Labour requires enormous amounts of energy, which needs to be replenished to ensure maternal well-being and there should not be interference with the woman's requirement for food and drink during labour and delivery, because in normal childbirth there must be a valid reason to interfere with the natural process (UNCEF, 2009a:89).

In this study, NMs (72.7%), PNs (68.7%), ENs (48%) and ENAs (44.4%) indicated that they teach and demonstrate to women about positioning, attachment and feeding cues. Daniels and Jacobs (2011:37) found that 89% of the nursing staff in their study could demonstrate correct positioning of the baby for breastfeeding, and 91.1% could demonstrate the proper attachment of the baby to the breast. A report in Libya by Goyal, Banginwar, Ziyu and Toweir (2011:74) found poor attachment and positioning amongst first-time mothers and this was attributed to lack of maternal education by health professionals as compared to those have been given instruction. They further argued that breast problems like cracked nipples, mastitis and sore nipples were significantly associated with poor positioning and attachment (Goyal et al., 2011:76).

In this study, NMs (63.6%), PNs (62.5%), ENs (52%) and ENAs (44.4%) indicated that they encouraged women to bring companions during labour. The practice score for encouraging women to bring companions during labour was higher amongst NMs and PNs than ENs and ENAs. A study by Kungwimba, Malata, Maluwa and Chirwa (2013:7) found that most women (76%) used external sources of information on birth companionship such as relatives and friends even though this is a component of routine antenatal care. The nurse at the antenatal clinic did not provide adequate information to the women about the role of companions during labour (Kungwimba et al., 2013:11). Yargawa and Leonardi-Bee (2015:608) found that male involvement during intrapartum care was significantly associated with reduced odds of postpartum depression and with improved utilisation of maternal health services.

The findings revealed that three nursing categories, namely NMs (63.6%), PNs (66.2%) and ENs (56%) indicated that they encouraged women to walk around and during labour. However, the ENAs (40.9%) indicated that they never encouraged women to walk around during labour. The practice score of NMs and PNs was higher

than ENs, and ENAs had the lowest with regards to encouraging women to walk around during labour. This corresponds to the fact that NMs and PNs have background knowledge on management of labour and exercises are usually recommended as part of midwifery management. This differs from Almushait and Ghani (2014:10) where 89% of health professionals in their study taught and informed women about non-pharmacological ways to cope with pain during labour. Deep breath exercises, moving around during labour, massaging and position of choice were encouraged by 90% of midwives who assisted women during labour (Almushait and Ghani, 2014:10). UNICEF (2009a:86) indicated that the recommendations are that all labouring woman should be encouraged to walk, be given massages and encouraged to do breathing exercises during labour as means to deal with pain.

Responses from NMs (72.7%), PNs (72.2%), ENs (64%) and ENAs (51.1%) stated that they encourage women to use ARVs during breastfeeding. This implies that they encouraged amongst breastfeeding women to continue taking their ARTs, although the practice scores of NMs and PNs were higher than those of ENs and ENAs. This concurs with Amboko and Brysiewicz (2015:5) where they found that most nurses who participated in their study were more compliant to EMTCT recommendations and they encouraged women to use ART. Zulliger, Abrams and Myer (2013:1551) found that 89% of HIV-positive women who were breastfeeding were on life-long ARVs and they said that nurses to be the main source of information for their adherence. About 96% of them reported receiving infant feeding counselling and information on ART use while breastfeeding (Zulliger et al., 2013:1551).

The findings revealed that NMs (72.7%), PNs (69, 8%), ENs (60%) and ENAs (55.6%) advise women to use condoms during breastfeeding. Mohammed-Durosinlorun, Abubakar, Adze, Bature, Mohammed, Taingson and Ojabo (2016:191) revealed that (98%) of breastfeeding women in their research were uninformed about condom use by health professionals and there were a high number of mixed-feeding practices observed amongst HIV-positive women. Condom use is the safest method for prevention of HIV transmission and other Sexually Transmitted Infections (STIs) (WHO, 2010b:14). The WHO (2010b:16) recommends all pregnant women and breastfeeding women should be encouraged to use condoms to avoid reinfection and prevent other STIs.

This study found NMs (81.8%) and PNs (56.6%) indicated that they encourage women to disclose their HIV status, whereas ENs (60%) and ENAs (51.1%) never encouraged women to disclose their HIV status. A study by Muluye, Woldeyohannes, Gizachew and Tiruneh (2012:240) found that women who disclosed their HIV status to spouses were more likely to follow the recommended safe infant feeding practices. Health professionals played a crucial role in encouraging women to disclose their HIV status and this 'greatly influenced infant feeding options of HIV-positive mothers when the partner was aware of the HIV status of the mother and involved in the decision' (Muluye et al., 2012:6). In a study conducted by Walcott, Hatcher, Kwena and Turan (2013:1115) most participants stated that disclosure at health facilities provided an opening for education, counselling and testing for HIV with their partners and access to treatment and care. They believed that this could contribute to improved understanding and communication between couples (Walcott et al., 2013:5). A study by Tshweneagae, Oss and Mgutshini (2015:5) regarding disclosure of HIV status to sexual partners by people living with HIV found individuals received support from their partners after admitting their HIV status; similarly, this is associated with increased mutual partner support and adherence to ART.

This study found that NMs (63.6%) had the highest practice score for promotion and creation of a conducive environment for male partner involvement in infant feeding. PNs (59%), ENs (72%) and ENAs (62.2%) never promoted and encouraged male partner participation in infant feeding. Tweheyo, Konde-Lule, Tumwesigye and Sekandi (2010:53) assert that 'men who knew about antenatal care (ANC) services, acquired information from a health worker and whose spouses utilised skilled delivery in the last pregnancy were more likely to accompany their spouses at ANC unlike those who wanted more children and lived more than 5km from the health facility'. A study conducted by Bhatta (2013:6) found that 'men who were uneducated or had primary level education, aged above 25 years, had higher income, formal employment, came from Hindu religion and non-indigenous ethnicities demonstrated greater involvement in maternity care'. Byamugisha, Tumwine, Semiyaga and Tylleskär (2010: 12) reported that 'harsh, critical language directed at Ugandan women by health professionals prevented male participation'. 'Insensitive treatment of men by health providers discouraged them from returning or participating in PMTCT activities and

some providers did not allow men access to ANC settings' (Byamugisha et al., 2010:7). Ladur, Colvin and Stinson (2015:10) found that both men and women interviewed in their study were receptive towards male involvement in PMTCT and men were reluctant to engage with health services due to stigma and negative attitudes from nurses. A study by Theuring, Mbezi, Luvanda, Jordan-Harder, Kunz and Harm (2009:98) established that service providers have a critical role in creating barriers for men to participate in maternity services. A study by Nesane, Maputle and Shilubane (2016:4) in Limpopo found that men were unwilling to take part in maternity care services since they believed it was a women's issue and their culture prohibited men from participating in maternity issues.

In this study, all nurses who understood MBFI principles had a positive attitude to MBFI and implemented the practices regularly in their facilities. Their attitudes have a positive significant relationship with practices for successful breastfeeding, mother-friendly care practices, practices related to HIV and infant feeding.

4.8 CONCLUSION

The results of this study reveal that all nurses who participated in this study had a high mean score for KAP related to MBFI implementation. It is, however, important to note that ENs and ENAs lacked knowledge on some important aspects of MBFI. Also, a significant proportion of the participants either disagreed or strongly disagreed on essential items that are in line with MBFI implementation. Also, some participants either practice or never practiced some aspects vital in MBFI implementation. Furthermore, it is a significant fact that the NMs and PNs were more knowledgeable, had more positive attitudes towards MBFI and their practices more aligned to the MBFI strategy implementation. ENs and ENAs lacked insight into some important aspects, had negative attitudes and never implemented some important aspects that support successful MBFI implementation. This study found a strong relationship between nurses' KAP regarding MBFI implementation.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS, LIMITATIONS AND CONCLUSION

5.1 INTRODUCTION

This chapter outlines the conclusions and recommendations made based on the findings of the study. Factors that placed limitations on the research study are identified and described.

5.2 SUMMARY AND INTERPRETATION OF FINDINGS

The study aimed to assess the KAP of nurses regarding MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district.

The results are summarised according to the sections of the questionnaire.

5.2.1 Respondents' demographic information

The researcher first determined the demographic parameters of nurses in Makhuduthamaga Sub-District. Data revealed that 50.6% of the population were PNs, 27.4% were ENAs, 15.2% were ENs and 6.7% were NMs. Most nurses who participated were between 31–40 years of age. Of the respondents taking part in this study, the NMs (63.6%) had degrees, PNs (54.4%) had diplomas and ENs (79.2%) and ENAs (95.3%) had certificates.

5.2.2 Knowledge of Nurses regarding Mother-Baby Friendly Initiative

The first objective of the study was to assess the knowledge of nurses regarding MBFI in the non-accredited PHC facilities of Makhuduthamaga Sub-District. Questions relating to the orientation of nurses towards MBFI revealed that NMs (100%), PNs (93.9%), ENs (91.7%) and ENAs (68.9%) indicated that they teach pregnant women about benefits of EBF. A few ENs (6.1%) and ENAs (31.1%) did not teach women about the benefits of EBF. The study also found that all NMs (100%) and more than 50% of two of the nursing categories, namely PNs (65.1%) and ENs (54.2%), have

received formal training on lactation management and the ENAs (73.3%) had no training on lactation management. The NMs (72.7%) and PNs (62.2%) stated that they knew the IYCF policy of their facilities, whereas the ENs (64%) and ENAs (66.7%) did not know the IYCF policy of their facilities. In this study, NMs (72.7%), PNs (59.8%), ENs (36%) and ENAs (37.2%) indicated that they were familiar with the IYCF policy of their facility. However, it is crucial to take note that more than 60% of the two nursing categories, namely ENs (64%) and ENAs (62.8%) indicated that they were never orientated to their facility's IYCF policies. The findings revealed that NMs (100%), PNs (78.6%), ENs (57.1%) and ENAs (62.5) reported that they heard about MBFI during the lactation management workshop. Evidently, the lactation management workshop had a very positive influence in advising these respondents about MBFI.

This study found that 72.7% of NMs, 90.4% of PNs, 72% of ENs and 66.7% of ENAs were knowledgeable about the duration of EBF. About 81.8% of NMs, 81.9% of PNs, 64% of ENs and 71.1% of ENAs were also well-informed. About 90.9% of NMs, 83.1% of PNs, 68% of ENs and 66.7% of ENAs could correctly mention the invasive procedures to avoid at birth. The findings disclosed that 63.6% of NMs, 80.7% of PNs, 80% of ENs and 57.8% of ENAs knew the components of MBFI. Also, 63.6% of NMs, 77.1% of PNs, 64% of ENs and 60% of ENAs were educated about the advice to give to an HIV-positive woman about HIV and infant feeding. Furthermore, 63.6% of NMs, 75.9% of PNs, 76% of ENs and 55% of ENAs could correctly explain the dangers of MF. About 63.6% of NMs, 59% of PNs, 60% of ENs and 48% of ENAs were well-informed about the reasons why the code of marketing of breast-milk substitutes prohibits acceptance of free gifts and samples from formula manufacturers by healthcare professionals.

5.2.3 Attitudes of nurses regarding Mother-Baby Friendly Initiative

This study found that the majority of nurses agreed that they teach women about the benefits of EBF and agreed that babies younger than six months should be exclusively breastfed. This study found that the majority of nurses agreed that MBFI increases breastfeeding rates. The findings showed that most nurses agreed that a woman must bring her husband during labour for support. The study found that most of ENs and of ENAs agreed that MBFI is time-consuming and different from their daily practice. Most NMs and PNs agreed that dummies undermine breastfeeding while a

majority of ENs and ENAs disagreed. In this study, the majority of nurses disagreed to the statement that breastfeeding is for poor people.

5.2.4 Nurses MBFI Practices

The third objective of this report was to identify the practices of nurses regarding MBFI implementation in non-accredited PHC facilities of Makhuduthamaga sub-district. This section consists of three sub-sections, namely: MBFI practices for successful breastfeeding, mother-friendly care, and HIV and infant feeding practices.

5.2.4.1 Mother-Baby Friendly Initiative practices for successful breastfeeding

This study found that 63.6% of NMs, 72.5% of PNs, 52% of ENs and 46.7% of ENAs indicated that they referred mothers to support groups for help with breastfeeding. About 54.5% of NMs, 70.9% of PNs, 64% of ENs and 42.2% of ENAs stated that they practiced EBF. The study also found that 63.6% of NMs, 69.6% of PNs, 56% of ENs and 46.7% of ENAs asserted that they teach and demonstrate hand-milk expression to women for maintenance of breastfeeding. In this study, 45.5% of NMs, 63.7% of PNs, 44% of ENs and 42.2% of ENAs practiced early skin-to-skin contact between the mother and the baby immediately after birth. About 9.1% of NMs, 21.3% of PNs, 36% of ENs and 44% of ENAs indicated they never practiced skin-to-skin contact immediately after birth.

5.2.4.2 Mother-Friendly Care Practices

This study found that 54.5% of NMs, 68.7% of PNs, 56% of ENs and 46.7% of ENAs indicated that they allowed women to take light meals and water during labour. A further 2.75% of NMs, 68.7% of PNs, 48% of ENs and 44% of ENAs specified that they taught and demonstrated to women about positioning, attachment and feeding cues. The findings revealed that 63.6% of NMs, 62.5% of PNs, 52% of ENs and 40% of ENAs encouraged women to bring companions during labour. Furthermore, the results reflect that 63.6% of NMs, 66.2% of PNs, 56% of ENs and 40% ENAs encouraged women to walk around during labour. However, 27.3% of NM's, 22.5% of PNs, 40% of ENs and 40.9% of ENAs never encouraged women to walk around during labour.

5.2.4.3 Practices related to HIV and infant feeding

This study found that 72.7% of NMs, 72.2% of PNs, 64% of ENs and 51.1% of ENAs encouraged women to use ARVs during breastfeeding. However, nearly 50% of ENAs (48.9%) reported that they did not encourage women to use ARVs during breastfeeding. About 81.8% of NMs and 56% of PNs indicated they encouraged women to disclose their HIV status and more than 50% of ENs (60%) and ENAs (51.1%) reported that they never encouraged women to disclose their HIV status. This study found that 63.6% of NMs, 40.9% of PNs, 28% of ENs and 31.8% of ENAs indicated that they promoted and created a conducive environment for male partner participation on infant feeding.

5.2.5 Relationship between knowledge, attitudes and practices of nurses regarding Mother-Baby Friendly Initiative

The last objective of the study was to determine if there is a relationship between the KAP of nurses regarding MBFI. This research established that there was a significant positive correlation between KAP of nurses regarding MBFI since the p-values were all less than .001. The nurses who had knowledge about MBFI demonstrated positive attitudes towards its implementation and their practices were in line with the MBFI strategy.

5.3 RECOMMENDATIONS

Based on the findings of this study recommendations are suggested for practice to successfully implement MBFI in rural PHC settings and increase breastfeeding rate amongst women. Also, the researcher highlights areas lacking information that are recommended for further research related to the perspective of nurses' KAP towards MBFI implementation.

The following recommendations are made based on the findings of this study:

5.3.1 Nursing Practice

The DoH together with the Mother and Child District task team and existing health partner organisations need to:

- Conduct training to improve ENs and ENAs knowledge on the updated recommendations of MBFI and the identified knowledge gaps on IYCF feeding like the duration of EBF and appropriate time for the introduction of complementary feeding,
- Organise refresher courses or awareness promotion workshops to promote, protect and support breastfeeding and provide guidance on the formulation and implementation of IYCF Policy of each facility,
- Monitor and follow up the actual implementation of MBFI through providing supportive supervision and efficient information management systems, so that MBFI implementation activities are well managed and reported in a standard system to the local managers and district MBFI committee,
- Each facility should have an on-going training programme for all new employees and training on lactation management should take place within the first six months of their employment,
- Teamwork should be improved for the implementation of MBFI and everybody actively involved amongst all the categories of personnel staff,
- Each facility should have a written IYCF policy routinely communicated to all staff and in-service training records should be in place for the implementation of MBFI strategy,
- EN's and ENA's should be involved in MBFI policy application and given all the necessary information for breastfeeding support and promotion,
- Male partner participation in infant feeding should be promoted and strengthened by all nurses irrespective of the nursing category,
- All HIV positive women should be encouraged to disclose their HIV status to their partners and families for support, and
- Information about the code of marketing for breastmilk substitutes should be routinely communicated to all staff and no free gifts of formula samples accepted from formula manufacturers.

5.3.2 Nursing Education

- MBFI to be included in the curriculum of nursing training from the first year of study (including the training curriculum of nursing assistants and enrolled nurses),

- A course on the monitoring and evaluation of successful implementation of MBFI integrated in the training of PNs and NMs,
- Infant and young child policy formulation and preparation of facility for accreditation should be offered and integrated to midwifery training,
- The HIV and infant feeding course offered to all nursing categories, and
- Mother-Friendly Care should be improved in midwifery training.

5.3.3 Future Research

It is advocated that further research is conducted on the following topics:

- Conduct similar studies in the other regions of Limpopo Province. Due to restrictions related to time and resources, the study has been carried out only in Makhuduthamaga Sub-district and hence it may not be representative of the country. In future, more studies should be conducted in other regions to find out the pattern of nurses' knowledge, attitude and practice towards MBFI implementation in non-accredited PHC facilities in rural areas,
- Review the medical and maternity records of women and children to identify the EBF rate so that practice level of nurses is measured from their action and an exploration of barriers to successful implementation of MBFI can be done,
- Assess the information management system of infant feeding with emphasis on EBF collaborative activities along with the reliability of data recording and reporting system from health facility up to the national level,
- A model of support for mother-friendly care practices developed and implemented, and
- This study further recommends that the support model for implementation of MBFI in non-accredited PHC facilities should be developed and implemented.

5.4 LIMITATIONS OF THE STUDY

This study was only conducted in non-accredited PHC facilities of Makhuduthamaga Sub-district in Limpopo, so it may not be accurate to generalise the findings to the whole country. Another limitation is that it was self-reported and even though the data was collected using a structured questionnaire, one cannot discount the existence of

a personal desirability bias in that respondents might not have described their actual attitudes and practices.

5.5 CONCLUDING REMARKS

The present study assessed nurses' level of KAP towards MBFI in non-accredited PHC facilities of Makhuduthamaga Sub-district in Limpopo Province. The findings and recommendations should serve to improve further knowledge and attitude of healthcare providers to ultimately increase the comprehensive implementation of MBFI in non-accredited facilities, not only in Makhuduthamaga Sub-district but also in the entire country. The researcher also believes this study will contribute significantly to open doors for further research on nurses' KAP towards MBFI implementation in non-accredited rural PHC facilities in other regions of the country.

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ANNEXURE A: QUESTIONNAIRE

SECTION TWO: KNOWLEDGE

Sub-section A: Orientation into Mother- Baby Friendly Initiative

Instruction: This section wants to check whether you were orientated into MBFI or not. Please provide honest answers as much as possible. Please put a tick to the appropriate option applicable to you.

4. Have you received formal training in lactation management since you started working here or in the last 5 years?

| | | | | |
|---|-----|--|--|----|
| 1 | Yes | | | 25 |
| 2 | No | | | 26 |

5. Have you heard of the Mother-Baby Friendly Initiative (MBFI)?

| | | | | |
|---|-----|--|--|----|
| 1 | Yes | | | 27 |
| 2 | No | | | 28 |

6. If yes, where did you hear of it?

| | | | | |
|---|---|--|--|----|
| 1 | Friend. | | | 29 |
| 2 | During my facility orientation programme. | | | 30 |
| 3 | I attended the lactation management workshop. | | | 31 |
| 4 | I was taught at school. | | | 32 |

7. Do you know the Infant and young child feeding policy (IYCF) of your facility?

| | | | | |
|---|-----|--|--|----|
| 1 | Yes | | | 33 |
| 2 | No | | | 34 |

8. Were you ever orientated to your facility's IYCF Policy?

| | | | | |
|---|-----|--|--|----|
| 1 | Yes | | | 35 |
| 2 | No | | | 36 |

9. Do you teach pregnant women about benefits of breastfeeding?

| | | | | |
|---|-----|--|--|----|
| 1 | Yes | | | 37 |
| 2 | No | | | 38 |

Sub-section B: Knowledge Test about MBFI

Instructions: Please tick only the correct answer from the given alternatives. Please take note that there is only one correct answer per question, so please only choose one that you think is the most correct answer.

10. What is mother-baby friendly initiative (MBFI)?

| | | | | |
|---|--|--|--|----|
| 1 | <i>A global initiative by WHO/UNICEF that aims to support and promote breastfeeding.</i> | | | 39 |
| 2 | An initiative for dieticians for nutritional services. | | | 40 |
| 3 | A national project for promotion of breastfeeding in HIV patients. | | | 41 |
| 4 | Promotion of breastfeeding for poor people. | | | 42 |

11. Components of Mother-Baby Friendly Initiative (MBFI) include the following:

| | | | | |
|---|---|--|--|----|
| 1 | Discouraging male partner involvement in maternity issues. | | | 43 |
| 2 | Promotion of infant formula feeding and standing for formula manufacturers. | | | 44 |
| 3 | Promotion of mixed feeding and dummies. | | | 45 |
| 4 | <i>Ten steps to successful breastfeeding, mother-friendly care, code of marketing for breast milk</i> | | | 46 |

| | | | | |
|--|--|--|--|--|
| | <i>substitutes and HIV and infant feeding.</i> | | | |
|--|--|--|--|--|

12. What is exclusive breastfeeding?

| | | | | |
|---|--|--|--|----|
| 1 | <i>Infant receives only breast milk from birth to six months, no water and only medicines prescribed by a health facility.</i> | | | 47 |
| 2 | Infant receives only milk from birth to six months but can have water and medicines. | | | 48 |
| 3 | Infant receives tea, milk, yoghurt and soft porridge. | | | 49 |
| 4 | Infant receives only breast milk from birth to six months but can be given water and gripe water. | | | 50 |

13. For how many months is a woman supposed to exclusively breastfeed her baby?

| | | | | |
|---|-----------------|--|--|----|
| 1 | 1 Week | | | 51 |
| 2 | 2 Months | | | 52 |
| 3 | 6 Months | | | 53 |
| 4 | A year | | | 54 |

14. What are the benefits of breastfeeding?

| | | | | |
|---|---|--|--|----|
| 1 | <i>It promotes bonding, growth, prevents infection and provides good nutrition.</i> | | | 55 |
| 2 | It makes the woman gain a lot of weight. | | | 56 |
| 3 | Breastfeeding makes the child weak. | | | 57 |
| 4 | Gives good nutrition only to the mother. | | | 58 |

15. Why is it important to feed the baby when he or she is hungry?

| | | | | |
|---|--|--|--|----|
| 1 | <i>It ensures good milk supply and ensures a content baby.</i> | | | 59 |
| 2 | Relieves pain. | | | 60 |
| 3 | Makes the baby vomit. | | | 61 |
| 4 | The baby can make good suckling sounds. | | | 62 |

16. What are the dangers of mixed feeding?

| | | | | |
|---|---|--|--|----|
| 1 | <i>Makes the baby prone to infections and provides no good nutrition.</i> | | | 63 |
| 2 | Makes the baby grow faster. | | | 64 |
| 3 | The baby get used to solid food and get a lot of energy. | | | 65 |
| 4 | The baby gets big and looks healthy. | | | 66 |

17. What is demand feeding?

| | | | | |
|---|---|--|--|----|
| 1 | <i>The baby feeds often when he/she wants to be feed.</i> | | | 67 |
| 2 | Every 4 hours. | | | 68 |
| 2 | Every 2-3 hours. | | | 69 |
| 4 | When the baby cries and is sleepy. | | | 70 |

18. What is rooming-in?

| | | | | |
|---|--|--|--|----|
| 1 | Separating the baby from the mother for 12 hours. | | | 71 |
| 2 | Only allowing the mother to stay with the baby during feeding. | | | 72 |
| 3 | <i>Keeping the mother and the baby in the same bed for 24 hours.</i> | | | 73 |

| | | | | |
|---|--|--|--|----|
| 4 | Putting the baby in a court bed and mother in a different bed. | | | 74 |
|---|--|--|--|----|

19. What is skin-to-skin contact?

| | | | | |
|---|--|--|--|----|
| 1 | <i>Skin-to-skin contact is the contact between the mother and the baby immediately after delivery and lasting for an hour.</i> | | | 75 |
| 2 | Covering the baby with linen and put her on the mother's abdomen. | | | 76 |
| 3 | Only putting the baby on the chest after two hours after delivery. | | | 77 |
| 4 | Skin contact with the baby and mother 6 hours after delivery. | | | 78 |

20. What are the benefits of 'skin-to-skin' contact?

| | | | | |
|---|---|--|--|----|
| 1 | Expose the baby to the cold and can be hypoxemic. | | | 79 |
| 2 | It causes the baby to pass meconium and urine. | | | 80 |
| 3 | <i>Calms the baby and the mother, promotes bonding and a good start for successful breastfeeding.</i> | | | 81 |
| 4 | Delays routine procedures such as weighing. | | | 82 |

21. Choose the correct reason why the code of marketing for breast milk substitutes prohibits acceptance of free gifts and samples from formula manufacturers by healthcare professionals?

| | | | | |
|---|---|--|--|----|
| 1 | <i>It discourages and undermines breastfeeding, promotes mixed-feeding and it is against the law.</i> | | | 83 |
|---|---|--|--|----|

| | | | | |
|---|---|--|--|----|
| 2 | It goes hand in hand with promotion of breastfeeding. | | | 84 |
| 3 | Mother can make a choice. | | | 85 |
| 4 | They are free and easy to use. | | | 86 |

22. Describe the information you would give to an HIV positive mother about infant feeding?

| | | | | |
|---|--|--|--|----|
| 1 | Encourage her to have multiple partners | | | 87 |
| 2 | Discourage her to breastfeed the baby | | | 88 |
| 3 | Advise her not to disclose her status to her partner | | | 89 |
| 4 | <i>Encourage her to take ARVs and continue Exclusive Breastfeeding and explain the risks of mixed-feeding</i> | | | 90 |

23. Which routine/ invasive procedures in labour should be avoided that interfere with successful breastfeeding?

| | | | | |
|---|---|--|--|----|
| 1 | Encouraging her to walk during labour. | | | 91 |
| 2 | Giving woman food and water during labour. | | | 92 |
| 3 | <i>Frequent vaginal examinations, episiotomies, rupturing of membranes, instrumental deliveries such as forceps.</i> | | | 93 |
| 4 | Bringing companions during labour. | | | 94 |

24. Which advice would you give to a woman with engorged breasts?

| | | | | |
|---|--|--|--|----|
| 1 | Encourage frequent feeding and use of hand-milk expression. | | | 95 |
| 2 | Encourage her to stop breastfeeding. | | | 96 |
| 3 | She should use formula feeding. | | | 97 |
| 4 | Encourage her to use bottle feeding. | | | 98 |

25. What are the causes of cracked nipples?

| | | | | |
|---|--|--|--|-----|
| 1 | When the baby takes the whole breast into the mouth. | | | 99 |
| 2 | Poor attachment. | | | 100 |
| 3 | Feeding on demand. | | | 101 |
| 4 | Hand-milk expression. | | | 102 |

26. The main causes of insufficient milk are:

| | | | | |
|---|--|--|--|-----|
| 1 | Poor attachment, ineffective breastfeeding and not feeding on demand. | | | 103 |
| 2 | Small breasts. | | | 104 |
| 3 | Hand-milk expression. | | | 105 |
| 4 | HIV and AIDS. | | | 106 |

27. What can be done to maintain privacy and confidentiality of pregnant woman and mothers who are HIV positive?

| | | | | |
|---|---|--|--|-----|
| 1 | Disclose her status to all patients and their relatives. | | | 107 |
| 2 | Counsel each woman privately and maintain confidentiality. | | | 108 |
| 3 | Discourage her from breastfeeding. | | | 109 |
| 4 | Do not allow her partner to be with her during counselling. | | | 110 |

- *For the purpose of this final report, the bolded options in italics are the correct answers that were expected from the respondents.*

SECTION THREE: ATTITUDES

Instructions: This section consists of statements to determine and see how you feel about MBFI implementation. There is no “right” or “wrong” answer because has the right to their own opinion. Give your first, natural answer as it occurs to you. There are four possible answers. Please tick to indicate whether you agree or not with the given statement using the five-point scale below:

4= strongly Agree; 3 =agree; 2 =disagree; 1 = strongly disagree

| NURSE’S ATTITUDES | 1 | 2 | 3 | 4 | | |
|--|----------|----------|----------|----------|--|------------|
| 28. Implementation of MBFI is complicated and a serious burden to nurses. | | | | | | 111 |
| 29. I teach women about benefits of EBF. | | | | | | 112 |
| 30. Dummies undermine breastfeeding. | | | | | | 113 |
| 31. Babies less than six months should be exclusively breastfed. | | | | | | 114 |
| 32. Exclusive breastfeeding is the optimal feeding for healthy child. | | | | | | 115 |
| 33. MBFI increases breastfeeding rates. | | | | | | 116 |
| 34. Babies should be given water, food, formula before six months. | | | | | | 117 |
| 35. Working mothers are not allowed to breastfeed. | | | | | | 118 |
| 36. I always avoid invasive procedures like frequent PVs and early rupture of membranes during labour | | | | | | |

| | | | | | | |
|---|--|--|--|--|--|-----|
| 37.A woman should assume her position of choice | | | | | | 119 |
| 38. A woman in labour should be starved. | | | | | | 120 |
| 39. A woman must come with her husband during labour for support. | | | | | | 121 |
| 40. Woman should be encouraged to walk during labour. | | | | | | 122 |
| 41. MBFI is for dieticians and midwives only. | | | | | | 123 |
| 42. Complementary feeding should be done after six months only. | | | | | | 124 |
| 43. Breastfeeding is for poor people. | | | | | | 125 |
| 44. MBFI is time consuming and different from our daily practice. | | | | | | 126 |
| 45. All nurses must promote, protect and support breastfeeding. | | | | | | 127 |

SECTION FOUR: PRACTICES

Instructions: Please tick to indicate whether you do these practices related to MBFI implementation or not with the given statement using the five-point scale below:

5 = Always; 4 = Often; 3 = Sometimes; 2 = Rarely; 1 = Never

The following are practices that give a woman a better chance for her to successfully breastfeed her baby. Please indicate how often you implement these practices in your facility.

| 1. PRACTICES FOR SUCCESSFUL BREASTFEEDING | 1 | 2 | 3 | 4 | 5 | | |
|---|---|---|---|---|---|--|-----|
| 46. Doing early skin to skin. | | | | | | | 128 |
| 47. Promote feeding on demand. | | | | | | | 129 |
| 48. Assistance with breastfeeding. | | | | | | | 130 |
| 49. Encourage Rooming-in. | | | | | | | 131 |
| 50. Exclusive breastfeeding. | | | | | | | 132 |
| 51. Early initiation of breastfeeding. | | | | | | | 133 |

| | | | | | | | |
|--|--|--|--|--|--|--|-----|
| 52. Referring mother to support groups. | | | | | | | 134 |
| 53. Demonstrate hand-milk expression. | | | | | | | 135 |
| 2. MOTHER-FRIENDLY CARE PRACTICES | | | | | | | |
| 54. Encouraging the woman to walk around during labour. | | | | | | | 136 |
| 55. Allow the woman to take light meals and water. | | | | | | | 137 |
| 56. Let the woman assume her position of choice. | | | | | | | 138 |
| 57. Encourage woman to bring a companion during labour. | | | | | | | 139 |
| 58. Advise her on non-pharmacological techniques for pain. | | | | | | | 140 |
| 59. Teaching and demonstrating to the woman about positioning, attachment and feeding cues. | | | | | | | 141 |
| 60. Teaching and demonstrating to the woman how to do hand-milk expression. | | | | | | | 142 |
| 3. PRACTICES RELATED TO HIV AND INFANT FEEDING | | | | | | | |
| 61. Promote exclusive breastfeeding only. | | | | | | | 143 |
| 62. Encourage woman to use ARVs during breastfeeding. | | | | | | | 144 |
| 63. Advise woman to use condoms during breastfeeding. | | | | | | | 145 |
| 64. Advise woman to avoid mixed-feeding. | | | | | | | 146 |
| 65. Encourage woman to avoid nipple damage. | | | | | | | 147 |
| 66. Counsel the woman about HIV and safe infant feeding. | | | | | | | 148 |
| 67. Encourage the woman to disclose her HIV status. | | | | | | | 149 |
| 68. Promote and create a conducive environment for male partner participation on infant feeding. | | | | | | | 150 |

THANK YOU FOR YOUR TIME



ANNEXURE B: ETHICAL

CLEARANCE CERTIFICATE

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:
Mr SE Mgozeli

Student No:
11605518

PROJECT TITLE: Knowledge. Attitudes and practices of nurses regarding mother-baby friendly initiative in non-accredited primary healthcare facilities of Makhuduthamaga sub-district, in Limpopo Province.

PROJECT NO: SHS/15/PDC/34/0502

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

| NAME | INSTITUTION & DEPARTMENT | ROLE |
|-----------------|--------------------------|------------------------|
| Dr NH Shilubane | University of Venda | Supervisor |
| Prof LB Khaza | University of Venda | Co- Supervisor |
| Mr SE Mgozeli | University of Venda | Investigator - Student |

ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE

Date Considered: February 2016

Decision by Ethical Clearance Committee Granted

Signature of Chairperson of the Committee:

Name of the Chairperson of the Committee: Prof. G.E. Ekosse



University of Venda
PRIVATE BAG X5050, TLOHOMANDLOU, 09501 LIMPOPO PROVINCE, SOUTH AFRICA
TELEPHONE (015) 962 8504/8313 FAX (015) 962 9060
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**ANNEXURE C:
LETTER TO
PROVINCIAL
RESEARCH
COMMITTEE
POLOKWANE**

Langaletu SSS
Tsono
5400
25 February 2016

**LIMPOPO DEPARTMENT OF HEALTH RESEARCH COMMITTEE
POLOKWANE
0699**

Sir or madam

REQUEST FOR PERMISSION TO CONDUCT A STUDY

This serves to request permission to conduct a study on: Nurses' knowledge, attitudes and practices regarding mother-baby friendly initiatives in non-accredited primary healthcare facilities of Makhuduthamaga sub-district, in Limpopo Province.

The proposal has been approved by the University of Venda Research Ethics Committee and the findings of this research will be handed to the Department of Health as a hard copy after completion of the study.

The copy of the research proposal and ethical clearance certificate are enclosed at your perusal.

Yours faithfully,

Mgolozeli SE (Master of Nursing Student)

Contact Details

Email: smcanzie@gmail.com

Cell: 0605503628

**ANNEXURE D:
PERMISSION
LETTER FROM
LIMPOPO DOH**



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Latif Shamila

Ref:4/2/2

Mgolozell SE
University of Venda
Private Bag X505
Thohoyandou
0950

Greetings,

RE: Knowledge, Attitudes and practices of nurses regarding mother-baby friendly initiative in non-accredited primary healthcare facilities of Makhuduthamaga sub-district, in Limpopo Province.

The above matter refers.

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

Your cooperation will be highly appreciated.



Head of Department

14/03/2016

Date

18 College Street, Polokwane, 0700, Private Bag x9302, POLOKWANE, 0700
Tel: (015) 293 6000, Fax: (015) 293 6211/20 Website: <http://www.limpopo.gov.za>

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**ANNEXURE E:
LETTER TO
SEKHUKHUNE
DISTRICT
MANAGER**

Langaletu SSS
PO BOX 125
Tsomo
5400
15 February 2016

**THE PRIMARY HEALTH CARE MANAGER
SEKHUKHUNE DISTRICT MUNICIPALITY DEPARTMENT OF HEALTH
PRIVATE BAG X 04
CHUENESPOORT
0745**

Sir or madam

PERMISSION TO CONDUCT A STUDY

This serves to request permission to conduct a study on: Nurses' knowledge, attitudes and practices regarding mother-baby friendly initiatives in non-accredited primary healthcare facilities of Makhuduthamaga Sub-district, in Limpopo Province.

The proposal has been approved by the University of Venda Research Ethics Committee and the Limpopo Department of Health. The findings of this research will be handed to the Department of Health as a hard copy after completion of the study.

Kindly find the enclosed research proposal and ethical clearance certificates from the University of Venda and the Limpopo Department of Health Research Committee.

Yours faithfully,

Mgolozeli SE

Contact: 0605503528

Email: smcanzie@gmail.com

**ANNEXURE F:
LETTER TO SUB-
DISTRICT
MANAGER**



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH
SEKHUKHUNE DISTRICT

RFP : 85/3/1/2
FNQ : Moyana M.D
TEL : 015 6332401

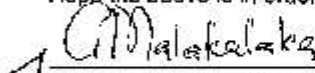
DATE : 13 April 2016

TO : SUB-DISTRICT MANAGER
MAKHUDUTHAMAGA

SUBJECT: STUDY ON KNOWLEDGE ATTITUDES AND PRACTICES OF NURSES REGARDING MOTHER-BABY FRIENDLY INITIATIVE IN NON ACCREDITED PRIMARY HEALTH CARE FACILITIES OF MAKHUDUTHAMAGA SUB-DISTRICT IN LIMPOPO PROVINCE.

1. The above matter bears reference.
2. Mr Mgozeli S.E, a student from the University of Venda currently studying towards a degree in Master of Nursing has been approved by the Head of Department to conduct a study on "knowledge, attitudes and practices of nurses regarding mother-baby friendly initiative in non accredited primary Health Care facilities of Makhuduthamaga sub-district Limpopo Province"
3. Facilities in Makhuduthamaga sub-district are sampled in the study, it is therefore requested that the student be permitted to conduct the study as per the approval by the Head of Department.
4. Attached to the memo find permission letter from Head of Department and a copy of the Research Proposal.

Hope the above is in order.


DISTRICT EXECUTIVE MANAGER
MRS MAEPA M.L

2016/04/14
DATE

Private Bag X04, Chuenespoort 0745
Tel: (015) 633 2300, Fax: (015) 633 6487
Website: <http://www.limpopo.gov.za>

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**ANNEXURE G:
CONSENT FORM
TO PARTICIPATE
IN THE STUDY**

CONSENT FORM TO PARTICIPATE IN THE STUDY

Study Title: Knowledge, Attitudes and Practices of Nurses' regarding Mother-Baby Friendly Initiative in non-accredited primary healthcare facilities of Makhuduthamaga Sub-district, Limpopo Province.

Researcher: MGOLOZELI SE (Cell: 0605503528)

Supervisors: DR SHILUBANE NH (Tel: 015 962 8713)

Co-supervisor: PROF KHOZA LB (Tel: 015 962 8510)

The researcher is a Master of Nursing student from the Department of Advanced Nursing Science at the University of Venda and is currently collecting information about knowledge, attitudes and practices towards mother-baby friendly initiative in non-accredited primary healthcare facilities of Makhuduthamaga Sub-district. The researcher is interested in finding out your knowledge, attitudes and practices pertaining to MBFI in your facility. Participation in this study will not benefit you directly, and payment will not be provided for participating. We hope that with your active involvement, this research will provide insight into how programmes which aim to make all healthcare facilities mother-baby friendly can be improved.

Your participation in this study is voluntary, and if you decide not to participate then you will face no negative consequences. This study is not being conducted by the clinic, so if you decide not to participate then your daily work will not be affected in any way. We will not record your name on the questionnaire, nor use the information in our research. You are also free to withdraw from the study at any time or refuse to answer any specific questions, should you wish to do so.

If you agree to participate, please fill the following spaces and sign.

I consent voluntarily to participate in this study and I understand that I have the right to withdraw from the study at any time without this affecting my job in any way or leading to any negative consequences.

SignatureDate.....

Researchers Signature.....Date.....

ANNEXURE H: PARTICIPATION INFORMATION LEAFLET

PARTICIPANT INFORMATION LEAFLET

You are invited to participate voluntarily in this study. The reason for being selected is that you are in contact with pregnant women, labouring women and children as you are currently working in a primary healthcare facility. Before you agree to take part, you should fully understand what is involved, hence this leaflet. Participation in this study is voluntarily and you are free to withdraw if you are not satisfied with the information provided.

What is the purpose of the study?

The purpose of this study is to assess knowledge, determine attitudes and identify nurses' practices towards mother-friendly initiative in non-accredited primary healthcare facilities of Makhuduthamaga Sub-district in Limpopo province.

What are my rights as participant?

The participant has the right to decide voluntarily whether to participate in the study or not. You have the right to be treated before, during and after the study. You have the right to withdraw from the study anytime without penalty.

May any of this study procedures results in discomfort or inconveniences?

Discomfort may result since a questionnaire requires the respondents to think and write the information required in the questionnaire. It may require time from the respondents to be able to complete the questionnaire.

Are there any warnings or restrictions concerning my participation in the study?

The respondents will be anonymous in the study. No names will be written on questionnaires when completed.

Should you wish to get some clarity or more information, please contact:

Mr Mgolozeli Siyabulela Eric; Cell: 0605503528 or smcanzie@gmail.com

Prof Shilubane NH (Study Leader); Tel: 015 962 8713 or Email:

Hilda.Shilubane@univen.ac.za or Khoza@univen.ac.za



DECLARATION OF PROFESSIONAL EDITING

Marion Pfeiffer
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27 September 2019

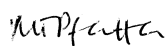
DECLARATION OF PROFESSIONAL EDIT

KNOWLEDGE, ATTITUDES AND PRACTICES OF NURSES' REGARDING MOTHER-BABY FRIENDLY INITIATIVE IN NON-ACCREDITED PRIMARY HEALTHCARE FACILITIES OF MAKHUDUTHAMAGA SUB-DISTRICT IN LIMPOPO PROVINCE

By **MGOLOZELI SIYABULELA ERIC**

I declare that I have edited and proofread this document. My involvement was restricted to language usage and spelling, completeness and consistency, referencing checking and style and formatting of headings, captions and Tables of Contents. I did no structural re-writing of the content.

Sincerely,



Marion Pfeiffer

Freelance Copy-editor and Proofreader

Intermediate Member, SfEP UK

Full member, Professional Editors Group and SAFREA

Professional
EDITORS 
Group