EVALUATION OF THE IMPLEMENTATION OF THE BABY AND MOTHER FRIENDLY INITIATIVE IN NAMIBIA

by

JUSTINA NELAGO AMADHILA

submitted in accordance with the requirements

for the degree of

DOCTOR OF LITERATURE AND PHILOSOPHY

in the subject

HEALTH STUDIES

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF GH VAN RENSBURG

JUNE 2017

Student number: 4829476

DECLARATION

I declare that **EVALUATION OF THE IMPLEMENTATION OF THE BABY AND MOTHER FRIENDLY INITIATIVE IN NAMIBIA** is my own work and that the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

..... 16/05/2017

SIGNATURE **DATE**

Justina Nelago Amadhila

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STUDENT NUMBER: 4829476
STUDENT: JUSTINA NELAGO AMADHILA
DEGREE: D LITT ET PHIL
DEPARTMENT: HEALTH STUDIES, UNIVERSITY OF SOUTH AFRICA
SUPERVISOR: PROF GH VAN RENSBURG

ABSTRACT

The purpose of this study was to conduct evaluation research on the implementation of the Baby and Mother Friendly Initiative in Namibia in order to identify its successes and failures, as well as to develop guidelines for the strengthening of the programme. An evaluation research design using a sequential mixed-methods approach to collect qualitative and quantitative data was conducted. In phase 1, qualitative data were collected through face-to-face interviews. Participants were the chief health programme officer for nutrition at national level and nurse managers in charge of the baby and mother friendly hospitals. In phase 2, quantitative data were collected from 391 registered and enrolled nurses/midwives working in the baby and mother friendly hospitals through a self-administered questionnaire. Both phases 1 and 2 indicated partial implementation of the Baby and Mother Friendly Initiative programme. Factors influencing the implementation positively or negatively were identified. The integrated findings formed the basis of guidelines to strengthen the programme. Nine guidelines were developed and validated.

Key concepts

Baby and mother friendly initiative; baby friendly hospital initiative; breastfeeding; the ten steps to successful breastfeeding; implementation; nurse manager; enrolled nurse/midwife; registered nurse/midwife.

ACKNOWLEDGEMENTS

The research on which this report is based would not have been possible in the absence of assistance, guidance, motivation and encouragement of a number of institutions and individuals. I herewith acknowledge, with heartfelt appreciation and gratitude, their valuable contributions that have led to the completion of my study.

- First and foremost, my Creator and Good Shepherd Who ceaselessly takes care of and timeously provides for all my needs at all times.
- My original supervisor, the late Professor MJ Oosthuizen, for her continuous support, guidance, and encouragement.
- My new supervisor, Professor GH Van Rensburg, for her understanding, kindness, guidance and taking over from Professor Oosthuizen when she became ill and passed away.
- Marion Marchand for editing this piece of work.
- The former Permanent Secretaries of the Ministry of Health and Social Services, Mr. Kahijoro Kahuure and Mr. Andrew Ndishishi, for granting me permission and study leave to carry out the study.
- The regional directors of the 14 health regions, medical superintendents and medical officers in charge of the Baby and Mother Friendly Hospitals for having granted me permission to conduct the study in their respective hospitals.
- My sponsors, Solly Amadhila, my husband, for financial support for this undertaking and Dr Frans Aupa Indongo for partial financial support towards the field work.
- Obert Mutabeni, Marjorie Van Wyk and Shirley-Ann Swartz for their assistance with statistical analysis.
- All participants, namely the health programme officers, nurse managers, registered enrolled nurses/midwives without whose consent and responses to interviews and questionnaires this study would have been impossible.
- My colleagues in the Directorate: Policy, Planning and Human Resources Development for their moral support.
- My relatives and family friends in particular, in non-preferential order, Hilkka Mbundu, Kristofina Haimbili, Iyaloo Haimbili, my spiritual father Bishop Dr Dumeni and his wife, my “father” Dr Frans Aupa Indongo and his wife, Lucia Nelumbu, Kaliinasho Ya Otto, Lina Jass, Kingo Mchombu and the entire extended family, for always being there for me.

- Last, and in no way least, my husband Solly, my sons Penda, Shikondjo and Ian, my daughters Ndafu and Nelago for their love, encouragement, understanding and prayers. My granddaughter Ayanna, for keeping me company during the last part of this study and refusing to be fed other milk except breast milk.

Dedication

In loving memory of my beloved late parents Hilma and Risto Uushona and my parents-in-law Hilma and Epafras Amadhila.

My beloved late brothers Heikkie and Akitofel, my dearest late sister Eva and my late cousin Kandali whose memories and companionship I shall ever miss and cherish.

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LIST OF ABBREVIATIONS

BFHI	Baby Friendly Hospital Initiative
BMFI	Baby and Mother Friendly Initiative
CPD	Continued Professional Development
CSI	Child Survival Interventions
GPD	Gross Domestic Product
GRN	Government of Namibia
HAART	Highly Active Antiretroviral Treatment
HPCNA	Health Professions Councils of Namibia
HIV	Human Immunodeficiency Virus
IEC	Information Education and Communication
IBFAN	International Baby Food Action Network
IOCU	International Organization of Consumers Union
MoHSS	Ministry of Health and Social Services
NDHS	Namibia Health and Demographic Survey
NPC	National Planning Commission
NSA	National Statistics Agency
UNICEF	United Nations Children's Fund
UNISA	University of South Africa
WHA	World Health Assembly
WHO	World Health Organization

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Good nutrition is a basic building block of human capital that contributes to economic development, optimal growth and good health (MoHSS 2014a:129).

Globally in 2015, 156 million children under the age of five were stunted (short for their age), while 50 million were wasted (thin for height). Of these, 37% who are stunted and 28% who are wasted live in Africa. Children who are stunted or wasted have an increased risk of death (United Nations Children's Fund [UNICEF] 2016a:3). Namibia is one of the countries in Africa with high rates of undernutrition. In 2013, 24% of children under the age of five were stunted, 6% were wasted and 13% were underweight (MoHSS 2014a:129). Inadequate breastfeeding is identified as one of the most common causes of malnutrition and deaths among infants (MoHSS 2005:1).

Among behaviour change interventions, the promotion of breastfeeding is one that is proven to reduce child mortality, improve nutritional outcomes and protect human capital (Horton, Shekar, McDonald, Mahal & Brooks 2010:12). According to Victora et al (2016), cited in WHO (2016:7), increased breastfeeding could save more than 820 000 lives every year, and prevent nearly half of all diarrhoeal diseases and one-third of respiratory infections in children. The World Health Organization (WHO) (2016:7) estimated global economic losses from lower cognition associated with a lack of breastfeeding at more than US$300 billion in 2012, which is equivalent to 0.4% of the world's gross national income. According to UNICEF (2016b:26), malnutrition and childhood illness compromise cognitive development and reduce adult productivity.

In Namibia, the introduction of a breastfeeding programme has contributed to increased duration of exclusive breastfeeding for children under the age of six months, from 6% in 2000 to 24% in 2006 and 49% in 2013 (Amadhila 2005:4; MoHSS 2008a:154; MoHSS 2014a:137).

The Baby Friendly Hospital Initiative (BFHI) is a global strategy of WHO and UNICEF aimed at promoting, supporting and protecting breastfeeding, especially in maternity hospitals. This initiative became a global priority in 1989 after WHO, UNICEF, the International Organization of Consumers Union (IOCU), the International Baby Food Action Network (IBFAN) and the Baby Food Industry held a meeting in Geneva to discuss child health and nutrition and decided to take action towards the promotion of breastfeeding. At this meeting it was agreed that child morbidity and mortality were associated with the decline in breastfeeding. Factors that were identified as contributing to the decline of breastfeeding included employment of women, hospital practices that undermine breastfeeding, such as separating babies from their mothers, and the use of infant formula and aggressive advertisement of artificial feeding and equipment, known as breast milk substitutes. The outcome of this meeting was a recommendation for the establishment of the BFHI. This initiative was to be implemented through two main strategies, namely the International Code of Marketing of Breast Milk Substitutes and the Ten Steps to Successful Breastfeeding (MoHSS 2005:5).

The Code of Marketing of Breast Milk Substitutes is an instrument aimed at protecting breastfeeding by putting restrictions on marketing of artificial feeding products such as infant formula, bottle-fed complementary foods, bottles and teats. It also applies to the quality and availability of information concerning the use of these products (Sokol 1997:1). The Code was adopted by the World Health Assembly (WHA) in May 1981 (WHO 2016:7). The 60th WHA, in May 2007, made recommendations in the form of WHA Resolution 60.23 (WHO 2008) to strengthen the code in all WHO member states. These recommendations were endorsed by WHA Resolution 63.14 in May 2010 (WHO 2010a).

The Ten Steps to Successful Breastfeeding addresses issues of policy, training of health workers, education of mothers during pregnancy and the first six months after giving birth, breastfeeding practices and formation of community support groups. A hospital that agrees to implement the BFHI programme is expected to comply with the Ten Steps to Successful Breastfeeding and be assessed accordingly in order to be declared a baby friendly hospital. UNICEF recommends that re-assessment be carried out every three years in order to ensure that a hospital continues to comply with the steps (WHO & UNICEF 2006:212).

According to WHO and UNICEF (2009:ii), more than 20 000 hospitals in 156 countries globally had been designated Baby Friendly by 2007. In September 2016, these numbers had not changed. This was stated with the announcement of the marking of the 25th anniversary of the BFHI (WHO 2016).

The BFHI was introduced in Namibia in 1992. It was named the Baby and Mother Friendly Initiative (BMFI) programme after a needs assessment identified the promotion of breastfeeding as a suitable approach for increasing access of mothers and children to other services such as family planning, immunisation and growth monitoring and promotion. Although the name was changed from BFHI to BMFI, it was implemented through the global Ten Steps to Successful Breastfeeding of WHO and UNICEF. The steps were adopted without change and have been declared as BMFI policy for Namibia (MoHSS 1992b). With the development of the National Guidelines on Infant and Young Child Feeding, the steps were reaffirmed to be the BMFI policy in Namibia (MOHSS 2011a:3). There were 34 state and state-subsidised mission hospitals in Namibia, which were all declared baby friendly from 1993 to 1997 (MoHSS 2009:4). These hospitals are called “Baby and Mother Friendly Hospitals”. This means that all hospitals (state and mission) in Namibia were assessed and declared “baby and mother friendly” by 1997.

Available reports indicate that no further assessments of the baby and mother friendly hospitals have been carried out (MoHSS 2009:4; MoHSS 2016:6). This study is designed to evaluate the implementation of the BMFI in Namibia in order to identify its successes and failures, as well as to develop guidelines for the strengthening of the programme.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

Namibia Vision 2030 recognises breastfeeding as a contributory factor to health and development of the Namibian people. One of its major objectives is to ensure a healthy, food-secure and breastfeeding nation, in which all preventable infectious and parasitic diseases are under control (GRN 2004:41). BMFI is one of the strategies that addresses this objective.

1.2.1 Country profile

Namibia's land surface covers an area of 824 116 square kilometres. It is the fifth largest country in Africa. It is located in the south-western part of Africa and its borders are the Atlantic Ocean to the west, Botswana and Zimbabwe to the east, South Africa to the south, and Angola and Zambia to the north. The country is divided into 14 administrative regions, each with a regional governor.

In 2014 the total population was 2 247 021 persons (NSA 2015:17). The number of children less than one year of age was 67 427, calculated as 3% of the total population, while that of children under five years was 292 200, calculated as 13% of the total population. The number of pregnant women was 89 980, calculated as 4% of the total population; women of child-bearing age (14 to 49 years old) were 540 285, calculated as 24% of the total population (MoHSS 2015a:1).

1.2.2 Socio-economic status

The bases of economy in Namibia are agriculture, herding, tourism and mining, including gem diamonds, uranium, gold, silver and base metal. However, due to the global economic crisis and drought, the economy in 2013 depended on meat processing, textiles, clothing apparel, non-metal mineral products and publishing and printing (NPC 2013, cited in MoHSS 2014a:2).

Namibia is classified by the United Nations as an upper middle-income country, with an annual per capita income of N$45,506, which is equivalent to R45 506. However, it has a high degree of income inequality, as indicated by the GINI coefficient of 0.58. The Gross Domestic Product (GDP) for 2014 was N$117 571 million, which showed a reduction of 0.6% from the previous year. The country has an estimated unemployment rate of 29% and poverty incidence of 26.9% (NPC 2016a:14, 24, 25).

The government is committed to accelerating economic growth through the National Development Plan's objectives, which focus on reducing poverty and unemployment and addressing unequal income distribution (NPC 2016b:13).

1.2.3 Health status of children and women

Information on the health status of children and women is important for planning and evaluation of health policies and programmes.

According to the Namibia Demographic and Health Survey (NDHS) in 2013, infant and under-five mortality rates were 39 and 54 deaths per 1 000 live births respectively (MoHSS 2014a:85). The maternal mortality rate was 385 per 100 000 live births (MoHSS 2014a:96). The nutritional status of children under the age of five years included 24% who were deemed to be stunted, 6% wasted and 13% underweight. Only 49% of children under the age of six months were exclusively breastfed (MoHSS 2014a:137).

Human Immunodeficiency Virus (HIV) infection contributes to child and maternal morbidity and mortality. It also influences breastfeeding practices negatively, because women who are HIV infected may choose not to breastfeed or fail to practise exclusive breastfeeding for the first six months of life. In 2013, the prevalence of HIV among pregnant women attending antenatal care was determined at 16.6% (MoHSS 2014b:14).

1.2.4 Organisation of health services

The Namibian Health and Social Services sector is guided by the National Health Policy Framework, 2010–2020, which is based on the principle of primary health care that includes equity, community involvement, inter-sectoral collaboration and community participation (MoHSS 2010:3). There are eight national and 14 regional health directorates and 34 health districts. Each district is served by a hospital.

The MoHSS is responsible for overall health sector management, including that of the private health sector. The functions of the eight national health directorates include policy formulation and review, strategic planning, resource mobilisation and allocation, setting standards for health services delivery, health legislation and overall stewardship (MoHSS 2010:27).

The 14 regional health directorates provide leadership, management support and supervision to the districts, including translation of national policies into operational plans and coordination of programme activities.

The districts are responsible for implementing the district health package, which stipulates minimum cost-effective interventions, including the BMFI that should be provided at district level. The district health package is implemented in collaboration with communities and other partners who support community-based activities such as the promotion of breastfeeding and income generation to improve living conditions. The districts are also responsible for managing district resources such as human resources for health, as well as material and finances needed to implement the minimum district health package (MoHSS 2011b:14).

1.2.5 Public health priorities

Maternal and child health continues to be a health priority for the MoHSS. Strategies to address this priority, which are outlined in the National Health Policy Framework, include Child Survival Interventions (CSI) such as immunisation, family planning, nutrition and growth monitoring and promotion. Breastfeeding is integral to these interventions; it protects against infections, helps to prevent pregnancy soon after delivery, is the ideal food for babies and promotes growth and development (MoHSS 2011a:9).

1.2.6 The source of the research problem

Despite its many benefits, breastfeeding continues to decline globally owing to a number of factors such as the convenience of formula feeding, emergence of bottle feeding as a status symbol, breastfeeding mothers returning to work and excessive promotion of infant formula and infant feeding products. The decline in breastfeeding has been a cause for concern and resulted in the introduction of the Baby Friendly Hospital Initiative by WHO and UNICEF in 1989 (MoHSS 2005:5). However, despite the promotion of breastfeeding interventions, UNICEF (2016c:8) states that globally in 2015, just over 40% of infants aged zero to five months were exclusively breastfed. This percentage is lower than the WHA target of 50% of babies globally to be exclusively breastfed for the first six months of life (UNICEF 2015:27).

The overall objective of the BMFI in Namibia is to improve the health and nutritional status of mothers and their babies through client education on the importance of nutrition and the benefits and management of breastfeeding (MoHSS 1992a:9). This objective can only be achieved if the programme is effectively implemented. The effectiveness of the BMFI is not known; therefore the implementation of the programme may be meaningless to those in the health sector who implement it. Effective implementation of the BMFI programme will contribute to the improvement of the health status of children and mothers in Namibia by

- reducing childhood illnesses associated with non-breastfeeding
- reducing malnutrition
- improving mental wellbeing of breastfeeding mothers
- reducing the risks of breast cancer among breastfeeding mothers
- assisting non-breastfeeding mothers and families to choose affordable, accessible and safe feeding options for those babies who cannot breastfeed.

The BMFI strategies outlined in the BMFI guidelines include the following:

- Training of health workers on promotion and management of breastfeeding, with emphasis on changing their attitudes towards breastfeeding.
- Adoption of an inter-sectoral approach to create a friendly environment for breastfeeding mothers, including the establishment of breastfeeding corners at work places.
- Working with nongovernmental organisations and breastfeeding support groups in order to advocate for an increased duration of paid maternity leave for women.
- Making breastfeeding integral to mother and child health services through provision of breastfeeding management information and counselling services to women whenever they attend family planning, ante-natal and postnatal care, immunisation and growth monitoring and promotion services (MoHSS 1992a:14).

A National Policy on Infant and Young Child Feeding was developed in 2003 to supplement the BMFI policy of 1992 with regard to HIV and breastfeeding. This policy re-affirmed the promotion of breastfeeding in the general population, while giving practical

support to those few mothers who may not be able to breastfeed. One of this policy's objectives was to strengthen the BMFI programme through annual re-assessment of the BMFI hospitals (MoHSS 2003:11, 12, 20). National guidelines for implementing the National Policy on Infant and Young Child Feeding were developed in 2011. In these guidelines, the ministry recommended that babies be exclusively breastfed for the first six months, followed by the introduction of complementary food while breastfeeding is continued until age two. The same recommendation was made for infants of mothers who are known to be HIV positive. In addition, these babies and their mothers should be treated with highly active antiretroviral therapy (HAART) (MoHSS 2011a:11). These recommendations are in line with the updated WHO recommendations on HIV and infant feeding (WHO 2010b:3), and infant and young child feeding (WHO 2016:12).

1.3 RESEARCH SETTING

The study was conducted in 34 Baby and Mother Hospitals across the 14 regions of Namibia. The hospitals and the regions under which they resort are:

- Zambezi Region: Katima Mulilo District Hospital.
- Erongo Region: Omaruru, Swakopmund, Usakos and Walvis Bay District Hospitals.
- Hardap Region: Mariental District Hospital and Rehoboth St Mary Mission Hospital.
- Karas Region: Karasburg, Keetmanshoop and Luderitz District Hospitals.
- Kavango East Region: Rundu Intermediate Hospital and Andara and Nyangana Mission Hospitals.
- Kavango West Region: Nankudu District Hospital.
- Khomas Region: Windhoek Central Hospital and Katutura Intermediate Hospital.
- Kunene Region: Khorixas, Opuwo and Outjo District Hospitals.
- Ohangwena Region: Eenhana, Engela and Okongo District Hospitals.
- Omaheke Region: Gobabis District Hospital.
- Omusati Region: Oshikuku St Martin Mission, Okahao, Outapi and Tsandi District Hospitals.
- Oshana Region: Oshakati Intermediate Hospital.
- Oshikoto Region: Onandjokwe Mission Hospital and Tsumeb District Hospital.

- Otjozondjupa Region: Grootfontein, Otjiwarongo Okahandja and Okakarara District Hospitals.

Figure 1.1 shows the map of the Republic of Namibia with administrative regions, including Baby and Mother Friendly Hospitals.

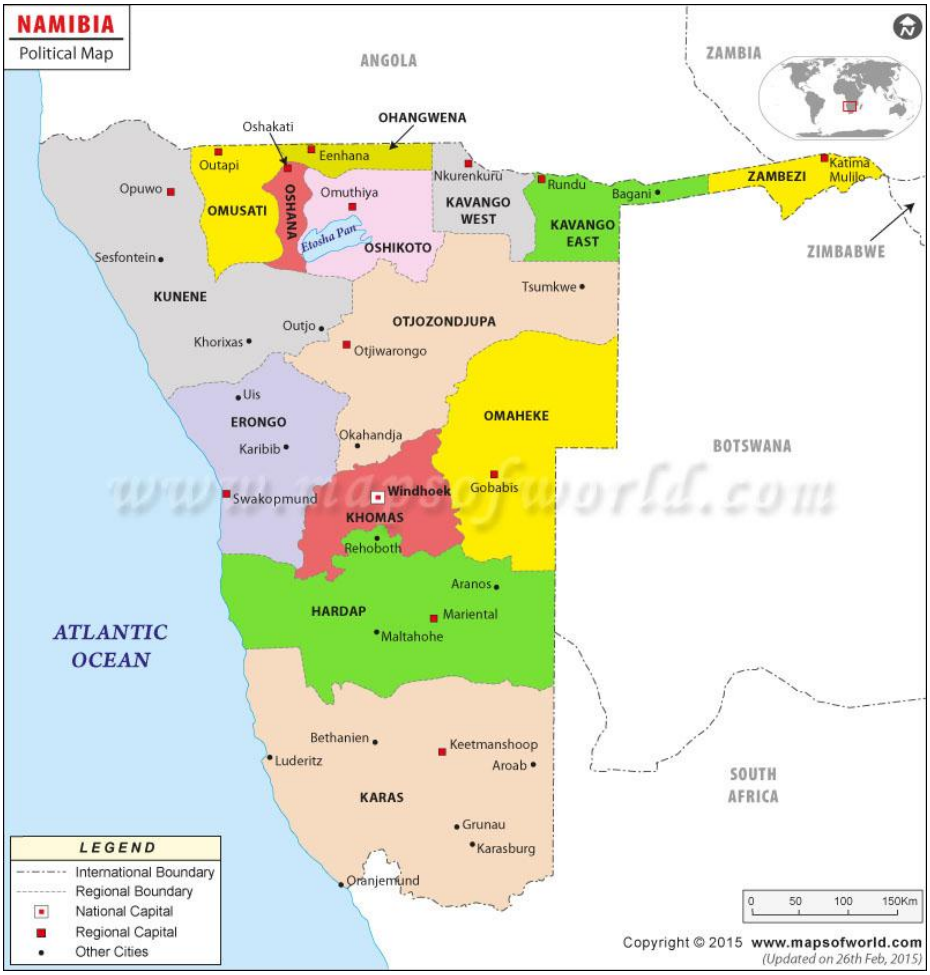

Figure 1.1 Map of the Republic of Namibia with administration regions, including Baby and Mother Friendly Hospitals

(Source: Maps of World 2015)

1.4 RESEARCH PROBLEM

All 34 hospitals in Namibia were declared Baby and Mother Friendly between 1993 and 1997, as stated above. The National Policy on Infant and Young Child Feeding stipulates that these hospitals should be re-assessed annually to ensure effective implementation of the initiative. Re-assessment of the Baby Friendly Hospitals was identified as one of

the key indicators for measuring service delivery in Namibia. However, available reports indicate that re-assessment of these hospitals was never carried out (MoHSS 2016:6).

Based on this lack of assessment it is not known if the BMFI programme is implemented as it should be. It has, therefore, become necessary to examine the implementation of the BMFI programme in the 34 Baby and Mother Friendly Hospitals in order to answer the following questions:

- How effectively has the BMFI programme been implemented in the Baby and Mother Friendly Hospitals in Namibia since its inception?
- What can be learned from the findings of the study?

1.5 AIM OF THE STUDY

The aim of this sequential mixed-methods study was to evaluate the implementation of the Baby and Mother Friendly Initiative programme from the experiences of the chief health programme officer and nurse managers. Themes generated from the qualitative data (phase 1) were developed into items for a questionnaire to examine the actual implementation of the programme by registered and enrolled nurses/midwives (phase 2). Qualitative and quantitative data were integrated and then used to develop and validate guidelines that could strengthen the BMFI programme.

The objectives of this study were to

- determine the current status of the Baby and Mother Friendly Initiative programme that was implemented in the Baby and Mother Friendly Hospitals in Namibia
- investigate the effectiveness of the Baby and Mother Friendly Initiative implementation in these hospitals
- develop and validate guidelines for the strengthening of the Baby and Mother Friendly Initiative programme

1.6 SIGNIFICANCE OF THE STUDY

Good nutrition, including breastfeeding, is a basic building block of human capital that contributes to economic development, reduces child mortality and improves nutrition outcomes (MoHSS 2014a:129). According to Hansen (2016:416), the Lancet Breastfeeding Series shows that breastfeeding is one of the highest-impact interventions that increases Intelligence Quotient (IQ) score, improves school achievement and boosts adult earnings. These benefits can only be achieved if the BMFI programme is effectively implemented. Evaluation assesses how well a programme is working and highlights areas of improvement (Polit & Beck 2012:727). This study is important because assessment of the Baby and Mother Friendly Hospitals was never carried out. Furthermore, an extensive literature search did not find any study on evaluation of the BMFI programme in Namibia.

Applied knowledge was developed. Firstly, the study explored and described the experiences of the chief health programme officer and nurse managers on the implementation of the BMFI programme. Secondly, it examined the actual implementation of the BMFI programme by the registered and enrolled nurses/midwives. This evidence resulted in recommendations for the implementation of the guidelines that are contextual and relevant to the Namibian situation.

1.7 DEFINITIONS OF THE TERMS

The key terms and concepts are clarified below for the purpose of this study.

1.7.1 Baby Friendly Hospital Initiative

The Baby Friendly Hospital Initiative is a global initiative aimed at promoting, supporting and protecting breastfeeding in maternity hospitals. The initiative is implemented through the WHO and UNICEF's Ten Steps to Successful Breastfeeding (WHO 1989).

1.7.2 Baby and Mother Friendly Initiative

The Baby and Mother Friendly Initiative is a breastfeeding programme in Namibia. It was adopted from the Baby Friendly Hospital Initiative in 1992. The name was chosen after a

needs assessment identified the promotion of breastfeeding as a suitable approach for increasing access of mothers and children to other services such as family planning, immunisation and growth monitoring and promotion. The global WHO and UNICEF's Ten Steps to Successful Breastfeeding were adopted as the programme's policy in 1992 and re-affirmed in 2011 (MoHSS 1992b:2; MoHSS 2011a:3).

1.7.3 Baby and Mother Friendly Hospital

A Baby and Mother Friendly Hospital is a hospital that is certified baby and mother friendly in Namibia. There are 34 state and state-subsidised mission hospitals in the country, which were all certified baby friendly between 1993 and 1997 (MoHSS 2016:6). This study examines the implementation of the Baby and Mother Friendly Initiative programme in these hospitals.

1.7.4 Implementation

Implementation is the action of putting a decision or a plan into effect, or putting something into operation (*The Concise Oxford Dictionary* 1995, sv "implementation"). In this study, the Baby and Mother Friendly Initiative programme represents a plan that is being implemented in the Baby and Mother Friendly Hospitals. The purpose of the study is to evaluate how this plan was implemented.

1.7.5 Programme evaluation

Programme evaluation is research that evaluates a programme, practice or intervention. The purpose of evaluation may be to improve the programme (formative evaluation) assess the worth of a programme (summative evaluation) or assess a programme's net impacts (outcome evaluation). Formative evaluation is also called process or implementation evaluation (Polit & Beck 2012:260). This study is an implementation evaluation of the Baby and Mother Friendly Initiative programme.

1.8 FOUNDATIONS OF THE STUDY

The foundation of the study will be discussed in terms of philosophical paradigm and theoretical framework.

1.8.1 Meta-theoretical assumptions

Meta-theory refers to the analysis of the theoretical underpinnings (paradigms) on which studies are grounded. Barker (2003), cited in De Vos, Strydom, Fouché and Delport (2011:40), defines a paradigm as a model or pattern containing a set of legitimated assumptions and a design for collecting and interpreting data. According to Polit and Beck (2012:736), a paradigm is a way of looking at natural phenomena, a world view that encompasses a set of philosophical assumptions and that guides one's approach to inquiry. Two broad paradigms are positivism (quantitative) and constructivism or naturalism (qualitative). In addition, pragmatists believe that multiple paradigms can be used to address research problems (Rossman & Wilson 1985, cited in Creswell and Plano Clark 2011:26). According to Tashakkori and Teddlie (2003), cited in Creswell and Plano Clark (2011:26), a pragmatic paradigm is the best philosophical foundation for mixed-methods research.

This study employed a pragmatic paradigm. The pragmatic paradigm is not committed to any one system of philosophy and reality. It uses both quantitative and qualitative data because they work together to provide the best understanding of the research problem. For a mixed-methods researcher, pragmatism opens the door to multiple methods, different worldviews and different assumptions, as well as different forms of data collection (Creswell 2014:11). The search to understand the experiences and practices of the implementation of the BMFI programme guided the researcher to choose the qualitative approach (phase 1) and quantitative (phase 2) approaches.

Qualitative research approach is subjective and acknowledges that personal values and perceptions may influence the findings of the study (Grove, Burns & Gray 2013:25). The experiences of the chief health programme officer and nurse managers are subjective and may be influenced by various factors. Quantitative research is a means for testing objective theories by examining the relationship among variables, which can be measured typically on instruments (Creswell 2014:247). The practices of registered and enrolled nurses/midwives were obtained through numbers and analysed using statistical procedures. Therefore, both these paradigms guided the approach to addressing the research problem.

1.8.2 Philosophical assumptions of the study

Philosophical assumptions respond to basic philosophical questions such as: what is the nature of reality (ontology); what is the relationship between the researcher and respondent (epistemology); what is the role of values in the inquiry (axiology); and how is evidence best obtained (methodology) (Polit & Beck 2012:13). On the other hand, Terre Blanche, Durrheim and Painter (2006:6) see ontology as the nature of reality of what is to be studied and what can be known about it, epistemology as specifying the nature of the relationship between the researcher and what can be known, and methodology as how researchers may go about practically studying whatever they believe can be known. An assumption is a basic principle that is believed to be without proof or verification (Polit & Beck 2012:12). These philosophical assumptions guided the departure of the paradigm of this study. They will be discussed below.

Ontology: It was assumed that the chief health programme officer and each nurse manager's experience of the implementation of the BMFI programme would be genuine and distinctive. The researcher then needed to uncover these multiple interpretations of reality to gain an in-depth understanding of their experiences. The researcher also assumed that there were various contributing factors that influenced the participants' experiences.

Epistemology: It was assumed that the researcher is part of the creation of the findings because of the role played in the collection and analysis of the data and the interpretation of the findings regarding the experiences of the chief health programme officer and the nurse managers in the implementation of the BMFI programme.

Axiology: It was assumed that the values and biases of the chief health programme officer and the nurse managers would influence their experiences of the implementation of the BMFI programme. Additionally, the values and biases of the researcher would also influence the interpretation of the findings. In contrast, in phase 2, the researcher limited the role of the values and biases of registered and enrolled nurses/midwives. This was done by setting closed questions with predetermined answers to choose from for items in the questionnaire.

Methodology: It was assumed that by using a mixed-methods approach, the best evidence would be generated. The integration of qualitative and quantitative data would

assist in developing comprehensive guidelines and validation thereof, which would help to strengthen the BMFI programme.

1.8.3 Theoretical framework

This study was a sequential, exploratory, mixed-methods design. According to Polit and Beck (2012:728), a framework is the conceptual underpinning of the study, such as a theoretical framework in theory-based studies or conceptual framework in studies based on a specific conceptual model. If the research is very pragmatic, it does not need a theory to enhance its usefulness (Polit & Beck 2012:145). This study entailed evaluation of a practice, hence the researcher adopted the Eight Stage Model of Evaluation based on Macpherson (1986) (Territory Health Services 1999:45). This model has been recommended to be used in evaluating health promotion programmes (Rendall-Mkosi, Tilford & Alexander 2003:144). The stages in this model enabled the researcher to ask specific questions, the answers to which focused the study in manageable stages. The stages are illustrated in Figure 1.2 and briefly described below.

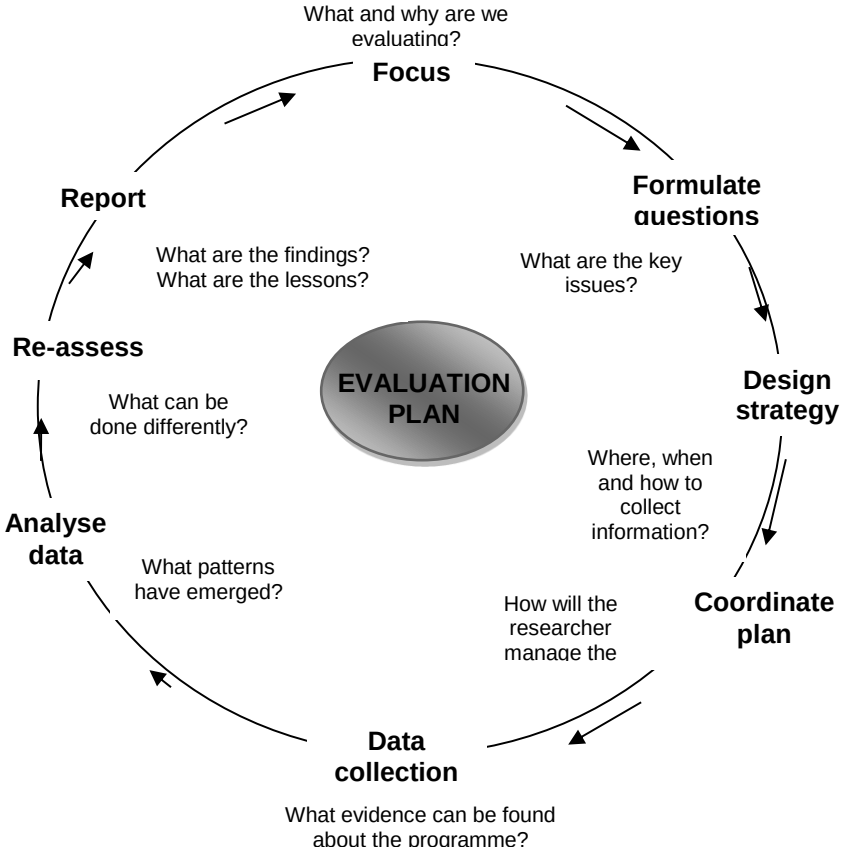

Figure 1.2 The Eight Stage Model of Evaluation based on Macpherson

(Source: Territory Health Services 1999:45)

Stage 1 entails the *focus of the study*. To answer specific questions of the study, the researcher focused on the identification of the research problem, the significance of the problem, and aims and objectives of the study.

Stage 2 entails the *formulation of the questions*. During this stage, the initial literature review was conducted before phase 1 of this study. The review was limited to determining when and how the BMFI programme was introduced in Namibia, identifying the stakeholders that were involved, the programme objectives, and how the programme was launched. An extensive literature review was conducted after the data from phase 1 were analysed.

Stage 3 entails the *designing of the study.* This stage addressed where, when and how the information would be collected. During this stage, a sequential mixed-methods design using qualitative and quantitative techniques of data collection and analysis was chosen.

Stage 4 entails the *co-ordination of the study plan*. It involved management of the study and organising the required resources. A timetable of when to collect data for phases 1 and 2 was drawn up. The researcher solicited finances for the field visits in terms of transport and accommodation, and arranged for study leave. Plans for the logistics of administering the questionnaires in phase 2 were also done.

Stage 5 entails *data collection.* In order to find evidence of how the BMFI programme was implemented in the 34 Baby and Mother Friendly Hospitals, the researcher conducted the actual study. This involved conducting of interviews with the chief health programme manager for nutrition programme at national level and nurse mangers in charge of the Baby and Mother Friendly Hospitals in phase 1. In phase 2, a questionnaire was administered to registered and enrolled nurses/midwives working in the Baby and Mother Friendly Hospitals. Ethical considerations regarding data collection and data analysis were taken into consideration.

Stage 6 entails *data analysis and presentation of results.* In order to find out what had emerged from the study, data were analysed. Qualitative data were analysed manually, using thematic analysis as described by Braun and Clarke (2006:[15]). Quantitative data were analysed using Epi Info Version 7. Data from phase 1 were analysed and, together

with the literature, informed the development of the questionnaires for registered and enrolled nurses/midwives (phase 2). The datasets from phases 1 and 2 were integrated and their conclusions formed the basis for developing and validating the guidelines that will help to strengthen the BMFI programme.

Stage 7 entails *assessment.* This stage addressed the question of what could be done differently to address failures in the implementation of the BMFI programme. Based on the findings of the integrated data, the researcher proposed guidelines which could help to strengthen implementation of the BMFI programme. The guidelines were validated by experts in the field of nursing, nursing management, health programme management and health, as well as nursing and allied health education.

Stage 8 entails *report writing*. The research report explains how the study was conducted and the findings of the study, including presentation of the proposed guidelines for the strengthening of the BMFI programme.

1.9 RESEARCH DESIGN AND METHOD

A sequential, exploratory, mixed-methods design was followed. In mixed-methods research, the researcher combines elements of qualitative and quantitative research approaches such as viewpoints, data collection, analysis and inference techniques, for the purpose of breadth and depth of understanding and corroboration (Johnson et al 2007, cited in Creswell & Plano Clark 2011:4). The design consisted of a qualitative component (phase 1) that collected data from the chief health programme officer and nurse managers regarding their experiences of the implementation of the BMFI programme. The study was sequential, because the data obtained in the qualitative phase were used to collect quantitative (phase 2) data from registered and enrolled nurses/midwives on their practice of the BMFI programme. In a sequential mixed-methods design, the two types of data are not collected at the same time, as the analysis and interpretation in one phase informs the collection and analysis of data in the second (Polit & Beck 2012:608). Finally, data were used to develop guidelines to help strengthen the BMFI programme. Figure 1.3 presents a summary of the research process.

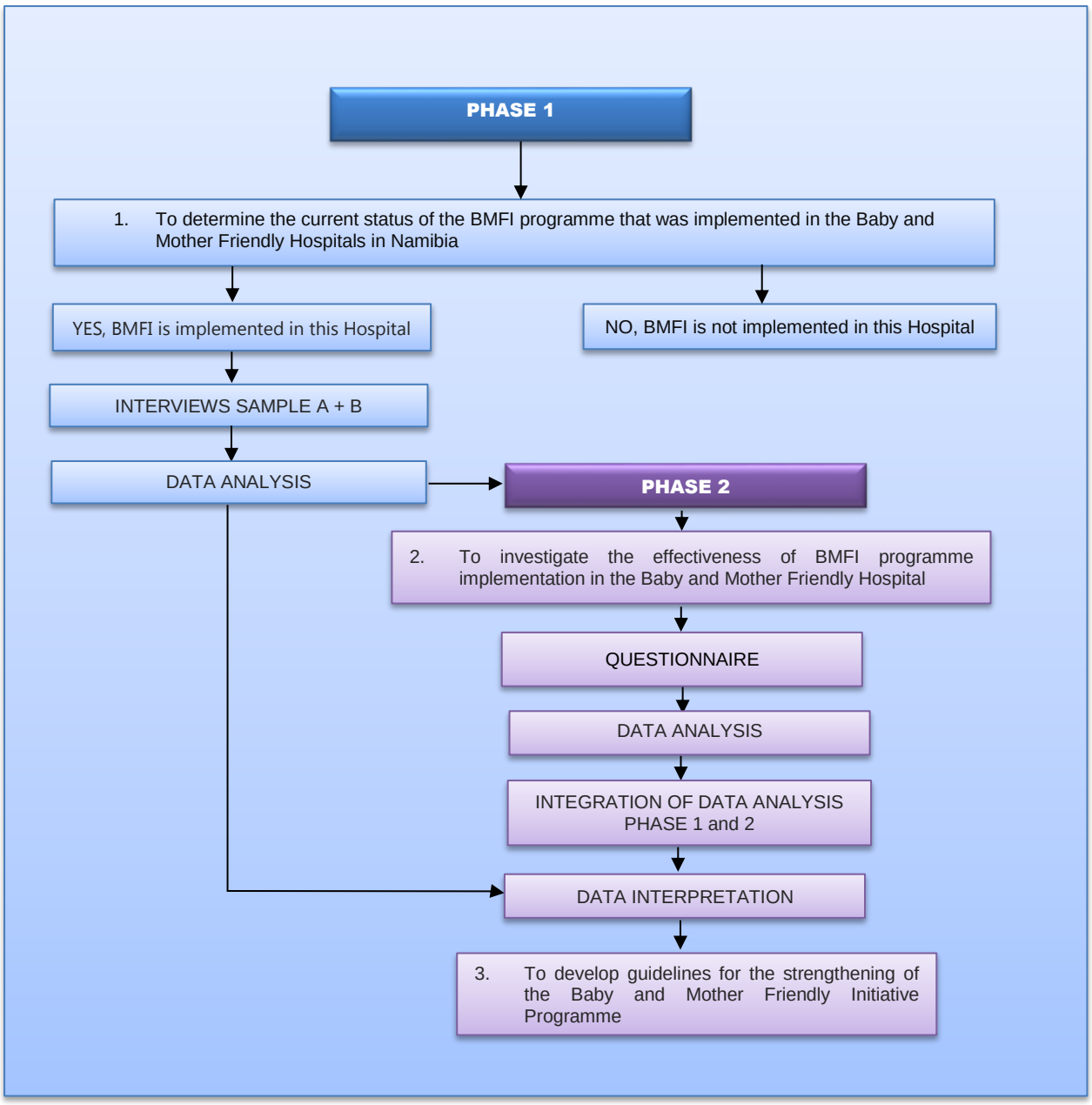

Figure 1.3 Schematic presentation of the research process

1.10 ETHICAL CONSIDERATIONS

Ethical principles such as respect for persons, beneficence and justice form the basis for human rights of participants (Grove et al 2013:162). The researcher respected these principles by:

- Explaining the purpose of the study to related institutions, participants and respondents and before requesting approval and consent to participate in the study.

- Clarifying participants' and respondents' right to voluntary participation in the study.
- Assuring anonymity and confidentiality of the information provided by participants and respondents.
- Obtaining ethical clearance from the Department of Health Studies (University of South Africa) Higher Degrees Committee in order to protect the researcher, participants and institutions involved in the study (Annexure A).
- Obtaining approval from the Ministry of Health and Social Services and related institutions in Namibia to conduct the study (Annexures B–B4).

Ethical considerations will be discussed in more depth in the methodology Chapter 2.

1.11 THE SCOPE OF THE STUDY

This study's focus was on providing guidelines for strengthening the BMFI programme. The study was conducted in a Namibian context in all state and state-subsidised mission hospitals.

1.12 STRUCTURE OF THE THESIS

The discussion of the study is divided into eight chapters.

Chapter 1: Orientation to the study

Chapter 1 introduces the background to the research problem and problem statement. The aim, objectives and significance of the study are discussed. The chapter includes definitions of terms used and discusses the foundation of the study. A brief description is provided of the research design, methodology, ethical principles and scope of the study.

Chapter 2: Research design and methods

This chapter describes the research design and methodology, including the population, sampling, data collection and data analysis. In addition, the measures for ensuring the trustworthiness, validity and reliability of the study are discussed.

Chapter 3: Data analysis, presentation and discussion of findings of phase 1

Chapter 3 discusses the analysis and interpretation of the qualitative data obtained from the interviews with the chief health programme officer (sample A) and nurse managers (sample B), supported by a comparison with the literature. The data of both sets is integrated to further guide the data collection of phase 2.

Chapter 4: Literature review

This chapter discusses additional literature on evaluation and implementation of the Baby Friendly Hospital Initiative in general, and particularly on the Baby and Mother Friendly Initiative in Namibia. It was also guided by data obtained from phase 1 of this study. The literature was further used to develop items for the questionnaire for quantitative data collection in phase 2.

Chapter 5: Data analysis and discussions of findings of phase 2

Chapter 5 presents a discussion of the analysis and interpretation of the data obtained from the registered and enrolled nurses/midwives who were working in Baby and Mother Friendly Hospitals, through self-administered questionnaires. Descriptive and inferential statistics were used to analyse the data, and the results are presented as composite frequency tables and bar graphs, with a supportive discussion.

Chapter 6: Discussion of the integrated data from phases 1 and 2

Chapter 6 presents a discussion on the integrated data from phases 1 and 2. The findings of the literature search were also integrated in the discussion. The integrated data formed the basis for the development of guidelines which should help to strengthen the BMFI programme.

Chapter 7: Discussion on the development and validation of the guidelines to strengthen the BMFI programme in Namibia

Chapter 7 discusses the development of the guidelines and the validation thereof by field experts to help strengthen the BMFI programme. Each guideline is followed by a set of recommendations to strengthen the implementation of the BMFI programme.

Chapter 8: Conclusions, recommendations and limitations

This chapter presents an overview of the study, including the recommendations and limitations of the study.

1.13 SUMMARY

Chapter 1 introduced the background of the research problem and the context in which the Baby and Mother Friendly Initiative programme is implemented. It discussed the rationale for conducting this study, together with definition of concepts. The theoretical framework that guided the study was discussed. The theoretical foundation and paradigm of the study were described. The chapter gave a brief overview of the research design, methodology and research setting, as well as ethical principles and scope of the study. This was followed by an outline of the thesis report.

The next chapter (2) discusses the research design and methods.

CHAPTER 2

RESEARCH DESIGN AND METHODS

2.1 INTRODUCTION

The preceding chapter introduced the background and the context in which the study was conducted. This chapter discusses and explains the research design and methods, including data collection, population and sample, measures to ensure trustworthiness, validity, reliability and ethical considerations. The study was conducted in two phases, which will be discussed separately.

2.2 APPLICATION OF THE EIGHT STAGE MODEL OF EVALUATION TO THE RESEARCH DESIGN

A framework is the abstract, logical structure of meaning that guides development of the study and enables the researcher to link the findings to the body of knowledge for nursing (Grove et al 2013:695). According to Polit and Beck (2012:728), a framework is the conceptual underpinning of the study, such as a theoretical framework in theory-based studies or conceptual framework in studies based on a specific conceptual model. The authors state that if the research is very pragmatic, it may not need a theory to enhance its usefulness. Given the fact that evaluation research is based on practical considerations, the researcher chose to use the Eight Stage Model of Evaluation based on Macpherson (1986) to guide the study (Territory Health Services 1999:45). This model has been recommended for use in evaluating health promotion programmes (Rendall-Mkosi et al 2003:144). The stages in this model enabled the researcher to ask specific questions, the answers to which focus the study in manageable stages. The stages are illustrated in Figure 2.1. How the steps apply to this study is described below.

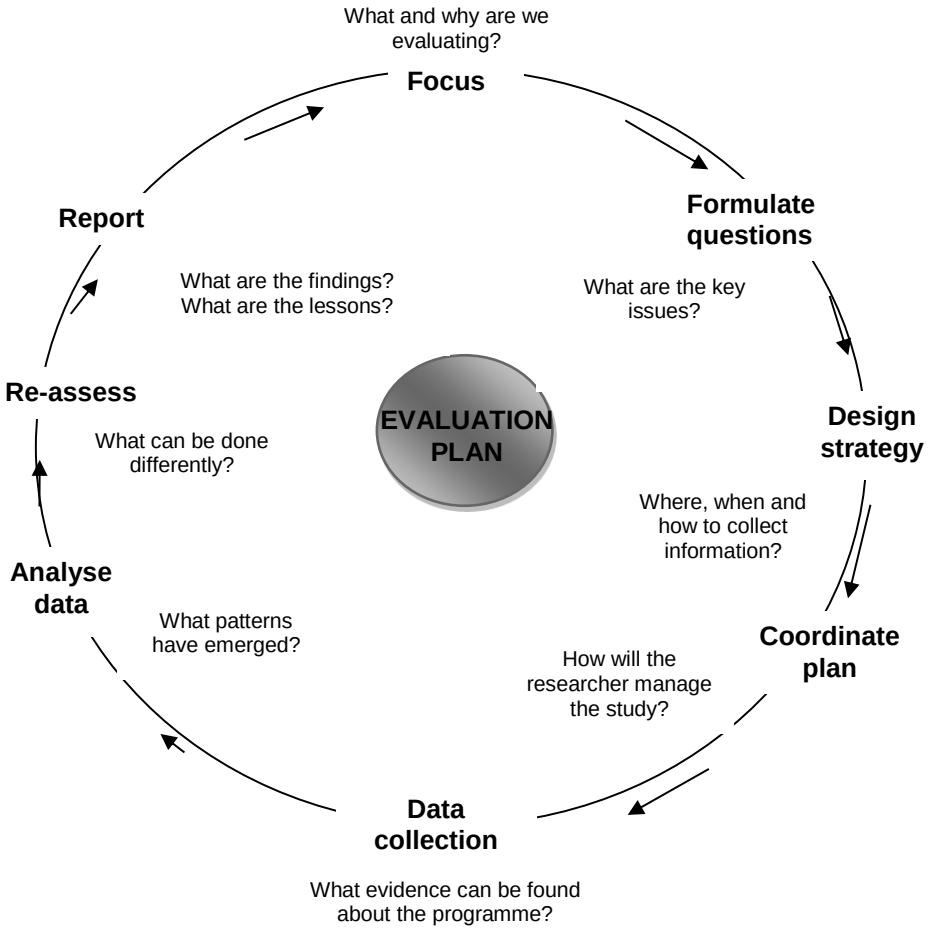

Figure 2.1 The Eight Stage Model of Evaluation based on Macpherson 1986

(Source: Territory Health Services 1999:45)

Stage 1 entailed the *focus of the study*. The focus of this study was the evaluation of the implementation the BMFI programme in the Baby and Mother Friendly Hospitals. The first objective of the study was to determine the current status of the Baby and Mother Friendly Initiative programme that was being implemented in the Baby and Mother Friendly Hospitals in Namibia. The second objective was to investigate the effectiveness of the Baby and Mother Friendly Initiative implementation in these hospitals. The last objective was to develop guidelines for the strengthening of the Baby and Mother Friendly Initiative programme.

Stage 2 entailed the *formulation of the questions.* In this stage, key questions regarding the BMFI programme were identified. These questions included when and how the programme was launched, as well as its objectives. Some of these key questions were derived from a preliminary review of the literature regarding the BMFI programme.

Answers to these questions helped the researcher to understand the context in which the study was to be conducted and set the scene for the study.

Stage 3 entailed the *designing of the study.* The researcher chose a sequential, exploratory, mixed-methods design to answer the research questions, namely; How effectively has the BMFI programme been implemented in the Baby and Mother Friendly Hospitals in Namibia since its inception? What can be done to strengthen the implementation of the BMFI programme? In mixed-methods research the researcher collects and analyses data, integrates the findings and draws inferences, using both qualitative and quantitative methods in a single study (Tashakkori & Creswell 2007, cited in Polit & Beck 2012:603).

Stage 4 entailed the *co-ordination of the study plan*. A timetable and budget for the study was drawn up in order to ensure that all the steps of the research process were followed accordingly, within the allocated budget and within the given time frame. Financial resources were organised for registration fees, computer, fuel, air-tickets, meals, accommodation during fieldwork and postal services (Annexure J). Furthermore, the services of a statistician for assistance with creating the questionnaire on EPI Info and analysis of data were solicited. Lastly, the researcher applied for study leave and annual leave to conduct the fieldwork.

Stage 5 entailed *data collection* to find evidence on how the BMFI programme was being implemented in the Baby and Mother Friendly Hospitals in Namibia. The study employed unstructured and semi-structured interviews for samples A and B in phase 1 and structured questionnaires in phase 2 as data collection methods. Using more than one method in the same study strengthens the study's validity (Creswell & Plano Clark 2011:12). According to De Vos et al (2011:348), unstructured interviews allow for a deep understanding of an experience and the meaning that people make of their experiences. Semi-structured interviews ensure that researchers obtain all the information required and give freedom to participants to provide as many illustrations and explanations as they wish (Polit & Beck 2012:537). Questionnaires are designed to determine facts about the study participant, including events, beliefs and level of knowledge (Grove et al 2013:425). In this study, unstructured and semi-structured interviews enabled the researcher to gain a deep insight into the experiences of the chief health programme officer and nurse

managers on the implementation of the BMFI programme. Questionnaires enabled the researcher to investigate the level of knowledge of registered and enrolled nurses/midwives on the implementation of the BMFI programme, as well as the day-to-day practice thereof.

Stage 6 entails *data analysis and presentation of results.* In order to find out what had emerged from the data, they were analysed as follows:

Qualitative data were analysed using Braun and Clarke's (2006) thematic analysis. These data were obtained through unstructured interviews from sample A and semi-structured interviews from sample B of phase 1. The datasets were analysed separately and integrated to build on the quantitative phase 2.

Quantitative data derived from the questionnaires submitted to the registered and enrolled nurses/midwives working in the Baby and Mother Friendly Hospitals in phase 2 were analysed, using Epi Info, Version 7. Descriptive statistical analyses were performed to describe data in the form of frequencies, percentages, tables and figures. Inferential statistics were performed to determine relationships between the demographic characteristics of the registered and enrolled nurses/midwives and the implementation of the Ten Steps to Successful Breastfeeding. Cross-tabulation and a Chi square test were used to determine the relationship of certain practices in the implementation of the BMFI programme and demographic practices of the respondents.

Qualitative and quantitative data sets were integrated and formed the basis for the development and validation of the guidelines which could help to strengthen the BMFI programme.

Stage 7 entailed *re-assessment.* This stage was concerned with what could be done with the result of the study and addressed the last objective of the study, namely the development and validation of the guidelines for strengthening the BMFI programme. The guidelines were developed and validated.

Stage 8 entailed *report writing*. The research report discussed how the study was conducted from conceptualisation to the findings, and the development and validation of

the guidelines to help strength the BMFI programme, including recommendations and conclusions of the study.

2.3 RESEARCH DESIGN

A research design focuses on the end product and all the steps in the process to achieve the outcome anticipated (De Vos et al 2011:143). Bryman (2008:698) refers to a research design as a framework for collecting and analysing data**.** A sequential exploratory mixed-methods design using a pragmatic paradigm was chosen to answer the research question. A pragmatic paradigm is a philosophical underpinning for mixed-methods studies. In pragmatism, instead of focusing on methods, the emphasis is on the research problem and the use of all approaches available to understand the problem (Rossman & Wilson 1985, cited in Creswell 2014:10).

2.3.1 Mixed-methods research

The main reason for using a mixed-methods design was that the combination of a qualitative and quantitative design would address the research problem from different perspectives (Creswell & Plano Clark 2011:12). The rationale for using mixed-methods research was as follows:

- Mixed-methods research uses distinct designs that involve philosophical assumptions as well as diverse methods (Creswell 2014:4). The research problem encouraged the application of pragmatic philosophical assumptions that enabled the researcher to draw freely from both qualitative and quantitative assumptions and use both qualitative and quantitative methods of data collection and data analysis.
- Qualitative and quantitative data each have both strengths and limitations. The strengths of each of them can be combined to develop a stronger understanding of the problem or question, as well as overcoming the limitations of the other. Using mixed-methods research means allowing each method to do what it does best (Creswell 2014:215; Polit & Beck 2012:604). The researcher gained full understanding of the (qualitative) experiences of the chief health programme

officer and nurse managers and also the (quantitative) practices of the registered and enrolled nurses/midwives in the implementation of the BMFI programme.

- Using mixed methods provides a more comprehensive understanding of the research problem, such as developing better measurement instruments by first collecting and analysing qualitative data and then administering the instrument to a sample (Creswell 2014:218). The researcher used the information from the interviews with the chief health programme officer and nurse managers to develop question items in the questionnaire for registered and enrolled nurses/midwives. In addition, integrating the results of phases 1 and 2 provided the best evidence for the development and validation of the guidelines that should help to strengthen the BMFI programme.
- Mixed methods represent two fundamental languages of human communication, namely words and numbers (Polit & Beck 2012:604). In the qualitative phase, words were used to describe the analysis and interpretation of the experiences of the participants. However, in the quantitative phase, numbers, descriptive and inferential statistics were used to describe the data pertaining to the practices of registered and enrolled nurses/midwives and hospitals with regard to the implementation of the BMFI programme.

The advantages of mixed-methods research include providing better understanding of the research problem and better evidence than either qualitative or quantitative methods alone, as well as allowing the researcher to apply different philosophical assumptions and combinations of research methods and approaches. The challenges of mixed-methods research include the need for extensive data collection, the time-intensive nature of analysing both qualitative and quantitative data, and the requirement for the researcher to be familiar with managing different approaches of research (Creswell 2014:218). In this study, it took nine months to collect the qualitative data in phase 1.

2.3.2 Exploration

Qualitative research often informs clinical practice by raising questions and providing ideas for additional research into activities about which little is known (Stommel & Wills 2004:178). Exploratory sequential mixed-methods design collects qualitative data in the first phase with the central premise of the need for initial in-depth exploration, and then

uses the findings in a second quantitative phase (Polit & Beck 2012:612). In this study, the qualitative data collection preceded quantitative data collection because the researcher wanted first to explore in depth the experiences of the implementation of the BMFI programme qualitatively, before an attempt was made to measure quantitatively how it was practised. Therefore, the information from phase 1 guided the development of questionnaires for the registered and enrolled nurses/midwives in phase 2 of the study.

2.3.3 Description

The purpose of description is to observe, describe and document aspects or provide a picture of situations as they naturally occur (Grove et al 2013:215; Polit & Beck 2012:226). In order to give a representation of the implementation of the BMFI programme, a detailed description of the experiences of the chief health programme officer and nurse managers was provided. Furthermore, the way in which the registered and enrolled nurses reported their practices of the BMFI programme was described. In addition, a description was provided of the integration of the evidence of the two phases to develop and validate the guidelines intended to strengthen the BMFI programme.

2.3.4 Contextual

The main reasons why qualitative researchers provide considerable descriptive detail is that they typically emphasise the importance of understanding behaviour, values or whatever must be understood in context (Bryman 2008:387). The influence of the research setting where the BMFI programme was planned and implemented was recognised.

2.4 STUDY SETTING

In phase 1 of this study, the interview with sample A (the chief health programme officer) took place at the headquarters of the MoHSS in Windhoek. All nutrition programmes, including the BMFI, were planned in the office of the chief health programme officer. Interviews with sample B (nurse managers) took place in the Baby and Mother Friendly Hospitals. The BMFI programme implementation was supervised from the offices of nurse managers in these hospitals. The hospitals concerned were: one national referral

hospital, three intermediate hospitals, four state-subsidised mission hospitals and 25 state district hospitals.

Phase 2 of the study was conducted in 32 Baby and Mother Friendly Hospitals that were found to be implementing the BMFI programme in phase 1 of the study, excluding one hospital in which the study was pre-tested. Data were collected from all registered and enrolled nurses/midwives who were working in the maternity wards during the time of the study.

2.5 RESEARCH METHODOLOGY

Methodology is the study of procedures used in research to create new knowledge (Terre Blanche et al 2006:561). According to Creswell (2014:247), research methods involve the forms of data collection, analysis and interpretation that researchers propose for their studies. The methods used in phase 1 and phase 2 will be discussed separately in order to maintain a clear distinction.

2.5.1 Qualitative phase 1

According to Creswell (2014:246), qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The qualitative approach was chosen based on its following characteristics.

- Qualitative researchers believe that truth is both complex and dynamic and can be found only by studying persons as they interact with and within their socio-historical settings (Marshall & Rossman 2011; Munhall 2012, both cited in Grove at al 2013:24). This study was conducted in the natural settings where the BMFI programme was implemented.
- Qualitative research includes theoretical perspectives that guide researchers as to how they position themselves in qualitative research. The researcher plays an active part in the study and acknowledges that subjectivity and personal values are inevitable and necessary for understanding human experiences (Creswell 2014:64; Marshall & Rossman 2011, cited in Grove et al 2013:25). In this study, the researcher filled the role of an interviewer during data collection, as well as an

interpreter during the data analysis. The researcher's own preconceptions and worldview influenced how the data were analysed. As a result, subjectivity was accepted, which added richness to the data.

- Qualitative research is the investigation of phenomena, typically in an in-depth and holistic fashion, through the collection of rich narrative materials using a flexible research design (Polit & Beck 2012:739). A detailed description of the data obtained from phase 1 of this study has been provided.
- The findings from a qualitative study seek contextual understanding that is unique to the specific study (Creswell 2014:203; Grove et al 2013:25). In this study the researcher does not intend to generalise the findings beyond the Baby and Mother Friendly Hospitals in Namibia.

2.5.1.1 Population

Terre Blanche et al (2006:562) define population as the larger pool of cases from which a sample is drawn. The study population of phase 1 consisted of two populations, namely population 1, which consisted of the chief health programme officer in charge of the nutrition programme, and population 2, comprising nurse managers in charge of the Baby and Mother Friendly Hospitals. The accessible population 1 were all chief health programme officers in charge of the nutrition programme at national level. The accessible population 2 were all nurse managers in charge of the Baby and Mother Friendly Hospitals.

Population 1 was the chief health programme officer for nutrition (there was only one post for this position). The chief health programme officer contributes to the development of nutrition policies, planning and supervision of the implementation of the BMFI programme in all hospitals in Namibia. The officer is also responsible for overseeing planning and coordinating breastfeeding training, as well as assessment and re-assessment of the Baby and Mother Friendly Hospitals.

Population 2 consisted of nurse managers in charge of the 34 hospitals in which the BMFI programme had been implemented since 1992. The nurse managers supervise the implementation of the BMFI programme at hospital level. They are responsible for

ensuring availability of BMFI policy and resources, including training, as well as requesting assessment and re-assessment of their respective hospitals.

2.5.1.2 Sample, sampling and sample size

A sample comprises elements or a subset of the population considered for actual inclusion in the study (Unrau, Gabor & Grinnell 2007, cited in De Vos et al 2011:223). Sampling is the process of selecting a portion of the population to represent the entire population (Polit & Beck 2012:742).

- **Sample A**

A census was employed to select sample A from population 1. Census refers to a sample that covers the entire study population (Polit & Beck 2012:721). De Vos et al (2011:225) state that in cases where the target population is small, it is preferable to include the total population in the study. The inclusion criteria were related to the responsibility for the overall planning and supervision of the implementation of the BMFI programme.

The inclusion criteria for sample A were as follows:

- Must be involved in policy formulation and planning of the nutrition programme as head of the unit at national level

In this study, there was only one candidate for population 1, hence sample A was the chief health programme officer in charge of the nutrition programme (the only unit of analysis). The chief health programme officer was informed about the study through the Director of Primary Health Care (Annexure H). The researcher contacted the officer telephonically to introduce herself and the study and make an appointment for the interview. During the conversation, the topic and the aim of the study was communicated.

- **Sample B**

A census was also employed to select sample B from population 2, which comprised the total population: the nurse managers who were in charge of the 34 Baby and Mother

Friendly Hospitals during the period of the study. Therefore, the sample size for sample B was the 34 nurse managers. It was appropriate to include the total population in sample B, not only because it was relatively small but also to address the objective of the study: to evaluate the implementation of the BMFI programme in all 34 Baby and Mother Friendly Hospitals.

The inclusion criteria for sample B were as follows:

- Must be in charge of the Baby and Mother Friendly Hospital
- Alternatively being a nurse manager in an acting position during the time of the study

The participants were approached through the directors of the respective regional health directors, medical superintendents and medical officers. The participants were approached for consent to conduct the interview.

2.5.1.3 Data collection

Mixed-methods research requires having sufficient time, resources and skills to collect and analyse data (Creswell & Plano Clarke 2011:14). Due to these requirements and the vast area that had to be covered, the data collection from both samples A and B took place over a period of nine months.

- **Interviews**

An interview is a structured or unstructured verbal communication between the researcher and a participant during which information is obtained for the study (Grove et al 2013:698). Terre Blanche et al (2006:297) state that for a constructivist, whatever meanings are created in the interview are treated as co-constructed between the researcher and participant. According to De Vos et al (2011:342), all interviews are interactional events, and interviewers are inevitably implicated in creating meanings that exist in participants. Interviews in this study were seen from this perspective; meaning that the outcomes of the interviews were joint constructions between the researcher and participants.

De Vos et al (2011:348) describe six types of one-to-one interviews, namely the unstructured, semi-structured, the ethnographic, the e-mail, the telephone and the convergent interviews. An unstructured interview was applied for sample A and semi-structured interviews for sample B. The data collection process will therefore be discussed separately for samples A and B.

The rationale for using one-to-one interviews was as follows:

- Interviews are a useful way of getting large amounts of data quickly and are an effective way of exploring and obtaining greater depth of meaning (De Vos et al 2011:360). However, the researcher found that planning and travelling to the Baby and Mother Friendly Hospitals required a considerable amount of time.
- Interviews allow the researchers to explore greater depth of meaning than they could obtain with other techniques. Interviewers use probing to obtain more information and can explain the question further or ask the participants to explain the statements that they have made (Grove et al 2013:424). In an unstructured interview, the researcher found that the participants expressed their experience freely without much probing required.
- Interviews allow the researcher to have control over the line of questioning (Creswell 2014:191). The researcher was able to keep the discussions within the relevant topics.
- In semi-structured interviews, the use of a written topic guide ensures that the researcher can obtain all the information required and also gives participants the freedom to provide as many illustrations and explanations as they wish (Polit & Beck 2012:537). In this study, using the interview guide enabled the researcher to ensure that all important topics regarding the implementation of the BMFI programme were covered.
- The response rate of interviews is higher than the response rate of questionnaires; offering a more representative sample (Grove et al 2013:424). However, in this study the sample comprised the total target population for the study.

Apart from the advantages of one-to-one-interviews, their disadvantages were also considered.

- The disadvantages of interviews include participants not providing the required responses, or the researcher asking questions that do not elicit the required responses (De Vos et al 2011:360). To address these challenges, the researcher allowed the participants' perspectives to emerge by remaining open to how they responded, and carefully wording follow-up questions, as described by Grove et al (2013:271).
- Interviews are more costly than questionnaires and more time consuming (Grove et al 2013:424). Interviews demand skills in gathering, analysing and interpreting data. Careful planning, consultation and feedback from the supervisors addressed these limitations.

- **Data collection for sample A**

An unstructured interview was applied for sample A.

An unstructured one-to-one interview is an in-depth interview conducted with an interest in understanding other people's experiences and the meanings they make of those experiences and a focus to allow the researcher and participant to explore an issue (De Vos et al 2011:348). It is with these reasons and understanding that the researcher conducted an unstructured interview with sample A, the chief health programme officer.

The participant's experience of seven years as head of the nutrition programme was noted.

The chief health programme officer was informed about the study through the director of primary health care (Annexure H). The researcher contacted the officer telephonically to introduce herself and the study and make an appointment for the interview. During the conversation, the topic and the aim of the study was communicated.

A pilot is a small-scale version or trial designed to test the methods to be used in a larger, more rigorous study (Polit & Beck 2012:195). The purpose of the pilot study is to identify possible problems in the data collection protocols and set the stage for the actual study. For sample A, no piloting was conducted because there was only one person for the study

population. According to Grove et al (2013:424), the pilot testing should be done on subjects similar to the individuals who will be included in the study.

In preparation for the interview, the researcher had the following at hand: Copies of approval of the study from the University of South Africa (Unisa), MoHSS and the Director of Primary Health Care, informed consent form, audio-tape recorder with extra batteries and a notebook.

Once a date for the interview had been confirmed, the researcher visited the officer at her workplace to conduct the interview. The interview took place in the private and quiet office of the participant with a “do not disturb sign” outside the door. Before commencing with the interview, the researcher again explained the purpose of the study, voluntary participation and confidentiality of the information. Regarding anonymity, the officer was informed that because of her unique position, there was a possibility that her identity could be recognised. This information was written in the consent form which was given to the participant. The participant consented to the interview as well as the audio-tape recording thereof.

The researcher started the interview by one open-ended question: What is your experience with regard to the implementation of the BMFI in Namibia? This was followed by probing questions. Probing is the use of non-threatening but thought-provoking questions (Grove et al 2013:272). Listening carefully enabled the researcher to ask relevant follow-up questions, which gave the participant an opportunity to provide rich detailed information of her experience with the implementation of the BMFI programme. According to De Vos et al (2011:351), an interview is an interactional situation and a social interaction where meanings are negotiated. Therefore by asking relevant questions, the researcher was able to interact and later analyse the interview. The interview lasted for 45 minutes. At the end of the interview, the researcher summarised the major points, asked the participant if she had further questions and thanked her for taking time to participate in the study. After the interview, the researcher listened to the audio-tape record in order to familiarise herself with the data.

- **Data collection for sample B**

Thirty-four interviews including pre-testing (one pilot interview and 33 actual interviews) were conducted in 14 health regions across the country over nine months, as indicated below.

Table 2.1: Sample B schedule

Number of interviews	Region
1 pilot	Hardap
2	Khomas
2	Hardap
3	Karas
1	Omaheke
4	Otjozondjupa
3	Kunene
4	Erongo
4	Kavango East and West
1	Oshikoto
3	Ohangwena
1	Oshana
4	Omusati
1	Zambezi
34	**14 Regions**

Semi-structured interviews were applied for sample B.

The semi-structured interview is an information-collection approach that gives a detailed picture of a participant's belief about or perception of a particular topic (De Vos et al 2011:351). The semi-structured interview enabled both the researcher and participants to ask and explain questions for clarity, thus providing a detailed picture of the implementation of the BMFI programme.

The participants were informed about the approval of the study through the regional directors. A letter to request further approval to conduct interviews was e-mailed to the national and regional directors, medical superintendents, medical officers and nurse managers (Annexure H). Once the names and contact details of the participants were received, the researcher communicated the schedule of the field visits to each region and requested the participants to indicate possible suitable dates for appointments for

interviews. The participants themselves consented to participate in the study when the schedule and appointments for interviews were made.

- **Piloting**

Teddlie and Tashakkori (2009), cited in De Vos et al (2011:446), state that a pilot study is part of the data collection steps in mixed-methods research. The purpose of pre-testing a data collection instrument includes seeing how much time it takes to administer the instrument, and assessing whether sequencing of questions is sensible (Polit & Beck 2012:296). The semi-structured interview guide (Annexure D) was pre-tested in Aranos Health Centre in Hardap Region, which has a baby friendly status. Pre-testing allowed the researcher to practise interview skills, such as listening, probing and asking follow-up questions, as well as estimating time for the real interviews. The interview during pre-testing lasted for an hour. There were two interruptions: a phone call and a knock at the door from the chief medical officer who wanted to ask something from the nurse manager. The nurse manager had to spend a few minutes on both. Polit and Beck (2012:543) state that interruptions by telephones and other distractions are common problems during interviews. The researcher therefore learned the importance of ensuring a private, quiet venue for interviews and requesting participants to unplug the telephones and/or switch off their cell phones during interviews. Furthermore, listening to the audio-tape recording immediately after the interview was over helped the researcher to examine and improve her own interviewing skills in the actual study.

- **Preparation of the interviews**

As with the interview for sample A, the researcher had the following at hand: Copies of approval from Unisa, MoHSS, informed consent form, audio-tape recorder with extra batteries and a notebook. De Vos et al (2011:350) explain that a private and quiet environment with no interruptions facilitates the interview process. Interviews took place either in the nurse managers' offices or the conference rooms of the hospitals. The researcher requested that “interview in progress” signs be put outside the doors of these offices and conference rooms. The researcher explained the purpose of the study, voluntary participation and confidentiality of the information. With regard to anonymity, each participant was also informed that because of his or her position, a possibility existed

that her or his identity could be recognised through the name of the hospital. This information was written in the consent form which was given to each participant to read. The participants consented to the interviews as well as to the audio-tape recording thereof. In addition, participants were informed that an interview would take about 50 minutes. At the end of each interview, the researcher summarised the major points and asked the participants if they had any questions as well as thanking them, as described by De Vos et al (2011:351). An average interview lasted for 45 minutes. After each interview, the researcher listened to the audio-tape recording in order to familiarise herself with the data. Transcriptions were done in the evenings following each interview.

2.5.1.4 Data analysis

Mixed-methods data analysis consists of analytical techniques applied to both the qualitative and quantitative data and integration of the two forms of data in a single project (Creswell & Plano Clark 2011:212). In both qualitative and quantitative data analysis, it is crucial that each step in the process be followed meticulously (Creswell & Plano Clark 2011:204). The qualitative data were analysed according to Braun and Clarke's (2006) thematic analysis. Thematic analysis is a rigorous thematic approach that produces an insightful analysis that answers particular research questions (Braun & Clarke 2006:[28]). The phases of the thematic analysis and how they were applied to this study are described below.

Although the data of samples A and B were initially analysed separately, the process of data analysis described below applies to both samples. The transcriptions were numbered 'interview one (1) to 33' to identify in which interview certain topics emerged. However, the transcript of sample A was represented by X.

- ***Familiarisation with data***

This phase involved the preparation of data for analysis. The digital voice recordings from the interviews were transcribed verbatim and the transcriptions were checked for accuracy. The researcher immersed herself in the data by repeated reading of data in an active way, searching for a general understanding of all data, as well as meanings and

patterns. The researcher kept on going back to check the transcripts against the original audio recording for accuracy.

- ***Generating initial codes***

This phase entailed the production of the initial codes from the data. Coding is the process of grouping evidence and labelling ideas so that they reflect increasingly broader perspectives (Creswell & Plano Clark 2011:212). The coding process was done manually, using highlighters to indicate potential codes. According to Saldana (2009:22), manual coding of data gives more control over and ownership of the work to the researcher. An example of the transcribed interview is presented in Annexure E.

- ***Searching for themes***

This phase involved sorting the different codes into potential themes and collating all relevant coded data extracts within the identified themes. The codes were analysed into categories, which were grouped into themes.

- ***Reviewing themes***

This phase entailed reviewing and refining of the themes. The researcher read and re-read the entire data sets again in order to determine if there was a need for re-coding. Re-coding was done accordingly.

- ***Defining and naming themes***

This phase entailed defining and further refining the themes for presentation of analysis. The researcher revisited the data extracts for each theme and conducted a detailed discussion for each theme. The discussions included narrative quotations from the participants.

- ***Producing the report***

This last phase of thematic analysis includes the final analysis and write-up of the report. The research process, including the findings, guidelines for strengthening the BMFI programme, conclusions and recommendations was included in the thesis report.

2.5.1.5 Integration of results from samples A and B

In this phase of the study, the data from samples A and B were integrated. Prior to this process, the themes, categories and subcategories that emerged from each sample were analysed and discussed separately, supported by literature comparison. The aim of literature comparison is to form the basis for comparing and contrasting findings of the current study with previous studies (Creswell 2014:29). The integrated data were presented as the themes which emerged with respect to important issues in the implementation of the BMFI programme. During the integration of the data, the chief health programme officer's experience of the implementation of the BMFI programme was compared with the experiences of the nurse managers. Better understanding of each sample's views regarding the implementation of the BMFI programme was thus obtained.

2.5.1.6 Trustworthiness

Trustworthiness refers to ensuring rigour in qualitative research. Lincoln and Guba (1985:290) identify four criteria for establishing trustworthiness, namely credibility, transferability, dependability and confirmability, which are discussed below.

- **Credibility**

According to Lincoln and Guba (1985:301), credibility refers to the likelihood that credible findings and interpretations will be produced. In this study, the credibility criterion was ensured by probing during the interviews in order to confirm that the researcher correctly understood what the participants meant. Member checking provided the chief health programme officer and nurse managers with an opportunity to correct errors of fact and challenge what might be perceived to be the researcher's wrong interpretations, as stated by Lincoln and Guba (1985:314).

- **Dependability**

Dependability refers to the ability of the process of inquiry that is followed in a study to be examined by someone other than the researcher. This means that an external person/body should be able to attest to the dependability of the findings in the research (Lincoln & Guba 1985:318). To this end, the researcher kept complete records of all stages of the research process, including the interview guide, transcripts and evidence of the data analysis process.

- **Transferability**

Transferability refers to the extent to which the findings can be applied or transferred to other contexts or situations (Lincoln & Guba 1985:316). In this study, the transferability criterion was observed by providing thick descriptions of the study to enable users to evaluate the transferability of the study to other contexts.

- **Confirmability**

Confirmability is a criterion that is concerned with establishing that the data and their interpretation represent what is provided by participants and are not invented by the researcher (Polit & Beck 2012:585). The researcher strived to prevent her personal views, values and understanding from influencing the data collection, analysis and interpretation of the findings by continually remaining reflexive during the study (Lincoln & Guba 1985:327). Furthermore, Lincoln and Guba (1985:318) state that as with dependability, the interview guide, transcripts and evidence of the data analysis process provide an audit trail that can be examined to determine the confirmability of the study.

2.5.2 Quantitative phase 2

The following discussion of the quantitative phase covers the procedures followed to collect data from the registered and enrolled nurses/midwives.

Creswell (2014:247) defines quantitative research as a means for testing objective theories by examining the relationships among variables that can be measured, typically

on instruments, so that numbered data can be analysed using statistical procedures. Grove et al (2013:706) see quantitative research as a formal, objective and systematic study process to describe and test relationships and to examine cause and effect interactions among variables. According to Polit and Beck (2012:739), quantitative research is the investigation of phenomena that lend themselves to precise measurement and quantification, often involving a rigorous and controlled design. The quantitative component in this study was non-experimental and descriptive in nature, meaning that no manipulation of the variable, the BMFI programme, occurred. The objective in this study was to investigate the effectiveness of the BMFI implementation in the Baby and Mother Friendly Hospitals.

Some of the characteristics of quantitative research have already been discussed in section 2.5.1, in relation to the rationale for using mixed-methods research. The following additional characteristics of the quantitative approach were considered:

- Quantitative research is typically highly structured, so that the investigator is able to examine the precise concepts and issues that are the focus of the study (Bryman 2008:394). In this phase a structured process was followed in administering the data collection instrument.
- In quantitative research, concepts, variables, hypotheses and methods of measurement tend to be defined before the study begins and remain the same throughout. Quantitative researchers choose methods that allow them to objectively measure the variables of interest and try to remain detached from the research participants so that they can draw unbiased conclusions (De Vos et al 2011:63). In this study, the BMFI concept was operationalised from literature to describe the registered and enrolled nurses/midwives' practices of the BMFI programme. The researcher maintained distance from the collected data.
- Quantitative data analysis consists of analysing the data based on the type of questions or hypotheses and using appropriate statistical tests to address the questions or hypotheses (Creswell & Plano Clark 2011:416). In this study, descriptive and inferential statistics were used to analyse the data in this phase.

2.5.2.1 Census

Considering the objective of the study and its manageable size, it was decide to include the entire population (census) of 391 possible respondents. A census includes the entire study population (Bryman 2008:169; Polit & Beck 2012:721). The inclusion criteria for the unit of analysis of this population were that the participant should

- be a registered nurse/ midwife or enrolled nurse/midwife
- be working in the Baby and Mother Friendly Hospitals

In order to determine the number of the respondents, hospitals that were found implementing the BMFI programme in phase 1 were approached to provide a list of all registered nurses/midwives and enrolled nurses/midwives who were working in the maternity wards. Three hospitals did not participate in phase 2 for the following reasons: One hospital had not participated in phase 1 of the study. The second hospital was found to be not implementing the BMFI programme during phase 1. The third hospital participated in pre-testing of the research instrument, and was therefore excluded from phase 2. The total number of registered and enrolled nurses/midwives given by the 31 hospitals was 391 (Table 2.2).

Table 2.2: Study population for Phase 2

Name of hospital	Total registered and enrolled nurses/midwives
1. Hospital A	4
2. Hospital B	14
3. Hospital C	13
4. Hospital D	10
5. Hospital E	10
6. Hospital F	5
7. Hospital G	10
8. Hospital H	50
9. Hospital I	10
10. Hospital J	10
11. Hospital K	5
12. Hospital L	11
13. Hospital M	8
14. Hospital N	4
15. Hospital O	8
16. Hospital P	12
17. Hospital Q	7
18. Hospital R	8
19. Hospital S	9
20. Hospital T	54
21. Hospital U	17
22. Hospital V	10
23. Hospital W	16
24. Hospital X	9
25. Hospital Y	8
26. Hospital Z	18
27. Hospital Aa	10
28. Hospital Bb	10
29. Hospital Dd	6
30. Hospital Ee	14
31. Hospital Ff	11
Total	**391**

2.5.2.2 Data collection

According to Creswell and Plano Clark (2011:173), quantitative data collection in mixed-methods study incorporates rigorous quantitative procedures such as using sampling procedures, obtaining permission, collecting information, recording data and administering the procedures. This section discusses the data collection plan, the instrument, validity and reliability. The type of information to be collected was guided by the data pertaining to the implementation of the BMFI programme obtained in the qualitative phase 1 and the literature. The data in Phase 2 were collected by means of a self-administered questionnaire completed by all willing registered and enrolled

nurses/midwives at the 31 Baby and Mother Friendly Hospitals. The distribution process commenced after the instrument was tested. This will be discussed below.

The questionnaires were sent at the request of the researcher to the coordinators assigned by the regional directors to each hospital by Namibia Post LTD courier. Each of the 31 hospitals received one bag with the number of questionnaires equal to the number of enrolled and registered nurses/midwives who were working in maternity wards during the period of data collection. A self-addressed Namibia Post LTD courier bag was put in each bag to cover the cost of returning the questionnaires. The coordinators were given the responsibility for distributing, collecting and returning the completed questionnaires by a set date. Data collection for phase 2 took place between 15 April 2015 and 15 June 2015. Of the 391 questionnaires issued, 285 (73%) completed questionnaires were received.

All hospitals but one received questionnaires by post. The director for the region where the particular hospital was situated wanted the researcher to administer the questionnaires in person. After consultation with the supervisors, the researcher had to travel to that hospital. However, on arrival, the medical officer who was in charge of that hospital consented for the questionnaires to be distributed as self-administered. The questionnaires were returned within a period of two weeks by post.

2.5.2.3 Data collection instrument

A questionnaire is a printed self-report form designed to elicit information that can be obtained through written responses of the subject (Grove et al 2013:706). The basic objective of the questionnaire is to obtain facts and opinions about a phenomenon from people who are informed on the particular issue (De Vos et al 2011:186). The focus of phase 2 was on obtaining information about the practice of the BMFI programme by the registered and enrolled nurses/midwives. A questionnaire was compiled, based on the themes that had emerged from phase 1 and the literature, to examine the practices of registered and enrolled nurse/midwives in the implementation of the BMFI programme. This approach to data collection is typically that of a sequential mixed-methods study, as one set of data builds on the other (Creswell 2014:220).

A self-administered questionnaire was preferred because the postal costs were lower than travel and accommodation costs if the researcher had had to administer the questionnaire herself. Considering the time that would have been needed if other types of instruments had been used, the self-administered questionnaire was the most suitable for collecting information over a relatively short period of time. According to Grove et al (2013:429), the response rate to a questionnaire is generally lower than with other forms of self-reporting; particularly if the questionnaires are mailed out, it is usually 25% to 35%. In this study, however, the high response rate of 73% was attributed to the involvement of the regional directors, who appointed coordinators for the data collection at hospital levels. Creswell (2014:96) identifies the importance of obtaining permission from individuals in authority, who are gatekeepers, to gain access to study participants. The researcher also kept close contact with the coordinators by regularly phoning or e-mailing to remind them on the due date for returning the questionnaires.

- **Development of the structured questionnaire**

Before the researcher can decide on the nature of the questionnaire, there must be clarity on precisely what information is to be obtained, determined by the central concept of the study (De Vos et al 2011:190). The development of the questionnaire was guided by the objective of phase 2, the themes that emerged from phase 1 and the literature. According to De Vos et al (2011:191), a concept can be measured by operationalising it from literature. The concept of BMFI was therefore operationalised into practical measurements, namely WHO and UNICEF's (1989) Ten Steps to Successful Breastfeeding. Operationalising a concept from a literature review ensures greater chance of the items' reflecting the concept more accurately. Operationalising the BMFI concept therefore helped to improve face validity of the instrument. The design of the questionnaire was also helped by coding and de-coding of the question items with the help of a statistician before and after pre-testing of the questionnaire.

- **Pre-testing of the instrument**

A pre-test is a small-scale version conducted in preparation for a major study to develop or refine the methodology, such as the treatment, instrument or data collection process (Grove et al 2013:46; Polit & Beck 2012:195). The instrument was pre-tested in Windhoek

Central Hospital, which was found to be implementing the BMFI programme in phase 1. This hospital was therefore excluded from phase 2 of this study. Ten questionnaires were distributed to registered and enrolled nurses/midwives for pre-testing. All ten questionnaires were completed and returned. According to the respondents, completion of a questionnaire took between 7 and 12 minutes. All ten questionnaires were analysed by the statistician using the EPI Info, Version 7, statistical analysis package. As a result, some changes to the flow of questions and numbering of questionnaires to include “skip questions” were made; other than that, no further changes were made.

- **Content of the structured questionnaire**

The questionnaire was characterised by categories of closed questions using nominal and ordinal levels of measurements of rating scales. Nominal level measurement is the lowest level of measurement that is used when data can be organised into categories that are exclusive and exhaustive, but the categories cannot be compared or ordered by rank: for example gender, race or marital status. Ordinal measurement is a measurement level that yields data that can be ranked, but the intervals between the ranked data are not necessarily equal (Grove et al 2013:701, 702). The questionnaire consisted of sections A and B (Annexure F).

Section A was designed to elicit demographic and background information on the registered and enrolled nurses/midwives. The respondents were required to make choices from the listed items. Nominal levels of measurements of rating scale were used in questions 1, 3 and 5 for qualifications (registered nurse/midwife/enrolled nurse/midwife), gender (male/female) and name of the hospital. Ordinal levels of measurement of rating scale were used in questions 2, 4 and 6. Respondents were required to choose only one response from more than 5 grouped interval categories of years during which qualification had been obtained, age, and years worked in the maternity ward.

Section B was aimed at obtaining information on the effectiveness of the implementation of the BMFI programme. This section consisted of questions pertaining to the implementation of the BMFI programme, as operationalised in terms of the Ten Steps to

Successful Breastfeeding. Ordinal measurement levels of rating scales were used in most of the questions.

- **Composition of the questionnaire**

Table 2.3 shows a summary of the composition of the questionnaire.

Table 2.3: Composition of the questionnaire

Sections	Addressed items
Section A **Items 1-6**	**Biographic data** Name of hospital, qualifications, gender, age, years during which qualification was obtained, and years worked in the maternity ward
Section B **Items 7.1-7.5**	**Implementation of the BMFI programme** Step 1:Have a breastfeeding policy that is routinely communicated to all health care staff
Items 8-12	Step 2: Train all health care staff in skills necessary to implement the policy
Items 13-14	Step 3: Inform all pregnant women about the benefits and management of breastfeeding
Items 15-16	Step 4: Help mothers initiate breastfeeding within a half-hour of birth
Item 17	Step 5: Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants
Items 18-19	Step 6: Give new-born infants no food or drink other than breast milk, unless medically indicated
Item 20	Step 7: Practise rooming-in: allow mothers and infants to remain together – 24 hours a day
Item 21	Step 8: Encourage breastfeeding on demand
Items 22-24	Step 9: Give no artificial teats or pacifiers (also called dummies) to breastfeeding infants
Items 25-27	Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic
Items 28-29	Availability and utilisation of baby friendly corners in health facilities

2.5.2.4 Data analysis

Quantitative data analysis is the manipulation of numerical data through statistical procedures for the purpose of describing phenomena or assessing the magnitude and reliability of relationships among them (Polit & Beck 2012:739). According to Grove et al (2013:691), data analysis is conducted to reduce, organise and give meaning to data. In this study, the raw data were translated into numerical codes and analysed using Epi Info, Version 7, with the assistance of a statistician. Descriptive statistics are summary

statistics that allow the researcher to organise the data in ways that give meaning and facilitate insight, such as frequency distributions and measures of central tendency and dispersion (Grove et al 2013:692). Inferential statistics permit inferences about whether results observed in a sample are likely to be found in the large population (Polit & Beck 2012:730). Descriptive statistical analyses were performed to describe data in the form of frequencies, percentages, tables and figures. Inferential statistics were performed to determine relationships between the demographic characteristics of the registered and enrolled nurses/midwives and the practice of the Ten Steps to Successful Breastfeeding. These data are presented in Chapter 5.

Databases from phases 1 and 2 were integrated and formed the basis for the development of the guidelines (see section 2.6).

2.5.2.5 Validity and reliability

Validity and reliability are important criteria for measuring quality in research. Validity is a quality criterion referring to the degree to which inferences drawn in a study are accurate and well founded (Polit & Beck 2012:745). Reliability refers to the dependability/consistency of the measurement instrument: the extent to which the instrument yields the same results on repeated trials (Grove et al 2013:707; Polit & Beck 2012:741; Terre Blanche et al 2006:152).

- **Validity**

In order to establish the validity of the questionnaire in this study, measurement validity was measured. These measurements were face, content and construct validity. Measurement validity is the degree to which an instrument measures what it is intended to measure (Grove et al 2013:712; Terre Blanche et al 2006:147).

Face validity verifies whether the instrument looks like or gives the appearance of measuring the content desired for a study (Grove et al 2013:394). In order to determine face validity of the instrument in this study, the supervisors checked the questionnaire. The researcher also discussed the questionnaire with colleagues who are experts in

nursing and nutrition. Further, a statistician coded the question items before and after the questionnaire was pre-tested.

Content validity examines the extent to which the measurement method includes all major elements relevant to the construct being measured. Evidence for content-related validity is obtained from the literature, representative of the relevant population and content experts (Grove et al 2013:690). Content validity of the instrument was established by using themes from the qualitative phase for item generation and literature to operationalise the concept BMFI into the WHO and UNICEF's (WHO 1989) Ten Steps to Successful Breastfeeding. Checking of the questionnaire by the supervisor, pre-testing and coding of the question items by a statistician also improved content validity of the instrument.

Construct validity examines the fit between conceptual and operational definitions of variables and determines whether the instrument actually measures the theoretical construct that it purports to measure (Grove et al 2013:690). According to Creswell (2014:242), construct validity occurs when investigators use adequate definitions and measures of variables. Construct validity was therefore established by operational definition of each step to successful breastfeeding.

- **Reliability**

Reliability and validity are related in some manner, meaning that if a measure is unreliable, it cannot be valid (Terre Blanche et al 2006:154). Reliability was enhanced by careful designing, pre-testing of the questionnaire and checking of the questionnaire by the supervisors and the statistician.

2.6 INTEGRATION OF DATA FROM THE QUALITATIVE AND QUANTITATIVE PHASE

According to Morse and Niehaus (2009), cited in Creswell and Plano Clark (2011:66), the point of interface or the stage of integration of data is a point within the process of research where the qualitative and quantitative strands are mixed. In the sequential mixed-methods design the two databases are analysed separately and the findings

obtained from the initial exploratory database built into quantitative data (Creswell 2014:227). The data obtained from phases 1 and 2 were analysed separately and integrated at this stage, which is discussed in Chapter 6. The findings of phase 1 confirmed the results of phase 2. From the integrated data, conclusions were drawn that formed the basis for the development of the guidelines and validation thereof. Experts in relevant fields, namely nurse managers, health programme officers, nursing and allied health educators and professional nurses, validated the guidelines.

2.7 APPROACHES FOLLOWED IN GUIDELINE DEVELOPMENT

The last objective, namely to develop guidelines for the strengthening of the BMFI programme, is discussed in this section. A guideline is defined as a systematically developed statement to assist practitioners and patient decisions about appropriate health care for specific clinical circumstances (Field & Lohr 1990, cited in Kish 2001:851). Sufficient evidence should be available for review to justify the development of a guideline (Kish 2001:851). This study's guidelines were developed by drawing evidence from the integrated qualitative and quantitative data, using reasoning processes.

2.7.1 The reasoning process followed during guidelines development

De Vos et al (2011:48) explain three modes of reasoning: deductive, inductive and diagnostic reasoning. Deductive reasoning is the process of developing specific predictions from general principles (Grove et al 2013:7; Polit & Beck 2012:11). Inductive reasoning is reasoning from the specific to general, in which particular instances are observed and then combined into a larger whole or general statement (Grove at al 2013:696). Deductive reasoning was applied during the process of formulating the guidelines by using evidence from phases 1 and 2, and the literature. From each theme, one guideline in the form of an outcome objective was formulated. Inductive reasoning was applied when recommendations for implementation were proposed.

2.7.2 Validation of the guidelines

Validity of the guidelines is related to three principal factors in guideline development, namely the composition of the guideline development panel and its processes, the

identification of evidence and the method of guideline construction (Grimshaw & Russell 1993, cited in Eccles, Clapp, Grimshaw, Adams, Higgins, Purves & Russell 1996:760). In this study, validators were identified based on the following criteria:

- Nursing and allied health educators
- Professional nurses who work in maternity wards
- Health programme officer involved in policy formulation for mother and child health programmes
- Nurse managers in Baby and Mother Friendly Hospital

The participants were provided with a hard copy of the proposed guidelines that needed to be assessed against a set of criteria, together with a letter that provided relevant information and requested consent from the participants (Annexure H). An agreement on the timespan was reached to allow them to familiarise themselves with the guidelines and give feedback. After their feedback had been received, the necessary changes were made. Finally, the guidelines were disseminated through describing the research findings in a thesis. Further dissemination of these guidelines by means of an article and the implementation thereof in hospitals with maternity sections is envisaged.

2.8 ETHICAL CONSIDERATIONS

Ethics is a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligations to the study participants (Polit & Beck 2012:727). Grove et al (2013:693) define ethical principles as principles of respect for persons, beneficence and justice relevant to the conduct of research. These principles form the basis of human rights of participants. Furthermore, the rights of the institution and scientific integrity are part of the principles of Unisa policy on research ethics (Unisa 2007). The following measures were applied to ensure that this study complies with the principles of research ethics.

2.8.1 Respect for human rights of participants

According to Polit and Beck (2012:154), participants of the research study have the right to voluntary participate in the study, to refuse to participate or withdraw, to give informed

consent, and to receive full disclosure and understanding. In this study, a covering letter was attached to each questionnaire which sought consent to participate in the study and informed the respondents about the aims of the study, and their right to voluntary participation, anonymity and confidentiality of the information (Annexure C). Furthermore, participants who validated the guidelines were provided with a letter that gave them relevant information and requested consent from them to participate (Annexure G). The names of participants in phase 1 and respondents in phase 2 were not used on the interview guide and questionnaires and they were also not linked to the data analysis. However, regarding anonymity, participants of phase 1 were informed that a possibility existed that they might be identified through their position in the hospitals.

2.8.2 Beneficence

Beneficence is a fundamental ethical principle that seeks to maximise the benefits for study participants and prevent harm (Polit & Beck 2012:720). The benefits may be more directly to participants, or may represent a situation that is more common to others, including better skills and knowledge (Terre Blanche et al 2006:67; Polit & Beck 2012:152). In this study, the participants would benefit as a professional group by contributing to the development of the guidelines that would help to strengthen the BMFI programme. De Vos et al (2014:350) state that should an interview cause any discomfort, a referral system must be available. However, except for participants' sacrificing their time by participating in the study, no emotional harm was observed during the interviews.

2.8.3 Justice

The principle of justice includes the right to fair treatment and privacy (Polit & Beck 2012:155). The principle of justice was addressed by protecting the anonymity and confidentiality of the participants in phase 2. The chief health programme officer and nurse managers were informed that even though their names were not linked to the data or transcriptions, a possibility existed for them to be identified through the nature of their positions and relations to the BMFI programme.

Regarding fair treatment, a census as a sampling procedure, which included the whole target population in both phases 1 and 2, was used. Purposive sampling was used in the

validation of the guidelines, meaning that not all possible participants were included. However, purposive sampling is one of the characteristics of sampling in qualitative research.

2.8.4 Rights of the institution

Creswell (2014:95-96) explains that prior to the study, researchers need to obtain the necessary permission from institutional review boards and approval from individuals in authority. The Department of Health Studies, University of South Africa's Higher Degrees Committee reviewed this study proposal for ethical approval in order to protect the researcher, participants, respondents and institutions involved in the study (Annexure A). Regarding obtaining permission from individuals in authority, written permission was sought and obtained from the Ministry of Health and Social Services in Namibia (Annexures B1-B4). The letters of approval from both institutions were attached to the letters seeking permission from the health directors, medical superintendent, medical officers and nurse managers.

In phase 1 of the study, the researcher scheduled the interviews with the chief health programme officer and nurse managers at appropriate times so as to not interfere with their responsibilities.

The research findings, including the guidelines for the strengthening of the BMFI programme, would be shared with the participants of phase 1 of the study, who would in turn share them with the employees of the Ministry of Health and Social Services.

2.8.5 Scientific integrity

According to the Unisa (2007:4) policy on research ethics, researchers may not commit plagiarism, piracy, falsification or the fabrication of results at any stage of the research. Poor research design is an ethical issue because it can lead to invalid results and an unnecessary waste of resources and participants' time (Terre Blanche et al 2006:70). To comply with scientific integrity, the researcher followed a scientific research process and strived to observe general rules of scientific writing through objective and accurate reporting of the findings. The researcher maintained a balanced discussion in the

literature review and avoided any deliberate fabrication or distortion of data and results. All sources that were consulted were fully acknowledged and referred to in the text and list of sources. Furthermore, all formal and informal contributors were acknowledged in the thesis report.

2.9 SUMMARY

This chapter discussed the research purpose, objectives, research design and methods of phases 1 and 2, as well as data integration of the two phases. This was followed by the discussion on the development and validation of the guidelines for the strengthening of the BMFI programme, and adherence to ethical principles.

Chapter 3 discusses data analysis of the qualitative phase 1, supported by the literature.

CHAPTER 3

DATA ANALYSIS, PRESENTATION, DISCUSSION AND LITERATURE COMPARISON OF PHASE 1 FINDINGS

3.1 INTRODUCTION

This chapter discusses and presents the data and literature comparison of the qualitative phase (phase 1). The first discussion and findings obtained from the interviews refer to sample A (the chief health programme officer), followed by sample B (nurse managers) and finally the integration of the data of samples A and B. A table indicating the themes, categories and subcategories related to the relevant sample will precede the discussion of each theme's categories and subcategories. The discussion will be supported by in-text reference to the relevant sections and related literature. Following the discussion of samples A and B, an integration of these findings will be presented.

3.2 DATA ANALYSIS

Braun and Clarke's (2006) thematic analysis method was used to analyse the data of phase 1. This process began with the researcher's becoming familiar with and immersing herself in the data, identifying codes and categories and translating them into relevant themes. The process was repeated several times and recoding was done when necessary. A detailed description of the methodology used in this phase was presented in Chapter 2, section 2.5.1.4. The main themes that emerged from samples A and B are indicated in Table 3.1.

Table 3.1: Themes from sample A (chief health programme officer) and B (nurse managers)

Sample A: Chief health programme officer		Sample B: Nurse managers	
Theme 1:	Human resources and capacity	Theme 1:	Benefits of the BMFI programme
Theme 2:	Need to review and strengthen the BMFI steps	Theme 2:	Factors hindering implementation of the BMFI programme
Theme 3:	Legislation for baby friendly corners	Theme 3:	Implementation of the BMFI programme
Theme 4:	Ownership and commitment	Theme 4:	Strengthening the BMFI programme

3.3 ANALYSIS, DISCUSSION AND LITERATURE COMPARISON OF SAMPLE A (CHIEF HEALTH PROGRAMME OFFICER)

The data from sample A were collected from an interview with the chief health programme officer who is in charge of the nutrition programme at national level. The participant shared typical information on the implementation of the BMFI programme, since she had been involved in planning of the BMFI programme activities for seven years.

Four themes and six categories with their subcategories emerged from sample A's data analysis. The four themes that emerged during data analysis of sample A were:

Theme 1: Human resources and capacity
Theme 2: Need to review and strengthen the BMFI steps
Theme 3: Legislation for baby friendly corners
Theme 4: Ownership and commitment

3.3.1 Theme 1: Human resources and capacity

In theme 1: Human resources and capacity, two categories emerged, namely 'staffing" and 'training'. The participant identified inadequate staff and training as factors that affect the implementation of the BMFI programme. Table 3.2 indicates theme 1's categories and subcategories.

Table 3.2: Theme 1: Human resources and capacity

Theme	Category	Subcategory
Theme 1: Human resources and capacity	Staffing	• Staff shortage • Staff turnover • Staff rotation
	Training	• Planning of BMFI training • Incorporation of BMFI training in maternal and child health programmes • Training on the latest feeding recommendations

3.3.1.1 Category: Staffing

In the category 'staffing', the subcategories that were associated with staffing were staff shortage, staff turnover and staff rotation. These factors were reported as main challenges to the implementation of the BMFI programme.

In the subcategory: staff shortage, the participant specified that owing to inadequate staff, there was limited time to implement the activities of the BMFI programme. This point is evidenced from the following statements:

> "… This is something that is a big challenge, and this challenge is related to staff time, lack of human resources."

> "Because we did not have enough staff … to do follow up, to do support, to do the mentoring and also to support the hospitals to maintain the BMFI status."

The above view is supported by Schmied, Gribble, Sheehan, Taylor and Dykes (2011:[6]) who have established that time is one of the most important resources needed to implement the BFHI and to support women with breastfeeding. Taylor, Gribble, Sheehan, Schmied and Dykes (2011:29) have also reported that lack of resources and time led to shortcuts by giving formula because it was perceived convenient for staff and mothers. However, Schmied et al (2011:[6]) found that spending time assisting mothers with breastfeeding would save time for the staff in the long run, because breastfed babies would not need to visit health facilities so often for curative services.

Regarding the subcategory: staff turnover, the participant reported that staff turnover worsened the already heavy burden that was caused by staff shortage. This was evident from the following statement:

> "Also there is high attrition rate. Staff members are leaving for other work or job opportunity."

The above evidence is supported by Jones and Gates (2007:[2]). They found that staff turnover is associated with decreased productivity. Castle, Engberg and Men (2007:658) examined the impact of nursing home staff turnover, and identified an association between high staff turnover and indicators of poor quality care such as pressure sores. Therefore, it can be concluded in this study that the quality of implementation of the BMFI programme has been affected by high staff turnover.

The subcategory: staff rotation emerged as a disruption in the implementation of the BMFI programme. The participant discussed the fact that when staff members are rotating from one discipline to another, it becomes difficult to keep up with orientation and training regarding the BMFI programme. This point was illustrated by the following statement:

> "There is also one thing you have to understand: our health workers are being rotated … So, you can't … it is not always the same staff."

In this study, staff rotation was identified as a negative factor in the implementation of the BMFI programme. However, Ho, Chang, Shih and Liang (2009:[4]) have reported that nurses' staff rotation increases job satisfaction and organisational commitment. Nafei (2014:104) identified a positive relationship between job rotation and job satisfaction, as well as between job satisfaction and organisational commitment. The benefits of long term (permanent) staffing to breastfeeding support were also identified by Javanparast, Newman, Sweet and McIntyre (2012:1281).

Based on this study evidence and the above literature, the MoHSS may benefit from staff rotation if it develops a policy on rotation which stipulates a maximum time requirement needed for a staff member to stay in one discipline. The policy should also include

orientation and training programmes for those who are being rotated. Further research on staff rotation policy is required.

3.3.1.2 Category: Training

In the category 'training', the subcategories that were associated with training were: planning of BMFI training, incorporation of BMFI training in maternal and child health programmes and training on the latest feeding recommendations.

In the subcategory: planning of BMFI training, the participant reported that the BMFI training was planned at national level and conducted vertically by national staff. This top-down approach has contributed to an incomplete handing over of ownership of the BMFI programme to the regions and hospitals. This was evident from the following statements:

> "Since the start of primary health care in this country, we at national level identify training needs for regional and operational implementation … those trainings are defined by us at national level, in terms of what [are] our priorities."

> "Basically … the ownership is still with us."

In the subcategory: incorporation of BMFI training in child and maternal programmes, the participant explained that because the BMFI training was planned and conducted vertically from the national level, it was difficult for the hospitals to include/integrate it with training in other programmes, such as family planning, growth monitoring and immunisation. It was also reported that not planning the BMFI training together with these programmes hindered the hospitals' taking ownership of the programme. The following statements attest to these points:

> "I think, maybe, there is lack of integration, because it is easy for us to train [from national level], but we have to make sure that it is integrated into other training programmes."

> "… Integration, lack of … of, contributes a lot to lack of ownership."

The evidence in this study shows a failure to make promotion of breastfeeding the centre of mother and child health programmes. The MoHSS (2011a:3) recommends that the BMFI training should be part of any training involving maternal and child health programmes in Namibia. Lack of integration of breastfeeding with immunisation information was identified by Haider, Rasheed, Sanghvi, Hassan, Pachon, Islam and Jalal (2010:[5]), who reported that a large proportion (88%) of children had completed three doses of diphtheria pertussis and tetanus immunisation in Bangladesh, but only 8% of their mothers reported receiving information on breastfeeding from health workers. Integration of breastfeeding training with other maternal and child health programmes would therefore close the gap in the information that is given to mothers.

The third subcategory: training in latest feeding recommendations, was experienced as another challenge. In Namibia, the first national guidelines on infant and young feeding were issued in 2003, revised in 2008 and 2011 respectively (MoHSS 2003:8; MoHSS 2008b:24; MoHSS 2011a.11). The latest changes were made based on the updated WHO recommendations on HIV and infant feeding (WHO 2010b:3). The participant discussed the fact that these frequent changes in feeding recommendations necessitated continuous training. However, training was reportedly not carried out. The following was said:

> "Another challenge is also the fact that infant feeding recommendations are changing … it makes it difficult. And health workers are not continuously updated".

Lack of updates on latest developments leads to giving conflicting messages, as noted by Fadnes, Engebretsen, Moland, Nankunda, Tumwine and Tylleskar (2010:[3]). The authors have reported that feeding messages differed depending on whether or not health workers had updated knowledge.

3.3.2 Theme 2: Need to review and strengthen the BMFI steps

In the second theme, the participant describes the need to 'review and strengthen the BMFI steps'. One category: restructure the BMFI steps, emerged. Table 3.3 displays the category and subcategories of the theme.

Table 3.3: Theme 2: Review and strengthen the BMFI steps

Theme	Category	Subcategory
Theme 2: Review and strengthen the BMFI steps	Restructure the BMFI steps	• Prioritise the Ten Steps to Successful Breastfeeding • Community engagement

3.3.2.1 Category: Restructure the BMFI steps

In the category 'restructure the BMFI steps', the subcategories: prioritise the Ten Steps to Successful Breastfeeding, and community involvement emerged. The ten steps to successful breastfeeding are minimum requirements for implementation of the global BFHI (WHO 1989). These steps were also adopted as the BMFI policy for Namibia (1992b). To give the reader clarity, the ten steps are presented below.

(1) Have a breastfeeding policy that is routinely communicated to all healthcare workers.
(2) Train all healthcare workers in 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 of their baby.
(5) Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants.
(6) Give newborn infants no food or drink other than breast milk, unless medically indicated.
(7) Practice rooming-in: allow mothers and infants to remain together – 24 hours a day.
(8) Encourage breastfeeding on demand.
(9) Give no artificial teats or dummies to breastfeeding infants.
(10) Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

(Source: WHO and UNICEF 2006:29)

According to the WHO and UNICEF's (2009) criteria, a hospital that achieves any eight of the ten steps to successful breastfeeding during an external assessment qualifies to be awarded a baby friendly status. However, the participant discussed the need to strengthen the BMFI programme by making all the ten steps a requirement for BMFI status. She suggested that for quality indicators, the ten steps should be reorganised or prioritised in compulsory steps and clear guidelines on how to implement them. The following statement demonstrates this point:

> "I am saying some steps such as one and two, they be non-negotiable, ja, they lay the foundation. The rest be as I said earlier, directives".

With regard to community involvement, the participant reported that the clinics and village health committees should form part of the establishment of community-based breastfeeding support groups.

> "For example, the community based part [step 10] is difficult to manage and coordinate from the hospital, especially our system setup … Find a way how to do it … delegate to the clinics and village health committees."

The idea to extend the ten steps to the community is not unique to Namibia. In Quebec State in Canada, seven BFHI steps were developed for community centres offering maternity services (Haiek 2012:347).

3.3.3 Theme 3: Legislation of baby friendly corners

In theme 3, 'legislation of baby friendly corners', two categories emerged, namely adherence to baby friendly corners and advocacy for legislation of baby friendly corners. Table 3.4 indicates theme 3's categories.

Table 3.4: Theme 3: Legislation of baby friendly corners

Theme	Category
Theme 3: Legislation of baby friendly corners	• Adherence to baby friendly corners • Advocacy for legislation of baby friendly corners

3.3.3.1 Category: Adherence to baby friendly corners

The next section describes the first category, ‘adherence to baby friendly corners’. As part of the BMFI policy, every workplace should have a baby friendly corner equipped with basic furniture and running water, to enable breastfeeding employees to express and store breast milk while at work (MoHSS 1992a:26). The participant reported that many workplaces do not have baby friendly corners. She was of the opinion that legislation of the baby friendly corners would compel employers to make provision therefor. The following statements support this point:

> “… other ministries and private companies, they, they do not have baby friendly corners.”

> “Because my experience is, when people hear it is a policy issue rather than legislation, they say: it can’t be enforced. I believe that we need to move towards making it a law or legislation.”

Breastfeeding legislation would compel employers to provide facilities in workplaces that enable mothers to breastfeed and/or express and store breast milk while at work. A civil penalty of US$100 is served on employers in violation of the breastfeeding legislation in California State (Chertok & Hoover 2009:45, 50). The benefits of provision of facilities that support breastfeeding in workplaces include increased productivity, decreased absenteeism, improving retention of experienced employees and reduction of the health bill, as breastfed babies are not often sick (US Department of Health 2010, cited in Murtagh & Moulton 2011:218).

3.3.3.2 Category: Advocacy for legislation of baby friendly corners

In the second category, ‘advocacy for legislation of baby friendly corners’, the participant suggested that officers in the MoHSS should use their positions to argue for legislation of the baby friendly corners. The following statements illustrate this view:

"I think we have to start advocacy and lobby … to make it discussed nationwide - where everybody is talking about it. We can have a national debate to make people aware."

"Because we have the minister and we have the deputy minister, we can come up with communication messages to arm them to take it to parliament."

The Maternity Protection Convention (2000) (No. 183 of the United Nations International Labour Organization) is the most important international legal measure that protects and supports breastfeeding in employment. Governments are required to ratify the convention through provision of national laws and regulations aimed at supporting and protecting breastfeeding in workplaces (Maternity Protection Convention 2000). The Namibia Labour Act (Namibia 2007:sd) is a suitable instrument to make provision for baby friendly corners. However, it has no such provision.

3.3.4 Theme 4: Ownership and commitment to BMFI

In theme 4 'ownership and commitment to BMFI', one category emerged, namely 'belief in the BMFI programme'. The category and subcategories are displayed in Table 3.5.

Table 3.5: Theme 4: Ownership and commitment to BMFI

Theme	Category	Subcategory
Theme 4: Ownership and commitment towards the BMFI programme	Belief in BMFI programme	• Maintaining BMFI status • Attitudes towards BMFI programme • Support from management

3.3.4.1 Category: Belief in BMFI programme

In the category, 'belief in BMFI programme', the participant spoke of some Baby and Mother Friendly Hospitals' staff indicating commitment to maintaining BMFI status, having positive attitudes towards BMFI programme and support from management.

Regarding the subcategory: maintaining the BMFI status, the participant reported that although none of the hospital has been re-assessed, she believes some are still maintaining the BMFI status. She stated:

> "They have done a great job by maintaining the BMFI and making sure that new staffs are trained and so on … they are still implementing the ten steps."

The participant also noted that positive attitudes towards the BMFI programme enhanced ownership of the programme.

> "I think it also comes back to ownership, attitudes of health workers, and the belief in the baby and mother friendly initiative and so on."

Taylor et al (2010:30) identified positive attitudes, belief in the BFHI and commitment of staff as leading factors that made one of the neonatal intensive care units in Australia even more advanced than the postnatal care unit in implementing the BFHI.

In the subcategory: support from management, the participant reported that she believed support from top management has contributed to both ownership and commitment to the BMFI programme. The following statement demonstrate this point:

> "But and then, I think the support also comes to…, probably from management, it helps if management (inaudible) make sure, hmm, because the director was there for a long time".

Walsh, Pincombe and Henderson (2011:601) have found that having support from directors and senior staff made the baby friendly accreditation processes and implementation successful in Australian hospitals. Dawson, Stasa, Roche, Homer and Duffield (2014:[5]) have reported that lack of support from management contributed to nurses' turnover.

3.4 ANALYSIS, DISCUSSION AND LITERATURE COMPARISON OF SAMPLE B (NURSE MANAGERS)

The data from sample B (nurse managers) were collected from one-to-one interviews with nurse managers in charge of the Baby and Mother Friendly Hospitals.

The demographic profile of the participants, including gender and age group of the participants, is indicated in Table 3.6. There were 33 participants in this sample, of which 3 (9.1%) were males, while 30 (90.9%) were females. Of a total number of 33 interviews that were conducted, one could not be concluded due to an emergency at the specific hospital.

Table 3.6: Demographic profile of sample B

Characteristic	Value	Frequency	Percentages
Gender	Male	3	9.1
	Female	30	90.9
Age group	30–39 years	0	0.0
	40–49 years	17	51.5
	50–59 years	16	48.5
	60 years and older	0	0.0
Total number of interviews	**33**	-	-

Four themes and 15 categories with their subcategories emerged from sample B's data analysis. The four themes that emerged during the data analysis from sample B were:

Theme 1: Benefits of the BMFI programme
Theme 2: Factors hindering implementation of the BMFI programme
Theme 3: Implementation of the BMFI programme
Theme 4: Strengthening the BMFI programme

3.4.1 Theme 1: Benefits of the BMFI programme

In theme 1, 'benefits of the BMFI programme', three categories emerged, namely 'healthy babies', 'reduced stigma of HIV/AIDS' and 'improved breastfeeding practices'. The categories are displayed in Table 3.7.

Table 3.7: Theme 1: Benefits of the BMFI programme

Theme	Category
Theme 1: Benefits of the BMFI programme for babies and mothers	• Healthy babies • Reduced stigma of HIV/AIDS • Improved breastfeeding practices

3.4.1.1 Category: Healthy babies

The effect of breastfeeding on babies' health and the protection against diseases were distinguished as stated in the following statements:

> "… Babies are very healthy; they are very nice, even if the mother is HIV positive they are ..." Interview 33

> "These babies are not at risk of the many communicable diseases." Interview 32

The literature shows that exclusive breastfeeding is associated with lower risk of acute otitis media and respiratory tract infection (Abraham & Labbok 2011:510).

3.4.1.2 Category: Reduced stigma of HIV/AIDS

Regarding the category 'reduced stigma of HIV/AIDS', the participants reported that the latest guidelines on infant feeding recommend breastfeeding for the general population, and also for babies born to HIV-infected women. It was reported that the implementation of these guidelines has contributed to the reduction of HIV-stigma-associated failure to breastfeed. It was said:

> "The good thing is, stigma becomes less because everyone is breastfeeding." Interview 2

Fadnes et al (2010:[6]) have identified the fact that owing to fear of HIV stigma associated with non-breastfeeding, HIV-positive mothers breastfed when in the presence of others and avoided breastfeeding when alone. However, mixed feeding increases the risk of transmission of HIV from mother to the baby (MoHSS 2011a:12).

3.4.1.3 Category: Improved breastfeeding practices

Responses on 'improved breastfeeding practices' differed. Some of the participants believed that exclusive breastfeeding had increased owing to the BMFI programme. Others expressed concern about available reports showing low rates of exclusive breastfeeding in Namibia. The different views are illustrated in the following statements:

> "I think breastfeeding practices, especially exclusive breastfeeding, has improved." Interview 14

> "I have seen one report; they are saying that only 24% of mothers are exclusively breastfeeding for six months. But all the hospitals are almost 100%. They reach the target, but..., exclusive breastfeeding we are going down." Interview 18

The BMFI programme might have contributed to increased exclusive breastfeeding rates reported in the Namibia demographic and health surveys for the past 15 years. Nationally, exclusive breastfeeding for children under the age of six months has increased from 6% in 2000 to 24% in 2006 and 49% in 2013 (Amadhila 2005:4; MoHSS 2008a:129; MoHSS 2014a:129). Garcia-de-Leon-Gonzalez, Oliver-Roig, Hernandez-Martinez, Mercader-Rodrigues, Munoz-Soler, Maestre-Martinez and Monreal-Tomas (2011:447) have reported that the BFHI has increased the rates of exclusive breastfeeding in Spain. Other studies have also shown that breastfeeding promotion interventions have improved breastfeeding practices, which resulted in increased breastfeeding rates (Haroon, Das, Salam, Imdad & Bhutta 2013:[13]; Imdad, Yakoob & Bhutta 2011:[4]).

3.4.2 Theme 2: Factors hindering the implementation of the BMFI programme

The participants reported on various factors that, according to their experiences, influenced implementation of the BMFI programme. These factors emerged as the categories 'human resources', 'physical environment', 'perception regarding implementation of the BMFI programme', 'socio-economic factors' and teenage motherhood'. Table 3.8 displays the categories and subcategories of theme 'factors hindering the implementation of the BMFI programme.

Table 3.8: Theme 2: Factors hindering implementation of the BMFI programme

Theme	Category	Subcategory
Theme 2: Factors hindering implementation of the BMFI programme	• Human resources	• Staff shortage • Staff rotation
	• Physical environment	• Space • Privacy
	• Perceptions regarding implementation of the BMFI programme	• HIV and breastfeeding • Effectiveness of new guidelines and recommendations
	• Socio-economic factors	• Education • Affluence • Race • Employment
	• Teenage motherhood	• School • Understanding • Body image

3.4.2.1 Category: Human resources

In sample A (chief health programme officer) the same category, human resources, was discussed as described from the experience of the participant. In this section, the subcategories: staff shortage and staff rotation as related to 'human resources' were discussed from the experiences of nurse managers (participants).

Nurse shortage is the gap between the available number of nurses and the desired or the optimum number of nursing staff. The participants reported that staff shortage was one of the major challenges to the implementation of the BMFI programme. The participant who had reported that the BMFI programme was no longer implemented in their hospital had this to say:

> "Maybe [it] is because of shortages of staff. We are not really doing what we are supposed to do. No, no, no, to tell you the truth, BMFI is not implemented in this hospital." Interview 16

The following statements demonstrate what other participants had to say regarding shortage of staff:

> "With staff shortage, you cannot really pay attention, especially to the primigravidas, to show them how to properly put babies on breast." Interview 7

> "… That is what is happening in this hospital. We are really, really understaffed, severely understaffed." Interview 6

As a result of inadequate time, staff perform only those activities that are priorities of the facility, such as ensuring a steady patient flow, but not showing women how to breastfeed (Schmied et al 2011:[6]).

The subcategory: staff rotation emerged as the second challenge to implementing the BMFI programme. Staff rotation is a method of allocating staff from one discipline to another in order to learn new skills. Participants reported that as a result of staff shortage, training for rotated staff was not done regularly. The following statement supports this point:

> "… Due to staff shortage, [training] is a challenge because with this new people who are coming, they need training. It is like a continuous thing. We have to train those who are coming [rotating]." Interview 18

This evidence shows that the participants acknowledge the importance of training of staff who are being rotated. Although Ho et al (2009:[6]) and Nafei (2014:104) report that staff rotation leads to job satisfaction and organisation commitment, Javanparast et al (2012:1281) have established that long-term staffing facilitates breastfeeding support in child care centres. For this reason, it may be more beneficial to put measures in place to either allow for a longer period of rotation in the maternity wards or to ensure regular orientation/training for newly rotated staff.

3.4.2.2 Category: Physical environment

The category 'physical environment' was divided into the subcategories: space and privacy. This category describes the physical capacity of the hospitals and how it influences the BMFI programme activities.

In the subcategory: space, participants expressed deep concern about the availability of space in their hospitals. This was evident in the following statement:

> "Sometimes you find that there are a lot of deliveries, there is no space and you are forced to discharge some mothers, to make space." Interview 22

Premature discharge of mothers after delivery has implications for the BMFI programme because a mother may be discharged before breastfeeding is well established or before being shown how to breastfeed. A mother may experience breast problems, which can lead to early stopping of breastfeeding. There is evidence that breast problems cause early termination of breastfeeding (Doherty, Sanders, Jackson, Swanevelder, Lombard, Zembe, Chopra, Goga, Colvin, Fadnes, Engebresten, Ekstrom & Tylleskar 2012:[4]).

Regarding the subcategory: privacy, participants in small hospitals reported that lack of separate wards for maternity patients made it difficult for them to implement the Ten Steps to Successful Breastfeeding. The following statement illustrates this point:

> "You know, the problem we are having here is the infrastructure itself. We have general ward, paediatric ward and delivery ward in-one. So, sometimes it is really difficult for our mothers and nurses to implement [the ten steps]." Interview 9

Privacy creates a conducive environment for showing a mother how to breastfeed. The evidence in this study confirms Fadnes et al's (2010:[6] findings that lack of separate rooms for deliveries made it difficult for health workers to counsel mothers in privacy on infant feeding. Taylor et al (2011:29) have identified that screens that ensure privacy were essential to promote BFHI.

3.4.2.3 Category: Perceptions regarding implementation of the BMFI programme

In the category, 'perceptions regarding implementation of the BMFI programme', the subcategories: HIV and breastfeeding, and effectiveness of new guidelines emerged.

Regarding the subcategory: HIV and breastfeeding, the participants shared their experiences that mothers fear the risk of transmitting HIV infection to their babies through breastfeeding. This was evident from the following statement:

> "Most mothers are so worried, they want to breastfeed, but on the other hand they are afraid for the baby to get the virus." Interview 31

Fadnes et al 2010:[5] have reported that the majority of HIV-positive women considered breastfeeding to be harmful to their babies.

In addition, participants expressed concerns about the implications of the latest breastfeeding guidelines on health information education. They reported that when nurses give this new information to mothers, they become uncomfortable because it conflicts with the previous messages. It was also reported that mothers also argued that the new information was not correct, based on their experiences with previous information. The following statements confirm these points:

> "… Previously we were talking this, now we are talking about this, now you don't really know." Interview 32

> "They [women] tell you: I delivered my baby here four years ago but, and I was told I must ..." Interview 18

Regarding the subcategory: effectiveness of new guidelines, the participants reported that the huge shift in the recommendations on feeding babies of HIV-infected women, from replacement feeding in 2005 to full breastfeeding in 2011, has created uncertainty and doubt among health workers. It was said:

> "The new guidelines, it seems, are doing well until now, although we don't know the outcome." Interview 3

3.4.2.4 Category: Socio-economic factors

The category 'socio-economic factors' was divided into the subcategories: education, affluence, race and employment. In this category, participants described factors outside hospital environments that challenge the implementation of the BMFI programme.

Participants reported that as a result of lack of education or poor education, mothers were not following instructions related to feeding their babies. This opinion was illustrated in the following statements:

> "Our people, you know, some mothers are not educated. You tell her this but tomorrow you find she is doing the thing you told her not to." Interview 18

> "… but when they go home, they start using bottles, and … instead of cups." Interview 27

Ogunlesi (2010:461) has found that maternal education below secondary level significantly contributed to the use of pre-lacteal feeding and failure to practise exclusive breastfeeding.

In the subcategory: affluence, the participants experienced the fact that wealth influenced mothers' feeding choices. They reported that some women regard breastfeeding as an option for those who could not afford to buy baby formula. This opinion is illustrated by the following statements:

> "People are thinking if they've got money to provide milk – that affordability or the thought they can afford, is also contributing to infant formula use." Interview 7

> "… These girls with money they don't breastfeed." Interview 33

The result of this study is contrary to the findings of Alemayehu, Haider and Habte (2009:16). They found a significant association between middle, richer and richest wealth index and exclusive breastfeeding. However, Fadnes et al (2010:[5]) have identified that it was health workers (not the women) who regarded breastfeeding as an option for those mothers who could not afford formula feeding.

Regarding the subcategory: race, participants noted that white women prefer formula feeding above breastfeeding. They reported that even if white women know the benefits of breastfeeding, they choose formula feeding. The following statements attest to this point:

> "Whites, they prefer bottle feeding, even if given information … they say they know … they are going on with bottle feeding." Interview 5

> "Europeans, especially private patients, tell you: I am not going to breastfeed." Interview 6

In the subcategory: employment, the participants were critical of long working hours of breastfeeding mothers. They reported that factory workers and nurses work long hours per day, which makes it impossible for them to breastfeed their babies. It was described as follows:

> "I think it is more or less this thing; the mothers are working. At times, especially at our factories, the mothers are working from six-to-six o clock in the evening." Interview 6

> "Because if they [nurses] work seven-to-seven, there is no time to go and breastfeed at home just one hour for lunch and come back." Interview 32

Zafar and Bustamante-Gavino (2008:137) have identified the need for nurses in Karachi, Pakistan, to have a daycare centre in the hospital so that they can breastfeed during lunch time and tea break. Provision of baby friendly corners recommended by the MoHSS (1992a:26) would enable mothers to continue working and breastfeeding.

3.4.2.5 Category: Teenage motherhood

In the category, 'teenage motherhood', the subcategories: school, understanding and body image emerged. The participants reported that these factors played a major role in teenage mothers' inability to breastfeed their babies.

Going back to school was the main reason reported that made it difficult for teenage mothers to breastfeed. For this reason, it was reported that teenage mothers did not even initiate breastfeeding (step 4 to successful breastfeeding). The following statements attest to these points:

> "Teenage pregnancies is also contributing to these − not breastfeeding challenges, because these children want to go back to school and they don't want to breastfeed." Interview 7

> "… And they don't see reasons why they should breastfeed for two days, [while in postnatal wards] as they will not continue." Interview 1

Regarding the subcategory: understanding, participants described that teenage mothers lack understanding of the importance of breastfeeding, hence they do not want to breastfeed. The following statements were made:

> "… Teenagers, they have to be encouraged to breastfeeding …, because they have to know that the benefit … emphasise the benefit of the breastfeeding." Interview 2

> "Teenage mothers, I don't know if they don't want or don't understand, but sometimes they opt for bottle feeding." Interview 9

Literature has shown that teenage mothers who knew the benefits of breastfeeding and had the support from a team of their mothers, school nurse and other staff members, have showed the intention to breastfeed and also made plans on how to combine breastfeeding and schooling (Smith, Coley, Labbok, Cupito & Nwokah 2012:[8]).

'Body image" indicates a perception that breastfeeding has negative effects on the body shape. The participants noted that teenage mothers believed that breastfeeding would alter their body shape, especially their breasts, as is evident from the following statement:

> "When it comes to teenagers – they tell you, they don't want their breasts to sag" Interview 13

The result of this study and the literature indicate the need for special interventions on breastfeeding education and support for teenagers during ante-natal care to enable them to continue breastfeeding while schooling. This intervention could be explored through further research.

3.4.3 Theme 3: Implementation of the BMFI programme

In theme 3, 'implementation of the BMFI programme', the categories 'BMFI training', 'breastfeeding support' and 'baby friendly corners' emerged. Table 3.9 displays the categories and subcategories of theme 3.

Table 3.9: Theme 3: Implementation of the BMFI programme

Theme	Category	Subcategory
Theme 3: Implementation of the BMFI	• BMFI training	• BMFI steps • Capacity
	• Breastfeeding support	• Supervision • Community involvement
	• Baby friendly corners	• Insufficient • Non-utilisation

3.4.3.1 Category: BMFI training

In theme 1 of sample A, BMFI training was described in terms of the experience of the chief health programme officer. In sample B, this category is described from the experiences of nurse managers. The subcategories related to the category 'BMFI training' were: BMFI steps and capacity.

Regarding the BMFI steps, the participants were quick to mention only a few of the ten steps to successful breastfeeding to justify their statements that the BMFI programme was implemented in their hospitals. Most frequently mentioned steps were: breastfeeding education for pregnant women (step 3), helping mothers to initiate breastfeeding (step 4), and rooming-in (step 7). The following statements confirm this point of view:

> "Yeah … because the babies are sleeping with their mothers, so, we still implement BMFI. Before that, every mother was having a baby-cot." Interview 10

> “We are implementing it basically in maternity ward where we are initiating breastfeeding 30 minutes after delivery.” Interview 4

> “[BMFI] is being implemented, − hmm − for me when it comes to the staff giving education to mothers, it is not a problem.” Interview 3

When asked specifically about other steps, the participants acknowledged that some of the steps were not implemented. Partial implementation was evidenced by the following statement:

> “What step? No, no, that one was never implemented in this hospital.” Interview 27

> “Even when we started the initiative, there was no group [step 10] that was formed to support us. We have not done it.” Interview 10

In the subcategory capacity, the participants expressed the need for expertise and adequate funds for BMFI training, as evident from the following statements:

> “I think we need a refresher course. We need the expert to come and train.” Interview 18

> “But I think the last workshop was in 2010. As from last year, because of other programmes pushing through [competing for resources], we did not have any formal workshop about breastfeeding.” Interview 20

> “We experience shortage of staff, it is also a challenge to send all staff to training.” Interview 19

Participants’ experience on training and capacity differed. The different experience is evidenced by the following statement:

> “For the health workers, for health workers, there is always a breastfeeding workshop that every health worker attends.” Interview 5

3.4.3.2 Category: Breastfeeding support

In the category 'breastfeeding support' the subcategories: supervision and community involvement emerged.

Regarding the subcategory: supervision, participants expressed concern about lack of breastfeeding support visits from the regional directorates. They stated the need to pay special attention to the BMFI programme. Statements that were made regarding this point are:

> "We do not really get any support from the region." Interview 9

> "The regional office team is doing support visits, but to say that they are coming specific for breastfeeding, no, no." Interview 18

The number of hospitals implementing the BMFI programme, according to the ministry (MoHSS 2012:25), serves as an indicator for measuring the impact of service delivery. However, evidence in this study shows that the status of the Baby and Mother Friendly Hospitals is not checked during supervisory visits.

The next subcategory that emerged is: community involvement. Even though participants reported lack of community breastfeeding support groups, they acknowledged their importance. A statement that attests to this point is:

> "I would rather prefer a support group for mothers … It is good if you hear things from the person you know … the same time she has a question there would be someone close to her, … not … a nurse in hospital." Interview 25

The hospital can help mothers to start breastfeeding, but they need follow-up support in their communities to continue breastfeeding (WHO & UNICEF 2006:193). Coutinho, Cabral de Lira, De Carvalho Lima and Ashworth (2005:1097) found that the high rate of exclusive breastfeeding achieved at discharge could only be sustained in the group of mothers who had received home visits for breastfeeding support, and not in the group that did not receive such visits.

3.4.3.3 Category: Baby friendly corners

The category 'baby friendly corners' was divided into the subcategories: insufficient provision and non-utilisation. The participants were concerned about inadequate provision and non-utilisation of available baby friendly corners. It was reported that workplaces lacked baby friendly corners, making it difficult for working mothers to breastfeed their babies, as evidenced by the following:

> "Some of the workplaces do not have a place where a mother can tell a nanny or whoever to bring the child for breastfeeding. Our factories do not have that." Interview 6

Participants also reported that because of lack of baby friendly corners in hospitals, they themselves, as working mothers, did not benefit from the BMFI programme. They said the following:

> "I just want to say: this BMFI, when it comes to health workers, they are also included. There must be a corner in the hospital for health workers, so that they can breastfeed their babies." Interview 32

In contrast, other participants experienced non-utilisation of existing baby friendly corners in some hospitals. The following statement supports this point:

> "Here in the hospital, there is a baby friendly corner at the clinic but it is not used. The nurse who is working at the clinic is going to the nurses' home to breastfeed." Interview 6

In this study, reasons for not using baby friendly corners were that nurses regarded hospitals as risky and unsafe for babies, as identified by Zafar and Bustamante-Gavino (2008:137). The findings of this study suggest that baby friendly corners for health workers should be far from patients' wards.

3.4.4 Theme 4: Strengthening the BMFI programme

In the fourth theme, namely strengthening the BMFI programme, the categories 'development of health care professionals', 'community development', 'maternal support' and 'evidence based practice' are discussed. Table 3.10 displays the categories and subcategories of this theme.

Table 3.10: Theme 4: Strengthening the BMFI programme

Theme	Category	Subcategory
Theme 4: Strengthening the BMFI programme	• Development of health care professionals	• Training
	• Community development	• Community education • Community support groups
	• Maternal support	• Maternity leave
	• Evidence based practice	• Research (local research)

3.4.4.1 Category: Development of health care professionals

Participants were asked whether they thought the BMFI programme in their respective hospitals needed improvement, and to share their opinions as to what could be done if that was the case. Training of health workers was regarded as a critical component of the BMFI programme. Participants suggested continuous training, including training for nurses and doctors at private facilities. The following was stated in this regard:

> "Training for nurses is really important, especially those who are working in private [facilities] and the private doctors." Interview 7

> "There should be ongoing training. People tend to forget, and new things come up every year. Yeah, for us to stay abreast with breastfeeding, we need regular training." Interview 2

> "Because breastfeeding is important, we think when we are doing strategic planning we need to include breastfeeding training." Interview 19

Grossman, Chaudhuri, Fedman-Winter, Abrams, Newton, Philipp and Merewood (2009:56) state that breastfeeding training of health workers equips them with the knowledge and skills to educate women on how to manage breastfeeding. This education would in turn lead to improved breastfeeding practices that would increase the rates of breastfeeding.

3.4.4.2 Category: Community development

The category 'community development' was divided into the subcategories: community education and community support groups.

With regard to community education, participants emphasised the need for and importance of breastfeeding education of the community. They stressed that the focus of education should be on antenatal care services, private patients and awareness creation through the media. The following statements demonstrate these points:

> "We have to strengthen health education at ante-natal care department … and encourage private patients to breastfeed, because private doctors are not in the action of preparation [preparing a mother for breastfeeding] properly." Interview 7

> "Put emphasis on the benefits of breastfeeding. Give radio talks … through pamphlets to be distributed just to have information." Interview 5

Regarding the subcategory: community support groups, the participants expressed their concern about the absence of community-based breastfeeding support groups. They recommended formation of these, as is evident from:

> "… but this one, with my manager we will sit down and talk about it, the support group." Interview 4

> "Breastfeeding support group, it is something that we have to give attention on." Interview 14

3.4.4.3 Category: Maternal support

In the category ‘maternal support’ the subcategory: maternity leave emerged. A participant was critical about the short period of 12 weeks provided in the Labour Act (Namibia 2007:sd), as evident from the following:

> “I think maybe mothers can get, like in other countries, a full year of maternity leave. It will help.” Interview 6

Skafida (2012:523) found that mothers who took short maternity leave of two months had a higher risk of earlier stopping of breastfeeding than mothers who were still on maternity leave when the child was aged 10 months. However, the suggestion of one year’s maternity leave has financial implications. Rojjanasrirat and Sousa (2010:2019) have reported that women regarded staying at home to breastfeed as a financial sacrifice. The best way to balance breastfeeding and financial needs is therefore through the provision of support for breastfeeding in workplaces.

3.4.4.4 Category: Evidence-based practice

In the category ‘evidence-based practice’, a suggestion was made to conduct research on babies of HIV infected women who are breastfed according to the new guidelines. It was reported that the research findings should be used to develop evidence-based guidelines for Namibia. The following statement attests to this point:

> “My personal view, we need to conduct research so that we can … bring effective guidelines.” Interview 32

This call for evidence might be an indication that participants were not aware that the new guidelines are based on the updated WHO recommendations on HIV and infant feeding (WHO 2010b:3), and research must have been conducted before these recommendations were issued. However, it is encouraging to see managers demanding evidence-based practice.

3.4.5 Integration of the findings of samples A and B

To fully understand how the BMFI programme was implemented, the data of sample A (chief health programme officer) and sample B (nurse managers) were integrated; the integration will be discussed below. Figure 3.1 illustrates the themes that emerged from samples A and B. To maintain the clarity of the discussion, the participants will be referred to as chief health programme officer from sample A and nurse managers from sample B.

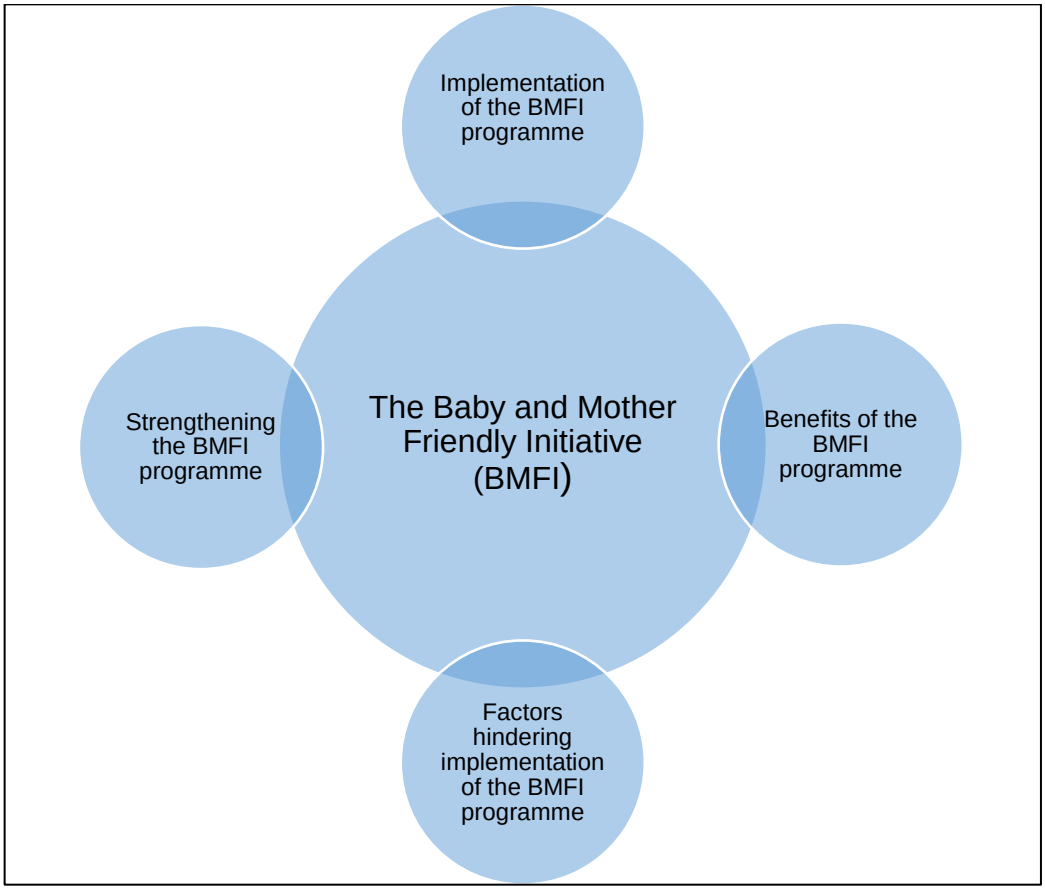

Figure 3.1 Themes from the integrated data from samples A and B

3.4.5.1 Theme 1: Implementation of the BMFI programme

The data from samples A and B indicated that the implementation of the BMFI programme was characterised by limited implementation of the Ten Steps to Successful Breastfeeding. It was reported that as a result of staff shortage, BMFI training, including updating of nurses on the latest guidelines on HIV and breastfeeding and orientation of rotating staff, was not conducted regularly. Staff turnover worsened the heavy burden that was caused by staff shortage and resulted in inadequate time to carry out other BMFI

programme related activities such as supervision and assessment of the Baby and Mother Friendly Hospitals. In addition, the nurse managers reported that the hospitals did not have adequate expertise and financial resources for BMFI training.

3.4.5.2 Theme 2: Benefits of the BMFI programme

The chief health programme officer did not share any aspect related to the benefits of the BMFI programme. However, the nurse managers reported that the BMFI programme has contributed to the reduction of the stigma of HIV associated with non-breastfeeding, and to increased exclusive breastfeeding and healthier babies through protection against infectious diseases.

3.4.5.3 Theme 3: Strengthening the BMFI programme

The chief health programme officer reported that for quality control, there was a need to make compulsory the Ten Steps to Successful Breastfeeding and to issue directives with clear guidelines. She suggested that hospitals should be mandated to implement all of the ten steps. She further suggested community involvement in the implementation of step 10 (establishment of community-based breastfeeding support groups) through clinics and village health committees. Furthermore, she suggested advocacy for legislation for baby friendly corners in workplaces.

Nurse managers recommended various interventions that would strengthen the BMFI programme. One of these interventions is continuous BMFI training for nurses and doctors in state and private clinics and hospitals. In addition they recommended community breastfeeding education through ante-natal care services and the media. They further recommended support for breastfeeding through the establishment of community-based breastfeeding support groups and the provision of baby friendly corners in workplaces, as well as maternal support through the provision of increased maternity leave. Moreover, they recommended local research on HIV and breastfeeding in order to ensure evidence-based practice.

3.4.5.4 Theme 4: Factors hindering the implementation of the BMFI programme

The chief health programme officer reported that nurses were not updated on the latest guidelines on HIV and breastfeeding. On the other hand, the nurse managers reported uncertainty and doubt among both mothers and nurses about HIV and breastfeeding. Although the chief health programme officer reported that regional health directorates did not own the BMFI programme, she was of the opinion that hospitals that had the support of their region's directors were committed to the implementation of the programme. However, nurse managers reported lack of BMFI programme support from the regional health teams.

Nurse managers reported on various factors that hindered the implementation of the BMFI programme, especially the Ten Steps to Successful Breastfeeding. These factors were physical environment, socio-economic factors and teenage motherhood. Regarding physical environment, they reported that as a result of lack of space, especially separate maternity wards, women were cared for without privacy. In addition, education, employment, affluence, race and teenage motherhood were reported to have an influence on women's feeding choices.

3.5 SUMMARY

This chapter analysed, presented and discussed the qualitative data of phase 1, which reflected the experiences of the chief health programme officer and nurse managers on the implementation of the BMFI programme. A literature comparison was carried out, which indicated similarities to and differences from previous studies. Various experiences of the BMFI programme implementation and recommendations for its strengthening were reported. The second phase of this study was on the implementation of the BMFI programme as practised by the registered and enrolled nurses/midwives. This evidence will be discussed in Chapter 5. The next chapter discusses relevant literature on the implementation of the BMFI programme.

CHAPTER 4

LITERATURE REVIEW

4.1 INTRODUCTION

The literature review in dissertations cites sources that are pertinent or highly important in providing the in-depth knowledge needed to make changes in practice or to study a selected problem (Grove et al (2013:707). In a sequential mixed-methods study, if the study begins with a qualitative phase, the literature is substantially less and the researcher may incorporate the literature review later in the study (Creswell 2014:30). In this mixed-methods design, when the emphasis was on the qualitative phase, a literature comparison was conducted in Chapter 3. This chapter discusses additional literature consulted on the *implementation of the BMFI programme* in order to design an instrument to be used in phase 2 of this study. The themes that emerged in the qualitative phase (phase 1) guided this literature review. The topics that will be discussed are the clarification of the *BMFI programme* and important factors that the participants of phase 1 identified as relevant to the implementation of the BMFI programme. From the literature review, the concept of BMFI was operationalised to be measured into the WHO and UNICEF's (1989) Ten Steps to Successful Breastfeeding. De Vos et al (2011:191) state that a concept can be measured by operationalising it from literature.

4.2 THEME: IMPLEMENTATION OF THE BMFI PROGRAMME

The BMFI programme in Namibia was adopted from the BFHI in 1992. The programme is implemented through WHO and UNICEF's (1989) Ten Steps to Successful Breastfeeding. These steps were adopted without change and have been declared as the BMFI policy for Namibia (MoHSS 1992b). Regarding assessment criteria, the extent of implementation of each step is obtained by calculating the percentage of compliance. A step is only considered completely implemented if the extent of its implementation achieves a certain percentage threshold: at least 80%.

Below is set out the BMFI policy (the Ten Steps to Successful Breastfeeding) and relevant literature on each policy step.

Step 1: Promote and implement Namibia's breastfeeding policy

In 2011, the National Guidelines on Infant and Young Child Feeding were developed based on the BMFI policy, to be implemented through its Ten Steps to Successful Breastfeeding. Therefore, the Ministry recommends that the National Policy on Infant and Young Child Feeding should also be routinely communicated to all health care workers (MoHSS 2011a:3). According to the global criteria, the breastfeeding policy should be made available to all staff members and be written in the languages mostly understood by mothers and staff (WHO & UNICEF 2009:7).

Issues identified for successful development and implementation of breastfeeding policies include high-level decision support, teamwork, skilled and experienced personnel and clear protocols and guidelines (Walsh et al 2011:601).

Step 2: Train all health care staff in skills necessary to implement the BMFI policy.

This step is to be addressed through the following:

- Training all health care staff in skills necessary to implement the BMFI policy and national policy and National Guidelines on Infant and Young Child Feeding
- All levels of training should integrate the BMFI policy, PMTCT and International Code of Marketing of Breast Milk Substitutes (MoHSS 2011a:4).

According to WHO and UNICEF (2009:9), 20 hours of theory training and three hours of supervised clinical training are needed to develop the knowledge and skills necessary to adequately support mothers on breastfeeding.

Step 3: Inform all pregnant women about the benefits and management of breastfeeding

In addition to providing information on the benefits on breastfeeding, the MoHSS (2011a:4) recommends that health workers should provide general information on HIV and breastfeeding, HIV counselling and testing, and individual infant feeding counselling.

WHO and UNICEF (2009:10) recommend that each facility offering ante-natal care services should have a written description of the minimum content of breastfeeding information for pregnant women. The information should include the benefits of breastfeeding, including exclusive breastfeeding, and how to maintain breastfeeding. Breastfeeding management practices that help a mother to maintain lactation include breastfeeding on demand (Step 8) and correct positioning and attachment of the baby to the breast (Step 5). Tadele, Habta, Akmel and Deges (2016:[3]) report that the majority of women who had received information on exclusive breastfeeding did not know its benefits and duration thereof. These findings show the need to strengthen the quality of antenatal education.

Step 4: Help mothers initiate breastfeeding within a half-hour of birth

Step 4 is implemented by assisting mothers to initiate breastfeeding within a half hour of birth with skin-to-skin contact for at least one hour, or until the baby has attached and fed at the breast (MoHSS 2011a:4). WHO and UNICEF (2009:11) interpret early initiation of breastfeeding as placing the baby on the mother's breast with skin-to-skin contact immediately following birth for at least an hour, and encouraging the mother to recognise when the baby is ready to breastfeed, offering help if needed. Mothers who have delivered by caesarean section with general anaesthesia should also initiate breastfeeding as soon as they are responsive and alert.

Studies have shown that timely initiation of breastfeeding leads to prolonged duration of breastfeeding (Garcia-de-Leon-Gonzalez et al 2011:447). Walsh et al (2011:609) have identified factors such as routine procedures and physical layout of a health facility that make it difficult to practice skin-to-skin contact on mothers who have had caesarean section delivery. Tilahun, Degu, Azale and Tigabu (2016:[5] have also reported a negative association between caesarean section delivery and timely initiation of breastfeeding. However, Schmied et al (2011:[6]) have reported that Step Four was perceived as an easier step to implement than other steps. This was reported to be due to the fact that once a baby had been placed with the mother with skin-to-skin contact there was no need for a health worker to stay with them.

Step 5: Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants

This step is implemented by showing breastfeeding mothers correct positioning and attachment of their babies to the breast and teaching them to express breast milk by hand to maintain the milk supply (MoHSS 2011a:4; WHO & UNICEF 2009:10).

Incorrect positioning and attachment of the baby to the breast causes breast problems. Doherty et al (2012:[4]) have identified that cracked nipples and breast engorgement were the most important predictors of early termination of breastfeeding. Dongre, Deshmukh, Rawool and Garg (2010:228) have reported that incorrect positioning and attachment of the baby to the breast was associated with poor breastfeeding practices such as not breastfeeding on demand and giving the baby other food or drinks.

Step 6: Give newborn infants no food or drink other than breast milk, unless medically indicated

Feeding breast milk only, with no water, other food or fluids except oral immunisations, vitamins or medicine, is defined as exclusive breastfeeding. Acceptable reasons for feeding food other than breast milk include galactosemia, maple syrup urine disease and phenylketonuria in infants, as well as severe illnesses of the mother such as sepsis or herpes simplex virus type 1 (MoHSS 2011a:66; WHO & UNICEF 2006:31).

Exclusive breastfeeding has many benefits. In a study on breastfeeding impact on HIV exposed infants in Durban, South Africa, exclusively breastfed babies were reported to have had a lower incidence (69%) of diarrhoea. They had no hospital admission at the age of up to 14 weeks, compared with the formula-fed babies. Also, fewer mothers who were exclusively breastfeeding had experienced depression than mothers who used formula feeding (Kindra, Coutsoudis, Esposito & Esterhuizen 2012:635). Donaldson-Myles (2012:88) also found that exclusive breastfeeding increased the production of prolactin and oxytocin, which are reported to reduce the incidence of postnatal depression.

Step 7: Practice rooming-in: allow mothers and infants to remain together – 24 hours a day

Rooming-in is the practice in hospitals of keeping the baby's crib at the mother's bedside or keeping the baby in the same bed with the mother, also called bedding-in.

The literature shows that mothers who room-in with their babies produce more milk, breastfeed longer and are more likely to breastfeed exclusively than mothers who have limited contact with their babies (Crenshaw 2007:41). According to WHO and UNICEF (2006:121), rooming-in promotes bonding between the mother and baby even if a mother is not breastfeeding. Babies sleep better, cry less and are fed more frequently. A mother who practises rooming-in can see that her baby is well and is not worried about thinking that the baby who is crying in the nursery is hers.

Step 8: Encourage breastfeeding on demand

Breastfeeding on demand means that babies should feed according to their needs, not on a schedule decided by the health facility or mother. Breast milk production depends on the frequency of breastfeeding. The more the baby breastfeeds, the more milk is produced in the breast. A mother who feeds on demand experiences less breast engorgement and breastfeeds longer (MoHSS 2011a:5; WHO & UNICEF 2006:122).

Step 9: Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants

This step is implemented by teaching mothers the dangers of using teats and dummies. These dangers include ear and dental infection. Babies who are given dummies often feed less, which can lead to undernutrition. The baby may also develop a preference for teats over the breast, which may lead to termination of breastfeeding. For these reasons, it is recommended that an open cup be used even if the baby is fed with artificial feeding (MoHSS 2011a:5; WHO & UNICEF 2006:127).

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

A community-based breastfeeding support group serves as an extension of the BMFI programme in the community (MoHSS 2011a:5; WHO & UNIFEF 2006:193). Studies have shown the effectiveness of combining facility and breastfeeding promotion interventions on sustaining of the exclusive breastfeeding achieved at discharge from a baby friendly hospital (Coutinho et al 2005:1097; Haroon et al 2013:13).

4.3 THEME: THE BENEFITS OF THE BMFI PROGRAMME

Breastfeeding promotion interventions hold many health benefits for the baby and mother as well as economic benefits for the family, community and society (WHO & UNICEF 2006:65; Schmied 2011:[3]).

The benefits of the BFHI include improved breastfeeding practices such as timely initiation of breastfeeding, exclusive breastfeeding and avoidance of prelacteal feeding (Garcia-de-Leon-Gonzalez et al 2011:447; Perez-Escamilla 2007:485). However, other studies have shown that even though timely initiation of breastfeeding has increased due to the promotion of breastfeeding, exclusive breastfeeding remains low (McKean & Spragins 2012:4).

The impact of breastfeeding promotion interventions translates into health care savings associated with lower incidence of childhood and maternal illnesses (Abraham & Labokk 2011:510; Donaldson-Myles 2012:88; Kindra et al 2012:635; Perez-Escamilla 2007:485). The US Department of Health (2010, cited in Murtagh and Moulton (2011:218) has reported that in addition to lower health care spending, breastfeeding promotion in workplaces leads to decreased absenteeism, increased productivity and improved morale of employees.

4.4 THEME: FACTORS HINDERING IMPLEMENTATION OF THE BMFI PROGRAMME

- **Hospital practices that undermine breastfeeding**

Some hospital practices and routines have been identified as interfering specifically with timely initiation of breastfeeding.

Engebresten, Moland, Nankunda, Karamagi, Tylleskar and Tumwine (2010:[4]) have identified hospital routines such as bathing the mother and baby, stitching episiotomy and weighing the baby as reasons for delaying the initiation of breastfeeding. Other routine practices that interfere with timely initiation of breastfeeding have been identified as the use of nurseries and routine prescription of formula and glucose water (Haiek 2012:351); Taylor et al 2011:29; Walsh et al 2011:609).

- **Physical environment**

Fadnes et al (2010:[6] have reported that lack of adequate space made it difficult for health workers to counsel mothers in privacy on infant feeding. Taylor et al (2011:29) identified the fact that screens to ensure privacy were essential to promote BFHI.

- **Cultural beliefs and practices**

In Bangladesh, Cameroon, Ethiopia and Uganda, colostrum is discarded because it is believed to cause stomach pain, diarrhoea, worms and even the death of the baby (Chiabi, Kamga, Mah, Bogne, Nguefack, Fokam, Tafen & Tchokoteu 2011:13; Engebresten et al 2010:[4]; Fjeld, Sisiya, Katepa-Bwalya, Kankasa, Moland, Tylleskar & the PROMISE-EBF Study Group 2008;[5]; Rogers, Abdi, Moore, Nd'iangui, Smith, Carlson & Carlson 2011:2033).

Cultural rituals such as sacrifices to please the spirits, naming a child and cleansing a mother from sexual taboos include giving food such as mustard oil, butter, honey and yeast before a baby is introduced to breastfeeding (Engebretsen et al 2010:[5]). Apart from delaying initiation of breastfeeding, prelacteal food deprives the baby of the

immunological benefits of colostrum, may contain harmful contaminants and may also be difficult to digest (Rogers et al 2011:2034). The literature search found no report of these practices in Namibia. This may be because 96.6% of women in Namibia receive ante-natal care from a qualified health care provider (MoHSS 2014a:100).

- **Socio-economic factors**

Socio-economic factors such as marital status, educational level and employment status of the mothers have been shown to influence breastfeeding practices.

Alemayehu et al (2009:14) found that women ranking middle and above in the wealth index were twice more likely to exclusively breastfeed than those who ranked poorest and poorer in the index. Similarly, Agho, Dibley, Odiase and Ogbonmwan (2011:[4]) have found that children of mothers from rich households were more likely to be exclusively breastfed than those from poor households. Egata, Berhane and Worku (2013[5]) have also identified an association between poor socio-economic conditions and household food insecurity with non-exclusive breastfeeding in children under the age of six months. Engebresten et al (2010:[6]) also found that non-exclusive breastfeeding was associated with mothers' inability to produce adequate breast milk due to hunger.

The educational level of a mother is also a predictor of the outcome of breastfeeding. Ogunlesi (2010:462) has reported that in Nigeria higher education was associated with timely initiation of breastfeeding, higher exclusive breastfeeding and lower use of pre-lacteal feeding. Similarly, Laantera, Polkki, Ekstrom and Pietila (2010:[4]), in their study on breastfeeding attitudes of Finnish parents during pregnancy, reported that parents with lower or moderate education had more negative feelings towards breastfeeding than those with higher education. Henninger, Irving, Kauffman, Kurosky, Rompala, Thompson, Sokolow, Avalos, Ball, Shifflett and Naleway (2017:260) also found that higher maternal education at college, a master's degree or beyond, was associated with timely initiation of breastfeeding. According to Egata et al (2013:[5]), maternal illiteracy was significantly associated with non-exclusive breastfeeding in children under the age of six months.

Employment status of the mothers is one of the factors that have been found to influence breastfeeding practices, especially exclusive breastfeeding. Nabulsi (2011:[4]) has

reported that women's return to work after a short maternity leave of 40 days in Lebanon was associated with early termination of breastfeeding at the age of three months. On the other hand, Setegn, Belachew, Gerbaba, Deribe, Deribew and Biadgilign (2012:[4]) report that unemployed mothers were about five times more likely to breastfeed exclusively than employed mothers. The authors attributed this to the fact that unemployed mothers spent more time with their babies, which enabled them to exclusively breastfeed. However, Alemayahu et al (2009:13) did not find an association between exclusive breastfeeding and current employment of the mother.

Marital status of a mother determines her breastfeeding practices: Alemayehu et al (2009:14) and Egata et al (2013:[5]) found that unmarried women were more likely to breastfeed their babies exclusively than those who were married. However, this was contrary to the findings of Agunbiade and Ogunleye (2012:[6]), who found that married women were more likely to exclusively breastfeed than those unmarried. The authors attributed these findings to the support of fathers-in-law and mothers-in-law.

- **Teenage motherhood**

The literature has shown that teenage decision to continue breastfeeding depends on the teenagers' knowledge about breastfeeding, and the support and experiences needed to sustain their decision (Smith et al 2012:[14]).

- **Knowledge and perceptions of women about breastfeeding**

Knowledge and perception of women about breastfeeding determine their breastfeeding feeding decisions and practices.

Inadequate knowledge of mothers about breastfeeding was reported to be associated with poor breastfeeding practices such as discarding of colostrum and non-exclusive breastfeeding (Chiabi et al 2011:12; Egata et al 2013:[5]; Setegn et al 2012:[4]). Nabulsi (2011:[3]) has stated that perceptions that breastfeeding causes breast sagging and weight gain, as well as a belief that the breast milk may become bad or harmful, contributed to non-breastfeeding. Agunbiade and Ogunleye (2012:[6]) have also reported

that women feared that breastfeeding would make their breasts flabby and unappealing to their husbands.

4.5 THEME: HUMAN RESOURCES AND CAPACITY

Human resources for health are the most important assets of the health system. The success implementation of any health intervention depends on the availability of an adequate number of human resources with sufficient knowledge, skills and attitudes.

MacKean and Spragins (2012:24) have reported that staff shortage and lack of time in health facilities form part of the challenges that contribute to lack of individualised or personalised care. Schmied et al (2011:[6]) found that lack of time led staff to take shortcuts such as giving a bottle of formula instead of spending time with a mother showing her how to manage breastfeeding. MacKean and Spragins (2012:6) reported that a culture of the health care system contributed to health care practices that undermined women's confidence and self-esteem. The authors identified the need for the development of a health care system culture that would supported health care professionals in providing a mother-, family- and community-centred approach that would help to build women's confidence in breastfeeding. The culture of a health care system that undermines breastfeeding can also be addressed through breastfeeding training of health professionals: Grossman et al (2009:57) established that breastfeeding training of health professionals was associated with increased rates of initiation of breastfeeding. Dawson et al (2014:[6]) have identified professional development and training as a strategy that improves nurses' retention.

4.6 THEME: OWNERSHIP AND COMMITMENT TO BMFI PROGRAMME

Beliefs and attitudes of health care staff influence ownership and commitment towards implementation of the BFHI programme: Schmied et al (2011:[3]) found that health care staff were committed to the implementation of the BFHI because they believed it was beneficial and achievable. Taylor et al (2011:29), however, reported that entrenched attitudes caused resistance to the changing of established practices to implement the BFHI.

4.7 THEME: LEGISLATION OF BABY FRIENDLY CORNERS

- **Breastfeeding legislation**

Breastfeeding legislation compels employers to provide facilities equipped with refrigerators and other equipment that enable mothers to express and store breast milk or to breastfeed their babies while at work (Chertok & Hoover 2009:50). Amin, Said, Sutan, Shah, Darus and Shamsuddin (2011:[2]) reported that women who worked in workplaces that did not have refrigerators for storing breastmilk were more likely to discontinue breastfeeding than those who worked in workplaces that had them. Zafar and Bustamante-Gavino (2008:136) found that mothers who worked in workplaces that did not have facilities to support breastfeeding experienced the physical discomfort of leaking and engorged breasts. Breast engorgement is one of the causes of low milk production that may lead to termination of breastfeeding (WHO & UNICEF 2006:167). Breastfeeding support in workplaces has economic benefits, such as improving retention of experienced employees, decreased absenteeism, and increased productivity (US Department of Health (2010), cited in Murtagh & Moulton 2011:218).

The MoHSS (1992a:24) has introduced the concept of baby friendly corners in workplaces in Namibia, as part of expansion of the BMFI programme. However, provision of baby friendly corners is not regulated by law. The aim of the baby friendly corners is to enable working mothers to express and store breast milk while at work or ask the child minder to bring the baby to work for breastfeeding.

In view of the recommendation of exclusive breastfeeding for six months from birth and shorter maternity leave of 12 weeks (MoHSS 2011a:11; Namibia 2007:sd), there is a need to provide support for breastfeeding in workplaces through breastfeeding legislation.

4.8 THEME: STRENGTHENING THE BMFI PROGRAMME

In addition to breastfeeding legislation, the International Code of Marketing of Breast Milk Substitutes and Maternity Protection Convention (2000) (No 183) are part of legal instruments that support and protect breastfeeding.

- **International Code of Marketing of Breast-milk Substitutes**

The International Code of Marketing of Breast Milk Substitutes is the second strategy (to the Ten Steps to Successful Breastfeeding) for implementation of the BFHI. The aim of the code is to regulate unethical marketing of artificial feeding products and equipment that undermine breastfeeding. The 60th World Health Assembly (WHA) Resolutions, in May 2008, made recommendations by WHA Resolution 60.23 (WHO 2008) to strengthen the code in all WHO member states. Subsequent steps, especially Resolution 63.14 of 2010, have endorsed recommendations by member states to strengthen the implementation of the code through the development of national laws to reinforce and monitor the implementation of the code (WHO 2010). The MoHSS (2011a:4) recommends that breastfeeding training should include the Code of Marketing of Breast Milk Substitutes.

Labbok and Taylor (2008:18) have reported a decrease in breastfeeding rates associated with increased level of exposure to breast milk substitutes' advertisements. Similarly, Rosenberg, Eastham, Kasenhagen and Sandoval (2008:291) have found that mothers who received commercial hospital discharge packages were less likely to exclusively breastfeed for a long period than those who did not receive such packages.

In Namibia, the National Code of Marketing of Breast Milk Substitutes is incorporated in the recently enacted Public and Environmental Health Act (Namibia 2015:s13). This means that a regulation to monitor the implementation of the code is still to follow.

- **Maternity Protection Convention (MPC)**

The Maternity Protection Convention (2000) (No. 183) of the United Nations International Labour Organization) is the most important international legal measure that protects and supports breastfeeding in employment. The MPC makes provision for 14 weeks' paid maternity leave and breastfeeding breaks. Governments are required to ratify this convention through provisions of national laws and regulations aimed at support and protection of breastfeeding in workplaces. The Labour Act (Namibia 2007:sd) makes provision for 12 weeks' paid maternity leave; two weeks shorter than the provisions in the Maternity Protection Convention. The Social Security Commission pays maternity leave

to a female member a sum equal to 100% of her basic salary for a maximum period of 12 weeks, with a minimum of N$300.00 per month and maximum of N$13 000 per month. One Namibian dollar (N$) is equivalent to one South African Rand (ZAR). The ZAR is legal tender in Namibia. The maximum benefit was equivalent to 910 USD and the minimum was equivalent to 22 USD, according the exchange rate on 7 November 2016. Women who are in higher salary brackets do not benefit from the Social Security provision and thus would rather go back to work for a full salary. This practice has a negative effect on continuation of breastfeeding.

4.9 SUMMARY

The discussion on relevant literature on the BMFI programme addressed the implementation of BMFI programme's Ten Steps to Successful Breastfeeding and various factors influencing breastfeeding. Not all the literature referred to in this review describes the implementation of the BMFI programme as such. The literature review firstly guided the familiarisation of implementation of the BMFI programme during phase 1 of this study and, secondly, the development of the questionnaire for data collection in phase 2. This literature review demonstrates that the implementation of the BMFI programme is influenced by various factors in the health facilities, homes, communities and workplaces.

The next chapter discusses the data obtained from registered and enrolled nurses/midwives.

CHAPTER 5

DATA ANALYSIS AND DISCUSSIONS OF RESULTS: PHASE 2

5.1 INTRODUCTION

In this chapter, the result of phase 2 of the research is discussed. The target population for this phase was 391 registered and enrolled nurses/midwives who were working in the 32 hospitals which were found to be implementing the BMFI programme in phase 1 of this research. This number excludes those who were working in Windhoek Central Hospital, in which the study questionnaire was pre-tested. Discussions of these results will be based on responses of the 285 (73.0%) registered and enrolled nurses/midwives who completed the questionnaires.

Descriptive statistics were used to summarise the data, together with tables and figures. Further statistical analyses were performed to determine relationships between some of the variables. Totals are indicated by frequency, followed by percentages (%), which are rounded off to one decimal point.

Table 5.1 presents the names of the hospitals and the number of questionnaires submitted and returned.

Table 5.1: Name of hospital and number of questionnaires submitted and returned

Name of hospital	Number of questionnaires submitted	Number of questionnaires returned	Response rate
Hospital A	4	4	100.0
Hospital B	14	9	64.3
Hospital C	13	8	61.5
Hospital D	10	7	70.0
Hospital E	10	10	100.0
Hospital F	5	5	100.0
Hospital G	10	3	30.0
Hospital H	50	17	34.0
Hospital I	10	9	90.0
Hospital J	10	9	90.0
Hospital K	5	4	80.0
Hospital L	11	10	91.0
Hospital M	8	8	100.0
Hospital N	4	4	100.0
Hospital O	8	7	87.5
Hospital P	12	12	100.0
Hospital Q	7	7	100.0
Hospital R	8	3	37.5
Hospital S	9	9	100.0
Hospital T	54	50	92.6
Hospital U	17	12	70.5
Hospital V	10	4	40.0
Hospital W	16	8	50.0
Hospital X	9	8	89.0
Hospital Y	18	10	55.5
Hospital Z	8	6	75.0
Hospital Aa	10	4	40.0
Hospital Bb	10	7	70.0
Hospital Dd	6	6	100.0
Hospital Ee	14	14	100.0
Hospital Ff	11	11	100.0
Total	**391**	**285**	**73.0**

5.1.1 The research instrument

Data were collected using a questionnaire which comprised two sections.

Section A was designed to elicit demographic and background information of registered and enrolled nurses/midwives.

Section B comprised questions that attempted to ascertain how the BMFI hospitals in general, and particularly the registered and enrolled nurses/midwives, were implementing the BMFI programme. The questions were based on the WHO and UNICEF's Ten Steps to Successful Breastfeeding as a strategy for implementing the programme.

The results below are provided according to each item in the questionnaire.

5.2 DEMOGRAPHIC AND BACKGROUND INFORMATION

A brief profile of registered and enrolled nurses/midwives who completed the questionnaires is provided in this section. The information was obtained from section A of the questionnaire. It includes information pertaining to job category, year of obtaining basic qualification, years of working in maternity ward, gender and age group of the respondents. The reason for including a demographic profile of respondents is to provide information that may be significant to the findings of the study.

5.2.1 Job category of respondents

Table 5.2 shows that 171 (60.6%) respondents were registered nurses/midwives, while 111 (39.4%) were enrolled nurses/midwives. Three respondents did not indicate their job category, accounting for the total of 282 in this section. These frequencies indicate that more registered nurses/midwives than enrolled nurses/midwives were allocated to maternity wards.

Table 5.2: Job category of respondents (n=282)

Job category	Frequency	Percent
Enrolled Nurse/midwife	111	39.0
Registered Nurse/midwife	171	60.0
Missing	3	1.0
Total	**285**	**100.0**

5.2.2 YEAR OF OBTAINING BASIC QUALIFICATION

As depicted in Figure 5.1, 30 (10.8%) of the respondents qualified before 1999, 21 (7.6%) between 1990 and 1994, 23 (8.3%) between 1995 and 1999, 30 (10.8%) between 2000 and 2004, 51 (18.4%) between 2000 and 2009 and 122 (44.0%) between 2010 to date. These frequencies indicate that more than one-third of the respondents were newly qualified.

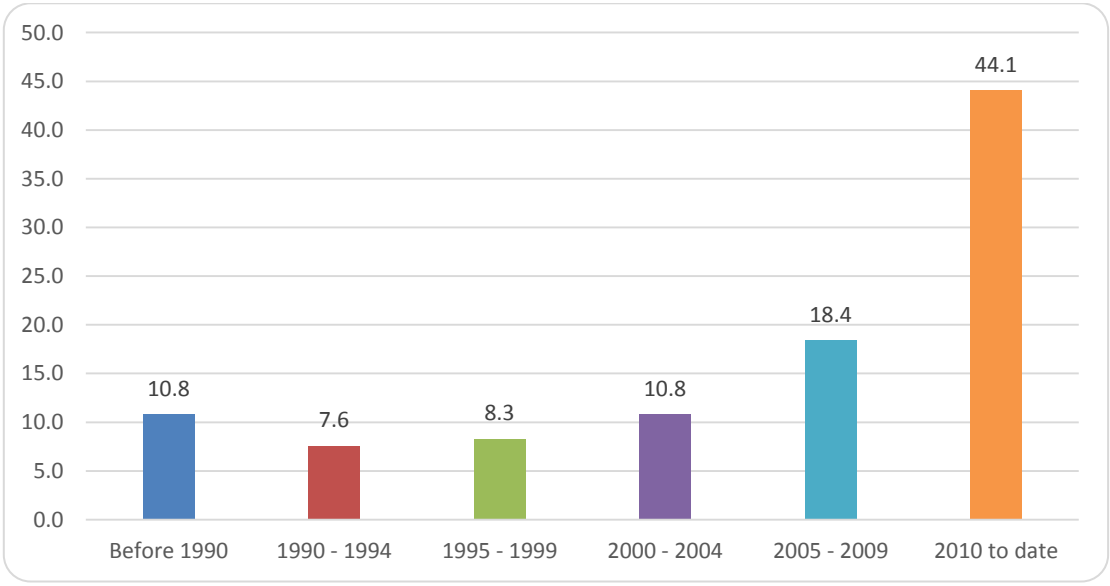

Figure 5.1 Year of obtaining qualifications (n=277)

5.2.3 Years of working in maternity ward

Of the 279 respondents, 170 (60.9%) were working in maternity wards for a period of 0 to 5 years, 48 (17.2%) for 6 to 10 years, 23 (8.2%) for 11 to 15 years, 11 (4.0%) for 16 to 20 years and 27 (9.7%) for 21 years and longer (see figure 5.2). The majority of the respondents have worked in maternity wards for a shorter period. This could be a result of the staff rotation that was described by nurse managers in phase 1 of this study.

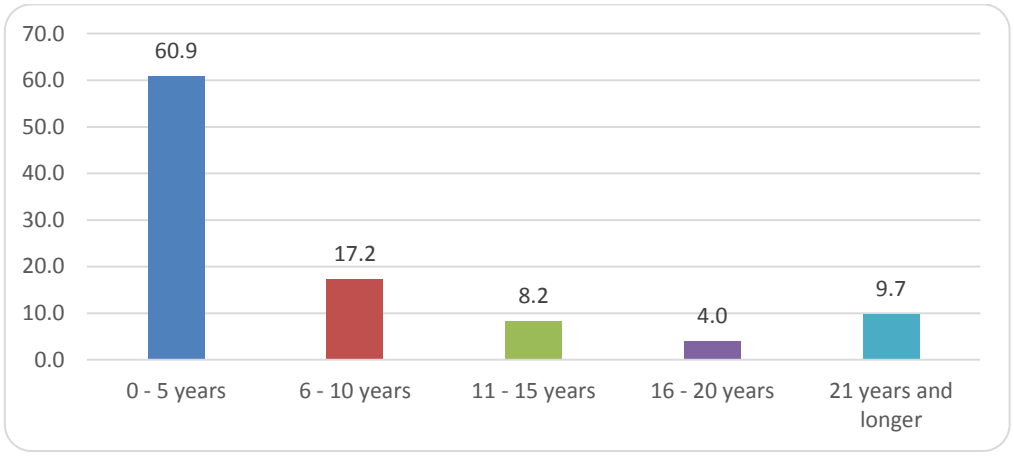

Figure 5.2 Years of working in maternity ward (n=279)

5.2.4 Gender of respondents

Table 5.3 presents data regarding the gender of respondents. Only 9 (3.2%) of the 283 respondents were males. Two respondents did not indicate their gender, accounting for the total of 283 in this section. The nursing profession is generally dominated by females; however, it was necessary to determine how many male respondents participated in the study. The percentage of male registered and enrolled nurses/midwives in this study was lower than the 15.0% for the whole country reported by the Health Professions Councils of Namibia (HPCNA) (2015). This may be due to the fact that male nurses are not always allocated to maternity wards.

Table 5.3: Gender of respondents (n=283)

Gender	Frequency	Percent	Cumulative percent
Female	274	96.8	96.8
Male	9	3.2	100.0
Total	**283**	**100.0%**	**100.0**

5.2.5 Age of the respondents

As shown in Table 5.4, of the 283 respondents, 98 (34.6%) were between the ages of 20 and 29 years, 82 (29.0%) between the ages of 30 and 39, and 40 (14.1%) between the ages of 40 and 49. Fifty-nine (20.9%) were between the ages of 50 and 59. Only 4 (1.4%) were 60 years and older. These figures correspond with the statistics of the HPCNA (2015).

Table 5.4: Age category of registered and enrolled nurses/midwives (n=283)

Age category	Frequency	Percent	Cumulative percent
20−29 years	98	34.6	34.6
30−39 years	82	29.0	63.6
40−49 years	40	14.1	77.7
50−59 years	59	20.9	98.6
60 years and above	4	1.4	100.0
Total	**283**	**100.0**	**100.0**

5.3 IMPLEMENTATION OF THE BABY AND MOTHER FRIENDLY INITIATIVE

The questions in this section investigate the extent to which the BMFI programme was implemented. Since the MoHSS has adopted WHO and UNICEF's Ten Steps to Successful Breastfeeding as the BMFI policy for Namibia, the questions were formulated to ascertain how the hospitals in general, and particularly the nurses, were implementing these steps.

5.3.1 Step 1: Have a breastfeeding policy that is routinely communicated to all health care staff

5.3.1.1 Adherence to the BMFI policy

Table 5.5 shows that of the 269 (93.0%) respondents who reported that their hospitals had the BMFI policy, 139 (48.8%) indicated that the policy was visibly displayed in maternity wards. However, less than half (120; 42.1%) of the respondents reported that the policy was communicated to staff, while only 3 (1.0%) reported that it was communicated to patients. These frequencies indicate that the BMFI policy was reportedly not well communicated to staff and patients. Communication allows both the staff and patients to be involved and establishes agreed-upon expectations and objectives.

Table 5.5: Hospital adherence to the BMFI policy

Adherence to the BMFI policy	Frequency	Percent
Hospital has the BMFI policy	269	93.0
BMFI policy is visibly displayed	139	48.8
BMFI policy is communicated to staff	120	42.1
BMFI policy is communicated to patients	3	1.0

5.3.1.2 Languages in which the BMFI policy is written

As many as 265 (98.5%) respondents reported that the BMFI policy was written in English. Thirty-nine (14.7%) indicated that it was written in Oshiwambo, 16 (4.8%) in Afrikaans, 12 (4.4%) in Rukwangari, 11 (4.1%) in Otjiherero and 7 (2.6%) in Damara/Nama (see Table 5.6). These frequencies indicate that the BMFI policy was mainly available in English, the official language. However, the rest of the languages that are usually used for national surveys and sharing health information in the country should also be taken into consideration.

Table 5.6: Languages in which the BMFI policy is written

Languages	Frequency	Percent
English	265	98.5
Oshiwambo	39	14.7
Afrikaans	16	4.8
Rukwangari	12	4.4
Otjiherero	11	4.1
Damara/Nama	7	2.6

WHO and UNICEF (2009:7) recommend that a breastfeeding policy should be available to all staff members, clearly visibly displayed in all areas of the health care facility and written in languages most commonly understood by mothers and staff. Javanparast et al (2012:1279) analysed breastfeeding policies and practices in Adelaide, South Australia, and reported that the few policies that were available were in the form of general statements and not clearly stated.

5.3.1.3 Mechanism for evaluating the effectiveness of the BMFI policy

As shown in Table 5.7, out of 246 respondents, 160 (65.0%) reported that there was no mechanism to evaluate the effectiveness of the BMFI policy in their hospitals. These data confirm what was reported by nurse managers in phase 1 of this study: that there were no mechanisms to monitor the implementation of the BMFI programme.

Table 5.7: Mechanism for evaluating BMFI policy (n=246)

Mechanism for evaluating BMFI policy	Frequency	Percent	Cumulative percent
No	160	65.0	65.0
Yes	86	35.0	100.0
Total	**246**	**100.0**	**100.0**

5.3.2 Step 2: Train all health care staff in skills necessary to implement the breastfeeding policy

The success of the BMFI programme depends on competent staff equipped with the necessary skills and right attitudes towards breastfeeding. Of the 285 respondents, 134 (47.0%) affirmed that they were trained in breastfeeding; the rest, who represented more than a half of the respondents indicated they were not trained (see Table 5.8).

Table 5.8: Breastfeeding promotion and management training (n=285)

Breastfeeding training	Frequency	Percent	Cumulative percent
No	151	53.0	53.0
Yes	134	47.0	100.0
Total	**285**	**100.0**	**100.0**

The percentage of respondents who were trained in breastfeeding was very low compared with the WHO and UNICEF's (2009:9) target for training, set at 80% of health workers in a maternity ward. Javanparast et al (2012:1281) have established that training in breastfeeding was needed for child care workers to enable them to support breastfeeding women. Grossman et al (2009:57) have identified a significant association between training of health professionals in breastfeeding and increased rates of initiation of breastfeeding.

If health workers are not trained in breastfeeding, they will not be able to support mothers and teach them how to manage breastfeeding.

5.3.2.1 Sufficiency of training in breastfeeding management

In order to assess the quality of training, respondents were asked to indicate the extent to which they regarded their training to be sufficient.

Of the 134 respondents, 54 (40.2%) indicated that their training had been very good; 38 (28.4%) regarded their training to be of an acceptable degree; another 38 (28.4%) considered their training to be sufficient to some degree and 4 (3.0%) reported that their

training was not sufficient at all. Table 5.9 presents responses in this regard. Based on this information, it can be concluded that the quality of most training was reported to be at a satisfactory level.

Table 5.9: Sufficiency of training in breastfeeding (n=134)

Sufficiency of training	Frequency	Percent	Cumulative percent
Very good training	54	40.2	40.2
To an acceptable degree	38	28.4	68.6
To some degree	38	28.4	97.0
Not at all	4	3.0	100.0
Total	**134**	**100.0**	**100.0**

5.3.2.2 Type of training in breastfeeding management

Table 5.10 shows the type of training indicated by respondents. Each respondent was requested to indicate all points that applied to her or his training. As many as 110 (82.0%) respondents reported that they received breastfeeding training during their pre-service training, while 24 (18.0%) had attended WHO/UNICEF's 18-hour training. Nineteen (14.0%) respondents had received BMFI policy orientation only, while only 12 (9.0%) had received in-service training on breastfeeding. Other training, which included continuous professional development, advanced midwifery training and an infant and young child feeding training course, was reported by 5 (3.5%) of the respondents. These figures indicate inadequate continuing and in-service training in breastfeeding.

Table 5.10: Type of breastfeeding training attended by the respondents

Type of training	Frequency	Percent
Pre-service training	110	82.0
WHO/UNICEF 18-hour training	24	18.0
Orientation on BMFI policy only	19	14.0
In-service training	12	9.0
Other	5	3.5

5.3.2.3 Training on the International Code of Marketing of Breast-milk Substitutes

WHO and UNICEF (2009:8) recommend that the provisions of the International Code of Marketing of Breast Milk Substitutes relevant to health workers and health facilities should be part of the BFHI training. Respondents were asked to indicate more than one provision which was included in their training (Table 5.11). Of the 134 respondents, 83 (62.0%) reported that their training included prohibition of advertising of breast milk substitutes in health facilities, 66 (49.2%) stated prohibition of demonstration of preparation of infant formula to groups of mothers, 44 (32.8%) indicated prohibition of free samples of breast milk substitutes in health facilities, 42 (31.3%) indicated prohibition of low-cost supplies of formula in health facilities, 37 (27.6%) indicated prohibition of free gifts from breast milk substitute manufacturers to health workers. These frequencies indicate reported inadequate coverage of the International Code of Marketing of Breast Milk Substitutes in breastfeeding training.

Table 5.11: Training on the International Code of Marketing of Breast-milk Substitutes

Training on the code of marketing of breast milk substitutes	Frequency	Percent
Prohibit advertising in health facilities	83	62.0
Prohibit demonstration of preparation of formula milk in groups	66	49.2
Prohibit free samples to health workers	44	32.8
Prohibit low cost suppliers to health facilities	42	31.3
Prohibit free gifts to health workers	37	27.6

5.3.2.4 Training on strategies that support women who choose not to breastfeed

Respondents were requested to indicate which support strategies for women who choose not to breastfeed were part of their training on breastfeeding.

Out of the 134 respondents trained in breastfeeding, 111 (82.8%) indicated that individual counselling on replacement feeding was part of their training, 106 (79.1%) indicated

demonstration on how to prepare replacement feeds, 84 (62.6%) indicated how to feed replacement feeds, 73 (54.4%) indicated provision of policies on confidentiality, and 35 (26.1%) indicated disclosure of HIV. Respondents could choose more than one option that applied to their training (Table 5.12). These frequencies indicate that strategies that support women who are not breastfeeding were part of breastfeeding training. However, fewer respondents reported having been taught especially about the policies for ensuring confidentiality and non-disclosure of HIV status. The MoHSS (2011a:18) recommends infant feeding education and counselling to be integrated in all training and at all levels of maternal and child health care. According to Moland, Van Esterik, Sellen, De Paoli, Leshaban and Blystad (2010:[2]), disclosure of results of an HIV test to partners is often seen as a necessary condition for successful adherence to infant feeding recommendations in a PMTC context.

Table 5.12: Training on strategies that support women who choose not to breastfeed

Strategies to support women who choose not to breastfeed	Frequency	Percent
Individual counselling on replacement feeding	111	82.8
Demonstration on how to prepare replacement feeding	106	79.1
Demonstration on how to feed replacement feed	84	62.6
Provision of policies to ensure confidentiality	73	54.4
Policy on disclosure of HIV status	35	26.1

5.3.3 Step 3: Inform all pregnant women about the benefits and management of breastfeeding

To assess the implementation of this step, respondents were requested to indicate topics which are taught to pregnant women in their respective hospitals regarding the benefits and management of breastfeeding. These included nutritional, protection, bonding and maternal health benefits of breastfeeding, as well as breastfeeding management topics such as the importance of rooming-in, correct positioning and attachment of the baby to

the breast and breastfeeding on demand. No totals are provided in tables 5.13 and 5.14, as each respondent was requested to indicate all that applied to his or her hospital.

Of the 285 respondents, 267 (93.7%) reported that pregnant women who attended ante-natal services were informed about the nutritional benefits for the baby, 257 (90.1%) bonding benefits, 221 (77.5%) protective benefits and 218 (76.5%) maternal benefits of breastfeeding (Table 5.13). Out of the 285 respondents, 265 (93.0%) reported that pregnant women who attended ante-natal services at their hospitals were informed about the importance of correct positioning and attachment of the baby to the breast, 264 (92.6%) reasons for breastfeeding on demand and 227 (80.0%) reasons for rooming-in (Table 5.14).

These frequencies indicate that the majority of pregnant women who attend ante-natal care services are reportedly taught about the benefits and management of breastfeeding. According to WHO and UNICEF (2009:10) criteria, at least 70% of pregnant women should confirm that a staff member has given them information on the benefits and management of breastfeeding. The importance of breastfeeding education cannot be overemphasised. Chiabi et al (2011:14) have identified an association between poor maternal knowledge on breastfeeding and poor breastfeeding practices such as non-exclusive breastfeeding and not breastfeeding on demand. Agho et al (2011:[5]), in a study on determinants of exclusive breastfeeding in Nigeria, reported that mothers who had had four or more ante-natal care visits had higher rates of exclusive breastfeeding than those who did not attend.

Table 5.13: The benefits of breastfeeding taught to pregnant women

The benefits of breastfeeding	Frequency	Percent
Nutritional benefits	267	93.7
Bonding benefits	257	90.1
Protective benefits	221	77.5
Maternal health benefits	218	76.5

Table 5.14: Topics for management of breastfeeding

Topics for management of breastfeeding	Frequency	Percent
Importance of correct positioning and attachment	265	93.0
Reasons for breastfeeding on demand	264	92.6
Reasons for rooming-in	227	80.0

5.3.4 Step 4: Help mothers initiate breastfeeding within a half-hour of birth

WHO and UNICEF (2009:11) interpret early initiation of breastfeeding as placing the baby on the mother's breast with skin-to-skin contact immediately following birth for at least an hour and encouraging the mother to recognise when the baby is ready to breastfeed, offering help if needed. Mothers who have delivered by caesarean section with general anaesthesia should also initiate breastfeeding as soon as they are responsive and alert.

Out of the 281 respondents, 255 (90.7%) reported that in their hospitals, mothers who had had normal deliveries were helped to initiate breastfeeding within a half-hour of birth, while 26 (9.3%) indicated initiation of breastfeeding within an hour of birth (see Table 5.15). Only 47 (19.0%) of the respondents reported that mothers who had had caesarean section deliveries with general anaesthesia were helped to initiate breastfeeding within a half-hour of being able to hold their babies, 99 (40.1%) reported within an hour, and 101 (40.1%) reported more than one hour (see Table 5.16). These frequencies indicate reportedly delayed initiation of breastfeeding for mothers who have had caesarean section deliveries with general anaesthesia. According to the global criteria (WHO & UNICEF 2009:11), at least 80% of the mothers who have had normal vaginal deliveries should confirm that that their babies were placed in skin-to-skin-contact with them within a half-hour after birth. In addition, at least 50% of those who have had caesarean section deliveries with general anaesthesia should confirm that their babies were placed in skin-to-skin-contact with them within a half-hour after being responsive and alert. Walsh et al (2011:602) have identified skin-to-skin contact to be difficult for mothers who have had caesarean section deliveries. The authors attributed these difficulties to the physical layout of maternity wards and routines that separate mothers and babies. However, Schmied et al (2011:[6]) have reported that Step Four was perceived as an easier step to

implement than other steps, due to the fact that once a baby was placed with the mother with skin-to-skin contact there was no need for a health worker to stay with them.

Table 5.15: Breastfeeding after normal vaginal delivery (n=281)

Breastfeeding initiation after normal delivery	Frequency	Percent	Cumulative percent
Within half an hour	255	90.7	90.7
Within one hour	26	9.3	100.0
Total	**281**	**100.0**	**100.0**

Table 5.16: Breastfeeding initiation after caesarean section delivery (n=248)

Breastfeeding initiation after caesarean delivery	Frequency	Percent	Cumulative percent
More than one hour	102	41.0	41.0
Within one hour	99	40.0	80.0
Within half an hour	47	19.0	100.0
Total	**248**	**100.0**	**100.0**

5.3.5 Step 5: Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants

Showing how to breastfeed means demonstrating/teaching the correct positioning and attachment of the baby to the breast for effective sucking. Showing how to maintain lactation means demonstrating/teaching mothers how to express breast milk by hand, to justify the affordability of breastfeeding. Step Five, in this study, was evaluated by asking respondents if they personally taught mothers these practices.

As indicated in Table 5.17, out of 281 respondents, 278 (99.0%) reported that they personally taught mothers how to position and attach their babies to the breast, 218 (77.6%) taught expression of breast milk by hand, 7 (2.5%) reported that they did not personally show mothers how to position and attach their babies to the breast, while 3 (1%) reported that they did not personally show hand expression of breast milk. No totals

are indicated in Table 5.17, as respondents were requested to answer more than one question in this section.

Table 5.17: Skills personally taught to mothers

Skills personally taught to mothers	Frequency	Percent
Positioning and attachment of the baby to the breast	278	99.0
Expression of breast milk by hand	218	77.6
Do not personally teach positioning and attachment	7	2.5
Do not personally teach expression of breast milk by hand	3	1.1

According to the global criteria assessment (WHO & UNICEF 2009:13), out of the staff members working in maternity ward, at least 80% should report that they show mothers how to position and attach their babies for breastfeeding and 80% should report that they teach mothers how to express breast milk by hand. Reporting less than 80% on teaching expression of breast milk by hand makes this step to be reportedly partially implemented.

Competences in these skills can only be determined by observation, which is beyond this study. On the other hand, teaching mothers how to manage breastfeeding may be hampered by shortage of staff, as Schmied et al (2011:[6]) have established that when staff do not have enough time, they choose to take shortcuts, such as offering a bottle of formula instead of showing a mother how to breastfeed. Teaching a mother how to express breast milk by hand makes breastfeeding economical, as she does not need to buy breast pumps. Rojjanasrirat and Sousa (2010:2018) have identified a financial burden related to costs of breast pumps.

5.3.6 Step 6. Give new-born infants no food or drink other than breast milk, unless medically indicated

To assess the use of infant formula in the BMFI hospitals, respondents were asked to indicate whether they agreed or disagreed with the following related statements.

5.3.6.1 Infant formula is used as an exception, not a routine option

As shown in Table 5.18, of the 281 respondents, 251 (89.3%) agreed that infant formula should be used as an exception and not as a routine feeding option, 17 (6.1%) respondents disagreed, while 13 (4.6%) were not sure of the statement. It can be concluded that nurses knew the recommendation for exclusive breastfeeding.

Table 5.18: Infant formula used as an exception not a routine option

Infant formula is used as an exception	Frequency	Percent	Cumulative percent
Agree	251	89.3	89.3
Disagree	17	6.1	95.3
Not sure	13	4.6	100.0
Total	281	100.0	100.0

5.3.6.2 Ministry of health and social services' recommendations for HIV infected infants

According to the MoHSS (2011a:11), HIV-infected babies should be exclusively breastfed for the first six months of life, continue to be breastfed with adequate complementary food up to two years and be put on highly active antiretroviral therapy (HAART).

5.3.6.2.1 Exclusive breastfeeding for six months

Of the 285 respondents, 269 (94.4%) agreed that the MoHSS recommends HIV-infected babies to be exclusively breastfed for the first six months of life, 14 (4.9%) disagreed, while 2 (0.7%) respondents were not sure of the recommendation (see Table 5.19).

Table 5.19: Recommendation for HIV infected babies on exclusive breastfeeding for six months (n=285)

Exclusive breastfeeding for 6 months	Frequency	Percent	Cumulative percent
Agree	269	94.4	94.4
Disagree	14	4.9	99.3
Not sure	2	0.7	100.0
Total	**285**	**100.0**	**100.0**

5.3.6.2.2 Continuation of breastfeeding with adequate complementary food

Out of 283 respondents 200 (70.7%) agreed that HIV-infected babies should continue to be breastfed with adequate complementary food up to 24 months; 71 (25.1%) disagreed and 12 (4.2%) reported that they were not sure of the recommendation (see Table 5.20).

Table 5.20: Recommendation for HIV-infected babies on continuation of breastfeeding with adequate complementary food up to 24 months (n=283)

Continue breastfeeding with adequate complementary food up to 24 months	Frequency	Percent	Cumulative percent
Agree	200	70.7	70.7
Disagree	71	25.1	95.8
Not sure	12	4.2	100.0
Total	**283**	**100.0**	**100.0**

5.3.6.2.3 Recommendation for HIV-infected babies to be on highly active antiretroviral therapy (HAART)

As illustrated in Table 5.21, of the 280 respondents, 192 (68.6%) agreed that HIV-infected babies should be put on HAART; 70 (25.0%) disagreed, while 18 (6.4%) reported that they were not sure of the recommendation. The majority of respondents gave positive responses with regard to exclusive breastfeeding. However, a quarter of the respondents

disagreed with the recommendations on continuation of breastfeeding and highly antiretroviral therapy. This may mean that they were not aware of the latest guidelines and recommendations. The implication is that they may give outdated information to mothers, as identified by Fadnes et al (2010:[3]), who have reported that health workers gave different messages on feeding, depending on whether they had updated knowledge or not.

Table 5.21: Recommendation for HIV-infected babies on highly antiretroviral therapy (n=280)

Recommendation for HAART	Frequency	Percent	Cumulative percent
Agree	192	68.6	68.6
Disagree	70	25.0	93.6
Not sure	18	6.4	100.0
Total	**280**	**100.0**	**100.0**

5.3.7 Step 7: Practice rooming in – allow mothers and infants to remain together – 24 hours a day

Rooming-in refers to the hospital practice of keeping the mother and baby in the same room throughout the hospital stay. WHO and UNICEF (2009:15) recommend rooming-in should start immediately after normal vaginal birth or as soon as a mother is alert and responsive to the baby's needs after caesarean section with general anaesthesia. They should remain together 24 hours a day, unless separation is fully justified. Rooming-in has many benefits, including promotion of bonding and boosting a mother's confidence in caring for her baby, even if she is not breastfeeding. It also facilitates breastfeeding on demand, which results in good milk supply (WHO & UNICEF 2006:121).

5.3.7.1 Rooming-in after normal vaginal delivery or caesarean section delivery with general anaesthesia

Participants were requested to indicate whether they agreed or disagreed with the statement that mothers who had had normal deliveries and their babies should stay in one room for 24 hours a day unless separation was medically justified.

As shown in Table 5.22, 281 (99.0%) respondents agreed with the statement, 2 (0.7%) disagreed and 1 (0.3%) was not sure about the statement. It is encouraging to note that almost everyone agreed with the standard practice of rooming-in with regard to mothers who have had normal vaginal deliveries.

Table 5.22: Rooming-in baby and mother after normal vaginal delivery (n=284)

Rooming-in normal vaginal delivery	Frequency	Percent	Cumulative percent
Agree	281	99.0	99.0
Disagree	2	0.7	99.7
Not sure	1	0.3	100.0
Total	**284**	**100.0**	**100.0**

Participants were also requested to indicate whether they agreed or disagreed with the standard practice of rooming-in with regard to mothers who had had caesarean section with general anaesthesia. Of the 279 respondents, 273 (97.9%) agreed with the standard practice of rooming-in after caesarean section with general anaesthesia, 4 (1.4%) disagreed and 2 (0.7%) were not sure about the practice. These frequencies also indicate reported knowledge of the standard practice of rooming-in with regard to mothers who have had caesarean section delivery with general anaesthesia. The data are presented in Table 5.23.

Table 5.23: Rooming-in baby and mother after caesarean section delivery (n=279)

Rooming in caesarean section delivery	Frequency	Percent	Cumulative percent
Agree	273	97.9	97.9
Disagree	4	1.4	99.3
Not sure	2	0.7	100.0
Total	**279**	**100.0**	**100.0**

5.3.7.2 Availability of well-baby nurseries

The BFHI discourages the use of nurseries and recommends that baby care should take place at the mother's bedside to provide reassurance and teaching opportunities for the mother (WHO & UNICEF 2009:121). To confirm the practice of rooming-in, respondents were requested to indicate if well-baby nurseries were available in their respective hospitals.

Of the 285 respondents, 228 (82%) replied that there was not a well-baby nursery in their hospitals, 37 (13.3%) confirmed their availability, while 13 (4.7%) were not sure of their availability (see Table 5.24). These frequencies indicate unavailability of well-baby nurseries in most of the BMFI hospitals. It could be interpreted that healthy babies were not separated from their mothers, which is in accordance with the recommendation of the BFHI.

Table 5.24: Availability of a well-baby nursery (n=285)

A well-baby nursery is available	Frequency	Percent	Cumulative percent
Disagree	228	82.0	82.0
Agree	37	13.3	95.3
Not sure	13	4.7	100.0
Total	**278**	**100.0**	**100.0**

Researchers have shown many reasons for separating mothers and babies that are not medically justifiable. For example, Schmied et al (2011:[5]) have reported that health workers perceived taking a baby into the nursery for few hours to be supportive of a tired mother. Haiek (2012:351), in a study of compliance with baby-friendly policies and practice in Quebec, Canada, have identified reasons for separation of baby and mother, such as physical examination or bathing and weighing of the baby, which could be performed at the mother's bedside. Taylor et al (2010:28) have reported that lack of space to accommodate mothers in neonatal intensive care units was perceived as challenging to practising rooming-in. However, separating babies and their mothers should be regarded as medically justified only when intensive care is needed.

5.3.8 Step 8: Encourage breastfeeding on demand

Breastfeeding on demand or baby-led feeding means that the frequency and length of feeds are determined by the baby's needs and signs (WHO & UNICEF 2006:122). Practices that ensure breastfeeding on demand include teaching a mother to recognise the cues that indicate when her baby is hungry, encouraging her to feed as often and for as long as the baby wants, as well as advising her to wake up the baby for breastfeeding if her breasts become overfull (WHO & UNICEF 2009:15).

Out of 285 respondents, 266 (93.6%) reported that they advised mothers to breastfeed as often as the baby wanted; 138 (48.6%) whenever the baby was hungry and 80 (28.2%) to wake the baby for breastfeeding if the breasts became overfull. Respondents could choose more than one option that applied to what they taught mothers (see Table 5.25). According to the global criteria, a score of at least 80% on two of the items is an indication of satisfactory implementation of this step (WHO & UNICEF 2009:15). The result in this study shows that this step was reportedly partially implemented. Chiabi et al (2011:12) have identified an association between low maternal knowledge on the benefits of breastfeeding and low rates of breastfeeding on demand in the West Region in Cameroon.

Table 5.25: Advice on when to breastfeed the baby (n = 285)

Advice on when to breastfeed the baby	Frequency	Percent
Breastfeed as often as the baby wants	266	93.6
Breastfeed whenever the baby is hungry	138	48.6
Wake up the baby for breastfeeding if the baby sleeps too long	80	28.2

5.3.9 Step 9. Give no bottles, artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants

The use of bottles, teats and dummies has negative effects on both breastfed and formula fed babies. They may cause nipple confusion that leads to refusal of mother's breast or introduce infections if they are not properly cleaned.

5.3.9.1 Methods of feeding babies with expressed breast milk

Table 5.26 shows that of 284 respondents, 278 (98.0%) reported the use of cups when feeding babies with expressed breast milk, while 6 (2.0%) reported the use of bottles.

Table 5.26: Methods of feeding babies with expressed breast milk (n=284)

Methods of feeding expressed breast milk	Frequency	Percent	Cumulative percent
Cups	278	98.0	98.0
Bottles	6	2.0	100.0
Total	**284**	**100.0**	**100.0**

5.3.9.2 Methods of feeding babies with infant formula

Of the 283 respondents, 257 (90.8%) reported the use of cups when feeding babies with infant formula, 26 (9.2%) reported the use of bottles (see Table 5.27).

Table 5.27: Methods of feeding babies with infant formula (n=283)

Methods of feeding infant formula	Frequency	Percent	Cumulative percent
Cups	257	90.8	90.8
Bottles	26	9.2	100.0
Total	**283**	**100.0**	**100.0**

5.3.9.3 Advice against the use of dummies

As shown in Table 5.28, 268 (94.4%) of the respondents agreed with the statement that mothers were advised against giving dummies to their breastfed babies, 14 (4.9%) disagreed and 2 (0.7%) were not sure.

Table 5.28: Advice against the use of dummies for breastfed infants (n=284)

Use of dummies on breastfed infants	Frequency	Percent	Cumulative percent
Agree	268	94.4	94.4
Disagree	14	4.9	99.3
Not sure	2	0.7	100.0
Total	**284**	**100.0**	**100.0**

Table 5.29 shows 262 (92.3%) respondents who agreed with the statement that mothers were advised against giving dummies to their formula-fed babies, 18 (6.3%) disagreed and 4 (1.4%) were not sure.

Table 5.29: Advice against the use of dummies for formula-fed infants (n=284)

Use of dummies infants not breastfeeding	Frequency	Percent	Cumulative percent
Agree	262	92.3	92.3
Disagree	18	6.3	98.6
Not sure	4	1.4	100.0
Total	**284**	**100.0**	**100.0**

Overall, the use of bottles, teats and dummies for breastfed and formula-fed babies was reported to be nominal. The dangers of using bottles and teats include ear and dental infection (WHO & UNICEF 2006:127). However, health workers may not always realise these dangers. Javanparast et al (2012:1278) established that bottle feeding was perceived as the most convenient means for feeding expressed breast milk. The authors

reported that child care workers advised parents to introduce feeding breast milk in a bottle with a teat before starting child care. The same child care workers also perceived feeding a child with a cup as time consuming and messy. However, WHO and UNICEF (2006:127) state that feeding a baby with an open cup takes no longer than bottle-feeding. Walsh et al (2011:602) have reported that doctors and midwives perceived restriction of dummies as being unfriendly towards babies. This may be due to the perception that babies in intensive care units need to suck dummies for comfort, identified by Taylor et al (2011:28).

5.3.10 Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital or clinic

The health facility where the baby is born can do much to help a mother to initiate and establish breastfeeding. However, after discharge she needs support to continue breastfeeding (WHO & UNICEF 2006:193). Establishment of community-based breastfeeding support groups is one of the interventions that provide this support at family and community level.

As many as 211 (74.0%) respondents reported that there was no breastfeeding support group in their hospital, while 72 (25.3%) did not know if support groups existed. Only 2 (0.7%) reported having such groups in their hospitals (see Table 5.30). This step was therefore reportedly inadequately implemented. The importance of breastfeeding support is reported by Haroon et al (2013:13), who established that when facility and community breastfeeding promotion interventions were combined, exclusive breastfeeding increased significantly from day one to five months of age.

Table 5.30: Establishment of community-based breastfeeding support groups (n=285)

Community-based breastfeeding support group	Frequency	Percent	Cumulative percent
No	211	74.0	74.0
Don't know	72	25.3	99.3
Yes	2	0.7	100.0
Total	**285**	**100.0**	**100.0**

5.3.11 Availability of baby-friendly corners for staff

The MoHSS (1992a:24) has introduced the concept of baby friendly corners in workplaces in Namibia as part of the expansion of the BMFI programme. The aim of the corners is to enable working mothers to practise exclusive breastfeeding for six months after birth. The mother can express and store breast milk while at work or ask a child minder to bring the baby to work for breastfeeding.

Of the 281 respondents, 262 (93.2%) reported that there were no baby-friendly corners for staff in their hospitals, while 19 (6.8%) did not know if such corners existed. These data are presented in Table 5.31.

Table 5.31: Availability of baby-friendly corners for staff (n=281)

Baby friendly corner	Frequency	Percent	Cumulative percent
No	262	93.2	100.0
Don't know	19	6.8	100.0
Total	**281**	**100.0**	**100.0**

5.3.12 Respondents' comments/recommendations regarding the implementation of the BMFI

In an open-ended question, respondents were requested to suggest what they thought was needed to improve the implementation of the BMFI programme. A variety of comments were made. The comments were grouped into categories and eight themes emerged.

Table 5.32 shows that provision of baby-friendly corners topped the list of recommendations for improvement of the BMFI programme (92, 48.7%), followed by training of staff (31, 6.4%) and establishment of community-based breastfeeding support groups (20, 10.6%). In addition, participants recommended full implementation of the BMFI programme (18, 9.5%), health education (13, 7.0) and putting BMFI evaluation mechanisms in place 6, 3.1%). Furthermore, it was recommended that the BMFI policy should be clearly displayed in maternity wards (5, 2.6%) and the BMFI posters be translated into all languages (4, 2.1%).

Table 5.32: Respondents comments/recommendations

Respondents' comments/recommendations	Frequency	Percent
Provide baby-friendly corners for staff	92	48.7
Provide staff training	31	16.4
Establish community-based breastfeeding support group	20	10.6
Implement BMFI fully	18	9.5
Health education on BMFI	13	7.0
Put BMFI evaluation mechanisms in place	6	3.1
Clearly display BMFI policy in maternity ward	5	2.6
Translate BMFI posters in all languages	4	2.1

5.4 CROSS-TABULATION ANALYSIS

Tables 5.33 to 5.39 present a summary of cross tabulation and statistical tests. The Chi-square test and p-values were used to measure the relationship between demographic

and individual practices and knowledge of the latest recommendations on HIV and infant feeding.

5.4.1 Distribution of breastfeeding training by demographic characteristics

As shown in Table 5.33, there was no statistical relationship between training in breastfeeding and job category, years of qualification, years worked in maternity ward or age category of the respondents.

Table 5.33: Distribution of breastfeeding training by demographic characteristics

Variable	Trained inbreastfeeding Yes N (%)	Trained inbreastfeeding No N (%)	Total N (%)	P-Value*
Job category:				
Enrolled nurse	49 (44.1)	62 (55.9)	111 (100.0)	0.4
Registered nurse	82 (48.0)	89 (52.0)	171 (100.0)	
Years of qualification:				
Before 1990	13 (43.3)	17 (56.3)	30 (100.0)	
1990–1994	12 (57.1)	9 (42.9)	30 (100.0)	
1995–1999	13 (56.5)	10 (43.5)	23 (100.0)	0.3
2000–2004	15 (00.0)	15(50.0)	30 (100.0)	
2005–2009	29 (56.9)	22 (34.1)	51 (100.0)	
To date	51 (41.8)	71 (58.2)	122 (100.0)	
Years in maternity ward:				
0–5 years	80 (47.0)	90 (53.0)	170 (100.0)	
6–10 years	23 (47.9)	25 (52.1)	48 (100.0)	0.5
11–15 years	14 (60.9)	9 (39.1)	23 (100.0)	
16–20 years	6 (54.5)	5 (45.5)	11 (100.0)	
21 years and longer	10 (37.0)	17 (63.0)	27 (100.0)	
Age category:				
20–29 years	38 (38.8)	60 (61.2)	98 (100.0)	
30–39 years	43 (52.4)	39 (47.6)	82 (100.0)	0.4
40–49 years	20 (50.0)	20 (50.0)	(100.0)	
50–59 years	29 (49.1)	30 (50.9)	59(100.0)	
60 years and older	2 (50.0)	2 (50.0)	4 (100.0)	

*Mid-p exact value

5.4.2 Distribution showing positioning and attachment of the baby to the breast by demographic characteristics

There was no significant relationship between personally showing a mother how to position her baby to the breast and job category, years of qualification, years worked in maternity ward or age category of the respondents (see Table 5.34).

Table 5.34: Distribution of showing positioning and attachment of baby to breast by demographic characteristics

Variable	Positioning and attachment Yes N (%)	Positioning and attachment No N (%)	Total N (%)	P-value *
Job category:				
Enrolled nurse	108 (98.1)	2 (45.9)	110 (100.0)	0.06
Registered nurse	167 (90.4)	1 (0.6)	168 (100.0)	
Years of qualification:				
Before 1990	30 (100.0)	0 (0.0)	30 (100.0)	
1990–1994	21 (100.0)	0 (0.0)	21 (100.0)	0.2
1995–1999	22 (95.6)	1 (4.4)	23 (100.0)	
2000–2004	29 (100.0)	0 (0.0)	29 (100.0)	
2005–2009	50 (98.0)	1 (2.0)	51 (100.0)	
To date	118 (99.1)	1 (0.9)	119 (100.0)	
Years in maternity ward:				
0–5 years	166 (99.4)	1(0.6)	167 (100.0)	
6–10 years	46 (97.9)	1 (2.1)	47 (100.0)	**
11–15 years	23 (100.0)	0 (0.0)	23 (100.0)	
16–20 years	11 (100.0)	0 (0.0)	11 (100.0)	
21 years and longer	27 (100.0)	0 (0.0	27 (100.0)	
Age category:				
20–29 years	93 (79.9)	1 (2.1)	95 (100.0)	
30–39 years	80 (78.7)	1 (33.3)	81 (100.0)	**
40–49 years	40 (100.0)	0 (0.0)	40 (100.0)	
50–59 years	59 (100.0)	0 (0.0)	59 (100.0)	
60 years and older	0 (0.0)	0 (0.0)	4 (100.0)	

*Mid-p exact value

**P- values not computed for these categories due to small values

5.4.3 Distribution of showing expression of the breast milk by hand by demographic characteristics

Table 5.35 shows no significant relationship between personally showing a mother how to express breast milk by hand and job category, years of qualification, years worked in maternity ward or age category of the respondents.

Table 5.35: Distribution of reported showing expression of breast milk by hand by demographic characteristics

Variable	Expression by hand Yes N (%)	Expression by hand No N (%)	Total N (%)	P-value *
Job category:				
Enrolled nurse	89 (80.9)	21 (19.1)	110	0.1
Registered nurse	126 (75.0)	42 (25.0)	168	
Years of qualification:				
Before 1990	22 (73.3)	8 (26.7)	21 (100.0)	
1990–1994	16 (76.2)	5 (23.8)	29 (100.0)	
1995–1999	17 (74.0)	6(26.0)	23 (100.0)	0.6
2000–2004	22 (75.9)	7 (24.1)	29 (100.0)	
2005–2009	41 (80.4)	10 (19.6)	51 (100.0)	
To date	93 (78.1)	26 (21.9)	119 (100.0)	
Years in maternity ward:				
0–5 years	131 (78.4)	36 (21.6)	167 (100.0)	
6–10 years	36(76.6)	11 (23.4)	47 (100.0)	0.3
11–15 years	16 (69.6)	7(30.4)	23 (100.0)	
16–20 years	7 (63.6)	4 (36.4))	11 (100.0)	
21 years and longer	24 (89.0)	3 (11.0)	27 (100.0)	
Age category:				
20–29 years	75 (79.0)	20 (21.0)	95 (100.0)	
30–39 years	58 (71.6)	23 (28.4)	81 (100.0)	0.4
40–49 years	31 (77.5)	9 (22.5)	40 (100.0)	
50–59 years	50 (84.7)	9 (15.3)	59 (100.0)	
60 years and older	3 (75.0)	1 (25.0)	4 (100.0)	

*Mid-p exact value

5.4.4 Distribution of personally advising a mother to breastfeed whenever a baby is hungry by demographic characteristics

Table 5.36 shows a significant association between personally advising a mother to breastfeed whenever a baby is hungry and job category, years of qualification, years worked in maternity ward or age category of the respondents.

Table 5.36: Distribution of personally advising a mother to breastfeed whenever a baby is hungry by demographic characteristics

Variable	Breastfeed whenever the baby is hungry Yes N (%)	Breastfeed whenever the baby is hungry No N (%)	Total N (%)	P-value*
Job category:				
Enrolled nurse	60 (54.5)	50 (45.9)	110 (100.0)	0.04
Registered nurse	77 (45.0)	94 (55.0)	171 (100.0)	
Years of qualification:				
Before 1990	14 (46.7)	16 (53.3)	30 (100.0)	
1990–1994	8 (38.1)	13 (61.9)	21 (100.0)	
1995–1999	9 (39.1)	14 (60.9)	23 (100.0)	0.1
2000–2004	12 (40.0)	18 (60.0)	30 (100.0)	
2005–2009	33 (66.0)	17 (34.0)	50 (100.0)	
To date	62 (50.8	60 (49.2	122 (100.00	
Years in maternity ward:				
0–5 years	85 (50.0)	85 (50.0)	170 (100.0)	
6–10 years	23 (49.0)	24 (51.0)	47 (100.0)	
11–15 years	12 (52.2)	11 (48.0)	23 (100.0)	****
16–20 years	5 (45.5)	6 (54.5)	11 (100.0)	
21 years and longer	11 (40.8)	16 (59.2)	27 (100.0)	
Age category:				
20–29 years	52 (53.6)	45 (46.4)	97 (100.0)	
30–39 years	37 (45.1)	45 (54.9)	82 (100.0)	
40–49 years	20 (50.0)	20 (50.0)	40 (100.0)	0.2
50–59 years	29 (49.1)	30 (50.9)	59 100.0)	
60 years and older	0 (0)	4 (100.0)	4 (100.0)	

*Mid-p exact value

**P- values not computed for these categories

5.4.5 Distribution of "agree, disagree or not sure" about exclusive breastfeeding for six months by demographic characteristics

No statistical relationships was found between "agree, disagree or not sure" about exclusive breastfeeding for the first six months and job category, years of qualification, years worked in maternity ward or age category of the respondents (see Table5.37).

Table 5.37: Distribution of "agree, disagree or not sure" about exclusive breastfeeding for six months by demographic characteristics

Variable	Agree N (%)	Disagree N (%)	Not sure N (%)	Total N (%)
Job category:				
Enrolled nurse	102 (91.9)	7 (6.3)	2 (1.8)	0.1
Registered nurse	164 (95.9)	7 (4.0)	3 (1.7)	
Years of qualification:				
Before 1990	26 (86.7)	4(13.3)	0 (0.0)	
1990–1994	21(100.0)	0 (0.0)	0 (0.0)	0.4
1995–1999	21 (91.3)	0 (0.0)	0 (0.0)	
2000–2004	28 (93.37)	1 (3.3)	0 (0.0)	
2005–2009	48 (94.1)	2 (6.7)	0 (0.0)	
To date	117 (96.0)	3 (2.4)	2 (1.6)	
Years in maternity ward:				
0–5 years	163 (95.8)	5 (3.0)	2 (1.8)	
6–10 years	45 (93.8)	3 (6.2)	0 (0.0)	**
11–15 years	21 (91.3)	2 (8.7)	0 (0.0)	
16–20 years	10 (90.9)	1 (9.0)	0 (0.0)	
21 years and longer	25 (92.6)	2 (7.4)	0 (0.0)	
Age category:				
20–29 years	97 (99.0)	0 (0.0)	1 (1.0)	
30–39 years	75 (91.5)	6 (7.3)	1 (1.2)	0.2
40–49 years	37 (92.5)	3 (7.5)	0 (0.0)	
50–59 years	54(91.5)	5 (8.5)	0 (0.0)	
60 years and older	4 (100.0)	0 (0.0)	0 (0.0)	

*Mid-p exact value

**P- values not computed for these categories due to small values

5.4.6 Distribution of "agree, disagree or not sure" about continuing breast-feeding with adequate complementary food from six months by demographic characteristics

Table 5.38 shows no statistical relationships between reported "agree, disagree or not sure" about continuing breastfeeding after six months with adequate complementary food up to 24 months and job category, years of qualification, years worked in maternity ward or age category of the respondents.

Table 5.38: Distribution of "agree, disagree or not sure" about continuing breast-feeding with adequate complementary food from six months by demographic characteristics

Variable	Agree N (%)	Disagree N (%)	Not sure N (%)	Total N (%)	P-value*
Job category:					
Enrolled nurse	75 (68.2)	31 (28.2)	4 (3.6)	110 (100.0)	0.5
Registered nurse	123 (72.3)	39 (23.0)	8 (4.7)	170 (100.0)	
Years of qualification:					
Before 1990	19 (63.3)	11(36.7)	0 (0.0)	30 (100.0)	
1990–1994	15(71.5)	4 (19.0)	2 (9.5)	21 (100.0)	0.3
1995–1999	13 (59.1)	6 (27.3)	3 (13.6)	22 (100.0)	
2000–2004	22 (73.4)	7 (23.3)	1(3.3)	30 (100.0)	
2005–2009	40 (78.4)	10 (19.6)	1 (2.0)	51 (100.0)	
To date	85 (70.3)	31 (25.6)	5 (4.1)	121 (100.0)	
Years in maternity ward:					
0–5 years	119 (70.4)	43 (25.5)	7 (4.1)	169 (100.0)	
6–10 years	36 (70.6)	10 (21.3)	1 (2.1)	47 (100.0)	**
11–15 years	17 (74.0)	5 (21.7)	1 (4.3)	23 (100.0)	
16–20 years	8 (72.7)	2 (18.2)	1 (9.1)	27 (100.0)	
21 years and longer	17 (63.0)	9 (33.3)	1 (3.7)	27 (100.0)	
Age category:					
20–29 years	65 (67.0)	27 (27.9)	5 (5.1)	97 (100.0)	
30–39 years	61 (74.4)	18 (22.0)	3 (3.6)	82 (100.0)	0.4
40–49 years	28 (71.8)	7 (18.0)	4 (10.2)	39 (100.0)	
50–59 years	42(71.2)	17 (28.8)	0 (0.0)	59 (100.0)	
60 years and older	3 (750)	1 (25.0)	0 (0.0)	4 (100.0)	

*Mid-p exact value

**P- values not computed for these categories due to small values

5.4.7 Distribution of "agree, disagree or not sure" about the use of highly active antiretroviral treatment (HAART) in babies of HIV-positive mothers by demographic characteristics

No difference was shown between "agree, disagree or not sure" about the use of HAART in babies of mothers known to be HIV-positive and job category, years of qualification, years worked in maternity ward or age category of the respondents (see Table 5.39).

Table 5.39: Distribution of "agree, disagree or not sure" about the use of HAART in babies of mothers who are known to be HIV-positive by demographic characteristics

Variable	Agree N (%)	Disagree N (%)	Not sure N (%)	Total N (%)	P-Value*
Job category:					
Enrolled nurse	68 (63.5)	31 (29.0)	8 (7.5)	107 (100.0)	0.3
Registered nurse	122 (71.8)	38 (22.3)	10 (5.9)	170 (100.0)	
Years of qualification:					
Before 1990	20 (69.0)	8 (27.6)	1 (3.4)	29 (100.0)	
1990–1994	15 (71.4)	6 (28.6)	0 (0.0)	21(100.0)	0.4
1995–1999	16 (69.6)	5 (21.7)	2 (8.7)	23 (100.0)	
2000–2004	24 (80.0)	4 (13.3)	2 (6.7)	30 (100.0)	
2005–2009	38 (76.0)	11 (22.0)	1 (2.0)	50 (100.0)	
To date	73 (61.3)	34 (28.6)	12 (10.1)	119 (100.0)	
Years in maternity ward:					
0–5 years	106 (63.1)	49 (29.2)	13 (7.7)	168 (100.0)	
6–10 years	36 (80.0)	8 (17.8)	1 (2.2)	45 (100.0)	**
11–15 years	18 (78.3)	3 (13.0)	2 (8.7)	23 (100.0)	
16–20 years	8 (72.7)	2 (18.2)	1 (9.1)	11 (100.0)	
21 years and longer	18 (66.7)	8 (29.6)	1 (3.7)	27 (100.0)	
Age category:					
20–29 years	55 (58.5)	30 (31.9)	9 (9.5)	94 (100.0)	
30–39 years	61 (74.4)	17 (20.7)	4(4.9)	82 (100.0)	0.2
40–49 years	31 (77.5)	6 (15.0)	3 (7.5)	40 (100.0)	
50–59 years	41(70.7)	15 (26.8)	2 (3.5)	58 (100.0)	
60 years and older	2(50.0)	2 (50.0)	0 (0.0)	4 (100.0)	

*Mid-p exact value

**P- values not computed for these categories due to small values

Based on cross-tabulation results, no further data analyses were performed.

5.5 SUMMARY OF THE RESULTS

In this chapter, the results of phase 2 of this study were discussed. This phase was the quantitative phase, in which descriptive statistics were used to describe the results from the questionnaires completed by enrolled and registered nurses/midwives. Tables, figures and cross-tabulation analysis were used to represent data on the demographic and background information and how the BMFI programme was implemented in the BMFI hospitals.

Demographic and background data showed that the majority of nurses were female, registered nurses/midwives and had been working in maternity wards for a period of between zero and five years. More than one-third had qualified between 2010 and to date.

Being an enrolled nurse/midwife is significantly associated with personal advice to the mother to breastfeed her baby whenever the baby is hungry. There was no other statistical significance between individual practices of the Ten Steps to Successful Breastfeeding and demographic characteristics of the respondents.

Four of the Ten Steps to Successful Breastfeeding were reportedly adequately implemented. The steps are: Step 3: informing pregnant women about the benefits and management of breastfeeding; Step 6: giving new-born infants no food or drink other than breast milk; Step 7: practising rooming-in; and Step 9: giving no artificial teats and dummies.

The following steps were reportedly inadequately implemented: Step 1: breastfeeding policy, Step 2: training of health workers in breastfeeding, Step 4: early initiation of breastfeeding, Step 5: showing mothers how to breastfeed and how to maintain lactation, Step 8: encouraging breastfeeding on demand, and Step 10: establishing breastfeeding support groups, which play an important role in increasing exclusive breastfeeding.

The majority of the respondents reportedly knew the latest recommendations on HIV and feeding. Baby friendly corners were reported to be inadequate.

Respondents made suggestions on what they thought would strengthen the BMFI programme implementation. These were dominated by recommendations to provide baby friendly corners for staff, provide breastfeeding training and establish community-based breastfeeding support groups.

This chapter presented the results from the questionnaires submitted to registered and enrolled nurses/midwives during phase 2 of the study. The next chapter will present the discussion on the integrated results from phases 1 and 2 of this study.

CHAPTER 6

DISCUSSION OF THE INTEGRATED DATA FROM PHASES 1 AND 2

6.1 INTRODUCTION

Integrating data in a sequential mixed-methods design study means that the researcher analyses two databases separately and uses the initial exploratory databases to build into quantitative measures (Creswell 2014:227). In this study, qualitative data were obtained from the chief health programme officer and nurse managers in phase 1, and were then used as a foundation for collecting quantitative data from registered and enrolled nurses/midwives in phase 2. This chapter provides a discussion on the integrated results of this mixed-methods study. The integrated results were used as evidence for developing and validating the guidelines for strengthening the implementation of the BMFI programme. The topics that are discussed are the results of the investigations into how the chief health programme officer and nurse managers experienced the implementation of the BMFI programme, and how registered and enrolled nurses/midwives implemented the programme. The data generated from the interviews in phase 1 and the self-administered questionnaire in phase 2 are discussed jointly. The discussion will be presented in qualitative form (phase 1) and quantitative form (phase 2). In the discussion, the participants of phase 1 will be referred to as the chief health programme officer and nurse managers (participants) and the respondents of phase 2 as registered and enrolled nurses/midwives (respondents), to maintain clarity.

6.2 IMPLEMENTATION OF THE BMFI PROGRAMME

The BMFI programme is a breastfeeding programme adopted from the global BFHI. The programme is implemented through the following WHO and UNICEF's (WHO 1989) Ten Steps to Successful Breastfeeding.

(1) Have a breastfeeding policy that is routinely communicated to all health care workers.
(2) Train all health care workers in 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 of their baby.
(5) Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants.
(6) Give newborn infants no food or drink other than breast milk, unless medically indicated.
(7) Practice rooming-in: allow mothers and infants to remain together – 24 hours a day
(8) Encourage breastfeeding on demand.
(9) Give no artificial teats or dummies to breastfeeding infants.
(10) Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic (WHO & UNICEF 2006:29).

The ten steps are the minimum requirements for implementing the BFHI. However, according the WHO's criteria (2009), complete implementation of any eight of the ten steps during an external assessment qualifies a hospital for a baby friendly status award. In this study, the chief health programme officer discussed the need to strengthen and implement all the ten steps. She suggested that clear guidelines (directives) should be developed for implementation of the steps. She also suggested involvement of the community in the implementation of step 10: establishment of community breastfeeding support groups, (section 3.3.2). Schmied et al (2011:[4]) have identified the importance of each step, by comparing their implementation to climbing a mountain starting at the bottom (ante-natal care). In that process each step, though important, depends on the previous steps.

Nurse managers reported partial implementation of the BMFI programme; only a few of the ten steps to successful breastfeeding were implemented in their respective hospitals. The steps frequently mentioned were: steps 3 (breastfeeding education), step 4 (initiation of breastfeeding) and step 7 (rooming-in) (section 3.4.3). Schmied et al (2011:[6]) established that step 7 was easy to implement because once the baby was placed skin-to-skin with the mother, there was no need for a nurse to stay with them.

Nurse managers reported that BMFI training (step 2) was not conducted owing to lack of expertise and financial resources. However, their experiences of training differed; some reported that regular BMFI training workshops were conducted (section 3.4.3.1).

Community-based breastfeeding support groups (step 10) were reported to be non-existent (3.4.4.2). These support groups serve as extensions of the BMFI in the community, homes and workplaces. Literature has shown that combining facility and community breastfeeding promotion interventions significantly increases the duration of exclusive breastfeeding (Coutinho et al 2005:1097; Haroon et al 2013:13).

That the ten steps were only partially implemented, reported by the chief health programme officer and nurse managers, was confirmed by the registered and enrolled nurses/midwives. Six of the ten steps were reportedly inadequately implemented, as follows:

- Step 1: Less than half (48.8%) of the registered and enrolled nurses/midwives indicated that the BMFI policy was visibly displayed in maternity wards, and only 1.0% reported that it was communicated to patients. The policy was translated only into a few languages (section 5.3.1). UNICEF and WHO (2009:7) recommend that a breastfeeding policy should be displayed in languages most commonly understood by mothers.

- Step 2: The majority (65%) of the registered and enrolled nurses/midwives reported that they were not trained in BMFI (section 5.3.2). The requirement for training is at least 80% of staff (UNICEF & WHO 2009:9).

- Step 4: Although over 90% of the registered and enrolled nurses/midwives reported that mothers who had had normal vaginal deliveries should be helped to initiate breastfeeding within half an hour of birth, only 19.0% of them reported that mothers who had had caesarean section deliveries with general anaesthesia should be helped to initiate breastfeeding within half an hour of being alert and responsive to their babies (section 5.3.4). According to the global criteria, at least 50% of mothers who have had caesarean delivery with general anaesthesia should be reported to have been helped to initiate breastfeeding as soon as they are responsive and alert (UNICEF & WHO 2009:11).

- Step 5: Less than the required 80% of the registered and enrolled/nurses midwives reported that they taught expression of breast milk by hand (section 5.3.5).

- Step 8: Over 90% of the registered and enrolled nurse/midwives reported that they advised mothers to breastfeed as often as the baby wanted. However, less than half (48%) of them indicated advising a mother to breastfeed whenever the baby was hungry, and only 28.2% advised a mother to wake the baby for breastfeeding if the breasts became overfull (section 5.3.8). According to the global criteria, a score of at least 80% on two of the above items is an indication of satisfactory implementation of this step (WHO & UNICEF 2009:15).

- Step 10: Almost three-quarters (74.0%) of the registered and enrolled nurses/midwives reported that there were no breastfeeding support groups in their hospitals, while 25.3% indicated that they did not know if support groups existed (section 5.3.10). This result shows almost zero existence of breastfeeding support groups.

6.3 IMPLEMENTATION OF THE BMFI PROGRAMME

The chief health programme officer reported that implementation of the BMFI programme was affected by staff shortage, high staff turnover and staff rotation at both national and hospital levels. These staffing problems have negatively affected BMFI activities, namely training, supervision support visits and assessment of the baby friendly hospitals (section 3.3.1.1). Staff turnover increases workload and leads to poor quality of care (Castle et al 2007:658). Nurse managers confirmed that the hospital lacked capacity for BMFI training, as well as support in terms of supervisory visits from the regional health directorates (sections 3.4.3.1 and 3.4.3.2). Evidence in this study is contrary to the ministry's guidelines on supervisory visits, indicating that the number of hospitals implementing the BMFI programme should serve as an indicator for measuring the impact of service delivery (MoHSS 2012:25).

Nurse managers reported that owing to staff shortage, orientation and training of rotated staff was often not done (section 3.4.2.1). The literature defines staff rotation as a human capital development policy that improves job satisfaction and organisation commitment

(Nafei 2014:101; Ho et al 2009:[4]). Inadequate training of rotated staff, however, means new skills and practices regarding the BMFI programme are not learned. Nurse managers also reported that because of lack of in-house expertise for BMFI training, staff were sent to training workshops far from their hospitals. This practice, coupled with staff shortage, made it difficult for everyone to go for training (section 3.4.3.1).

In conclusion, the implementation of the BMFI programme was characterised by only partial implementation of the Ten Steps to Successful Breastfeeding.

6.4 BENEFITS OF THE BMFI PROGRAMME

Nurse managers reported that because of the recent promotion of breastfeeding irrespective of the HIV status of mothers, the programme has contributed to the reduction of HIV stigma associated with non-breastfeeding, and to healthier babies and increased exclusive breastfeeding (sections 3.4.1.1, 3.4.1.2 and 3.4.1.3). However, a different opinion was given regarding increased exclusive breastfeeding. Some nurse managers noted that even though the hospitals were implementing the BMFI programme, available reports indicated low exclusive breastfeeding. Nevertheless, the Namibian demographic and health surveys have shown that exclusive breastfeeding for children under the age of six months has increased from 6% in 2000 to 24% in 2006 and 49% in 2013 (Amadhila 2005:4; MoHSS 2008a:129; MoHSS 2014a:129). The BMFI programme might have contributed to these improvements. Perez-Escamilla (2007:485) has found that, based on Demographic and Health Survey data, the impact of BFHI on breastfeeding was translated into health care savings associated with lower incidence of diarrheal and respiratory illnesses.

Over 90% of the registered and enrolled nurses/midwives indicated that pregnant women who visit their hospitals for ante-natal care are informed about the benefits of breastfeeding (section 5.3.3). Agho et al (2011:[5]) have identified the fact that women who had had four or more ante-natal care visits had higher rates of exclusive breastfeeding than those who did not attend.

6.5 FACTORS HINDERING THE IMPLEMENTATION OF THE BMFI

Human resources factors that hinder the implementation of the BMFI programme were discussed in section 6.3. This section discusses additional factors, namely physical environment, perception regarding implementation of the BMFI programme, socio-economic factors and teenage motherhood.

The chief health programme officer reported that as a result of top-down planning and vertical training, the BMFI training was not integrated with other child and mother health programmes (section 3.3.1.2). This evidence goes against the MoHSS' (2011a:3) recommendation that breastfeeding should be part of every training addressing mother and child health.

Nurse managers reported that inadequate space, especially in smaller hospitals, made it difficult for nurses to implement most of the ten steps to successful breastfeeding, as well as to care for patients in privacy. Sometimes mothers were discharged early in order to make space for newly admitted women (section 3.4.2.2). Fadnes et al (2010:[6]) have reported that inadequate space and lack of privacy made it difficult for health workers to counsel mothers on feeding.

Fewer than 80% (required score) of the registered and enrolled nurses/midwives reported that they taught expression of breast milk by hand (section 5.3.5). This low frequency could be an indication of lack of a conducive environment to enable nurses to show mothers how to express breast milk.

The chief health programme officer reported that health workers were not updated on the latest guidelines on HIV and breastfeeding (section 3.3.1.2). Nurse managers confirmed that the perceptions of women that HIV-infected women should not breastfeed was based on earlier messages from health workers. They reported that regarding the latest guidelines, there is a huge change from emphasising replacement feeding in HIV cases to breastfeeding in spite of being HIV positive. However, proper training of health workers on the changed guidelines was not conducted. This change of information is regarded as conflicting by both women and nurses, making the latter uncomfortable (section 3.4.2.3). Over 80% of the registered and enrolled nurses/midwives who were trained on

breastfeeding reported that counselling on replacement feeding was part of their BMFI training (section 5.3.2.4). This evidence confirms nurse managers' experience that their training had emphasised replacement feeding for mothers who were HIV positive. The literature has shown that perceptions and beliefs of mothers, family and community regarding breastfeeding determine feeding choices, as well as contributing to non-breastfeeding (Nabulsi 2011:[4]).

Nurse managers reported that as a result of inadequate education, some women lack an understanding of instructions. Thus they do not adhere to the instructions related to feeding their babies (section 3.4.2.4). Ogunlesi (2010:461) and Agho et al 2011:[3] have identified significant associations between higher education of women and increased exclusive breastfeeding.

Nurse managers reported that women who could afford to buy formula milk, especially white mothers and the affluent, perceived breastfeeding as an option for the poor. They reported that despite knowledge on the benefits of breastfeeding, white mothers preferred formula feeding to breastfeeding (section 3.4.2.4). But contrary to evidence in this study, Alemayehu et al (2009:15) found that women on the middle, richer and richest wealth index were associated with increased exclusive breastfeeding.

Nurse managers reported that teenage mothers do not breastfeed for several reasons, mainly the need to continue schooling, lack of understanding the importance of breastfeeding and a perception that breastfeeding spoils their breasts (section 3.4.2.5). Rojjanasrirat and Sousa (2010: 2019) have established that lack of knowledge of the benefits of breastfeeding and anticipation of difficulties associated with multiple roles of being a mother and student played a role in teenage mothers' choice of feeding.

6.6 STRENGTHENING THE BMFI PROGRAMME

The chief health programme officer reported that there was a need for legislation of baby friendly corners to make employers adhere to the provision thereof. She stated that officers in the MoHSS are well placed to advocate for legislation of the baby friendly corners (3.3.3.2). In California State, this type of breastfeeding legislation supports breastfeeding in workplaces by compelling employers to provide facilities that enable

women to express and store breast milk while at work. A civil penalty of US$ 100 is issued for employers who violate the legislation (Chertok & Hoover 2009:45, 50).

Nurse managers reported that in order to strengthen the BMFI programme, there should be continuous training of health care professionals in both public and the private sector (section 3.4.4.1). According to the Health Professions Councils of Namibia (2011:6), health professions require consistent and ongoing commitment to lifelong learning to update, maintain, improve, broaden and develop their knowledge, skills and ethical attitudes that underpin competent practice. The Ministry's National Health Training Centre (NHTC) is an accredited service provider for continuing professional development (CPD) (MoHSS 2011c). The suggestion from nurse managers should therefore be made a recommendation to the NHTC to design and offer an appropriate programme in breastfeeding management.

Nurse managers reported that support for breastfeeding should be strengthened through community education. They reported that the focus should be on ante-natal care services, the private sector and awareness creation through the media. They also acknowledged that establishment of community-based breastfeeding support groups would empower women to help one another (section 3.4.4.2). The importance of community involvement in supporting breastfeeding was identified by Haider et al (2010:[4]): they found that the majority (83%) of mothers participating in their study received information on breastfeeding in their own homes and communities, and only 16% in a health facility. Javanparast et al (2012:1281) have also established that breastfeeding awareness among child care workers and parents was supportive for breastfeeding.

In an open-ended question in the questionnaire, registered and enrolled nurse/midwives recommended establishment of community-based breastfeeding support groups, and provision of staff training and baby friendly corners, as well as full implementation of the BMFI programme (section 5.3.12).

Nurse managers suggested extension of maternity leave to one year to enable women to breastfeed (section 3.4.4.3). In Namibia, the Labour Act (Namibia 2007:sd) makes provision for twelve weeks' paid maternity leave. The suggestion to increase maternity leave to one year has financial implications; Rojjanasrirat and Sousa (2010:2019) have

found that financial needs for women required them to return to work immediately after birth. There is, therefore, a need to balance maternity leave and financial needs through provision of support for breastfeeding in workplaces.

Nurse managers further suggested local research on HIV and breastfeeding in order to test the effectiveness of the latest guidelines on HIV and breastfeeding (section 3.4.4.4). It is encouraging that nurse managers acknowledge the importance of evidence-based practice.

6.7 SUMMARY

Chapter 6 presented a discussion on the integration of the qualitative data (phase 1), obtained from the chief health programme officer and nurse managers, and the quantitative data (phase 2) obtained from registered and enrolled nurses/midwives. Findings were supported with reference to the literature where applicable.

The chief health programme officer and nurse managers reported that the implementation of the BMFI programme was characterised by inadequate human resources and capacity, which led to limited implementation of the programme. Registered and enrolled nurses/midwives confirmed the limited implementation: Six of the ten steps were reportedly inadequately implemented. These steps were: step 1 (inadequate policy communication), step 2 (inadequate staff training), step 4 (initiation of breastfeeding by mothers who have had caesarean delivery under general anaesthesia), step 5 (expression of breast milk by hand), step 8 (breastfeeding on demand), and step 10 (establishment of community-based breastfeeding support groups). Nurse managers reported various factors that hindered the implementation of the programme, namely limited physical environment, perceptions regarding HIV and breastfeeding, socio-economic status of mothers and teenage motherhood. The chief health programme officer, nurse managers and registered and enrolled nurses/midwives suggested various interventions to strengthen the BMFI programme. These interventions include legislation of baby friendly corners, staff training, community breastfeeding education and breastfeeding support through the establishment of community breastfeeding support groups and provision of baby friendly corners.

In the next chapter, this evidence is discussed in the form of guidelines, which propose interventions that could help to strengthen the implementation of the BMFI programme.

CHAPTER 7

DISCUSSION ON THE DEVELOPMENT AND VALIDATION OF GUIDELINES TO STRENGTHEN THE BABY AND MOTHER FRIENDLY INITIATIVE IN NAMIBIA

7.1 INTRODUCTION

Chapter 7 addresses the process followed in developing and validating the guidelines for strengthening the BMFI programme. The development of the guidelines was based on the findings of phase 1 (qualitative data) and phase 2 (quantitative data) and supportive literature, as discussed in Chapter 6. The final objective was reached when the guidelines were developed and validated by technical experts.

7.2 DEVELOPMENT OF THE GUIDELINES

Logical reasoning was applied in the process of developing the guidelines. Deductive reasoning is reasoning from the general to the specific. Inductive reasoning is reasoning from the specific to the general (Grove et al 2013:7). Both deductive and inductive reasoning were used during the process of developing the guidelines. Evidence from the literature, qualitative and quantitative data, was used to reach concluding statements. From the specific concluding statements, guidelines were proposed to address these statements. These guidelines were given to technical experts in the field of nutrition, nursing, health and nursing education, as well as health and nursing programme managers, to validate and make suggestions for improvement. A detailed discussion of the process was provided in Chapter 2.

7.3 VALIDATION OF THE GUIDELINES

After the purposively selected guideline validators agreed to participate, they were provided with a hard copy of the proposed guidelines, a validation form and a letter explaining the validation process (Annexure G). They were requested to validate these guidelines according to the criteria: clarity, comprehensiveness, applicability, adaptability,

credibility and validity. A total of ten technical experts were approached. Eight of these participated in the validation process. Table 7.1 indicates the characteristics of the eight participants, namely, employment position, technical expertise and academic qualifications.

Table 7.1: Characteristics of the technical experts

Description	Frequency
Position	
Nursing manager	1
Health programme officer	3
Professional nurse	2
Educator 3	2
Total	**8**
Expertise	
Management	3
Nursing education	1
Environmental health education	1
Nutritionist	1
General Nursing/midwifery	1
Community nursing	1
Total	**8**
Academic qualifications	
Master's degree	5
Honours degree	3
Total	**8**

Table 7.2 presents the results of the validated guidelines**.** Participants gave valid inputs. Most of the comments made were on how to implement the guidelines. Participants mentioned that adaptability of the guidelines will require formal training of the users. Other comments stated that guidelines were clear, inclusive, objective and valid. The suggestions from the participants were incorporated in the final guidelines.

Table 7.2: Results of the validated guidelines

Criteria	Not acceptable	Acceptable with recommended changes	Acceptable as described	Comments from experts
Clarity		3	5	• Clear • Straight forward guidelines
Comprehensiveness		3	5	• Adequately cover identified aspects • Complete • Inclusive
Credibility		1	7	• Phrased well as required • Relevant • Inclusive
Applicability		1	7	• Appropriate for application • Reliable • Objective
Adaptability		1	7	• Adaptable • Adaptable provided some formal training is accorded to the users • Wish they will be accepted
Validity		1	7	• Valid • User friendly • Acceptable

7.4 PRESENTATION OF DEVELOPED GUIDELINES

After the guidelines had been developed, the experts' suggestions were incorporated. These guidelines emerged under three themes, illustrated in Table 7.3. These themes were human resources and capacity; factors hindering implementation of the BMFI programme; and strengthening the BMFI programme. Each theme consisted of categories, and for each category a guideline was formulated. A rationale for each guideline is presented, followed by recommendations on implementation.

Table 7.3: Themes and categories related to the guidelines to strengthen the BMFI programme

Theme	Category
Theme 1: Human resources and capacity	• Staffing • Training
Theme 2: Factors hindering implementation of the BMFI programme	• Physical environment • Perceptions regarding implementation of the BMFI programme • Socio-economic factors • Teenage motherhood
Theme 3: Strengthening the BMFI programme	• Development of health care professions • Community development • Maternal support • Restructure the Ten Steps to Successful Breastfeeding

7.5 THEME 1: HUMAN RESOURCES AND CAPACITY

Theme 1: human resources and capacity, encompassed two categories, namely staffing and training. The following guidelines were developed to address these categories.

7.5.1 Category: Staffing

From the category *staffing*, a guideline was formulated that is intended to improve the working conditions of staff. This guideline is based on the concluding statements, as presented in box 7.1.

Box 7.1: Summary of concluding statements regarding staffing for the BMFI programme

- The chief health programme officer and nurse managers reported that the implementation of the BMFI programme was characterised by staff shortage, staff turnover and staff rotation.
- Staff turnover has worsened the burden caused by staff shortage.
- Owing to staff shortage, orientation and training of rotated staff was not conducted regularly.

Guideline 1: Improving working conditions of staff

Rationale for the implementation of the guideline

Improving the working conditions of *staff* could result in satisfied and committed staff, which in turn could help the Ministry to retain and recruit more staff.

Recommendations on the implementation of the guideline

- The Ministry should finalise the restructuring process in order to expand the staff establishment of hospitals and clinics (MoHSS 2015b:13).
- The directorate Human Resource Management and General Service should speed up the process of advertising and filling of vacancies to ensure adequate staffing.
- The directorate Policy, Planning and Human Resource Development should implement the Incentive System and Retention Strategy developed in 2011, with the aim of attracting and retaining health professionals in the public sector (MoHSS 2011c).
- Nurse managers should identify a minimum period (that is long enough for learning) for staff to stay in one discipline before the next rotation.

7.5.2 Category: Training

To address issues related to the category *training*, a guideline was developed. This guideline is based on the concluding statements as presented in box 7.2.

Box 7.2: Summary of concluding statements regarding BMFI training

- The chief health programme officer experienced the following:
  - Top-down planning of BMFI training resulted in lack of integration of the programme training with other maternal and child health programmes.
  - Vertical training by national level staff resulted in lack of ownership of the BMFI programme by the regions and hospitals.
  - Training on the latest guidelines on HIV and breastfeeding depended on capacity and expertise of the national level staff.
  - Nurse managers experienced lack of financial resources for the BMFI training.

Guideline 2: Training of staff in breastfeeding management

Rationale for the implementation of the guideline

This guideline is intended to decentralise the BMFI *training* in order to help enhance ownership of and commitment to the BMFI programme by the regional health directorates and hospitals.

Recommendations on the implementation of the guideline

- The directorate Primary Health Care should decentralise the BMFI programme activities, including planning, budgeting and training, to the regions and hospitals.
- Regional directorates and hospitals should include BMFI activities in their strategic and annual plans. These plans should be presented at the Ministry's annual planning and budgeting meeting for approval and securing of funds.

7.6 THEME 2: FACTORS HINDERING IMPLEMENTATION OF THE BMFI PROGRAMME

In theme 2, factors hindering the implementation of the BMFI programme, four categories emerged: physical environment; perceptions regarding implementation of the BMFI programme; socio-economic factors; and teenage motherhood.

7.6.1 Category: Physical environment

Non-conducive *physical environment* emerged as a factor hindering the implementation of the BMFI programme. The recommendations on the implementation of this guideline are founded on the concluding statements presented in box 7.3.

Box 7.3: Summary of concluding statements on physical environment

- Nurse managers experienced that because of limited space:
  - It was difficult for health workers to implement all the Ten Steps to Successful Breastfeeding.
  - Women were cared for without privacy.
  - Mothers have to be discharged prematurely after giving birth, before breastfeeding has been established, to make space for others.

Guideline 3: Improving physical environment

Rationale for the implementation of the guideline

Improving the physical environment in maternity facilities could create a conducive atmosphere in which mothers could be shown how to manage breastfeeding in privacy.

Recommendations on the implementation of the guideline

- Hospital management and nurse managers should:
  - Budget for and provide adequate privacy screens
  - Ensure that beds are fitted with privacy screen curtains.
- In order to compensate for premature discharge, nurses should:
  - Give mothers written information, at discharge, on how to overcome early breastfeeding problems.
  - Arrange follow-up for mothers to be seen soon after discharge, preferably two to three days after birth, at the clinic.
  - Assess and give breastfeeding support during follow-up sessions.

- Identify and refer mothers to community-based breastfeeding support groups.

- Regional directorates and hospital management should engage the Facility Planning Division in the directorate: Policy, Planning and Human Resource Development to make provision for adequate space when upgrading maternity facilities.
- The Facility Planning Division in the directorate: Policy, Planning and Human Resource Development should advise provision for adequate space during the planning of construction of new maternity facilities.

7.6.2 Category: Perceptions regarding implementation of the BMFI programme

This guideline focuses on addressing *perceptions* of women and health workers regarding HIV and breastfeeding. The recommendations of this guideline are based on the concluding statements indicated in box 7.4.

Box 7.4: Summary of concluding statements on perceptions about HIV and breastfeeding

- Nurse managers reported that:
  - HIV infected women were afraid to transfer HIV infections to their babies through breastfeeding.
  - Health workers were concerned about giving different messages based on the latest changes in the guidelines regarding HIV and breastfeeding.
  - Health workers doubted the effectiveness and scientific reasons for introducing the new guidelines on HIV and breastfeeding.

Guideline 4: Addressing perceptions regarding implementation of the BMFI programme

Rationale for the implementation of the guideline

Addressing perceptions of health workers and women regarding HIV and breastfeeding could build the health workers' confidence in educating women on HIV and breastfeeding, as well as empowering women to make informed choices on feeding options.

Recommendations on the implementation of the guideline

- Nurse managers should oversee the:
  - Integration of the BMFI training, including HIV and breastfeeding, in all training on mother and child health programmes during pre-service and in-service training, as per the MoHSS (2011a:4).
  - Orientation of health workers on the new guidelines on HIV and breastfeeding.
  - Submission of HIV- and breastfeeding-related research topics to the MoHSS' research unit to be included in the research agenda.
- Health professionals should:
  - Individually counsel all new mothers enrolled in the PMTCT programme on the benefits of breastfeeding.
  - Explain the scientific reasons for recommending breastfeeding in cases of HIV infection in simple language.
  - Initiate and conduct own operational research in their hospitals and wards.
- Regional Information, Education & Communication (IEC) programme officers, in consultation with local communities, should:
  - Develop IEC materials on HIV and breastfeeding.
  - Translate IEC materials and scientific reasons for recommending breastfeeding in cases of HIV infection into local languages.

7.6.3 Category: Socio-economic factors

Socio-economic factors as a category emerged as an important determinant of breastfeeding practices. The recommendations on the implementation of this guideline are founded on the concluding statements presented in box 7.5.

Box 7.5: Summary of concluding statements on socio-economic factors

- Nurse managers reported that:
  - Women with poor education were not adhering to the feeding instructions.
  - Affluent women regarded breastfeeding as an option for those who could not afford to buy or manage formula.
  - White women were choosing infant formula above breastfeeding.
  - Long working hours made it impossible for working mothers to breastfeed their babies.

Guideline 5: Addressing socio-economic factors that influence mothers' feeding decisions

Rationale for the implementation of the guideline

It is anticipated that addressing socio-economic factors that influence mothers' feeding choices and breastfeeding practices could make it easier for them to breastfeed.

Recommendations on the implementation of the guideline

- Health workers should:
  - Identify women at risk of not breastfeeding due to poor education during ante-natal care services, and offer one-to-one breastfeeding education, making sure they understand what is taught.
  - Educate affluent women on the incomparable benefits of breastfeeding.
  - Make use of influential women to promote breastfeeding through radio and television talks.
  - Advocate for the provision of baby friendly corners to support breastfeeding in workplaces.

7.6.4 Category: Teenage motherhood

A guideline to address *teenage motherhood* and breastfeeding was developed based on the concluding statements as presented in box 7.6. Recommendations on the implementation were derived from these concluding statements.

Box 7.6: Summary of concluding statements on teenage motherhood

- Nurse managers reported that teenage mothers were not breastfeeding owing to the following reasons:
  - Needing to continue their schooling.
  - Lack of understanding of the importance of breastfeeding.
  - Fear of spoiling their figures.

Guideline 6: Supporting teenage mothers to choose and continue breastfeeding while schooling.

Rationale for the implementation of the guideline

Understanding the benefits of breastfeeding and having the skills on how to manage breastfeeding, as well as the necessary support, could assist teenage mothers to choose and continue breastfeeding while schooling.

Recommendations on the implementation of the guideline

- Health workers should:
  - Introduce breastfeeding promotion and management topics as part of the adolescent-friendly school services.
  - Educate pregnant teenagers on the benefits and management of breastfeeding at ante-natal services.
  - Establish a special teenage mothers' breastfeeding support group and link it to the existing community-based breastfeeding support groups.
  - Determine teenagers' intentions to breastfeed prior to giving birth and record them on teenagers' health card in order to facilitate breastfeeding support during labour and the post-natal period.
  - Encourage and help teenage mothers to make plans to continue breastfeeding and schooling.
  - Help teenage mothers to identify a breastfeeding support system within their families and communities.

7.7 THEME 3: STRENGTHENING THE BMFI PROGRAMME

In theme 3, four categories are discussed, namely development of health care professionals, breastfeeding support, community development and restructuring of the Ten Steps to Successful Breastfeeding. From these categories four guidelines were developed.

7.7.1 Category: Development of health care professionals

To strengthen the BMFI programme, *development of health care professionals* emerged as a strong category. The recommendations on implementation of the guideline are based on the concluding statements as shown in box 7.7.

Box 7.7: Summary of concluding statements on development of health care professionals

- The chief health programme officer and nurse managers reported inadequate training of health workers on breastfeeding management at all levels.
- Reportedly, neither nurses nor doctors in both public and private hospitals and clinics were trained.
- Training on the latest guidelines regarding HIV and breastfeeding was lacking.
- Lack of expertise in BMFI training resulted in:
    - Inability of hospitals to carry out in-service training.
    - Sending staff away from their duty stations to attend BMFI training workshops.
- More than half of the registered and enrolled nurses/midwives who participated in this study had reportedly not been trained in breastfeeding management.
- Lack of financial resources for BMFI training contributed to lack of training.

Guideline 7: Development of health care professionals

Rationale for the implementation of the guideline

It is envisaged that equipping health care professionals with the necessary knowledge and skills in breastfeeding management could enable them to assist women to breastfeed successfully, which would increase breastfeeding rates.

Recommendations on the implementation of the guideline

- Regional directorates should plan and present the hospitals' BMFI training plans at the Ministry's annual budget meetings for approval and allocation of funds.
- Hospitals management, with the assistance of the national nutrition unit, should:
    - Train a critical mass of BMFI trainers selected from the in-service training committees of each hospital.
- In-service training committees should:
    - Conduct training on breastfeeding as part of the hospital's in-service training programmes.
    - Use WHO and UNICEF's (2006) 20-hours training course: Divide breastfeeding training topics into manageable sessions of one to two hours, which could be taught as in-service training.
    - Draw up a dummy schedule for training with short sessions, to serve as a guide.
- The MoHSS should present the BMFI training programme to the HPCNA for accreditation for CPD points.
- The NHTC, as an accredited service provider in the MoHSS, should:
    - Include the BMFI training in its annual training calendar as part of continuing professional development (CPD).
    - Invite health professionals from the private sector to attend the training.
    - Use the updated BMFI training curriculum of public and private universities when participating in curriculum review.

7.7.2 Category: Community development

Community development emerged as a category that would strengthen the implementation of the BMFI programme. The recommendations on the implementation of this guideline are founded on the concluding statements presented in box 7.8.

Box 7.8: Summary of concluding statements on community development

- Nurse managers noted the importance of:
  - Breastfeeding education on the benefits of breastfeeding during ante-natal care services
  - Community breastfeeding education through information leaflets and the media
  - Establishment of community-based breastfeeding support groups

Guideline 8: Community development

Rationale for the implementation of the guideline

It is envisaged that the implementation of the guideline related to community development could empower the community to support breastfeeding women and improve breastfeeding practices.

Recommendations on the implementation of the guideline

- Nurse managers should:
  - Provide a description of the minimum content of breastfeeding information to be given to pregnant women at ante-natal services and breastfeeding mothers at maternity services.
- The regional IEC programme officers, in consultation with local communities, should:
  - Develop IEC materials on the promotion of breastfeeding, including HIV and breastfeeding, in local languages.
  - Involve community members, particularly women who have successfully breastfed their babies, to discuss breastfeeding management on radio and

television programmes. These discussions to be organised for various language stations and channels.

- Health professionals should:
  - Educate pregnant women on the benefits and management of breastfeeding during ante-natal services.
  - Display IEC materials on breastfeeding management and promotion at health facilities and maternity wards.
  - Distribute IEC material on breastfeeding management and promotion to mothers at ante-natal, post-natal and outreach services.
- Primary health care nurses should:
  - Assist facility and village health committees to establish community-based breastfeeding support groups.
  - Train community-based breastfeeding support groups on breastfeeding management.

7.7.3 Category: Maternal support

In the category, *maternal support*, a guideline was developed to suggest interventions that could support breastfeeding in workplaces. The suggested recommendations for implementation regarding maternal support are based on the concluding statements presented in box 7.9.

Box 7.9: Summary of concluding statements on maternal support

- The chief health programme officer noted:
  - Lack of baby friendly corners in workplaces.
  - Non-adherence of employers to the provision of baby friendly corners.
- Nurse managers reported:
  - That the current short maternity leave of 12 weeks made it difficult for women to continue breastfeeding once they returned to work.
  - Lack of baby friendly corners in workplaces
  - Inadequate baby friendly corners in the MoHSS
  - Non-utilisation of existing baby friendly corners in the MoHSS

Guideline 9: Maternal support

Rationale for the implementation of the guideline

Provision of facilities that support breastfeeding in workplaces would help mothers to continue with breastfeeding while working.

Recommendations on the implementation of the guideline

- Regional health directorates and hospitals management collaboratively should:
    - Designate appropriate rooms away from patients' wards to serve as a baby friendly corner in each hospital.
    - Equip the baby friendly corners with basic furniture as per the Ministry's guidelines (MoHSS 1992a:26).
- The MoHSS, through the directorate Primary Health Care, should:
    - Liaise with the ministries of Gender Equality and Child Welfare; Labour and Industrial Relations and Employment Creation; and Information and Communication Technology to advocate for the provision of baby friendly corners in workplaces.
    - Propose a law for employers to provide baby friendly corners in workplaces.
        - Collaborate with the Ministry of Labour and Industrial Relations and Employment Creation and workers unions to lobby for increased maternity leave.

7.7.4 Category: Restructure the Ten Steps to Successful Breastfeeding.

This guideline focuses on restructuring the implementation of the Ten Steps to Successful Breastfeeding. The recommendations of this guideline are based on the concluding statements indicated in box 7.10.

Box 7.10: Summary of concluding statements on restructuring the Ten Steps to Successful Breastfeeding

- The chief health programme officer noted the need for:
  - Reviewing and prioritising the Ten Steps to Successful Breastfeeding implementation.
  - Involving the community in implementation of step 10 of the Ten Steps to Successful Breastfeeding.

Guideline 10: Restructuring the Ten Steps to Successful Breastfeeding

Rationale for the implementation of the guideline

It is anticipated that restructuring of the Ten Steps to Successful Breastfeeding could ensure full implementation of the BMFI programme.

Recommendations on the implementation of the guideline

- The nutrition unit and regional health directorates should collaboratively:
  - Mandate compulsory implementation of steps 1 and 2 (have the BMFI policy that is routinely communicated to all health care workers; and train all healthcare workers in skills necessary to implement the BMFI policy).
  - Develop clear guidelines for implementation of all the Ten Steps to Successful Breastfeeding.
  - Develop quality indicators for the BMFI programme supervision, such as percentage of staff trained, including the means of verification, such as training plan and training report.
  - Integrate the BMFI programme supervision in other programmes' support supervision.
- Nurse managers should:
  - Assist clinics and village health committees to establish community-based breastfeeding support groups.
  - Assist training of community-based breastfeeding support groups.

7.8 SUMMARY

Chapter 7 presented a discussion on the development of guidelines to strengthen the implementation of BMFI programme. These guidelines were formulated based on concluding statements of data obtained in the qualitative (phase 1) and quantitative (phase 2) phases, with supportive literature. The guidelines were also validated by technical experts for clarity, comprehensiveness, applicability, credibility and validity. The experts' suggestions were incorporated in the guidelines. Chapter 8 discusses the conclusions, recommendations and limitations of the study.

CHAPTER 8

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

8.1 INTRODUCTION

The purpose of this sequential mixed-methods study was to conduct evaluation research on the implementation of the Baby and Mother Friendly Initiative in Namibia in order to identify its successes and failures, as well as to develop guidelines for the strengthening of the programme. Qualitative and quantitative data were integrated and used to develop and validate guidelines that could help strengthen the implementation of the BMFI programme.

The objectives of this study were:

- To determine the current status of the Baby and Mother Friendly Initiative programme that was implemented in the Baby and Mother Friendly Hospitals in Namibia.
- To investigate the effectiveness of the Baby and Mother Friendly Initiative implementation in these hospitals.
- To develop and validate guidelines for the strengthening of the Baby and Mother Friendly Initiative programme.

8.2 RESEARCH DESIGN AND METHODS

An explorative, sequential mixed-methods study design was used to collect qualitative and quantitative data. The reason for selecting mixed-methods research was firstly to describe the experiences regarding the implementation of the BMFI programme through a qualitative research method, and secondly to investigate the effectiveness of its implementation through a quantitative research method. Also, integrating qualitative and quantitative data together helped the development and validation of the guidelines for the strengthening of the programme. The study was therefore conducted in two phases. Despite several advantages of this type of design, it was challenging in terms of financial resources, time constraints and capacity to collect and analyse mixed-methods data.

Phase 1 consisted of a qualitative component in which data were collected from two census samples, namely sample A (a chief health programme officer in charge of the nutrition programme) and sample B (nurse managers in charge of the BMFI hospitals). Data were collected through face-to-face unstructured (sample A) and semi-structured (sample B) interviews. Data were analysed manually according to Braun and Clarke's (2006) thematic analysis. The themes, categories and subcategories that emerged from each sample were analysed and discussed separately, supported by literature comparison. Trustworthiness was established by the criteria of credibility, dependability, transferability, and confirmability, as suggested by Lincoln and Guba (1985:290). The data were then integrated and presented as themes, which emerged as experiences of the implementation of the BMFI programme. These themes and the literature were used as a basis for the development of the questionnaire to collect data in phase 2 of the study. From the literature, the concept BMFI was operationalised into the WHO and UNICEF's (1989) Ten Steps to Successful Breastfeeding. Phase 1 addressed the first objective.

In phase 2, quantitative data were collected from registered and enrolled nurses/midwives who were working in 32 hospitals that were found to be implementing the BMFI programme in phase 1. (This number included one hospital in which the pretesting of the questionnaire was conducted, which was excluded from phase 2 of the study.) A self-administered questionnaire based on the themes that emerged from phase 1 and the literature was developed to collect information. The total number of possible respondents was 391, of which 285 (73.0%) responded. The data were analysed using Epi Info, version 7. Descriptive and inferential statistics were used to describe the data. Validity was established through face, content and construct validity. Pre-testing of the questionnaire was conducted to establish reliability. On completion of phase 2, the second objective was achieved.

From the integrated themes and categories derived from the data in phase 1 and conclusions drawn from the data obtained from phase 2 and the literature, concluding statements were made. Based on these statements, guidelines that could help to strengthen the BMFI programme were developed and validated. The final objective was reached when the guidelines were developed and validated by technical experts.

8.3 SUMMARY AND INTERPRETATION OF THE RESEARCH FINDINGS

This exploratory sequential mixed methods-research was guided by the Eight Stage Model of Evaluation based on Macpherson (1986) (Territory Health Services 1999:45) as follows.

- Stage 1: formulating the study objectives
- Stage 2: preliminary literature search
- Stage 3: designing the study
- Stage 4: drawing the study table and budget
- Stage 5: data collection
- Stage 6: data analysis
- Stage 7: development and validation of the guidelines to strengthen the BMFI programme
- Stage 8: writing the thesis report

The findings of phases 1 and 2 will be presented separately as follows.

8.3.1 Phase 1

Four themes and 6 categories were generated from sample A (a chief health programme officer), while four themes and 16 categories were generated from sample B (nurse managers).

The data from samples A and B were integrated and four themes emerged as participants' experiences of the implementation of the BMFI programme.

- The first theme emerged as *human resources and capacity*. Staffing and training were identified as categories in this theme.
- The second theme, *the benefits of the BMFI programme,* comprised categories such as healthy babies, reduced stigma of HIV associated with non-breastfeeding and improved breastfeeding practices.
- The third theme emerged as *factors hindering the implementation of the BMFI programme.* Categories in this theme included human resources, physical

environment, perceptions regarding implementation of the BMFI programme, socio-economic factors and teenage motherhood.

- The fourth theme emerged as *strengthening the BMFI programme.* Development of health care professionals, community development, maternal support and restructuring of the Ten Steps to Successful Breastfeeding were categories in this theme.

8.3.2 Phase 2

As stated in section 2.5.2.3, the concept BMFI was operationalised into the WHO and UNICEF's (1989) Ten Steps to Successful Breastfeeding, from the literature. According to the global criteria, during an assessment, a hospital should score at least 80% in not less than eight of the ten steps, in order to be certified a baby friendly hospital. Quantitative data collected from the registered and enrolled nurses/midwives revealed partial implementation of the Ten Steps to Successful Breastfeeding.

In phase 1, six steps were reportedly inadequately implemented as follows:

- *Step one: Have a breastfeeding policy that is routinely communicated to all staff members:* Less than half of the registered and enrolled nurses/midwives reported that the BMFI policy was clearly displayed in their hospitals and only one percent (1%) reported that it was communicated to patients.
- *Step two. Train all health care staff in skills necessary to implement this policy:* Sixty-five percent (65%) of the registered and enrolled nurses/midwives reported that they were not trained in breastfeeding.
- *Step four. Help mothers initiate breastfeeding within a half-hour after birth; mothers who have had caesarean section deliveries should initiate breastfeeding within a half hour of being alert and responsive:* Only 19.0% of mothers who had had caesarean section deliveries with general anaesthesia were reportedly helped to initiate breastfeeding within half an hour of being alert and responsive to their babies.
- *Step five. Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants:* Less than the required 80% of the

registered and enrolled/nurses midwives reported that they taught expression of breast milk by hand.

- *Step eight. Encourage breastfeeding on demand:* Less than half (48%) of registered and enrolled nurses/midwives indicated that they advised mothers to breastfeed whenever the baby was hungry, and only 28.2% reported advising a mother to wake the baby for breastfeeding if the breasts became overfull.
- *Step ten: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital or clinic:* Three-quarters (74.0%) of the registered and enrolled nurses/midwives reported that there were no breastfeeding support groups in their respective hospitals, while 25.3% indicated that they did not know if support groups existed.

8.4 CONCLUSIONS

Conclusions are presented after being drawn from the integrated themes and categories derived from the experiences of the health programme officer and nurse managers on the implementation of the BMFI programme (phase 1), and conclusions drawn from the data obtained from registered nurses and enrolled nurses/midwives (phase 2), with supportive literature. Based on these conclusions, guidelines that could help to strengthen the BMFI programme were developed and validated. The validated guidelines are presented in Table 8.1.

Table 8.1: Summary of validated guidelines to strengthen the baby and mother friendly initiative

Theme	Category	Guideline	Recommendations for implementation
Theme 1: Human resources and capacity	Staffing	Improving working conditions of staff	• Finalisation of the restructuring process in order to expand the staff establishment of hospitals and clinics (MoHSS 2015b:13). • Fast tracking the process of advertising and filling of vacancies to ensure adequate staffing. • Implementing the Incentive System and Retention Strategy developed in 2011.

Theme	Category	Guideline	Recommendations for implementation
			• Identifying a minimum period (that is long enough for learning) for staff to stay in one discipline before the next rotation.
	Training	Training	• Decentralisation of the BMFI programme activities including training to the regions and hospitals. • Inclusion of the BMFI activities in strategic and annual plans. • Presentation of BMFI plans at the Ministry's annual planning and budgeting meeting.
Theme 2: Factors hindering implementation of the BMFI programme	Physical environment	Improving physical environment	• Budgeting and provision of adequate privacy screens and curtains. • Compensating for premature discharge by: Provision of written information on how to overcome early breastfeeding problems; Following-up mothers in two to three days after birth at the clinic; assessing and giving breastfeeding support during follow-up sessions; Identifying and referring mothers to community-based breastfeeding support groups. • Advising for adequate space when upgrading or constructing new maternity facilities.
	Perceptions regarding implementation of the BMFI programme	Addressing perceptions regarding implementation of the BMFI programme	• Integration of BMFI training in mother and child health programmes as per the MoHSS (2011a:4). • Orientation of health workers on the new guidelines on HIV and breastfeeding. • Local operational research on HIV and breastfeeding related topics. • Individual counselling of mothers enrolled in the PMTCT programme on the benefits of breastfeeding. • Explaining the scientific reasons for recommending breastfeeding in HIV infection. • Development of IEC materials on HIV and breastfeeding. • Translation of IEC materials and scientific reasons for recommending

Theme	Category	Guideline	Recommendations for implementation
			breastfeeding in HIV infection in local languages.
	Socio-economic factors	Addressing socio-economic factors that affect mothers' feeding choices	• One-to-one breastfeeding education to women at risk of not breastfeeding. • Educating affluent women on the incomparable benefits of breastfeeding. • Promoting breastfeeding through radio and television talks. • Advocating for the provision of baby friendly corners to support breastfeeding in workplaces.
	Teenage motherhood	Supporting teenage mothers to continue breastfeeding while schooling	• Introducing breastfeeding promotion and management in adolescent friendly school services. • Breastfeeding education and support for pregnant teenagers during ante-natal services. • Establishment of special teenage mothers' breastfeeding support groups. • Encouraging and helping teenage mothers to make plans to continue breastfeeding and schooling.
Theme 3: Strengthening of the BMFI programme	Development of health care professionals	Development of health care professionals	• Presentation of hospitals BMFI training plans at the Ministry's annual budget meetings for approval and allocation of funds. • Training of a critical mass of BMFI trainers selected from the in-service training committees. • In-service training on breastfeeding. • Accreditation of the BMFI training programme by the HPCNA for continuing professional development (CPD). • Inclusion of the BMFI training in the MoHSS' annual training calendar. • Updating BMFI training curriculum of public and private universities when participating in curriculum review.

Theme	Category	Guideline	Recommendations for implementation
	Community development	Community development	• Provision of a description of the minimum content of breastfeeding information for ante-natal education. • Involvement of community members in the development of IEC materials and the promotion of breastfeeding on radio and television talk shows. • Displaying IEC materials on breastfeeding management and promotion at health facilities and maternity wards. • Distribution of IEC material on breastfeeding to mothers at ante-natal, post-natal and outreach services. • Assisting facility and village health committees to establish community-based breastfeeding support groups. • Training of community-based breastfeeding support groups on breastfeeding management.
	Maternal support	Maternal support	• Provision of baby friendly corners in workplaces. • Proposing and advocating for a law for employers to provide baby friendly corners in workplaces. • Proposing and advocating for increased maternity leave.
	Restructuring the Ten Steps to Successful Breastfeeding	Restructuring the Ten Steps to Successful Breastfeeding	• Mandating compulsory implementation of steps 1 and 2 of the Ten Steps to Successful Breastfeeding. • Development of clear guidelines for implementation of all the Ten Steps to Successful Breastfeeding. • Development of quality indicators for the BMFI programme supervision. • Integration of the BMFI programme supervision in other programmes' support supervision. • Assisting clinics and village health committees to establish community-based breastfeeding support groups. • Assisting clinics and village health committees to train community-based breastfeeding support groups

8.5 RECOMMENDATIONS

The following recommendations are made based on the findings of the study and the proposed guidelines.

8.5.1 Recommendations for practice

The following recommendations are made to improve practice:

- National and regional health directorates, hospitals management, nurse managers and health professionals collaboratively should implement the recommended guidelines relevant to their responsibility and functions as proposed in Chapter 7, section 7.7.
- It is recommended that a team comprising the chief health programme officer, nurse managers, professional nurses, nurse educators, regional health directors and relevant health programme administrators should review the guidelines every five years.

8.5.2 Recommendation for policy

The directorates Primary Health Care, Regional Health and Policy, Planning and Human Resources Development collaboratively should:

- Revise the 1992 BMFI policy, which is based on the 1992 BFHI Global Criteria to be in line with the revised 2007 BFHI Global Criteria that is currently operational.
- Expand the Ten Steps to Successful Breastfeeding to include the International Code of Marketing of Breast Milk Substitutes, as well as baby friendly corners. The expansion should include clear guidelines on how these steps should be assessed.
- Expand the BMFI implementation by introducing the Ten Steps to Successful Breastfeeding, including the additional steps, in community services through the village health committees.
- Strengthen the BMFI programme support through reporting of the BMFI indicators in the regional supervisory visits reports as recommended in the Ministry's National Supportive Supervisory Guidelines for Health Care Services of 2012.

8.5.3 Recommendation for education

To improve education and training the following recommendations are made:

- The national and regional health directorates, through budgets, should ensure the provision of additional resources for BMFI training of all staff.
- The National Health Training Centre should:
    - Build the capacity of hospital training committees in order to ensure quality BMFI in-service training at all levels.
    - Strengthen the BMFI programme through the integration of mother and child health programmes' training at all levels, as recommended in the National Guidelines on Infant and Young Child Feeding (MoHSS 2011:4).
- The Directorate Primary Health Care should:
    - Increase breastfeeding education in the community through outreach services.
    - Train village health committees to establish and support community-based breastfeeding support groups in breastfeeding management, promotion, support and protection.

8.5.4 Recommendations for further research

It is evident that the implementation of the BMFI programme needs further investigation. The researcher recommends the following research:

- Evaluating the implementation of the baby and mother friendly initiative: an observational study.
- Evaluating the implementation of the baby and mother friendly initiative from the mothers' perspectives.
- Non-compliance of hospitals to re-assess the implementation of the baby and mother friendly initiative in Namibia.
- Adequacy of the baby and mother friendly initiative policy's Ten Steps to Successful Breastfeeding to address issues related to breastfeeding promotion and support in the community and workplaces.
- How to establish effective community-based breastfeeding.

8.6 CONTRIBUTION OF THE STUDY

This study is the first of its kind to evaluate the implementation of the BMFI programme in Namibia. The study makes a contribution to the body of knowledge in nursing in that it provides guidelines for the strengthening of the BMFI programme.

8.7 LIMITATIONS OF THE STUDY

- As stated by Creswell and Plano Clark (2011:13), mixed-methods studies require considerable skills, time and resources for extensive data collection and analysis. These factors also affected this study in such a way that not all aspects related to the implementation of the BMFI programme may have been dealt with in this study.
- According to Polit and Beck (2012:260), evaluation research can be threatening to implementers, owing to a tendency to think that their work was being evaluated. In this study, if participants and respondents had such thoughts, they might have contributed to biased responses.
- Skills on breastfeeding practices can best be evaluated through observation. The quality of implementation of the BMFI programme could therefore not be determined, as registered and enrolled nurses/midwives might have reported practising some skills even though they were not competent to do so.
- The study was carried out in the Baby and Mother Friendly Hospitals in Namibia. The findings of the study can therefore not be generalised beyond these hospitals. This is also a limitation inherent to qualitative inquiry.

Despite these limitations, the study gave insight into the shortcomings in the implementation of the BMFI programme, as well as providing guidelines for its strengthening.

8.8 CONCLUDING REMARKS

The promotion of breastfeeding cannot be left to the MoHSS alone. Health facilities help mothers to initiate breastfeeding. However, mothers need continued support to sustain breastfeeding, especially once they return to work after maternity leave. The call for employers to provide this support was made by Dr Sam Nujoma, founding president of the Republic of Namibia, at the launch of the BMFI programme in 1992. He said: *I wish*

to appeal to all employers, whether government or private sector, to be friendly and supportive to breastfeeding mothers, and create a good environment at workplaces, which will make it convenient for them to continue breastfeeding (MoHSS 1992a:annexure I*).*

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ANNEXURES

ANNEXURE A

ETHICAL CLEARANCE FROM THE DEPARTMENT OF HEALTH STUDIES, UNISA

UNISA

UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

HSHDC 46/2011

Date of meeting: 4 November 2011 Student No: 0482-947-6

Project Title: Evaluation of the implementation of the baby and mother friendly hospital initiative in Namibia.

Researcher: Justina-Nelago Amadhila

Degree: D Litt et Phil Code: DIS8908

Supervisor: Prof MJ Oosthuizen
Qualification: D Litt et Phil
Joint Supervisor: Prof GH van Rensburg

DECISION OF COMMITTEE

Approved [√] **Conditionally Approved** [ ]

Prof E Potgieter
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

for **Prof MC Bezuidenhout**
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE B1

REQUEST FOR APPROVAL TO CONDUCT THE STUDY

M Kahijoro Kahuure
The Permanent Secretary
Ministry of Health and Social Services
Private Bag 13198
Windhoek, Namibia
November 2011

Dear Mr Kahuure

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN THE 34 BABY AND MOTHER FRIENDLY HOSPITALS IN NAMIBIA

My name is Justina Nelago Amadhila, a chief health programme officer in the Directorate Policy Planning and Human Resources Development.

I am registered for a D Litt et Phil degree at the University of South Africa. I am expected to undertake research as part of the fulfilment of the requirements for this degree. The title of the intendent thesis is *"Evaluation of the implementation of the baby and mother friendly initiative in Namibia".*

The purpose of this study is to conduct an evaluation of the implementation of the baby and mother friendly initiative in order to identify its successes and failures, as well as to develop guidelines for the strengthening of the programme.

This letter service to request permission to undertake the study in the 34 baby and mother friendly hospitals in the13 health regions in the country.

Please find the attached copy of the proposal for your perusal.

Yours sincerely

Ms Justina Nelago Amadhila

PO Box 50324, Bachbrecht
Tel/Fax 061 221693/ 0811273551
E-mail: penda @ mweb.com.na

ANNEXURE B2

REQUEST FOR APPROVAL TO SUBMIT QUESTIONNAIRES

Mr Andrew Ndishishi
The Permanent Secretary
Ministry of Health and Social Services
Private Bag 13198
Windhoek
02 February 2015

Dear Mr Ndishishi,

REQUEST FOR PERMISSION TO SUBMIT QUESTIONNAIRES TO THE REGISTERED AND ENROLLED NURSES/MIDWIVES IN MATERNITY WARDS IN THE BABY AND MOTHER FRIENDLY HOSPITALS

In 2012, I was granted permission by the MoHSS to conduct a study on the "*Evaluation of the implementation of the baby and mother friendly initiative in Namibia"* as part of the fulfilment of the requirements for the D Litt et Phil degree at the University of South Africa (see the attached letter).

This letter service to request permission to submit questionnaires to registered and enrolled nurses/midwives in maternity wards in hospitals that were found implementing the Baby and Mother Friendly Initiative in phase 1 of this study.

Please find the attached copy of the provisional questionnaire for your perusal.

Yours sincerely,

Ms Justina Nelago Amadhila

PO Box 50324, Bachbrecht
Tel/Fax 061 221693/ 0811273551
E-mail: penda @ mweb.com.na

ANNEXURE B3

APPROVAL FROM MINISTRY OF HEALTH AND SOCIAL SERVICES TO CONDUCT THE STUDY

9 - 0/0001

REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198 **Ministerial Building** **Tel: (061) 2032125**
Windhoek **Harvey Street** **Fax: (061)272286**
Namibia **Windhoek** **E-mail:**msimasiku@mhss.gov.na

Enquiries: Mr.C.Simasiku **Ref.:** 17/3/3 **Date:** 17 February 2012

OFFICE OF THE PERMANENT SECRETARY

Ms. J.N. Amadhila
Directorate: PP& HRD
MoHSS

Dear Ms. Amadhila

Re: Evaluation of the implementation of the baby and mother friendly Hospital initiative in Namibia.

1. Reference is made to your application to conduct the above-mentioned study.

2. The proposal has been evaluated and found to have merit.

3. **Kindly be informed that permission to conduct the study has been granted under the following conditions:**

3.1 The data collected must only be used for purpose stated in the proposal and the permission requesting letter;
3.2 No other data should be collected other than the data stated in the proposal;
3.3 A quarterly report to be submitted to the Ministry's Research Unit;
3.4 Preliminary findings to be submitted upon completion of study;
3.5 Final report to be submitted upon completion of the study;
3.6 Separate permission to be sought from the Ministry for the Publication of the findings.

Yours sincerely,

MR. K. KAHUURE
PERMANENT SECRETARY

ANNEXURE B4

APPROVAL FROM MINISTRY OF HEALTH AND SOCIAL SERVICES TO SUBMIT QUESTIONNAIRES

REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198	**Ministerial Building**	**Tel: (061) 203 2515**
Windhoek	**Harvey Street**	**Fax: (061) 222558**
Namibia	**Windhoek**	**E-mail: jshatilwe@hotmail.com**

OFFICE OF THE PERMANENT SECRETARY

Enquiries: Mrs. J.T. Shatilwe

05 March 2015

Ms. J.N. Amadhila
P.O Box 50324
Bachbrecht, Windhoek

Dear Ms. Amadhila,

RE: EVALUATION OF THE IMPLEMENTATION OF THE BABY AND MOTHER FRIENDLY INITIATIVE IN NAMIBIA

Reference is made to your request for permission to submit questionnaires to registered and enrolled nurses/midwives in maternity wards in the Baby and Mother Friendly Hospitals.

Kindly be informed that permission to collect data has been granted under the same conditions stipulated in the letter from this Ministry to you dated 17 February 2012.

The Ministry wishes you success in completion of your thesis.

Yours sincerely,

PERMANENT SECRETARY

MR. ANDREW NDISHISHI
PERMANENT SECRETARY

Republic of Namibia
MINISTRY OF HEALTH AND SOCIAL SERVICES

Health for All

ANNEXURE C

QUESTIONNAIRE COVER LETTER

REQUEST FOR INFORMED CONSENT TO PARTICIPATE IN THE STUDY

My name is Justina Amadhila. I am registered with the University of South Africa for a D Litt et Phil degree. I am required to undertake research as part of the fulfilment of the requirement for this degree. The title of my thesis is *"Evaluation of the implementation of the baby and mother friendly initiative (BMFI) in Namibia".*

I would like to submit questionnaires for phase 2 of my study to all registered and enrolled nurses/midwives who are currently working in maternity wards.

The information obtained from the questionnaire is confidential. Neither your name nor those of your colleagues will be recorded.

The information you provide will contribute to the development of guidelines to strengthen the implementation of the BMFI programme.

Your participation is voluntary. You may choose to refuse to take part in the study; however I hope you are willing to help me complete my study.

The questionnaire will take 7 to 12 minutes to complete.

I thank you for your time.

ANNEXURE D

INTERVIEW GUIDE FOR PHASE 1 (SAMPLE B)

1. Your hospital has been declared baby and mother friendly some years back. Is Baby and Mother Friendly Initiative programme still being implemented in this hospital?

2. What is your experience with regard to the implementation of the Ten Steps to Successful Breastfeeding?

3. Which of the Ten Steps to Successful Breastfeeding do you regard as posing the most challenges to implementing the programme and why would you say so?

4. What would you regard as the strength of the BMFI programme?

5. What would you regard as the weaknesses in the implementation of the BMFI programme?

If the BMFI in this hospital needs improvement; what would you recommend?

ANNEXURE E

EXAMPLE OF TRANSCRIBED INTERVIEW

Text in interview (units)	Theme	Category	Sub-category
...'our client, our patients and their babies are benefiting a lot.' ...'those babies are not at the risk of any this many communicable diseases'...	**The benefits of the BMFI**	Healthy babies	**-**
...'there are challenges when it comes to the programme of HIV.' 'Some prefer to give artificial feeding – yeah- to their babies, especially those who are HIV positive.' ...'there is a risk [of transmission of HIV] a little bit – some percentages to the milk (sic).' 'This is a challenge because previously we were talking this and now we are talking about this – now you don't know really which one is effective – but you have to follow the guidelines – but really you [know] – we – also just don't know.'	**Factors hindering implementation of the BMFI programme**	Perceptions regarding implementation of the BMFI programme	HIV and Breastfeeding Effectiveness of the new guidelines and recommendations
'This establishment of the breastfeeding support group. Once a mother is discharge from the hospital, oh, no. ' ...'there must be a corner in the hospital for health workers, so that they can breastfeed their babies'	**Implementation of the BMFI programme**	Breastfeeding support Baby friendly corners	Community support groups Non-availability
...'we do not know whether research is conducted for those babies who are born after these guidelines [have been] implemented.' ...'we need to conduct research so that we can implement this ... bring effective guidelines.'	**Strengthening the BMFI programme**	Evidence-based practice	Local research

ANNEXURE F

QUESTIONNAIRE FOR REGISTERED AND ENROLLED NURSES/MIDWIVES

EVALUATION OF THE IMPLEMENTATION OF THE BABY AND MOTHER FRIENDLY INITIATIVE IN NAMIBIA

NAME OF THE HOSPITAL: _____

SECTION A: PERSONAL INFORMATION

Please answer the following questions. Read <u>all questions first</u> and choose the appropriate answer by circling <u>only one number</u> for each question.

1. Please indicate whether you are enrolled or registered nurse/midwife by circling the appropriate number.

Enrolled nurse/midwife	1
Registered nurse/midwife	2

2. When did you obtain your basic qualification?

Before 1990	1
1990 - 1994	2
1995 - 1999	3
2000 - 2004	4
2005 - 2009	5
2010 to date	6

3. What is the name of the hospital in which you are currently employed?

Name of hospital _____

4. How many years have you worked in the maternity department?

0 - 5 years	1
6 - 10 years	2
11 - 15 years	3
16 - 20 years	4
21 years and longer	5

5. What is your gender?

Female	1
Male	2

6. What is your age category?

20 – 29 years	1
30 – 39 years	2
40 – 49 years	3
50 – 59 years	4
60 years and older	5

SECTION B: THE BABY AND MOTHER FRIENDLY INITIATIVE

7. Please indicate your response to the following questions regarding the Namibia's Baby and Mother Friendly Initiative. (**Circle all that apply to your hospital).**

This hospital adheres to the Baby and Mother Friendly Initiative (BMFI) by:

7.1	Having the Namibian BMFI policy.	1
7.2	Visibly displaying the BMFI policy in all maternity sections	2
7.3	Communicating the BMFI policy to health care staff	3
7.4	Other (Please specify): ……. ……. …….	4

7.5 The Namibian BMFI policy in this hospital **is written** in the following languages: (**Circle all that apply to your hospital).**

7.5.1	English	1
7.5.2	Afrikaans	2
7.5.3	Damara/Nama	3
7.5.4	Herero	4
7.5.5	Kwangali	5
7.5.6	Oshiwambo	6
7.5.7	San	7
7.5.8	Silozi	8
7.5.9	Other, (Please specify): …….	9

7.6 This hospital has a mechanism for evaluating the effectiveness of the BMFI policy at least:

Once a year	1
More than once a year	2
Every 2nd year	3
Other (Please specify): …….	4
No mechanism	5

8. Have you been trained in breastfeeding promotion and management?

Yes	1	
No	2	**If No, go to Question 13**

9. Please indicate the extent to which you consider your training in breastfeeding promotion and management to be sufficient?

Not at all	1
To some degree	2
To an acceptable degree	3
Very good training	4

10. What type of training in breastfeeding management have you attended? **(Circle all that apply to your training).**

10.1	18 hours WHO and UNICEF training on breastfeeding management and promotion (in-service training)	1
10.2	During pre-service training as part of the midwifery curriculum	2
10.3	Orientation on the BMFI policy only (less than three hours)	3
10.4	Other, (Please specify): …… …… …	4

11. Did your training include the following information about the International Code of Marketing of Breast Milk Substitutes (infant formula, bottles, teats and dummies)? (**Circle all that apply to your training).**

11.1	Prohibition of advertisement of breast milk substitutes in health facilities.	1
11.2	Prohibition of free samples of breast milk substitutes in health facilities.	2
11.3	Prohibition of low cost supplies of formula in health facilities.	3
11.4	Prohibition of gifts from breast milk substitutes manufactures to health workers.	4
11.5	Prohibition of demonstrating how to prepare infant formula to groups of mothers.	5

12. Which of the following strategies to support women who have chosen not to breastfeed were included in your training? (**Circle all that apply to your training).**

12.1	Provision of individual counselling about replacement feeding.	1
12.2	Demonstrating how to prepare replacement feeding	2
12.3	Demonstrating how to feed replacement feeding	3
12.4	Provision of policies for insuring confidentiality of HIV positive mothers	4
12.5	Provision of policies that facilitate disclosure of HIV to significant others	5

13. Which of the following benefits of breastfeeding are taught to pregnant women attending the ante-natal clinic at your hospital? (**Circle all that apply)**.

13.1	Nutritional benefits	1
13.2	Protective benefits	2
13.3	Bonding benefits	3
13.4	Maternal health benefits	4
13.5	None of the above	5

14. Which of the following topics regarding breastfeeding management are taught to women attending the maternity services in this hospital? (**Circle all that apply)**.

14.1	The reasons why the baby and the mother need to stay in the same room without separation during hospital stay.	1
14.2	The importance of breastfeeding on demand	2
14.3	The importance of correct positioning and attaching the baby to the breast.	3

15. How soon are mothers who have had normal deliveries in this hospital helped to initiate breastfeeding after delivery?

15.1	Within half an hour	1
15.2	Within one hour	2
15.3	2- 3 hours	3
15.4	4 – 6 hours	4
15.5	7 – 8 hours	5
15.6	More than 8 hours	6

16. How soon are mothers who have had caesarean section deliveries in this hospital helped to initiate breastfeeding after they are able to hold their babies?

16.1	Within half an hour	1
16.2	Within one hour	2
16.3	2- 3 hours	3
16.4	4 – 6 hours	4
16.5	7 – 8 hours	5
16.6	More than 8 hours	6

17. Which of the following skills do you <u>personally</u> teach mothers? **(Circle all that apply).**

171	How to position and attach their babies to the breast.	1
17.2	How to express breast milk by hand.	2
17.3	I do not personally teach mothers how to position and attach their babies to the breast.	3
17.4	I do not personally teach mothers how to express breast milk by hand.	4

18. Please state whether you agree or disagree with the following statement::

Statement: Infant formula should be used as an exception not as a rule/routine.

Agree	1
Disagree	2
Not sure	3

19. Please state whether you agree or disagree with the following statements :

Statement: According to the Ministry of Health and Social Services' recommendation, HIV infected infants should:

19.1 Be exclusively breastfed for the first six months of life.

Agree	1
Disagree	2
Not sure	3

19.2 Continue breastfeeding with adequate complimentary food up to 24 months.

Agree	1
Disagree	2
Not sure	3

19.3 Be put on highly active antiretroviral therapy (HAART).

Agree	1
Disagree	2
Not sure	3

20 Please indicate whether you agree or disagree with the following statements regarding the practice of rooming-in in your hospital:

20.1 Mothers who have had normal deliveries and their babies stay in one room for 24 hours a day, unless separation is medically justified.

Agree	1
Disagree	2
Not sure	3

20.2 Mothers who have had caesarean section deliveries and their babies stay in one room as soon as the mothers are able to hold their babies and stay together 24 hours a day, unless separation is medically justified.

Agree	1
Disagree	2
Not sure	3

20.3 A well-baby nursery is available in this hospital for babies whose mothers prefer not to sleep with their babies in the same room

Agree	1
Disagree	2
Not sure	3

21 Which of the following advice do you give to mothers with regard to when to breastfeed their babies? **(Circle all that apply)**.

21.1	Breastfeed whenever your baby is hungry.	1
21.2	Breastfeed as often as your baby wants.	2
21.3	Wake up your baby when your breasts become too full.	3
21.4	Other (Please specify): ……. …… ……	4

22 Which of the following methods are used in this hospital when feeding babies with <u>expressed breast milk</u>?

Cups	1
Bottles	2
Other (Please specify)……..	3

23 Which of the following methods are used in this hospital when feeding babies with <u>infant formula</u>?

Cups	1
Bottles	2
Other (Please specify)……...	3

24 Please indicate whether you agree or disagree with the following statements regarding the advice on the use of dummies in this hospital:

24.1 Mothers are advised not to give dummies to their breastfeeding babies.

Agree	1
Disagree	2
Not sure	3

24.2 Mothers are advised not to give dummies to their babies even if they are feeding them with infant formula.

Agree	1
Disagree	2
Not sure	3

25 Has this hospital established a community-based breastfeeding support group?

Yes	1	
No	2	go to Q 27
Don't know	3	go to Q 27

26 What is the link between this hospital and the community-based breastfeeding support group? **(Circle all that apply**).

26.1	Membership comprises of both health workers and community members.	1
26.2	The hospital staff provides training to the community-based breastfeeding support group on breastfeeding management.	2
26.3	The hospital staff refers mothers to the community-based breastfeeding support group upon discharge	3
26.4	The hospital staff updates the community-based breastfeeding support group on new development on breastfeeding recommendations.	4
26.5	Members of the community-based breastfeeding support group visit the hospital to counsel mothers on breastfeeding management	5

27 Does this hospital have a baby-friendly corner where staff can attend to their babies' feeding needs?

Yes	1	
No	2	go to Q 29
Don't know	3	go to Q 29

28 How does staff who are breastfeeding mothers use the baby-friendly corner? **(Circle all that apply).**

28.1	To express breast milk during breaks.	1
28.2	To store breast milk for their babies who are left at home.	2
28.3	To breastfeed their babies during lunch or tea break.	3
28.4	To rest during tea of lunch breaks.	4

29 Any other comments you wish to make regarding the implementation of the Baby and Mother Friendly Initiative in this hospital?

……
……
……
……
……
……

I thank you for taking time to participate in this study.

ANNEXURE G

REQUEST TO VALIDATE GUIDELINES

10 November 2015

Dear sir/madam

REQUEST FOR VALIDATION OF THE GUIDELINES TO STRENGTHEN THE IMPLEMENTATION OF THE BABY AND MOTHER FRIENDLY PROGRAMME IN NAMIBIA (BMFI).

The attached guidelines were developed based on the findings of the study on the evaluation of the BMFI. The study was conducted as part of the fulfilment of the requirements for the degree of D Litt et Phil degree at the University of South Africa.

This letter serves to request your assistance to validate the guidelines in your capacity as an expert in the field of nursing, nursing and health management, nutrition and health or nursing education. Please indicate whether the guidelines conform to the following criteria by answering the following questions. Feel free to attach extra notes if the space provided is not sufficient. Kindly return the comments at your earliest convenience but not later than **20 November 2015**.

Clarity: Are the guidelines clearly formulated? Please tick: Yes/No

Comments:

_____
_____
_____
_____
_____

Comprehensiveness: Are the guidelines complete? Do they cover all the themes identified in the study? Please tick: Yes/No

Comments:

_____
_____
_____
_____
_____

Credibility: Do the guidelines address what is indicated by the themes. Do they have relevance to the study? Please tick: Yes/No

Comments:

_____
_____
_____
_____
_____

Applicability: Are the guidelines appropriate for application? Please tick: Yes/No

Comments:

_____
_____
_____
_____
_____

Adaptability: Can the guidelines be adapted to the situation at hand? Please tick: Yes/No

Comments:

_____
_____
_____
_____
_____

Validity: Can the guidelines be accepted as valid for their purpose? Please tick: Yes/No

Comments:

_____
_____
_____
_____
_____

Yours sincerely

Justina Amadhila

Cell number: +264811273551

E-mail: penda@mweb.com.na

ANNEXURE H

REQUEST FOR APPROVAL BY HEALTH DIRECTORATE TO CONDUCT A STUDY

National Directors
Regional Directors
Medical Superintendents
Medical Officers
Nurse Managers
Ministry of Health and Social Services

Dear Dr/Madam/Sir

REQUEST FOR APPROVAL TO CONDUCT A STUDY

I am registered with the University of South Africa (UNISA) for the D Litt et Phil degree. The title of my thesis is *"Evaluation of the implementation of the baby and mother friendly initiative (BMFI) in Namibia".*

The aim of the study is to conduct an evaluation research on the implementation of the BMFI in Namibia in order to identify its successes and failures, as well as to develop guidelines for the strengthening of the programme.

This letter serves to request for approval to conduct interviews with chief heath programme officers for nutrition programme and nurse managers in charge of the Baby and Mother friendly Hospitals in your respective directorates and hospitals. Kindly submit the names with contact details by the e-mail below.

All information will be treated confidential and only used for the purpose of the study.

Herewith attached, please find copies of approval to conduct the study from UNISA and the Ministry of Health and Social Services.

I thank you for your favourable response.

Yours sincerely

Ms. Justina Nelago Amadhila

PO Box 50324, Bachbrecht

Tel/Fax 061 221693/ 0811273551

E-mail: penda@mweb.com.na

ANNEXURE I

REQUEST FOR ASSISTANCE TO APPOINT A COORDINATOR FOR COLLECTION OF STUDY QUESTIONNAIRES

Regional Directors
24 March 2015

Dear Dr/Madam/Sir

REQUEST FOR ASSISTANCE TO APPOINT A COORDINATOR FOR COLLECTION OF STUDY QUESTIONNAIRES: *"EVALUATION OF THE IMPLEMENTATION OF THE BABY AND MOTHER FRIENDLY INITIATIVE (BMFI) IN NAMIBIA".*

I am registered with the University of South Africa (UNISA) for the D Litt et Phil degree. I was granted approval from UNISA, the Ministry of Health and Social Services and your respective offices to conduct the above-mentioned study (see attached copies of letters of approval).

This letter serves to request your good offices to kindly appoint coordinators to assist with the distribution, collection and returning of completed questionnaires. The questionnaires will be sent to the appointed coordinators by Namibia Post (NAM POST) courier. Further information will be shared with the nominated coordinators.

Kindly e-mail the nominated candidates' names, e-mail and cell numbers to the e-mail below at your earliest convenience.

I thank you for your favourable response.

Yours sincerely,

Ms Justina Nelago Amadhila

PO Box 50324, Bachbrecht

Tel/Fax 061 221693/ 0811273551

E-mail: penda@mweb.com.na

ANNEXURE J

TIME TABLE AND BUDGET FOR THE STUDY

Week	Region	Kilometres	Number of interviews	Number of nights	Meals & accommodation
1	Hardap	1000	2(one pilot)	3	**N$ 900**
2	Khomas	Home town	2		**Home town**
3	Karas	1658	3	4	**N$ 1,200**
4	Omaheke	398	1	1	**N$ 350**
5	Otjozondjupa	1080	4	5	**N$ 1,500**
6	Kunene	1500	3	5	**N$ 1,500**
7	Erongo	800	4	6	**2,400**
8	Kavango East & West	1350	4	6	**N$ 1,200**
9	Oshikoto	800	1	2	**N$ 750**
10	Ohangwena	320	3	6	**N$ 2,100**
11	Oshana	60	1	1	**N$ 400**
12	Omusati	200	4	4	**N$ 1,400**
13	Zambezi	Air ticjket	1	2	**N$ 3,464**
Total meals and accommodation					**N$ 16,264**
Total kilometres 9157, fuel price/litre 9.50N$ Fuel consumption: 5,7litre/100km **Total fuel price**					**N$ 4,958.51**
Namibia post courier bags 62 at N$ 50.00 per bag					**N$ 3,100**
Registration fee 10% annual increase					**N$ 79,300**
Notepad					**N$ 7,000**
Service of a statistician and editor					**N$ 20,000**
Grand total					**N$ 130,622.51**

ANNEXURE K

EDITOR'S LETTER

CERTIFICATE OF EDITING – MJ MARCHAND

PO Box 35430
MENLO PARK
0102
Tel/Fax: (012) 460 5727
Cell 082 343 0325
E-mail: marchm@iafrica.com

14, Twenty First Street
MENLO PARK
Pretoria
0081
6 July 2017

To whom it may concern:

I certify that I am a professional, experienced and accredited editor and that I have edited the D Litt et Phil dissertation in Health Studies entitled "Evaluation of the implementation of the baby and mother friendly initiative in Namibia", by Justina Nelago Amadhila

I have edited the dissertation for clarity, correctness and flow of language and expression. I have also checked the references to the best of my ability.

The dissertation left my hands on 6 July 2017.

Marion J Marchand
BA, H Dipl Lib, HED,
Postgraduate Certificate in Editing UP; Accredited Translator (Afrikaans to English) and English Editor, South African Translators' Institute, Member of the Professional Editors' Guild; Member of the English Academy