

**KNOWLEDGE AND PRACTICES OF PRIMARY HEALTH CARE WORKERS
RELATED TO THE IMPLEMENTATION OF THE REVISED INFANT AND YOUNG
CHILD FEEDING POLICY 2013 IN BLOUBERG MUNICIPALITY, CAPRICORN
DISTRICT, LIMPOPO PROVINCE**

BY

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MINI-DISSERTATION

Submitted in partial fulfilment of the requirements for the degree of

MASTERS OF PUBLIC HEALTH

In the

FACULTY OF HEALTH SCIENCES

(School of Public Health)

At the

UNIVERSITY OF LIMPOPO

SUPERVISOR: PROF. LINDA SKAAL

2015

DECLARATION

I, Mphasha Mabitsela Hezekiel, declare that KNOWLEDGE AND PRACTICES OF THE PRIMARY HEALTH CARE WORKERS RELATED TO THE IMPLEMENTATION OF THE REVISED INFANT AND YOUNG CHILD FEEDING POLICY 2013 IN THE BLOUBERG MUNICIPALITY OF THE CAPRICORN DISTRICT, LIMPOPO PROVINCE is my own original work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

Mphasha Mabitsela Hezekiel

Date

DEDICATION

This research work is dedicated to the following persons:

- My parents (Matladi and Machoene), siblings (Rebina, Mohlatlego, Moyahabo, Josephina, Matome, Tumishi and my late sister Lengoko), and grandchildren (Khomotso, Mamasedi, Moyahabo and Lengoko).
- Dieticians, nurses and all health care professionals involved in infant feeding and care.
- Mothers and guardians appropriately feeding infant and young children.

ACKNOWLEDGEMENTS

I want to thank the following for their contribution to this research project:

- The Almighty God and my ancestors for giving me life, strength, guidance, wisdom and protection.
- Special thanks to my supervisor Prof. L. Skaal for her support, encouragement and guidance throughout all stages of this research project.
- My family for their unconditional love, support and encouragement.
- Ms Nereen Mosena for helping in putting the proposal together and throughout the conduct of this research.
- Mr Khuliso Ravhuhali for guidance and contribution.
- My MPH classmates for critiquing this work during presentations.
- My MPH lecturers (Prof L. Skaal, Mr P. Kekana, Mr F. Matlala, Dr N. J. Ramalivhana, Dr M. S. Nmutandani and the late Dr R. Mamabolo) for guidance, support, encouragement. To a certain extent you all supervised my work. Thank you.
- The secretary in the Department of Public Health (Ms M. Makofane) for facilitating communication for the realization of this research project.
- University of Limpopo librarians, particularly Mr Arnold Thwala for assisting with articles.

- School of Health Science Senior Degrees Committee for recommendations, guidance and encouragement.
- Turfloop Research Ethics Committee and the Department of Health in Limpopo Province for giving me permission to conduct the study.
- All nurses who voluntarily participated in this study.
- The Health and Welfare Sector Education and Training Authority (HWSETA) for sponsorship.
- My undergraduates research team (Arthur, Johana and Rosslyne) and the supervisor (Mrs M. Bopape) for stimulating my love for research.
- My former lecturers at the Department of Nutrition (Ms S.H.M. Makuse, Ms M.E. Rapetsoa, Mrs M.M. Bopape, Mrs D.A. Rabodiba, Mr W Mokoena, Ms D.M.R. Tleane and Mrs S.S. Howard) for guidance and making me realize my potential.

ABSTRACT

Background: The revised Infant and Young Child Feeding Policy (IYCFP) 2013 encourages HIV-positive mothers to also exclusively breastfeed for six months, and to continue breastfeeding for a year with introduction of appropriate complementary feeding, while their children receive antiretroviral treatment. The aim of this study was to determine knowledge and practices of the Primary Health Care Workers (PHCWs) related to the implementation of the revised IYCFP 2013 in the Blouberg Municipality of Capricorn District, Limpopo Province. **Methods:** A quantitative descriptive study was conducted on 103 PHCWs. The questionnaire was closed ended. The questionnaire was developed based on the contents of the revised IYCFP 2013. A simple random sampling technique was used to sample nurses irrespective of the category. Data were analyzed through SPSS Software v23.0. **Results:** Most participants were females (91.3%), category were Professional Nurses (44.7%), aged between 31 and 40 years (44.7%) and also mostly worked for >10 years (56.3%). The results revealed that 97.1% of the participants have good knowledge about infant and young child feeding, 68% of participants were not trained on the revised IYCFP 2013, resulting to only 32% of participants having a good practice of this policy. Also 44.7% of the participants reported that they were not aware if clinics had a copy of this policy. The results further revealed that 92.2% of the participants reported that clinics still receive, keep and issue infant formula to HIV positive mothers, which maybe the reason the dieticians still receive requests for Infant Formulas to be delivered to HIV-positive mothers. **Conclusion:** There is a need for monitoring and evaluation to ensure availability and

implementation of the revised IYCFP 2013; and also the need for in-service training on this policy in order to improve the capacity to implement the revised IYCFP 2013.

Key Concepts

Revised IYCFP 2013; knowledge; practice; implementation; PHCWs; infant and young child feeding.

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ABBREVIATIONS

AIDS – Acquired Immunodeficiency Syndrome

ARV – Antiretroviral

DOH – Department of Health

EBF – Exclusive Breastfeeding

HCW – Health Care Workers

HIV – Human Immunodeficiency Virus

IYCF – Infant and Young Child Feeding

IYCFP – Infant and Young Child Feeding Policy

PHC – Primary Health Care

PHCWs – Primary Health Care Workers

SA – South Africa

WHO – World Health Organization

DEFINITION OF CONCEPTS

Revised Infant and Young Child Feeding Policy – for the purposes of this study, the revised Infant and Young Child Feeding Policy (IYCFP) is the policy reviewed and adopted in 2013 by the Department of Health in South Africa. This policy phased out the provision of infant formulas in support of breastfeeding, particularly exclusive breastfeeding for six months and beyond by HIV-positive mothers.

Breastfeeding - is when the child is receiving breast milk directly from the breast with sucking episode that lasts two minutes or longer or receiving breast milk (WHO, 2001).

Complementary feeding - is the introduction of any foodstuff, whether liquid, solid or semi-solid, given to an infant after the age of 6 months as part of the transitional process during which an infant learns to eat food appropriate for his or her developmental age while continuing to be breastfed with commercial formula (Department of Health (DOH),2013).

Exclusive breastfeeding - is when the infant is receiving breast milk only and no other liquids including water, with the exception of medicines, vitamin drops or syrups and mineral supplements (WHO, 2001).

HIV-positive - refers to the people who have taken HIV test whose results have been confirmed positive and who know their result (DOH, 2013).

Infant - is a new born baby till twelve (12) months of age (DOH, 2013).

Infant formula - is a formulated product specially manufactured in accordance with the applicable Codex standard to satisfy, by itself, the nutritional requirements of infants

during the first months of life up to the introduction of appropriate complementary foods (DOH, 2013). For the purposes of this study, infant formula is the milk which is not supposed to be used as breast milk substitute by HIV-positive mothers to feed their infants.

Mother to child transmission - is the transmission of HIV-positive woman, during pregnancy, delivery or breastfeeding, to her infant (DOH, 2013).

Primary Health Care Workers – for the purposes of this study, Primary Health Care Workers are registered nurses with Nursing Council working in the clinics, and are supposed to be the implementers of the revised IYCFP.

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1. Introduction

This study sought to determine knowledge and practices on the implementation of revised Infant and Young Child Feeding Policy (IYCFP) 2013. This chapter presents background information on this policy, and further outlines the problem statement, significance, research questions, aim, and objectives of the study.

1.2. Background information

The revised IYCFP 2013 protects, promotes and supports optimal infant and young child feeding practices, particularly breastfeeding. The HIV positive mothers are encouraged to breastfeed exclusively for six months and to continue breastfeeding with introduction of appropriate complementary feeding until one year, while their children are receiving antiretroviral (ARV) treatment (Department of Health (DOH), 2013). Optimal infant and young child feeding practices are essential to the children's health, growth, development, nutritional status and protects against illnesses and mortality (Sinhababu et al., 2010). Promotion of optimal infant feeding assists in the prevention of childhood obesity and related health problems (Eckhardt, Lutz, Karanja, Jobe, Maupomé and Ritenbaugh, 2014).

The revised IYCFP 2013 is based on the World Health Organization's (WHO, 2010a) guidelines which indicate that HIV-positive mothers should exclusively breastfeed their infants for the first six months of age, and continue breastfeeding until 12 months of life

with the introduction of appropriate complementary foods regardless of their babies' status, while babies are receiving ARVs to reduce HIV transmission through breastfeeding.

The Tshwane Declaration, which support breastfeeding and encourages exclusive breastfeeding by HIV-positive mothers, was adopted by the DOH in 2011. The Tshwane Declaration phased out the provision of infant formulas to HIV-positive mothers at the health facilities (DOH, 2011). The revised IYCFP 2013 replaced the 2007 IYCFP, which discouraged HIV positive mothers to exclusively breastfeed their infants for fear of mother to child transmission of HIV.

Australian Institute of Health and Welfare (2014) considers Primary Health Care (PHC) as the first health service visited by patients with a health concern. The healthcare workers at the PHC are expected to render services such as health promotion, illness prevention, antenatal and postnatal care including the protection, promotion and support of breastfeeding guided by the revised IYCFP 2013. According to DOH (2014), Nurses dominate the professional staff at the PHC level; however, Dieticians and other Allied Health Professionals are gradually getting employed on a full-time basis at the PHC facilities.

According to Brynard (2009), there are various factors influencing the successful implementation of the policies. They include value of training, cooperation, and commitment of the policy implementers to the policy. In the implementation of the health policies such as infant and young child feeding policy, health care workers are policy

implementers, and the clinic staff are regarded the major source of infant feeding information (Kassier and Veldman, 2013).

1.3. Problem statement

Exclusive breastfeeding refers to the provision of breast milk only to infants for the first six months of age (Lutter, 2013). The revised IYCFP 2013 phased out the provision of infant formula, and HIV-positive mothers are encouraged to exclusively breastfeed their infants for the first six months and beyond while infants are receiving ARVs (WHO, 2010). This was adopted and policy was circulated to all government health institutions in 2013. Prior to the adoption of the revised IYCFP 2013, the IYCFP 2007 discouraged HIV-positive mothers to exclusively breastfeed their children for fear of mother to child transmission of HIV, and provided that HIV-positive infants should receive free infant formula from the health facilities.

Kassier and Veldman (2013) highlighted that health care workers are responsible for the implementation of health policies such as infant and young child feeding, therefore nurses (Primary Health Care Workers (PHCWs)) and dieticians implement the revised IYCFP 2013. However, it is a concern that dieticians get referrals from the PHCWs for supply of infant formula, which is to be delivered to HIV-positive mothers. Also, HIV positive mothers still consult Dietetics Department requesting infant formulas. This then raised a concern as to why the dieticians are still receiving these requests for infant formulas, especially from the healthcare workers, who are supposed to be the drivers of this new policy which promotes exclusive breastfeeding.

1.4. Significance of the study

This study about knowledge and practices of the PHCWs related to the implementation of the revised IYCFP 2013 is important because it identifies strengths and weaknesses in the implementation. In addition, the study outlines areas needed to be attended to by policymakers. The study enhances knowledge related to the implementation of the revised IYCFP 2013 and also highlights the strategies for the successful implementation of this policy.

1.5. Research Question

What is the knowledge and practices of the Primary Health Workers related to the implementation of revised infant and young child feeding policy 2013?

1.6. Aim of the study

The aim of this study is to determine knowledge and practices of Primary Health Care Workers related to the implementation of the revised Infant and Young Child Feeding Policy 2013 in the Blouberg Municipality of Capricorn District, Limpopo Province.

1.7. Objectives of the study

- To determine socio-demographic profile of Primary Health Care Workers (PHCWs) related to the implementation of the revised Infant and Young Child Feeding Policy (IYCFP) 2013.
- To describe knowledge of PHCWs related to the implementation of the revised IYCFP 2013.

- To identify practices of PHCWs related to the implementation of the revised IYCFP 2013.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature review on the different strategies in implementing infant and young child feeding practices or policy. It also provides an overview of the revised Infant and Young Child Feeding Policy (IYCFP) 2013, WHO's perspective on breastfeeding.

2.2 Revised Infant and Young Child Feeding Policy 2013

The IYCFP 2007 discouraged HIV-positive mothers to exclusively breastfeed their infants for fear of mother to child transmission of HIV. According to this policy, HIV-positive mothers were provided with free infant formulas at health facilities as part of prevention of Mother to Child Transmission (MTCT) programme in South Africa (DOH, 2007). The IYCFP 2007 further indicated that HIV-positive mothers should meet the AFASS (Acceptable, Feasible, Affordable, Sustainable and Safe) criteria which implies that the mother or guardian should reliably provide sufficient infant formula exclusively using safe water and prepare it hygienically (DOH, 2013). Human Sciences Research Council (HSRC) (2010) reported that infant formula which the IYCFP 2007 promoted, helped in the prevention of HIV transmission; however, it deprived infants the benefits of breast milk which included reduction of chronic diseases later in life (Lutter, 2013).

According to WHO's (2010a) recommendations, a combination of exclusive breastfeeding and use of ARV treatment by infant reduces the risk of mother to child transmission. The DOH further adopted the Tshwane Declaration which promoted exclusive breastfeeding by HIV-positive mothers and later was annexed in the revised

IYCFP 2013. The IYCFP was reviewed and adopted in 2013. The revised IYCFP 2013 protects, promotes and supports breastfeeding, and optimal infant and young child feeding practices. HIV-positive mothers are encouraged to breastfeed exclusively for six months and to continue breastfeeding with introduction of appropriate complementary feeding until one year, while children receiving antiretroviral (ARV) treatment (DOH, 2013). The revised IYCFP 2013 replaced IYCFP 2007. The revised IYCFP 2013 phased out the provision of free infant formula to HIV-positive mothers at the health facilities. This revised policy helps in lowering the risk of obesity by promoting breastfeeding, which improves appetite regulation (Eckhardt et al., 2014).

2.3 WHO's perspective on breastfeeding

The latest WHO's perspective (WHO, 2010a) encourages HIV-positive mothers to exclusively breastfeed their infants for the first six months, and thereafter continue breastfeeding until 12 months of life with the introduction of appropriate complementary foods regardless of their babies' status, while infants receive ARVs to reduce HIV transmission through breastfeeding. The previous WHO's perspective (WHO, 2006) discouraged HIV-positive mothers to breastfeed for fear of mother to child transmission of HIV.

2.4 Policy implementation

Policy implementation is the translation of the goals and objectives of a policy into an operating and on-going programme (Noruzi and Irani, 2011). Policies when implemented, may not achieve the intended outcomes, therefore it is important to

assess policy implementation since such a practice promotes accountability, enhances effectiveness, and fosters equity and quality (Bhuyan et al., 2010).

2.5 Knowledge of infant and young child feeding

2.5.1 1000 days of life

According to Du Plessis (2013), the 1,000 days between a woman's pregnancy and her child's 2nd birthday is critical and when optimal nutrition is provided, it will enhance growth, nutritional status, health and development of the child. The first two years of life requires adequate infant and young child feeding to support rapid physical, cognitive and social development of the child and also to reduce morbidity and mortality (Mondal et al., 2013).

2.5.2 Antenatal care

Antenatal Care (ANC) refers to the health care of pregnant women in all the stages of pregnancy before giving birth, and the ANC should be provided by health care professionals; emphasizing on promoting healthy dietary intake and weight management during pregnancy (Garnweidner and Pettersen, 2012). Women's nutritional need increases during pregnancy, and proper nutrition is essential at all the stages of pregnancy. To achieve optimal health, nutritional supplementation of folate, iron and multi-vitamin should be provided to all pregnant women (Mahan, Escott-Stump, Raymond and Krause, 2012). Zhang and Ning (2011) point out that unfavourable maternal weight and nutritional status may increase the risk of adverse health outcomes during pregnancy such as gestational diabetes mellitus.

2.5.3 Breastfeeding

Breastfeeding is when the baby is provided with breast milk along with any food or liquid including non-human milk and formula. In addition to initiation of exclusive breastfeeding, it is recommended that breastfeeding continues concurrently with the introduction of complementary feeding, until the age of 24 months (WHO, 2011).

2.5.3.1 Concept of exclusive breastfeeding

Exclusive breastfeeding happens when breast milk is provided to the infant as the sole source of nutrition with no other liquids (including water) or food given, except for oral rehydration solution, drops, syrups (vitamins, minerals, or medicines) (Lutter, 2013). The American Academy of Paediatrics (2012) recommends exclusive breastfeeding for six (6) months, with continuation of breastfeeding for 1 year or longer as desired by the mother and infant. Breast milk is best and meets all nutritional requirements of the babies alone for six months (Radaelli, Riva, Verduci, Agosti and Giovannini, 2012). The needs for water, energy, protein, calcium and many other nutrients can be met by exclusive breastfeeding for 6 months, and there is no need to offer the child anything except breast milk before this period (European Food Safety Authority, 2009). The DOH (2011) promotes, protects and supports exclusive breastfeeding, and further encourages HIV-positive mothers to also exclusively breastfeed for six months, while their infants receive ARV treatment for the prevention of MTCT.

2.5.3.2 Benefits of exclusive breastfeeding and breastfeeding

Exclusive breast milk protects infants against short term illnesses such as gastroenteritis, respiratory infection and under nutrition, while the long term benefits include protection against chronic diseases such as type 2 diabetes, hypertension and obesity amongst others (Khanal, da Cruz Jonia, Nunes, and Rajendra, 2014). Promotion of exclusive breastfeeding helps in reducing the mortality rate amongst infants, since according to Agampoli et al. (2007), non-exclusively breastfed infants have more chances by more than two-fold, of dying at the age of 0-5 months, due to diarrhoea and pneumonia.

Breast milk provides proteins and energy as well as micronutrients such as vitamins A, C, and B-12, and folate and copper, which are needed by the infant. Breast milk is also beneficial because of its immunological and anti-infective factors and also promotes healthful gastrointestinal microbiota (Young et al., 2011). Breast milk has compounds such as α -tocopherol, β -tocopherol and prolactin which help in degrading inflammatory compounds, increase immune function and also decrease the sensitivity of infants (Lien and Goldman, 2011). In addition, breast milk saves money, since breast milk is not for sale (Khanal et al., 2014). Infants who are not breastfed are 6 to 10 times more likely to die in the first months of life than infants who are breastfed (Saxena and Kumari, 2014). Breastfeeding improves appetite regulation, thereby lowering the risk of obesity (Eckhardt et al., 2014). It also assists in the reduction of chronic diseases in the long term (Lutter, 2013). Further, breast milk alone meets all nutritional requirements of the babies for six months (Radaelli et al., 2012).

2.5.3.3 Factors affecting practice of exclusive breastfeeding

There are various factors influencing the practice of exclusive breastfeeding. They include maternal characteristics such as lack of information, occupation, health condition and age (Senarath et al., 2012); despite that breast milk alone meets all the babies' nutritional requirements for six months (Radaelli et al., 2012). The infant illness and cultural practices such as initiation of breastfeeding, time of introduction of complementary feeding can also influence negatively the practice of exclusive breastfeeding because some people introduce complementary food at the age of 3 months (Khanal et al., 2014).

2.5.3.4 HIV and infant feeding

A study by Magoni et al. (2005) in Uganda indicated that risk of HIV transmission through breast milk is the highest during the first months of life, especially soon after delivery. Breast milk viral load spike with rapid cessation of breastfeeding, though it is not associated with increased transmission or adverse outcomes in the infant, but there is biological plausibility that it may have detrimental effect on the infant (WHO, 2010a). The breast milk viral load may increase due to an association breast engorgement that occurs a few days after delivery and the onset of lactation. Initiating breastfeeding after cessation may significantly increase the risk of HIV transmission among HIV exposed infants (Zunza et al., 2011). The latest study by WHO (2010b) indicates that exclusive breastfeeding and the use of ARV treatment by either the mother or the child, lowers the risk of MTCT to only 2% compared to estimated 14-17% in breastfed infants without ARV treatment. Therefore, HIV-positive mothers are encouraged to exclusively

breastfeed their infants for the first 6 months of age, and continue breastfeeding until 12 months of life with the introduction of appropriate complementary foods regardless of their babies' status, while babies receive ARVs to reduce HIV transmission of mother to child (WHO, 2010a). The WHO recommendations further indicate that breastfeeding should only stop when the mother can provide nutritionally adequate and safe diet without breast milk. HIV transmission through breastfeeding is dependent on the duration and pattern of breastfeeding, including maternal health (Mkontwana et al., 2013).

2.5.3.5 Steps to successful breastfeeding

The following ten (10) steps to successful breastfeeding were developed in support, protection and promotion of breastfeeding (Marais et al., 2010; Lutter, 2013):

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

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

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

Step 4: Help mothers to initiate breastfeeding within half an hour of birth.

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

Step 6: Give new born infants only breast milk; give milk feeds and water only if medically indicated.

Step 7: Practise rooming-in; allow mothers and infants to remain together 24 hours a day.

Step 8: Encourage breastfeeding on demand.

Step 9: Do not give any artificial teats or pacifiers (dummies or soothers) to breastfed infants.

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

2.5.3.6 Complementary feeding

At the age of six months, infants should receive complementary feeding, since breast milk alone no longer meets the nutritional needs of the baby (Schiess, 2010). The weaning process, which involves the introduction of solids into the infant's diet from only breast milk or infant formula, should be done gradually and based on infant rate of growth and development. Weaning foods should be carefully chosen to complement the nutrient needs of the infant, promote appropriate nutrient intake and maintain growth (Mahan et al., 2012). Complementary foods which are rich in micronutrients can help in reducing micronutrients deficiencies amongst infants and young children (Singh et al., 2010). Improving the quality of complementary foods is the most cost-effective strategy for improving health and reducing morbidity and mortality in infants and young children (Krebs and Hambidge, 2007).

2.6 Practices related to the implementation of infant and young child feeding

2.6.1 Process of policy implementation

In ensuring successful policy implementation, the aim of policy implementation should be well outlined. The government adopted successful policy implementation as a strategy to achieve the intended policy outcomes (Brynard 2009). There are two different theoretic models of policy implementation which are a top-down approach which emphasizes the faithfulness with which implementation adheres to the policymakers' intentions and bottom-up approach which argues for local implementers to adapt policy strategies to meet local needs and concerns. There is also principal-agent theory which emphasise that decision makers delegate responsibility for the implementation of their policies to their officials (Buse et al., 2005).

2.6.2 Factors influencing successful policy implementation

Human Resource: The global shortage of health workers is at 4.3 million, however SA is better than most of the African and Asian Countries (WHO, 2006). Sufficient and equitable distribution of health care workers including skill development is essential in providing proper care and implementing policies. Primary care in South Africa is overwhelmingly staffed by nurses of various categories such as professional, enrolled and auxiliary nurses who are supported by some clerical and general workers (Lehmann, 2008). The clinic staffs are major source of infant feeding information, since women utilize clinic facilities during antenatal and postnatal care (Kassier and Veldman, 2013).

Commitment: Commitment of everyone involved in the implementation of the policy is warranted and should be consistently demonstrated from its inception till results are produced (Brynard, 2009). The study by Keurhorst et al. (2014), reported that general practitioners (GPs) demonstrating positive role and commitment to their work, manage patients with alcohol related problems better than GPs who neither have positive role nor commitment.

Value of training: The policy once developed should be translated into practice and policy implementers should be trained and educated about the policy, which will help in delivering expected policy outcomes, because they will understand it better (Orem et al., 2013). Despite breastfeeding being natural, it is also an art to be learned by both mother and baby; skills on how to hold and position a baby at the breast, how to achieve an effective latch, and other breastfeeding techniques may need to be taught (United States Department of Health and Human Services, 2011). The health care workers working in maternity care require in-depth breastfeeding knowledge and skills and lactation management because mothers often identify health professional support as the most important intervention, therefore well trained HCWs on nutrition will improve child health, particularly nutrition status (Sunguya et al., 2013).

Public/private partnerships: It is when public and private form partnership and establish relationships with communities to influence policy decisions; and the partnership is essential for policy implementation since it will assist in adequate mobilization of financial, institutional, technical and human resource skills needed in the initiative (Brynard, 2009). Partners contribute their expertise and knowledge for the benefit of the community (Mirzoev et al., 2012).

Role of the policy implementers: Policy implementers are those responsible to put policy into action, and health care workers are the health policy implementers (Kassier and Veldman, 2013). Individual practitioners together with their colleagues decide what treatment or services to offer in line with the policy (Nilsen et al., 2013). Policy implementers should be trained and educated about the policy, so that they understand their role in the implementation; this will help in delivering expected policy outcomes (Orem et al., 2013).

Workplace and Child Care: Support for breastfeeding in the workplace involves several types of employee benefits and services including developing corporate breastfeeding policies, providing designated private space for women to breastfeed or express milk, giving mothers options for returning to work such as teleworking, and offering professional lactation management services and support (Centre for Disease Control and Prevention, 2013). Integrated Child Development Scheme including crèches should be opened within working areas as an essential service to support working mothers to breastfeed (Gupta et al., 2010).

2.6.3 Implementation of infant and young child feeding in Sri Lanka

Breastfeeding is an acceptable and praised behaviour in Sri Lanka's culture. The national infant feeding policy guidelines in Sri Lanka recommended six months exclusive breastfeeding since 2005 (Agampodi et al., 2007). The Department of Census and Statistics in collaboration with the Ministry of Health Nutrition and Welfare (2002) indicates that breastfeeding initiation rates in Sri Lanka is almost 100% and 54% of mothers practise exclusive breastfeeding up to four months and not six months as

recommended. The change in breastfeeding recommendations from four to six months has not penetrated to the ground, hence the data about exclusive breastfeeding for six months is scarce, and a study conducted in Colombo by Bundusena (2003) highlights that none of the participants were practising exclusive breastfeeding for six months. Translation of the policy into action would need immense planning and strong implementation, since it is influenced by various factors including commitment, role of implementers and cooperation (Brynard, 2009).

2.6.4 Implementation of infant and young child feeding in Botswana

The Ministry of Health in the Republic of Botswana (2012) reported that 30.4% of pregnant women are living with HIV and that the country also registered a total decline of 78% between 2001 and 2009 in the number of children less than 15 years newly infected with HIV from 4,082 in 2001 to 1,074 in 2007 and 886 in 2009. The Government of Botswana's (GOB) (2012) report indicated that the death rate of children less than 15 years due to advanced AIDS has declined over the 8 year period. The Botswana MDG Status Report (2010) estimates that over 90% of HIV infected pregnant women received Prevention of mother to child transmission (PMTCT) services which assisted in this decline.

There were no tangible policy changes in Botswana between 1998 and 2006 to reduce national levels of mother to child transmission, before the introduction of PMTCT pilot programmes in 1999, the national infant feeding policy supported avoidance of breastfeeding and provision of free infant formula to HIV positive mothers (GOB, 2012). In 200, the Ministry of Health in Botswana highlighted that promotion of formula feeding

for HIV positive mothers influenced practices of uninfected women and those with unknown HIV status. The GOB changed its national infant feeding guidelines in July 2006 after diarrheal outbreak to be consistent with WHO 2006 guidelines, and PMTCT training package for health workers was developed. The spill-over of infant formula feeding from PMTCT mothers to non-PMTCT mothers remained a challenge within the country (Amibor and Ade, 2013).

2.6.5 Implementation of infant and young child feeding in South Africa

According to Tomlinson et al. (2011), South Africa has the highest number of people living with AIDS of which 30% are pregnant women and require appropriate care with their children. Despite health benefits of exclusive breastfeeding, EBF is rarely practised in South Africa, and the national rates are estimated at 6.8-8.3%, with other fluids and food included in the infant nutrition leading to increased infant and child mortality rates (Goosen et al., 2014).

The DOH in South Africa adopted the Tshwane Declaration which supports and encourages HIV-positive mothers to also exclusively breastfeed their infants for six months, while infants receive ARV treatment (DOH, 2011). The Tshwane Declaration further phased out the provision of free infant formulas at health facilities as it was encouraged by IYCFP 2007, this led to the revision of this policy which only recommended infant formula in the event of maternal death and/or medical reasons, prohibiting mothers to exclusively breastfeed (DOH, 2013). Also foodstuffs labelling and advertising regulations for infants and young children including were reviewed to discourage marketing of breast milk substitutes in the health facilities (DOH, 2012).

2.6.6 Implementation of infant and young child feeding in Limpopo Province

Prior to IYCFP revision, the Limpopo DOH discouraged HIV-positive mothers to breastfeed for fear of MTCT of HIV (HSRC, 2010). The department kept and distributed infant formulas to health facilities to issue to HIV-positive mothers (DOH, 2007). After the IYCFP was revised in 2013, which supports, promotes and protects breastfeeding, the department adopted and implemented the revised IYCFP (DOH, 2013). The department encourages HIV-positive mothers to exclusively breastfeed their infants while infants receive ARV treatment (WHO, 2010a). The department no longer keeps and distributes infant formulas to health facilities to issue to HIV-positive mothers, as it is required by the revised policy (DOH, 2011). The nutrition directorate in the Limpopo DOH is responsible for ensuring the successful implementation of this policy by training other healthcare workers on this policy which promotes exclusive breastfeeding. As Kassier and Veldman (2013) indicate healthcare workers are the drivers of this policy. According to the Limpopo Nutrition Directorate (2015), the department is still in the process of embarking on the survey to determine the EBF rates in the province.

2.6.7 Implementation of infant and young child feeding in Capricorn District

All the districts in Limpopo Province including Capricorn are committed to promoting, supporting and protecting breastfeeding as it is required by the revised policy (DOH, 2013). The district encourages HIV-positive mothers to also exclusively breastfeed for six months, while their infants are receiving ARV treatment, and until a year with the introduction of appropriate complementary feeding (WHO, 2010a). Training policy implementers about the policy helps to achieve the expected policy (Orem et al., 2013).

According to Capricorn District Nutrition Directorates (2015), they trained maternal and infant assessors who are responsible to train other health workers at various working areas about 40 hours training on infant and young child feeding based on the revised policy. Plans are also in place for district training of all non-trained health workers.

2.7 Summary

The infant and young child feeding policies and studies in South Africa, Africa and other continents were considered, and helped in synthesizing key information related to infant feeding practices and related issues. The studies generally highlighted the need to promote optimal infant and young child feeding practices, through ensuring that challenges which delay the implementation of the policies are addressed, which would result in successful implementation of infant and young child feeding policies or practices.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

In this chapter study method, design, site, population, and sampling method used to acquire participants, including data collection procedure, data analysis, measures taken to ensure validity and reliability, and ethical considerations will be discussed.

3.2. Study method

The quantitative study approach was utilized in this study. The approach was relevant in answering the research question and objectives. The present study examines knowledge and explores practices of primary health care workers (PHCWs) related to the implementation of the revised Infant and Young Child Feeding Policy (IYCFP) 2013. The quantitative study approach was used. This is the quantification of constructs, or measuring the properties of phenomena through assigning numbers to the perceived qualities of things; emphasis is placed on variables in describing and analysing human behaviour (Babbie and Mouton, 2010).

3.3. Study design

Research design is a plan or structured framework of how to conduct the research process in order to solve research problem (Babbie and Mouton, 2010). The research design used is descriptive study design, which is concerned with gathering information from a representative sample of the population (Brink et al., 2012). The descriptive design method was relevant because the researcher intended to obtain information

about knowledge and practices of PHCWs related to the implementation of the revised IYCFP 2013.

3.4. Study site

This study was conducted in all the clinics of Blouberg Municipality. Blouberg Municipality is one of the five municipalities of Capricorn District in Limpopo Province. The Blouberg Municipality has a total number of twenty-one (21) clinics. The Municipality has a population of 162 297 (Census, 2011).

3.5. Study Population

Population is a complete set of persons or objects that possess some common characteristics that is of interest to the researcher (Brink et al., 2012). The population in this study are registered PHCWs working at clinics in Blouberg Municipality, Limpopo Province. According to the Department Human Resource in Capricorn District (2014), the population is 143 PHCWs.

3.6. Study Sampling

Study sampling involves the selection of the sample that can be a group of people, events, behaviours or elements (Burns and Grove, 2012). Morgan and Krecjie (1970) chart for sample size calculation was used to determine the sample size from the population of 143, which resulted to a sample of 103. An additional 10% of sample was added to compensate for incomplete questionnaires and for participants who withdrew from the study, which resulted in 113 participants. The 10% of sample was added because it was not expected that more participants would withdraw or incompletely fill

the questionnaires, since the researcher was around to clarify any concern by participants during the completion of the questionnaire.

The simple random sampling technique was used, which implies that all elements in the population had an equal chance of being included in the sample (Brink et al., 2012). Random numbers were assigned to participants. These were generated using the computer. The clinics had no equal number of PHCWs. The number of PHCWs per clinic ranged from 4 to 9; therefore an average of 5 PHCWs was randomly sampled per clinic, and more than 5 PHCWs were also randomly sampled in clinics with more PHCWs in order to compensate for clinics with less than 5 PHCWs.

3.6.1. Inclusion criteria

3.6.1.1. All registered PHCWs working on a full-time basis at the clinics irrespective of the category.

3.6.2. Exclusion criteria

3.6.2.1. Any full-time registered PHCWs not working on child and maternal health, e.g. retired PHCWs who are re-hired to perform specific responsibilities.

3.7. Data collection

3.7.1. Data Collection Tool or Instrument

Data was collected using a close-ended questionnaire which was developed by the researcher based on the content of the revised IYCFP 2013 and used for the first time in this study, and it was administered to the participants. The questionnaire was written in English since all the participants were conversant with the language. Section A of the

questionnaire included questions on socio-demographic data, section B included questions on knowledge and section C included questions on practice of PHCWs related to the implementation of the revised IYCFP 2013.

3.7.2. Recruitment

The researcher visited all the clinics in Blouberg Municipality and also recruited participants personally from their respective clinics. The researcher informed the potential participants about the benefits of participating in the study, which includes identifying weaknesses which may negatively affect the implementation of this policy and also recommending better strategies for the successful implementation of this policy. The participants were informed that they were not forced to participate and that confidentiality was guaranteed. Those who agreed to participate were issued with consent forms and questionnaires to fill in on the spot, provided it was convenient for them and in the event it was not, appointments were scheduled.

3.7.3. Data Collection Procedure

Data were collected in the months of July to August 2015 using self-administered questionnaire developed for the first time for this study. One research assistant was trained on the data collection tool within a day. A total of 113 questionnaires which is 103 plus 10%, were distributed to sampled participants by the researcher. The researcher explained the aim and objectives of the study, questionnaire, and the ethical considerations to the participants. The participants were given questionnaires to complete which on average took 15 minutes, after they completed, the researcher and

assistant collected the questionnaires, which were checked to see if they were fully completed or not.

3.7.4. Pilot study

Pilot study refers to a small scale or dummy run of the major study (Brink et al., 2012). The pilot study which pre-tested the questionnaire was conducted at the Blouberg Health Centre within the Municipality. The pilot study was done in efforts to identify problems with the questions and to allow for clarity, relevance, completeness and consistency. Pilot study was done on 10 Nurses and the results were not included in the study; however, the results were analyzed and confirmed the reliability and validity of the questionnaire, and changes which resulted in the elimination of some questions from the original questionnaire were made.

3.7.5. Bias

Bias is an influence that produces an error or distortion, which can affect the quality of evidence in both quantitative and qualitative studies (Brink et al., 2012). The researcher can influence the responses of participants by making gestures and imposing opinions on participants was minimized by the addition of research assistant during data collection

Sampling bias is the over representation or under representation of a segment of the population, which will then impact on the purpose of the study and its validity (Polity and Beck, 2008). Sampling bias which could have occurred when only a certain category of Nurses is considered during sampling was eliminated by adhering to the simple random

sampling techniques, and by also allowing all PHCWs irrespective of category to have equal chances of being included in the study.

3.8. Validity and reliability

3.8.1. Validity

Validity is the ability of an instrument to measure the variable that it is intended to measure (Brink et al., 2012). The questionnaire was presented to the Dieticians at Helena Franz Hospital who are also experts in the infant and young child feeding, and to the Supervisor to evaluate content and face validity. The draft questionnaire was piloted to check on the relevance of each item on a separate population which was not part of the study population which consisted of different nursing categories prior data collection. Each objective had its own set of questions in ensuring that all aspects of the study are covered and the aim of the study addressed.

3.1.2. Reliability

Reliability is the consistency and dependability of a research instrument in measuring a variable, equivalence and internal consistency (Brink et al., 2012). Reliability was confirmed through the pilot study, which proved consistency and dependability of the questionnaire.

3.9. Data Analysis

The first phase of data analysis and interpretation involved administration tasks of checking the completeness of the questionnaires and identification numbers were assigned to the questionnaires. The second phase involved identifying statistical

methods used to organize, reduce, summarize, manipulate, evaluate, interpret and communicate the results (Brink et al., 2012). The process of data analysis was done using the Statistical Package for the Social Science (SPSS) 23.0 software for windows to calculate all statistics.

Data presentation: Tables and figures were used in the presentation of data in order to interpret them.

Descriptive statistics: It was used to calculate frequency distribution, means and standard deviation.

Associations: The following associations were determined using Pearson Chi-Square: Knowledge vs socio-demographic data, practice vs socio-demographic data, levels of practice vs knowledge and levels of practice vs socio-demographic data.

3.10. Ethical Clearance

The researcher submitted the proposal to the School of Health Science Senior Degrees Committee at the University of Limpopo for approval, after which it was submitted to the Turfloop Research Ethics Committee (TREC) for ethical clearance. After ethical clearance was obtained with project number TREC/48/2015: PG, it was submitted to the Department of Health in Limpopo Province with a study proposal and a letter requesting permission to conduct the study. The department duly granted the permission to conduct the study with reference number 4/2/2.

The participants were recruited to participate in the study by the researcher. The researcher briefed the potential participants about the voluntary participation and that no

one was forced to participate in the study. They were also briefed about the aim and significance of the study and the right to withdraw participation without penalties. The participants signed informed consent forms confirming voluntary participation. The privacy of the participants was protected through the use of informed consent signed by participants before completing the questionnaire which was separate from the informed consent, and the participants names were not captured in the questionnaire. The questionnaires were coded to ensure confidentiality.

3.11. Summary

This chapter discussed methods which included study design, site, population, sampling, data collection, validity and reliability, data analysis and ethical consideration. The results will be presented in the next chapter.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter presents and describes the results of data analysis of the study. The results are presented using figures abbreviated as (Fig) and Tables. The chapter is divided into the following sections as appears in the study instrument: socio-demographic data, knowledge related to the implementation of the revised Infant and Young Child Feeding Policy (IYCFP) 2013 and also practices related to the implementation of the revised IYCFP 2013.

4.2 Socio-demographic data of the participants

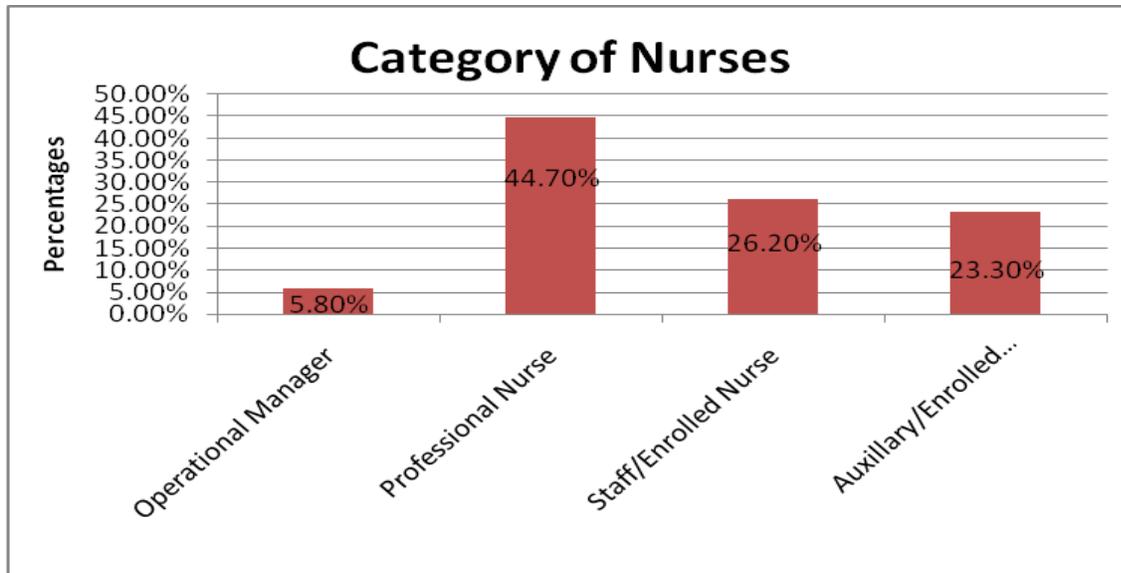


Fig 4.1: Nursing Category distribution of participants

Fig 4.1 shows above that most of the participants were Professional Nurses (43.7%) followed by Staff/Enrolled Nurses (26.2%) and the least were the Operational Managers (5.8%).

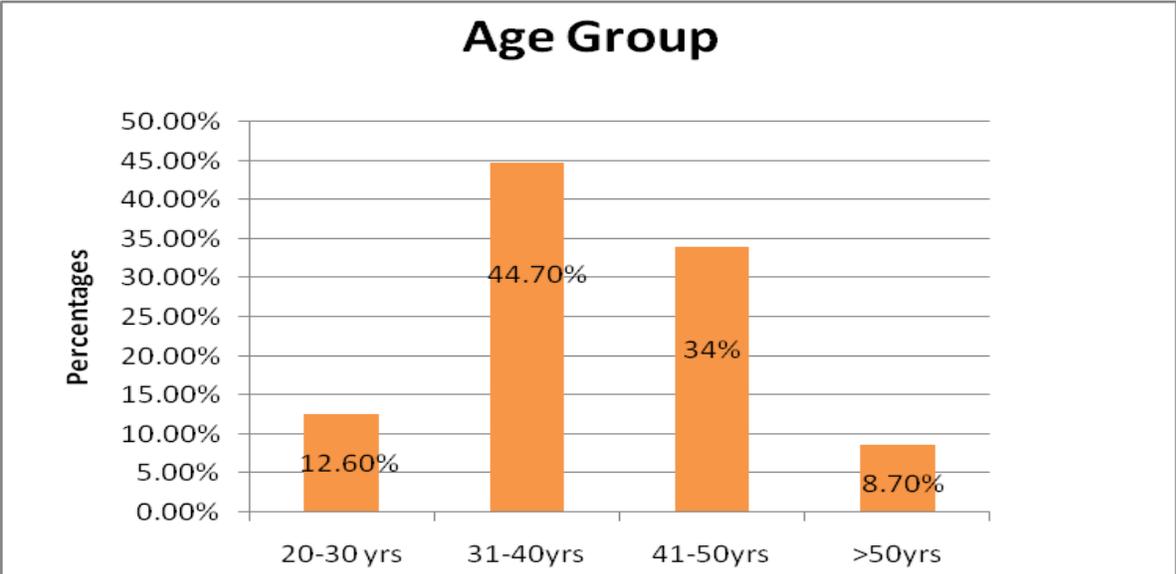


Fig 4.2: Age group of participants

Fig 4.2 shows that most participants were between 31 and 40yrs (44.7%), followed by those between 41 and 50yrs (34%) and least were those more than 50yrs (8.7%) of age.

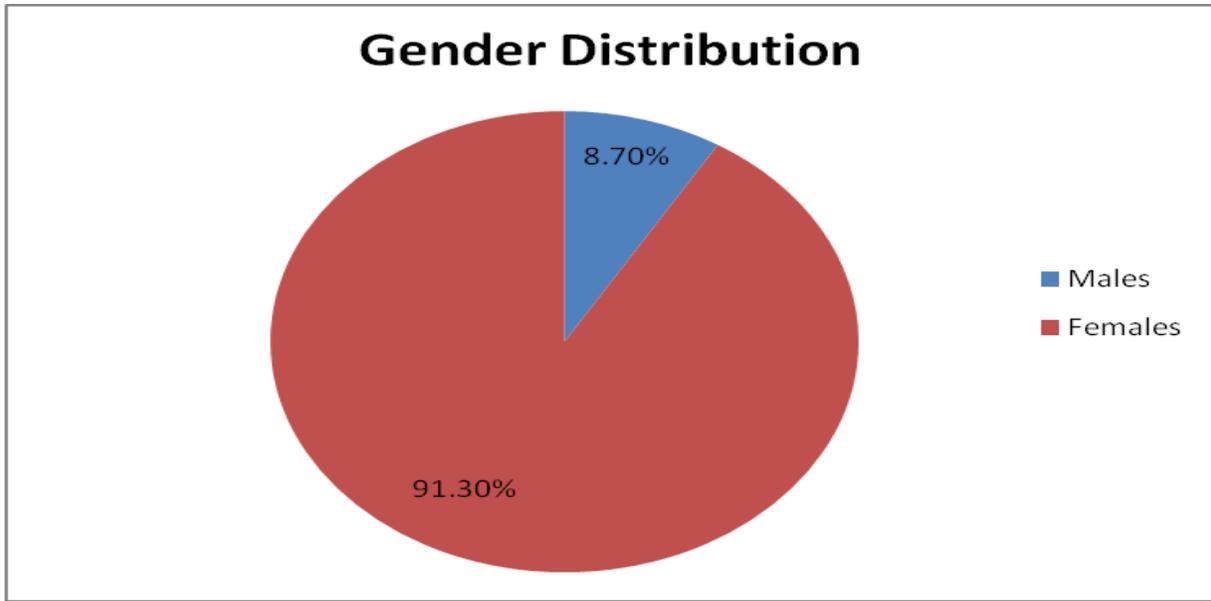


Fig 4.3: Gender distribution of participants

Fig 4.3 shows that 91.3% of the participants were females and only 8.7% were males.

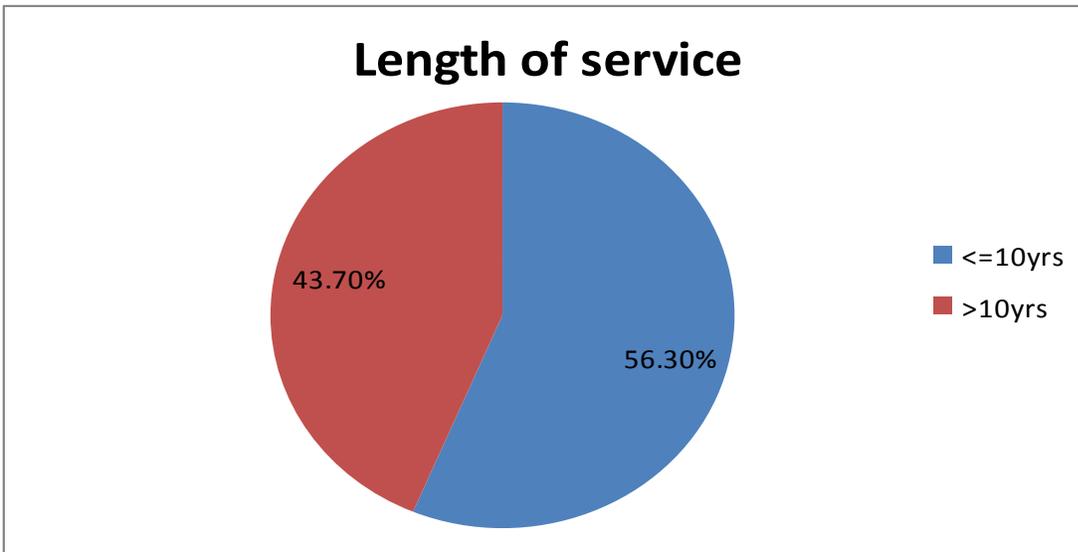


Fig 4.4: Length of service of the participants

Fig 4.4 shows that 56.3% participants had worked for ≤ 10 yrs and only 43.7% had worked for > 10 yrs.

4.3 Knowledge of the participants related to the implementation of the revised IYCFP 2013

Table 4.1: Knowledge of the participants about infant and young child feeding, % in rows; n=103

Knowledge of IYCFP	Agree	Neutral	Disagree
HIV positive mothers should not breastfeed their children, instead formula feed.	4.8%	3.9%	91.3%
HIV positive mothers should breastfeed while their children are receiving Nevarapine prophylaxis or ARVs.	98.1%	0	1.9%
Exclusive breastfeeding is recommended for 6 months.	96.1%	0	3.9%
During exclusive breastfeeding, an infant should not be given even water.	93.2%	0	6.8%
Formula feeding should not be recommended as an alternative to breastfeeding, unless there are legitimate medical reasons to do so.	89.3%	5.8%	4.9%
Breastfeeding is the best feeding option for both HIV unexposed and exposed children.	97.1%	0	2.9%
Complementary feeding should be introduced at 6 months, while continuing breastfeeding till 2 years or beyond.	90.3%	6.8%	2.9%

Table 4.1 above shows good-excellent knowledge of revised Infant and Young Child Feeding Policy 2013 as reported by the participants.

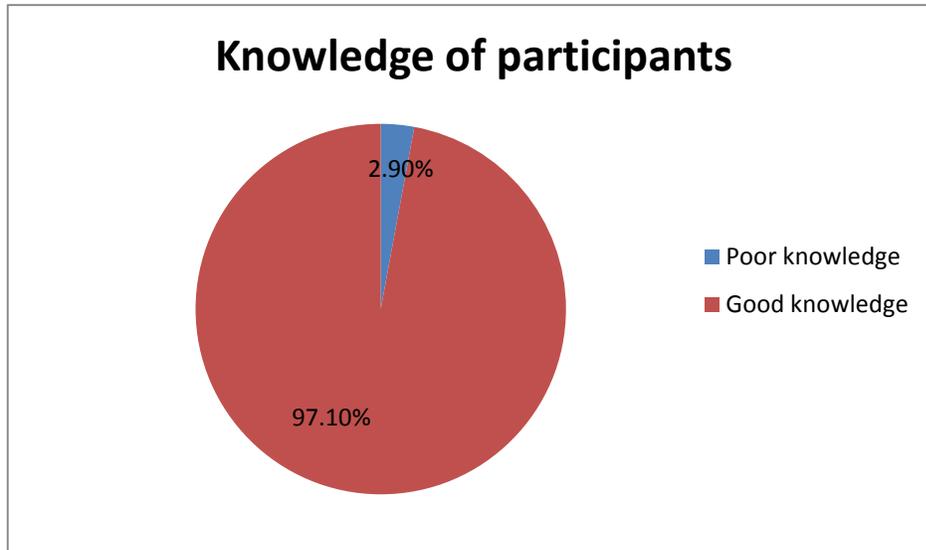


Fig 4.5: Knowledge of the participants

Fig 4.5 shows that 97.1% of the participants have good knowledge and only 2.9% have poor knowledge about revised Infant and Young Child Feeding Policy 2013.

Table 4.2: Knowledge vs. Demographic data of the participants

Variables		Poor knowledge	Good knowledge	P value
Gender (n=103)	Males (n=9)	0	9 (100%)	X=0.296
	Females (n=94)	3 (3.2%)	91 (96.8%)	P=0.758
Age (n=103)	20-30yrs (n=13)	0	13 (100%)	X=2.618
	31-40yrs (n=46)	1(2.2%)	45 (97.8%)	P=0.454
	41-50yrs (n=35)	1 (2.9%)	34 (97.1%)	
	>50yrs (n=9)	1 (11.1%)	8 (88.9%)	
Categories of Nursing (n=103)	Operational Manager (n=6)	1 (16.7%)	5 (83.3%)	X=4.899 P=0.298
	Professional Nurse (n=46)	1 (2.2%)	45 (97.8)	
	Staff/Enrolled Nurse(n=27)	1 (3.7%)	26 (96.3%)	
	Auxiliary/Assistant Staff Nurse (24)	0	24 (100%)	
Length of service (n=103)	<=10yrs (n=58)	2 (3.5%)	56 (96.5%)	X=3.898
	>10yrs (n=45)	1 (2.2%)	44 (97.8%)	P=0.595

Table 4.2 shows that there was no significant association between levels of knowledge and gender, age, category of nursing and length of service of the participants (P=0.758, P=0.454, P=0.298, & P=0.595) respectively.

4.4 Practices by participants related to the implementation of the revised IYCFP 2013

Table 4.3: Practice 1: Availability of the Revised Infant and Young Child Feeding Policy 2013 as reported by the participants, % in rows; n=103

Availability of the revised IYCFP	Yes	No	Not sure
My Clinic has a copy of the revised Infant and Young Child Feeding Policy (IYCFP) 2013.	55.3%	24.3%	20.4%
I have seen a copy of the revised IYCFP 2013.	56.3%	34.0%	9.7%
I have been trained about the revised IYCFP 2013.	32.0%	64.1%	3.9%
My clinic educated clients about the revised IYCFP 2013.	62.1%	28.2%	9.7%
My clinic has special employees educating clients about the revised IYCFP 2013.	43.7%	46.6%	9.7%

Table 4.3 shows only 55.3% reported that the clinic has a copy of the revised IYCFP 2013, whilst 20.4 were not sure. Also, 32% reported that they had been trained on the revised IYCFP 2013, and close to two-thirds (64.1%) had not been trained on this policy. Tables 4.3 also show that 62.1% reported that clients had been educated on this

policy, and 43% reported that the clinic had special employees educating clients about revised IYCFP 2013.

Table 4.4: Care and support of the clients with regard to the implementation of the revised IYCFP 2013 as reported by the participants, % in rows; n=103

Care and support	Yes	No	Not sure
My clinic collaborates with other organizations, departments, NGOs, and community organizations in educating the clients about the revised IYCFP 2013.	61.2%	28.1%	10.7%
My clinic has breastfeeding support group.	16.5%	78.6%	4.9%
My clinic has HIV positive mothers receiving postnatal care services.	96.1%	1.0%	2.9%
My clinic receives keeps and issues infant formula to HIV positive mothers.	92.2%	4.9%	2.9%
When the infant's mother is critically ill or dies, my clinic encourages guardians to formula feed.	82.6%	12.5%	4.9%
My clinic has workplace breastfeeding policy that meets the breastfeeding needs of the employees.	59.2%	27.2%	13.6%

Table 4.4 shows that the participants reported that the clinic had no breastfeeding support groups (78.6%), collaborated with other organizations (61.2%), kept and

issued infant formula to HIV mothers (92.2%) and had workplace breastfeeding policy (59.2%).

Table 4.5: Practice 1: Availability of the revised IYCFP 2013 according to gender of the participants

Availability of the revised IYCFP 2013		Gender		P value
		Male (n=9)	Female (n=94)	
Clinic has a copy of the revised IYCFP 2013 (n=103)	Yes (n=57)	4 (7%)	53 (93%)	X=1.039 P=0.595
	No (n=25)	2 (8%)	23 (92%)	
	Not sure (n=21)	3 (14.3%)	18 (85.7%)	
Received training on revised IYCFP 2013 (n=103)	Yes (n=33)	2 (6.1%)	31 (93.9%)	X=1.633 P=0.442
	No (n=66)	6 (9.1%)	60 (90.9%)	
	Not sure (n=4)	1 (25%)	3 (75%)	
Clinic educates clients about the revised IYCFP 2013 (n=103)	Yes (n=64)	5 (7.8%)	59 (92.2%)	X=1.783 P=0.410
	No (n=29)	2 (6.9%)	27 (93.1%)	
	Not sure (n=10)	2 (20%)	8 (80%)	
Clinic has special employees educating clients about the revised IYCFP 2013 (n=103)	Yes (n=45)	5 (11.1%)	40 (88.9%)	X=0.710 P=0.701
	No (n=48)	3 (6.3%)	45 (93.7%)	
	Not sure (n=10)	1 (10%)	9 (90%)	

Table 4.5 shows that there was no significant association between gender of the participants and all the variables concerning awareness about availability of the revised

Infant and Young Child Feeding Policy 2013 according to gender of the participants (P=0.595, P=0.442, P=0.410, & P=0.701) respectively.

Table 4.6: Care and support of the clients with regard to the implementation of the revised IYCFP 2013 according to gender of the participants

Care and support		Gender		P value
		Male (n=9)	Female (n=94)	
My clinic has breastfeeding support group (n=103)	Yes (n=17)	3 (17.7%)	14 (82.3%)	X=2.351 P=0.309
	No (n=81)	6 (7.4%)	75 (92.6%)	
	Not sure (n=5)	0	5 (100%)	
My Clinic receives, keeps and issues infant formula to HIV positive mothers (n=103)	Yes (n=95)	8 (8.4%)	87 (91.6%)	X=1.094 P=0.579
	No (n=5)	1 (20%)	4 (80%)	
	Not sure (n=3)	0	3 (100%)	
When the infant's mother is critically ill or dies, my clinic encourage guardians to formula feed (n=103)	Yes (n=85)	6 (7.1%)	79 (92.9%)	X=1.816 P=0.403
	No (n=13)	2 (15.4%)	11 (84.6%)	
	Not sure (n=5)	1 (20%)	4 (80%)	
My clinic has workplace breastfeeding policy that meets the breastfeeding needs of the employees (n=103)	Yes (n=61)	4 (6.6%)	57 (93.4%)	X=1.489 P=0.475
	No (28)	4 (14.3%)	24 (85.7%)	
	Not sure(n=14)	1 (7.1)	13 (92.9%)	

Table 4.6 shows that there was no significant association between gender of the participants and all the variables concerning practices related to the implementation of the revised Infant and Young Child Feeding Policy 2013 according to gender of the participants (P=0.309, P=0.579, P=0.403, & P=0.475) respectively.

Table 4.7: Availability of the revised IYCFP 2013 according to length of service of the participants

Availability of revised IYCFP 2013		Length of Service		P value
		<= 10yrs (n=58)	>10yrs (n=45)	
Clinic has a copy of the revised IYCFP 2013 (n=103)	Yes (n=57)	29 (50.9%)	28 (49.1%)	X=6.569
	No (n=25)	12 (48%)	13 (52%)	P=0.037
	Not sure (n=21)	17 (81%)	4 (19%)	
Received training on revised IYCFP 2013 (n=103)	Yes (n=33)	16 (48.5%)	17 (51.5%)	X=1.381
	No (n=66)	40 (60.6%)	26 (39.4%)	P=0.501
	Not sure (n=4)	2 (50%)	2 (50%)	
Clinic educates clients about the revised IYCFP 2013 (n=103)	Yes (n=64)	36 (56.3%)	28 (43.7%)	X=0.071
	No (n=29)	16 (55.1%)	13 (44.8%)	P=0.965
	Not sure (n=10)	6 (60%)	4 (40%)	
Clinic has special employees educating clients about the revised IYCFP 2013 (n=103)	Yes (n=45)	23 (51.1%)	22 (48.9%)	X=0.879
	No (n=48)	29 (60.4%)	19 (39.6%)	P=0.644
	Not sure (n=10)	6 (60%)	4 (40%)	

Table 4.7 shows that there was a significant association between length of service of the participants and availability of revised IYCFP 2013 ($P=0.037$). There was no significant association for other variables of awareness about availability of revised IYCFP 2013 ($P=0.501$, $P=0.965$, & $P=0.644$) respectively.

Table 4.8: Care and support of the clients with regard to the implementation of the revised IYCFP 2013 according to length of service of the participants

Care and support		Years of Service		P value
		<= 10yrs (n=58)	>10yrs (n=45)	
My clinic has breastfeeding support group (n=103)	Yes (n=17)	9 (52.9%)	8 (47.1%)	X=0.114 P=0.945
	No (n=81)	46 (56.8%)	35 (43.2%)	
	Not sure (n=5)	3 (60%)	2 (40%)	
My clinic receive, keep and issue infant formula to HIV positive mothers (n=103)	Yes (n=95)	54 (56.8%)	41 (43.2%)	X=0.682 P=0.711
	No (n=5)	2 (40%)	3 (60%)	
	Not sure (n=3)	2 (66.7%)	1 (33.3%)	
When the infant's mother is critically ill or dies, my clinic encourages guardians to formula feed (n=103)	Yes (n=85)	50 (58.8%)	35 (41.2%)	X=1.304 P=0.521
	No (n=13)	6 (46.2%)	7 (53.8%)	
	Not sure (n=5)	2 (40%)	3 (60%)	
My clinic has workplace breastfeeding policy that meets the breastfeeding needs of the employees (n=103)	Yes (n=61)	33 (54.1%)	28 (45.9%)	X=0.491 P=0.782
	No (28)	16 (57.1%)	12 (42.9%)	
	Not sure(n=14)	9 (64.3%)	5 (35.7%)	

Table 4.8 shows that there was no significant association between length of service of the participants and the variables concerning practices related to the implementation of revised IYCFP 2013 (P=0.945, P=0.711, P=0.521, & P=0.782) respectively.

Table 4.9: Availability of the revised Infant and Young Child Feeding Policy 2013 according to age of participants

Availability of the revised IYCFP 2013		Age group				P value
		20-30yrs (n=13)	31-40yrs (n=46)	41-50yrs (n=35)	>50yrs (n=9)	
Clinic has a copy of the revised IYCFP 2013 (n=103)	Yes (n=57)	4 (7%)	25 (43.9%)	22 (38.6%)	6 (10.5%)	X=17.574 P=0.007
	No (n=25)	1 (4%)	13 (52%)	8 (32%)	3 (12%)	
	Not sure (n=21)	8 (38.1%)	8 (38.1%)	5 (23.8)	0	
Received training on revised IYCFP 2013 (n=103)	Yes (n=33)	2 (6.1%)	12 (36.4%)	14 (42.4%)	5 (15.2%)	X=10.927 P=0.091
	No (n=66)	10 (15.2%)	34 (51.5%)	18 (27.3%)	4 (6.1%)	
	Not sure (n=4)	1 (25%)	0	3 (75%)	0	
Clinic educates clients about the revised IYCFP 2013 (n=103)	Yes (n=64)	9 (14.1%)	29 (45.3%)	21 (32.8%)	5 (7.8%)	X=5.003 P=0.543
	No (n=29)	3 (10.3%)	14 (48.3%)	8 (27.6%)	4 (13.8%)	
	Not sure (n=10)	1 (10%)	3 (30%)	6 (60%)	0	
Clinic has special employees educating clients about the revised IYCFP 2013 (n=103)	Yes (n=45)	4 (8.9%)	19 (42.2%)	18 (40%)	4 (8.9%)	X=3.653 P=0.724
	No (n=48)	8 (16.6%)	21 (43.8%)	14 (29.2%)	5 (10.4%)	
	Not sure (n=10)	1 (10%)	6 (60%)	3 (30%)	0	

Table 4.9 shows that there was a significant association between age of the participants and availability of revised IYCFP 2013 ($P=0.007$) and no significant association for other variables of awareness about availability of revised IYCFP 2013 ($P=0.091$, $P=0.543$ & $P=0.724$) respectively.

Table 4.10: Practice 2: Care and support of the clients with regard to the implementation of the revised IYCFP 2013 according to age of the participants

Care and support		Age group				P value
		20-30yrs (n=13)	31-40yrs (n=46)	41-50yrs (n=35)	>50yrs (n=9)	
My Clinic has breastfeeding support group (n=103)	Yes (n=17)	2 (11.7%)	9 (52.9%)	3 (17.7%)	3 (17.7%)	X=9.348 P=0.155
	No (n=81)	10 (12.3%)	37 (45.7%)	28 (34.6%)	6 (7.4%)	
	Not sure (n=5)	1 (20%)	0	4 (80%)	0	
My clinic receives, keeps and issues infant formula to HIV positive mothers (n=103)	Yes (n=95)	12 (12.6%)	42 (44.2%)	33 (34.8%)	8 (8.4%)	X=4.605 P=0.595
	No (n=5)	1 (20%)	3 (60%)	0	1 (20%)	
	Not sure (n=3)	0	1 (33.3%)	2 (66.7%)	0	
When the infant's mother is critically ill or dies, my clinic encourages guardians to formula feed (n=103)	Yes (n=85)	13 (15.3%)	36 (42.4%)	30 (35.3%)	6 (7%)	X=9.840 P=0.132
	No (n=13)	0	8 (61.5%)	2 (15.4%)	3 (23.1%)	
	Not sure (n=5)	0	2 (40%)	3 (60%)	0	
My clinic has workplace breastfeeding policy that meets the breastfeeding needs of the employees (n=103)	Yes (n=61)	6 (9.8%)	27 (44.3%)	20 (32.8%)	8 (13.1%)	X=6.335 P=0.387
	No (28)	6 (21.4%)	12 (42.9%)	9 (32.1%)	1 (3.6%)	
	Not sure(n=14)	1 (7.1%)	7 (50%)	6 (42.9%)	0	

Table 4.10 shows that there was no significant association between age of participants and the variables concerning practices related to the implementation of revised IYCFP 2013 (P=0.155, P=0.595 P=0.132, & P=0.387) respectively.

4.5 Knowledge of the participants vs. practice related to the implementation of the revised IYCFP 2013

Table 4.11: Levels of practice versus knowledge of the participants

Knowledge		Levels of practices			P value
		Poor practice (N=35)	Fair practice (n=36)	Good practice (n=32)	
Knowledge (n=103)	Poor knowledge (n=3)	1 (33.3%)	2 (66.7%)	0	X=1.850 P=0.397
	Good knowledge (n=100)	34 (34%)	34 (34%)	32 (32%)	

Table 4.11 shows that there was no significant association between levels of practices and knowledge (P=0.397).

4.6 Levels of practice versus socio-demographic data of participants

Table 4.12: Levels of practice versus socio-demographic data of the participants

Socio-demographic data		Levels of practices			P value
		Poor practice (N=35)	Fair practice (n=36)	Good practice (n=32)	
Age (n=103)	20-30yrs (n=13)	6 (46.2%)	6 (46.2%)	1 (7.6%)	X=7.501 P=0.277
	31-40yrs (n=46)	15 (32.6%)	18 (39.1%)	13 (28.2%)	
	41-50yrs (n=35)	11 (31.4%)	11 (31.4%)	13 (37.2%)	
	>50yrs (n=9)	3 (33.3%)	1 (11.1%)	5 (55.6%)	
Category of nurses (n=103)	Operational Manager (n=6)	2 (33.3%)	3 (50%)	1 (16.7%)	X=6.999 P=0.537
	Professional Nurse (n=46)	15 (32.6%)	17 (37%)	14 (30.4%)	
	Staff/Enrolled Nurse (n=27)	12 (44.5%)	9 (33.3%)	6 (22.2%)	
	Auxiliary/Enrolled Nurse (n=24)	6 (25%)	7 (29.2%)	11 (45.8%)	
Length of service (n=103)	<=10yrs (n=58)	21 (36.2%)	20 (34.5%)	17 (29.3%)	X=0.334 P=0.846
	>10yrs (n=45)	14 (31.1%)	16 (35.6%)	15 (33.3%)	

Table 4.12 shows that there was no significant association between levels of practices of the participants and all the variables which are age, category of nursing and the length of service (P= 0.277, P=0.537 & P=0.846) respectively.

4.7 Summary

The results of data analysis were presented in this chapter. The data were analyzed using SPSS 23.0 software for windows. The results of this data analysis will be discussed in the next chapter, which will also conclude the study and give recommendations.

CHAPTER 5: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter will discuss the results presented in chapter 4 with consideration or relation to previous studies and relevant literature related to infant and young child feeding, and also policy implementation. The aim of this study was to determine knowledge and practices of Primary Health Care Workers related to implementation of the revised Infant and Young Child Feeding Policy 2013 in Blouberg Municipality, Capricorn District, Limpopo Province. The objectives of this study were the following:

- *To determine socio-demographic profile of primary healthcare workers (PHCWs) related to implementation of the revised Infant and Young Child Feeding Policy (IYCFP) 2013.*
- *To determine knowledge of PHCWs related to implementation of the revised IYCFP 2013.*
- *To identify practices of PHCWs related to the implementation of the revised IYCFP 2013.*

5.2 Discussion of results

Objective 1: *To determine socio-demographic profile of primary healthcare workers (PHCWs) related to implementation of the revised Infant and Young Child Feeding Policy (IYCFP) 2013.*

Socio-demographic Profile (Nursing category, age, gender & length of service) of PHCWs

The results of this study revealed that most of the participants were Professional Nurses compared to other groups. According to PHC act, primary health centres are managed by nursing personnel, therefore it is expected that professional nurses would be more in the clinics than other nursing categories.

The results further revealed that most PHCWs were between 31-40 years of age, implying that the nurses working in these clinics are a young workforce, which is in contrast to reports from SANC (South African Nursing Council), that most nurses working in the primary health centres in South Africa are older (SANC, 2014). This further implies that these nurses are still at reproductive age, meaning, it is expected that they will have current knowledge of good feeding practices, such as breastfeeding for infants. The role of nurses in postnatal care includes educating young mothers to initiate good feeding practices for their infants (WHO, 2008). However, studies conducted in Ethiopia showed that over half of younger nurses preferred mixed method of feeding and were encouraging young mothers to do mixed feeding before their children were 6 months of age, this, despite the nurses scoring high in knowledge of benefits of exclusive breastfeeding (Dachew and Bifftu, 2014). According to the

American Academy of Pediatrics (2005), there are nutritional benefits to exclusive breastfeeding (EBF) for the first six months of life, and efforts are in place worldwide to promote this method of infant feeding. According to Leavitt et al., (2009), EBF reduces infant mortality rate by 13%, and most infant mortality cases could be prevented if good feeding practices were followed. It is therefore crucial that nurses are on board with guiding young mothers on best feeding practices in order to prevent unnecessary infant mortality, especially those mothers who are HIV positive.

The results of this study also revealed that mostly females participated as compared to males. It is not surprising that males are fewer participants, since females dominate the nursing profession throughout the country including Limpopo Province. A report by SANC (2014) highlights that Limpopo Province has a total of 26 322 nurses, of which 23 583 (89.6%) are females, while 2 739 (10.4%) are males, which explains why more females participated in this study. Females are primary caregivers, therefore it is expected that female nurses should provide good education about appropriate infant feeding practices to the mothers considering their maternal qualities of caring.

Over half of the participants in this study had working experience of ≤ 10 yrs, implying that they have less years in the nursing profession and could still develop themselves, hence they found the study important and helpful for enriching infant feeding knowledge and practices. It further implies that nurses with working experience of ≤ 10 years are still in the young age, since the department considers employing mostly young people, meaning these nurses participated in this study for the benefit of their infants and families. Studies indicate that experience improves and enhances one's work and practices, therefore it is expected that those with working experience of > 10 years will

have good knowledge of infant and young child feeding and will also practice the implementation of the revised policy better.

Objective 2: *To determine knowledge of PHCWs related to the implementation of the revised IYCFP 2013.*

Knowledge of the participants about infant and young child feeding

The revised IYCFP 2013 protects, promotes and supports breastfeeding, and optimal infant and young child feeding practices. HIV-positive mothers are encouraged to exclusively breastfeed for six months and continue breastfeeding with introduction of appropriate complementary feeding until one year, while their children are receiving ARVs treatment (DOH, 2013). The policy produces expected outcomes, provided it is implemented by people knowledgeable about the policy (Orem et al., 2013). According to Goga (2009), challenges in the implementation of IYCFP include confusion of healthcare workers about infant feeding, especially breastfeeding and HIV. It is encouraging that participants in the current study had good knowledge, therefore it is expected that they will successfully implement the revised IYCFP 2013. It is plausible that the overwhelming majority of the participants had good knowledge though it is important to have 100% of PHCWs with good knowledge of the revised IYCFP 2013 in order to prevent avoidable children's illnesses and death. According to Sinhababu et al. (2010), survival of the infants and young children is dependent on the best infant and young child feeding practices which are essential to the children's health, growth, development, and nutritional status. Infants, who are not breastfed, are 6 to 10 times more likely to die in the first months of life than infants who are breastfed (Saxena and

Kumari, 2014). Therefore, when PHCWs are knowledgeable about infant and young children's feeding decisions and procedures, they will educate mothers and guardians in order to appropriately feed their infants, thus leading to the reduction of child illnesses and death.

According to Brynard (2009), training of implementers, in this case PHCWs about the policy, may increase the implementers' confidence and self-efficacy so that they regard themselves more capable of best practice when it comes to breastfeeding. Policy implementers are more likely to continue translating policy into practice, provided they believe in their capability to do so. Women consider professional education more credible from staff that empathizes with them and are respectful, and also demonstrate confidence during counseling sessions (Kavanagh, 2008). It is of concern that most nurses have not been trained about the revised IYCFP 2013, despite them having good knowledge about infant feeding. Training about the policy may improve skills and abilities of the implementers required in the implementation of that policy leading to successful policy implementation (Giacchino and Kakabadse, 2003). Therefore, it is unlikely that the participants will successfully implement the revised IYCFP, given that they lack skills to educate and counsel mothers about the importance of correct infant and child feeding practices.

Knowledge of the participants about infant and young child feeding vs. Demographic data of the participants

Primary Health Care (PHC) is essential in the provisions of infant and young child feeding, particularly in protecting, promoting and supporting breastfeeding, since

women visit PHC facilities during antenatal and postnatal periods (WHO, 1978). The PHC should always be accessible not only its physical infrastructure, but also the services offered. According to patients' charter, patients have the right to get healthcare services from health facilities at all times and also have the right to access information as it is indicated in the *Batho Pele* Principles. It is encouraging that all nurses, irrespective of age, gender, category of nursing and working experience, have good knowledge of the infant and young child feeding, and there was no significant association between knowledge and socio-demographic profile of nurses. This gives hope that in the absence from work of professional nurses and of those who had worked for >10 years, infant and young child feeding services will be offered to mothers seeking such services by nurses of lower categories and those with less working experience. Breastfeeding improves appetite regulation, thereby lowering the risk of obesity (Eckhardt et al., 2014). It also assists in the reduction of chronic diseases in the long term (Lutter, 2013). The nurses are viewed as major source of infant feeding information, because women consult them when they need to know the best practice in child feeding during antenatal and postnatal visits to PHC facilities (Kassier and Veldman, 2013). It is therefore expected that all nurses, irrespective of age, gender, work experience and category should educate mothers about infant and young child feeding, in order to curb long term childhood obesity prevalence in South Africa.

Objective 3: *To identify practices of PHCWs related to the implementation of the revised IYCFP 2013.*

Availability of the revised IYCFP 2013

According to Mkontwana et al. (2013), interventions which build capacity for the implementation of infant and young child feeding policy include having seen a copy of policy and its availability in the facilities, and quality training about the infant and young child feeding. Implementation of imaginary policy cannot deliver expected policy outcome since it is unlikely to successfully implement policy which is either unavailable or never seen.

Despite participants having good knowledge about the revised IYCFP 2013, it is a concern that 44.7% of PHCWs reported that the clinics did not have a copy of this policy, and only over half of them reported that they have seen the copy within the facility. This therefore implies that half of the participants are partially capacitated to successfully implement the revised IYCFP, although the level of training about the policy is still to be considered. It is also worrying that only a third of the participants reported that they had been trained, despite half of the participants having seen the copy of the policy and had good knowledge about infant feeding. It is therefore of concern that most participants have poor practice of this policy, whilst this could have been improved through training since training about the policy increases chances of producing the expected outcomes of the policy, according to Orem et al., (2013). Orem et al. (2013) further emphasize that no matter how good the policy can be, it is doomed if end-users are not trained on its execution.

The results of this study further revealed that close to half of the participants reported that clinics were without lay employees dedicated to educating clients about the revised

IYCFP 2013, meaning that only nurses were responsible for educating mothers about contents of this policy considering that most participants have good knowledge about infant and young child feeding. Involvement of nurses in the implementation of IYCFP is supposed to accelerate the provision of infant and young child feeding services to the mothers, since all patients have the right to healthcare services and information. The nurses are viewed by many as a primary source of infant feeding information, since they are the first ones to receive women during antenatal and postnatal visits (Kassier and Veldman, 2013); therefore, empowering these nurses ensures effective implementation of IYCFP 2013. According to Brynard (2009), other factors influencing successful policy implementation include leadership, cooperation and attitude. The results also revealed that only close to two thirds of the participants reported that the clinics educated patients about the policy, contrary to the fact that only 55.3% of the participants reported that the clinics had a copy of the revised IYCFP 2013. The Department of Health, however, requires that all health facilities educate clients about this policy (DOH, 2013). This may also signal a lack of cooperation, attitude and poor leadership on the part of those who have to take decisions in terms of making sure that the policy is disseminated and implemented.

Care and support of the clients with regard to the implementation of the revised IYCFP 2013

Cooperation of all stakeholders affected and involved in the implementation of the policy is important for the successful implementation of the policy, because, various stakeholders bring along required resources, skills and abilities to realize the implementation of the policy (Giacchino and Kakabadse, 2003). It is encouraging that

the results of the study showed that close to two thirds of the participants reported that clinics collaborated with other organizations, departments, NGOs, and community organizations in educating clients about the revised IYCFP 2013, which encourages HIV-positive mothers to also exclusively breastfeed their children for the first six months and beyond before the introduction of appropriate complementary feeding while their children are receiving antiretroviral treatment. This gives hope that infant and young children will be saved from avoidable illnesses and death since, according to Saxena and Kumari (2014), infants who are not breastfed, are 6 to 10 times more likely to die in the first months of life than infants who are breastfed. Breastfeeding support groups are essential for the promotion and support for breastfeeding irrespective of HIV status of their mothers (WHO, 2014). According to the United States Department of Health and Human Services (2011), breastfeeding support is essential for the prevention of the rates of childhood obesity. Therefore, it is of concern that the majority of the PHCWs reported that clinics had no breastfeeding support groups, implying less efforts were taken in promoting best breastfeeding practice, which is a risk factor for various chronic diseases later in life.

The revised IYCFP 2013 provides that healthcare facilities can acquire, store and issue infant formulas to the hospitalized mothers who, due to medical reasons cannot breastfeed (DOH, 2013). Equally, no infant formulas will be available for HIV-positive mothers in the healthcare facilities (DOH, 2011). It is also of concern that 92.2% of nurses reported that clinics still kept and issued infant formula to HIV-positive mothers, despite the clear stipulation by IYCFP 2013 that they should not do so. This implies that nurses misinterpreted or ignored this provision in the revised IYCFP 2013 that stipulates

that no infant formulas will be available for HIV-positive mothers in the healthcare facilities (DOH, 2011). This could also be the reasons why dietitians still get referrals from the PHCWs for supply of infant formula, which is to be delivered to HIV-positive mothers. The revised IYCFP 2013 also provides that in the event the mother cannot breastfeed due to medical conditions or reasons, infant formula feeding should be recommended provided AFASS (Acceptable, Feasible, Affordable, Sustainable and Safe) criteria is met. The results further revealed that the majority of PHCWs have reported that infant formula should be recommended in case there is maternal death or medical reasons where the mother cannot breastfeed. This affirms the good knowledge of the revised IYCFP 2013 by participants, since the policy recommend Infant Formulas in the event the mother cannot breastfeed due to medical reasons. However, about 17.4% of PHCWs did not know this aspect of the policy. This implies that these groups of PHCWs will continue to supply mothers with infant formula, irrespective of their medical status.

The Centre for Disease Control and Prevention (2013) encourages employers to have workplace breastfeeding policy to enable working mothers to have designated private space to breastfeed or express milk at the workplace. The revised IYCFP 2013 also recommends that healthcare facilities should have workplace breastfeeding policy that is visible and also empowers women to practice exclusive breastfeeding. The results also showed that only 59.2% of the participants reported that the clinics had breastfeeding policy that meets the breastfeeding needs of the employees. Therefore, this will increase the nurses' commitment to the implementation of this policy as it directly benefits them. According to Giacchino and Kakabadse (2003), commitment to

the policy is essential for the successful implementation of the policy. However, it is a concern that about 40% of PHCWs did not know of the existence of infant feeding policy within their workplace, meaning that these nurses are likely not to commit to implementation of this policy.

Availability of the revised Infant and Young Child Feeding Policy 2013 vs socio-demographic profile of the participants

The results highlight that there was no significant association between availability of the revised Infant and Young Child Feeding Policy 2013 according to gender of the participants ($P > .050$). However, the results showed that there was a significant association between length of service of the participants and awareness of availability of a copy of revised IYCFP 2013 ($P < .050$); this significant association simply means that the longer the PHCWs work, the more they become aware of existing policies, however, that does not mean they will implement the policy.

Care and support of the clients with regard to the implementation of the revised IYCFP 2013 vs socio-demographic profile of the participants

The results revealed that there was no significant association between all the variables concerning practices related to the implementation of the revised Infant and Young Child Feeding Policy 2013 according to socio-demographic profile of the participants. Also, the majority of PHCWs reported that the clinics kept and issued infant formulas to the mothers, irrespective of their HIV status, and despite the contents of the IYCFP 2013. These results highlight the challenges facing the implementation of this policy, because availability of infant formula within the clinics makes the nurses to ignore the

policy on infant feeding, which stipulates that exclusive breastfeeding should be encouraged in the first 6 months of the child.

The results showed that there was no significant association between practices related to the implementation of the revised IYCFP 2013 according to length of service of the participants. Chopra and Rollins (2008) note that it would be valuable to have road shows to orientate staff and community volunteers on IYCF policy in improving awareness and perceptions about the recent changes on the IYCFP policy recommendations. The results further showed that there was no significant association between the implementation of the revised IYCFP 2013 and age, with younger PHCWs more knowledgeable than older PHCWs. This may be that older PHCWs are not aware of the new changes in recommendations to the policy, meaning they are likely to implement the revised IYCFP 2013 with old recommendations. Therefore, roadshows and training about the new recommendations that HIV-positive mothers can exclusively breastfeed should be prioritized.

Practice versus Levels of knowledge of participants

Knowledge is considered important for successful policy implementation, and that policy produces expected outcomes when implemented by people knowledgeable about the policy (Orem et al., 2013). A study by Chapagain (2012) highlights a gap in translating policy into practice, a gap was found between knowledge of mothers about appropriate feeding and practice, which resulted in inappropriate feeding practices. The results revealed that most participants had good knowledge about the revised IYCFP 2013; at

the same time only a third of the PHCWs implemented this policy accurately. Therefore, this further confirms the existence of a gap in translating knowledge into practice.

Orem et al. (2013) posits that receiving training about a particular policy leads to deliverance of the expected policy outcome. Therefore, this may imply that a third of the respondents with good practice of the revised IYCFP 2013 were those who had been trained about this policy. Amibor and Ade (2013) reported that poor infant feeding policy implementation may also be experienced due to time required for retraining and improving information, which should be circulated to health workers to enable them implement changes in health care practices.

Knowledge alone is not sufficient to produce good policy practice, according to Chapagain (2012). The results further revealed that only half of the PHCWs reported that their clinics had a copy of the revised IYCFP 2013, which raises questions about communication by the health department, particularly about the circulation of the policies to the subordinates for implementation. Therefore, this is in agreement that indeed knowledge alone is not sufficient for successful policy implementation, however various factors influence successful policy implementation.

Levels of practice versus socio-demographic data of participants

The results showed that participants who had good practice of the revised IYCFP 2013 were those aged >50 years as compared to other age groups. The fact that these participants are no longer of reproductive age, could mean that, they too are eager to know and practice, in case they need to feed their grandchildren. In addition, the results also showed that participants who had worked for >10 years had good practice of this

policy compared to those who worked for ≤ 10 years. Therefore, this also confirms that working experience improves how people view and practice and may likely influence successful policy implementation. According to SANC (2014), Auxiliary/Enrolled nursing category is the least category in the nursing profession. Surprisingly, these were the nursing categories that were found to have good practice of the revised IYCFP 2013, compared to other categories of the nursing profession. This may imply that nurses in this category are compliant with respect to policies imposed on them by the national Department of Health, therefore, more training and monitoring of other noncompliant nursing categories is essential in order to improve service delivery.

5.3 Conclusion

Child morbidity and mortality linked to inappropriate infant and young child feeding is a public health challenge which calls for all stakeholders to unite in implementing good policies, such as the revised Infant and Young Child Feeding Policy (IYCFP) 2013. This policy promotes and supports optimal infant and young child feeding practices. The aim of this study was to determine knowledge and practices of Primary Health Care Workers (PHCWs) related to the implementation of the revised IYCFP 2013. The study found that most of the PHCWs are aware of the existence of this policy, but have not been trained so that the policy is implemented effectively.

The study also highlighted the need for monitoring and evaluation on the implementation of the revised IYCFP 2013. Other weaknesses identified in the implementation of the revised IYCFP 2013 included inaccessibility of the policy in all

health facilities, untrained staff, and the general lack of the awareness of the existence of this policy by the healthcare workers.

5.4 Recommendations

The Department of Health in Limpopo should speed the in-service training and training of the old/new health care workers about the Infant and Young Child Feeding Course and align its scope the revised IYCFP 2013.

The Department of Health should also enforce the use of monitoring and evaluation tool as indicated in the revised IYCFP 2013 in order to obtain weaknesses and strengths in the implementation process. This will indicate areas that need to be improved, thus strengthening the process of providing health care to all health facilities.

It is important for the management at all levels to provide support and make the environment at the clinics more conducive in order to attain optimal implementation of this policy, since a supportive environment is one of the key elements to successful policy implementation.

The revised IYCFP 2013 provides that Infant Formula can be provided to the hospitalized who cannot breastfeed due to medical reasons, therefore the Department of Health should outline clearly circumstances or medical conditions which prohibit breastfeeding, this will clear out any misinterpretation by health care workers. This document should be attached as annexure to the policy.

Additional studies looking at the challenges faced by the PHCWs in the implementation of the revised IYCFP 2013 should be conducted and the instrument to be used in such

studies should also have some open-ended questionnaires in order to obtain in-depth insight into practices and challenges. Future studies about factors influencing the implementation of the revised IYCFP 2013 should be undertaken in order to address most of the challenges standing in the way of successful policy implementation.

5.5 Limitations of the study

The questionnaire used in this study was close-ended. The participants responded by only marking accordingly to pre-determined answers. The study participants were imbalanced, particularly in terms of gender and the category of nursing. These are fixed problems that are influenced by the nature of work which is mainly dominated by the female population. The study sample was only 103 nurses, which cannot be a true representation of the thousands of the population of nurses in South Africa; however, this study can be replicated in other parts of the Province of Limpopo.

5.6 Summary

This concluding chapter discussed results of data analysis regarding knowledge and practices of PHCWs related to the implementation of the revised IYCFP 2013. It was found that most PHCWs have good knowledge about infant and young child feeding; however most of them have not been trained about this revised policy. Evidence from other studies used in the discussion confirmed the need for training to equip healthcare workers for the successful implementation of the policies. Challenges facing the implementation of this policy were also highlighted, and must be addressed for effective implementation. Revised IYCFP 2013 support and promote exclusive breastfeeding, which saves lives of infants and young children, therefore, it is hoped that

recommendations made will be seriously considered in order to improve the implementation of the revised IYCFP 2013, particularly at the PHC level, which is the first health facility mothers visit for infant feeding information and/services.

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APPENDICES

APPENDIX 1: TIME FRAME

Activity	Time period
Developing proposal	February 2014-January 2015
Ethical Clearance	May 2015
Approval from Limpopo Department of Health	May 2015
Data collection	July – August 2015
Data analysis	September 2015
Report writing	September –October 2015
Submission for marking	October 2015
Submission of final document	December 2015
Graduation	May/June 2015

APPENDIX 2: BUDGET

Description of expenses	Amount
Internet <ul style="list-style-type: none">Data bundles for 20 months@R200	R4000
Stationery	R1 200
Transport	R2 500
Food	R600
English editor	R3 000
Binding of final document	R1 500
UL Fees <ul style="list-style-type: none">Registration fee R3 000@2Tuition fees R22 000Coursework attendance fees @R8 000	R6 000 R22 000 R8 000
Total	R48 800

APPENDIX 3: INFORMED CONSENT

Informed consent

a. Statement by the participant

Title of the Study: *Knowledge and Practices of Primary Health Care Workers Related to Implementation of the Revised Infant and Young Child Feeding Policy 2013 in Blouberg Municipality, Capricorn District, Limpopo Province*

I hereby confirm that the researcher (Mabitsela Hezekiel Mphasha), informed me about the aims and objectives of the proposed study and was provided the opportunity to ask questions and given adequate time to rethink the issue. The aim and objectives of the study are sufficiently clear to me. I have not been pressurized to participate in any way.

I understand that participation in this Study is completely voluntary and that I may withdraw from it at any time and without penalty or supplying reasons.

I know that this Study has been approved by Turfloop Research Ethics Committee and the Department of Health in Limpopo Province. I am fully aware that the results of this Study will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

I hereby give consent to participate in this Study.

.....

.....

Name of participant/volunteer

Signature of participant/volunteer

.....

.....

.....

Place.

Date.

Witness

b. Statement by the Researcher

I, (Mabitsela Hezekiel Mphasha) herewith confirm that the above participant has been informed fully about the nature of the Study. I will also adhere to the approved protocol.

.....

.....

Researchers' Signature

Date

.....

Place Signed

.....

.....

Witness Signature

Date

APPENDIX 4: QUESTIONNAIRE

4.1: Cover page of questionnaire

P.O. Box 115

Senwabarwana

0790

Cell No. 076 619 9310

Dear Sir/Madam

I, Mabitsela Hezekiel Mphasha, am currently undertaking a research on the knowledge and practices of primary health care workers related to the implementation of the revised Infant and Young Child Feeding Policy 2013 in Blouberg Municipality, Capricorn District, Limpopo Province. The aim of this study is to determine knowledge and practices of primary health care workers in relation to the implementation of the revised Infant and Young Child Feeding Policy 2013 in the municipality.

The objectives of the study are as follows:

- To determine the socio-demographic profile of primary health care workers (PHCWs) related to the implementation of the revised Infant and Young Child Feeding Policy (IYCFP) 2013.

- To determine knowledge of PHCWs' related to the implementation of the revised IYCFP 2013.
- To identify practices of PHCWs related to the implementation of the revised IYCFP 2013.

The findings of this study will inform policy makers about the challenges facing the implementation of the revised Infant and Young Child Feeding Policy, and will recommend better strategies to be used to implement the policy.

You are therefore requested to complete the attached questionnaire, which may take 15 minutes, by ticking on the description that best describes your views. The information given will be kept confidential and therefore you are not required to fill in your name.

Regards,

Mabitsela Hezekiel Mphasha

4.2 QUESTIONNAIRE

SECTION A: SOCIO-DEMOGRAPHIC DATA

1. Gender

Gender	Please tick (x)
Male	1
Female	2

2. Age

3. Category of Nurses

Please tick (x) your category appropriately

Operational Manager	Professional Nurse	Community Service Nurse	Staff/Enrolled Nurse	Auxiliary/Enrolled Assistant Nurse
1	2	3	4	5

4. Length of service

Years	Please tick (x)
Less than 1 year	1
1-5 years	2
6-10 years	3
11-15 years	4
16-20 years	5
21 years and above	6

SECTION B: KNOWLEDGE OF REVISED INFANT AND YOUNG CHILD FEEDING

Breastfeeding

Please indicate whether you agree, neutral and/or disagree with the following statements by ticking (x) appropriately

No.	Statement	Agree	Neutral	Disagree
1.	HIV positive mothers should not breastfeed their children, instead formula feed.	1	2	3
2.	HIV positive mothers should breastfeed while their children are receiving Nevarapine prophylaxis or ARVs.	1	2	3
3.	Exclusive breastfeeding is recommended for 6 months.	1	2	3
4.	During exclusive breastfeeding, an infant should not be given even water.	1	2	3
5.	Formula feeding should not be recommended as an alternative to breastfeeding, unless there are legitimate medical reasons to do so.	1	2	3
6.	Breastfeeding is the best feeding option for both HIV unexposed and exposed children.	1	2	3
7.	Complementary feeding should be introduced at 6 months, while continuing breastfeeding till 2 years or beyond.	1	2	3

SECTION C: PRACTICES RELATED TO IMPLEMENTATION OF THE REVISED INFANT AND YOUNG CHILD FEEDING POLICY (IYCFP) 2013

Please indicate whether the following statements are yes, no and/or not sure by ticking (x) appropriately

No	Statement	Yes	No	Not sure
1.	My clinic has a copy of the revised Infant and Young Child Feeding Policy (IYCFP) 2013.	1	2	3
2.	I have seen a copy of the revised IYCFP 2013.	1	2	3
3.	I have been trained about the revised IYCFP 2013	1	2	3
4.	My clinic educates clients about the revised IYCFP 2013.	1	2	3
5.	My clinic has special employees educating clients about the revised IYCFP 2013.	1	2	3
6.	My clinic collaborates with other organizations, departments, NGOs, and community organizations in educating clients about the revised IYCFP 2013.	1	2	3
7.	My clinic has breastfeeding support group.	1	2	3
8.	My clinic has HIV positive mothers receiving postnatal care services.	1	2	3
9.	My clinic receives keeps and issues infant formula to HIV positive mothers.	1	2	3
10.	When the infant's mother is critically ill or dies, my clinic encourages guardians to formula feed.	1	2	3
11.	My Clinic has workplace breastfeeding policy that meets the breastfeeding needs of the employees.	1	2	3

APPENDIX 5: TURFLOOP RESEARCH ETHICS COMMITTEE CLEARANCE



University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 2212, Fax: (015) 268 2306, Email:noko.monene@ul.ac.za

TURFLOOP RESEARCH ETHICS COMMITTEE CLEARANCE CERTIFICATE

MEETING: 06 May 2015

PROJECT NUMBER: TREC/48/2015: PG

PROJECT:

Title: Knowledge and practices of the primary health care workers related to implementation of the revised infant and young child feeding policy 2013 in the Blouberg Municipality of Capricorn District, Limpopo Province

Researcher: Mr MH Mphasha

Supervisor: Dr NJ Ramalivhana

Co-Supervisor: Prof L Skaal

Department: Medical Sciences, Public Health and Health Promotion

School: Public Health

Degree: Masters in Public Health


PROF TAB MASHEGO
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: **REC-0310111-031**

Note:

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

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APPENDIX 6: LETTER TO THE DEPARTMENT OF HEALTH

PO Box 115

Senwabarwana

0790

20 May 2015

Head of Department

Department of Health

College Street No. 18

Polokwane

0700

Dear Sir/Madam

Request for approval

1. I am a student at the University of Limpopo studying towards a Master's degree in Public Health, specializing in Health Policy and Health Systems Management.

2. I intend to conduct my research in the clinics located in Blouberg Municipality of Capricorn District.
3. My research topic, which has been given clearance by the Turfloop Research Ethics Committee, is: *Knowledge and Practices of the Primary Health Care Workers Related to Implementation of the Revised Infant and Young Child Feeding Policy 2013 in Blouberg Municipality, Capricorn District, Limpopo Province.*
4. Attached to this letter please find Research Proposal and Clearance Certificate from Turfloop Research Ethics Committee.
5. Therefore, this letter serves to request approval letter to conduct research in the clinics located in Blouberg Municipality.

I would like to thank you in advance for your cooperation.

Kind regards

Mphasha Mabitsela Hezekiel

Cell No.: 083 702 3481/076 619 9310

Email address: pitso85@gmail.com

APPENDIX 7: APPROVAL LETTER FROM DEPARTMENT OF HEALTH



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Stols M.L.
Tel: 015 293 6604

Ref:4/2/2

Mphasha MH
PO Box 115
Senwanbarwa
0790

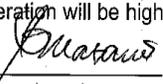
Greetings,

RE: Knowledge and practices of Primary Health Care Workers related to implementation of the revised Infant and Young Child Feeding Policy 2013 in the Blouberg Municipality, Capricorn District, Limpopo Province

The above matter refers.

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

Your cooperation will be highly appreciated.


Head of Department

28/05/2015
Date

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

The heartland of Southern Africa – *development is about people*