

**Namibian Primary Health Care nurses' perceptions on
factors influencing the successful implementation of the
Integrated Management of Neonatal and Childhood Illness
(IMNCI)**

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Thesis presented in partial fulfilment of the requirements
for the degree of Master of Nursing Science
in the Faculty of Medicine and Health Sciences
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Declaration

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Abstract

Background

The Integrated Management of Neonatal and Childhood Illness (IMNCI)/Integrated Management of Childhood Illness (IMCI) improves nurses' skills on the assessment and treatment of children. The correct implementation of the IMNCI is attributed to the global reduction of mortality rates among children under five years. Namibia is among the countries where poor adherence to the IMNCI guidelines was observed. The aim of the study was to describe and explore the perceptions of primary health care (PHC) nurses on what promotes or hinders the implementation and integration of IMNCI in public PHC facilities in Windhoek, Namibia.

Methods

The study used the Normalisation Process Theory (NPT) as the theoretical departure. A qualitative, exploratory, descriptive and contextual design, was applied in this study. The study was conducted at Katutura and Khomasdal Health Centres. A purposive sampling method was used. Data collection was done through individual, semi-structured, face-to-face interviews, guided by a semi-structured interview guide. Ten interviews, including the pilot study, were conducted by the researcher. Ethical approval was obtained from Stellenbosch University, the Ministry of Health and Social Services and the Khomas Regional Health Directorate. Qualitative content analysis of data, using Tesch's eight steps was done.

Findings

Despite efforts to implement the IMNCI, challenges such as negligence by the nurses, lack of training, high workload in the PHC facilities, absence of accountability to superiors and lack of adequate control, were reported to have a negative influence on the successful implementation of the IMNCI. Furthermore, lack of resources such as human resources, time, equipment and materials as well as medicines, were also found to be negatively affecting the implementation of the IMNCI.

Conclusion and recommendations

Although Namibian nurses were found to have a sound understanding of the IMNCI, their ability to implement the strategy was reported to be hindered by various factors. Recommendations include availing of IMNCI training opportunities, provision of adequate human resources, IMNCI equipment and medicine to the PHC facilities, as well as strengthening of control measures such as supervision and support visits.

Key words: IMNCI, IMCI, perceptions of PHC nurses, factors, implementation

Opsomming

Agtergrond

Die Geïntegreerde Hantering van Neonataal- en Kindersiektes (GHNKS)/ Geïntegreerde Hantering van Kindersiektes (GHKS) verbeter die vaardighede van die verpleegsters vir die assessering en behandeling van kinders. Die korrekte implementering van GHNKS word toegeskryf aan die wêreldwye afname in die sterftesyfers van kinders onder die ouderdom van vyf jaar. Daar is bevind dat Namibia onder die lande is waar GHNKS riglyne swak nagekom word. Die doel van die studie is om die persepsies van primêre gesondheidsorg (PGS) verpleegsters te ondersoek en te beskryf oor wat bevorder of verhinder die implementering en integrasie van GHNKS in Staatsgesondheidsorg fasiliteite in Windhoek, Namibië.

Metodes

Die studie het gebruik gemaak van die Normalisering Prosesteorie (NPT) as die teoretiese vertrekpunt. 'n Kwalitatiewe, ondersoekende, beskrywende en kontekstuele ontwerp is in die studie toegepas. Die studie is by Katutura en Khomasdal Gesondheidsentrums uitgevoer. 'n Doelbewuste steekproefmetode is gebruik. Data-insameling is deur individuele, semi-gestruktureerde, van aangesig-tot-aangesig onderhoude gedoen, gelei deur 'n semi-gestruktureerde onderhoudsgids. Tien onderhoude, insluitende die loodsprojek is deur die navorser voltooi. Etiese goedkeuring is van de Universiteit van Stellenbosch, die Minister van Gesondheid en Maatskaplike Dienste en die Khomas Streeksgesondheid Direkoraat verkry. 'n Kwalitatiewe inhoudelike analise van die data is met behulp van Tesch se ag stappe uitgedra.

Bevindings

Ten spyte van pogings om die GHNKS te implementeer, is uitdagings soos nalatigheid van verpleegsters, 'n tekort aan opleiding, hoë werklading in die PGS fasiliteite, afwesigheid van verantwoording doen aan gesagdraers en gebrek aan voldoende beheer, gerapporteer wat 'n negatiewe effek op die geslaagde implementering van GHNKS het. Vervolgens, 'n gebrek aan menslike hulpbronne, tyd, toerusting en gereedskap, asook medisyne het ook die implementering van GHNKS negatief geaffekteer.

Gevolgtrekkings en aanbevelings

Alhoewel daar bevind is dat Namibiese verpleegsters 'n goeie begrip het van GHNKS, is hulle vermoë om die strategie te implementeer, verhinder deur verskeie faktore. Aanbevelings sluit in die beskikbaarstelling van GHNKS opleidingsgeleentheid, voorsiening van voldoende

menslike hulpbronne, GHNKS toerusting en verskaffing van medisyne aan die PGS fasiliteite, asook die versterking van beheermaatreëls soos toesighouding en ondersteuningsbesoeke.

Sleutelwoorde: GHNKS, GHKS, persepsies van PGS verpleegsters, faktore, implementering

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Dedication

I dedicate this thesis to the loving memories of my dearest mother Etutala Tauya and Uncle Frans Heita, both who passed away while I was busy with this study. Their contribution towards my education brought me to this level.

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Abbreviations

AIDS	Acquired Immunodeficiency syndrome
HIV	Human Immunodeficiency syndrome
IMCI	Integrated Management of Childhood Illness
IMNCI	Integrated Management of Childhood and Neonatal Illness
IMR	Infant mortality rates
KRHD	Khomas Regional Health Directorate
MDGs	Millennium Development Goals
MoHSS	Ministry of Health and Social Services
NACS	Nutritional Assessment Counselling and Support
NMR	Neonatal mortality rates
NPT	Normalisation Process Theory
U5MR	Under five mortality rates
PHC	Primary Health Care
SDGs	Sustainable Development Goals
UN	United Nation
UNICEF	United Nations Children's Fund
WHO	World Health Organisation

CHAPTER 1: FOUNDATION OF THE STUDY

1.1 INTRODUCTION

The adoption of the Millennium Development Goals (MDGs) in the year 2000, resulted in the reduction of the global under-five mortality rates (U5MR) from 91 deaths per 1 000 live births in 1990 to 43 deaths per 1 000 live births in 2015 (You, Hug, Ejdemyr, Idele, Hogan, Mathers, et al., 2015:2275). This progress is remarkable, although it failed to meet the MDG4 target of reducing the U5MR by two thirds, by the year 2015 (Bryce, Black & Victora, 2013:1; You et al., 2015:2283). However, in the low-income countries including the sub-Saharan Africa, the U5MR remains high (You et al., 2015:2284). The U5MR in the sub-Saharan Africa was reported to be 86 per 1 000 live births, in the United Nation (UN) report of 2015 (Makhlouf, Kellard & Vinogradov, 2017: 144). Many of these deaths are caused by preventable and easily treatable diseases (Ahmed, Mitchell & Hedt, 2010:129). Nevertheless, efforts to decrease children's mortality rates did not end with the MDGs. The sustainable development goals (SDGs) that were adopted in 2015, aims at reducing the neonatal mortality rates (NMR) to not more than 12 deaths per 1 000 live births and the U5MR to not more than 25 deaths per 1 000 live births by the year 2030 (World Health Organisations, 2015:72)

Efforts to reduce death rates among children led to the development of the Integrated Management of Childhood Illness (IMCI). IMCI is a strategy developed by the World Health Organisation (WHO) and the United Nations Children's fund (UNICEF), to reduce child morbidity and mortality in countries with high U5MR (Costello & Dalglish, 2016:1). As an assessment and treatment strategy, IMNCI focuses on the holistic care of a child, instead of concentrating on a single ailment. The term IMCI was later changed to the Integrated Management of Neonatal and Childhood Illnesses (IMNCI) in some countries, to accommodate new-born babies (Iita, Neshuku & Chirimhana, 2016:76).

IMNCI was adopted by many countries, including Namibia (Boschi-Pinto, Labadie, Dilip, Oliphant, Dalglish, Aboubaker, et al., 2018:5). However, findings of various studies conducted in different countries, indicate poor adherence to the IMNCI guidelines by healthcare workers (Mulaudzi, 2015:92; Kiplagat, Musto, Mwizamholya & Morona, 2014:2; Titaley, Jusril, Ariawan, Soeharno, Setiawan & Weber, 2014: 161).

1.2 BACKGROUND

Namibia is one of the sub-Saharan African countries with high rates of child mortality. According to the country's health statistics of 2013, the infant mortality rate (IMR) was reported to be 39 deaths per 1 000 live births, while the U5MR was 55 deaths per 1 000 live births

(Ministry of Health and Social Services, 2014: 85). Although these figures are lower than those of 2006 when the IMR stood at 69 per 1 000 live births and the U5MR stood at 46 per 1 000 live births, the country seemed unlikely to reach its target goals of 18 and 24 deaths per 1 000 live births respectively by the year 2018 (Ministry of Health and Social Services 2014:9). According to the Ministry of Health and Social Services (2014:7), the common causes of child morbidity and mortality in Namibia are neonatal conditions, pneumonia, diarrhoea, human immunodeficiency syndrome (HIV) /acquired immunodeficiency syndrome (AIDS) and malnutrition.

Namibia adopted the IMNCI strategy in the year 2009 (Ministry of Health and Social Services, 2014:41). Since then, attempts to train healthcare workers were made and the strategy was introduced to various public primary health care (PHC) facilities around the country. According to the government accountability report, 71 percent of the health facilities in Namibia has attempted to implement the IMNCI strategy by the year 2013 (Republic of Namibia, 2015:178). IMNCI training was also incorporated in the curricula of nursing educational institutions in Namibia (Ministry of Health and Social Services, 2011:41). However, there is evidence that Namibian healthcare workers are not adhering to the IMCI guidelines (Ministry of Health and Social Services, 2014:41; Kruger, Heinzl-Gutenbrunner & Ali, 2017:10).

The researcher is a registered nurse who has previously worked in PHC facilities. Currently, she is working at a training institution as a nurse educator. During the clinical supervision of students, she observed that most nurses do not use the IMNCI guidelines at all. The few who attempt to use it, rarely apply its classifications and treatment plans correctly. Despite the above findings, there is no evidence of a study on the perceptions of PHC nurses regarding the factors that are influencing the successful implementation of the IMNCI in Namibia.

1.3 RATIONALE OF THE STUDY

The health and wellbeing of children is an essential pillar of the SDGs, and governments across the world strive to ensure that children receive adequate health services (Silver & Singer, 2014: 1093). Hence, the IMNCI was introduced as a strategy to improve the nurses' skills on the assessment and treatment of children (Costello & Dalglis, 2016:1). However, the implementation of the IMNCI remains a challenge in Namibia and this study was conducted to obtain perceptions of PHC nurses in Namibia regarding the factors that influence successful implementation of the IMNCI.

The correct implementation of IMNCI improves healthcare workers' assessment and management of childhood illnesses, and this results in the reduction of child morbidity and mortality (Kiplagat, et al., 2014:2). However, various studies done in different countries on the

implementation of the strategy indicated that healthcare workers are not adhering to the IMNCI guidelines. A study done in Indonesia revealed that, although 79% of public primary healthcare facilities implemented IMCI, only 64% applied it to all visiting children (Titaley, et al., 2014: 161). Similarly, a study done in Tanzania on the implementation of IMNCI, revealed that healthcare workers failed to adhere to the IMCI guidelines (Kiplagat, et.al, 2014:2). Furthermore, poor adherence to IMNCI was also observed in Namibia (Ministry of Health and Social Services, 2014:41; Kruger, et al., 2017:10).

This study is justified by the absence of research that addresses the challenges that Namibian PHC nurses face in their attempt to use the IMNCI. Therefore, this study addresses the knowledge gap on the successful implementation of the IMNCI in Namibia and provides solutions for addressing the limitations in efforts to use the IMNCI. Knowledge thereof may help policy makers to develop strategies that will increase adherence to IMNCI, thereby improving child healthcare services and reducing the child mortality rate.

1.4 PROBLEM STATEMENT

The aforementioned literature stated that the world failed to meet the target of reducing the U5MR by two thirds by the year 2015. The U5MR stay high in the low-income countries. These deaths are caused by preventable and easily treatable diseases. IMCI/IMNCI was developed to address the inadequacies in the assessment and treatment of children under 5 years, which led to a high mortality rate in this age group (Tripodi, Siano, Mandato, De Anseris, Quitadamo, Guercio, et al., 2017:7). When used correctly, the IMNCI enables the healthcare provider to conduct a holistic examination of children, and provide proper treatment and care, to reduce morbidity and mortality rates (Aneja, 2019:625).

Since its development, IMNCI/IMCI was adopted by many countries, including Namibia. However, evidence of poor adherence to the strategy has been observed in many countries. Namibia is among the countries with poor adherence to the IMNCI guidelines (Kruger, et al., 2017:10; Ministry of Health and Social Services, 2014:41). As per this researcher's observations, many nurses in the PHC facilities do not refer to the IMNCI guidelines, when managing sick children. This poor adherence raises the question on the factors that might be affecting its effective implementation. This study therefore sought to explore the perception of the PHC nurses in Namibia on factors that influence the successful implementation of the IMNCI.

1.5 RESEARCH QUESTION

The research question for this study was:

What are the perceptions of PHC nurses regarding factors influencing the successful implementation of IMNCI in PHC facilities in Windhoek, Namibia?

1.6 RESEARCH AIM

This study aimed at exploring and describing the perceptions of PHC nurses on what promotes or hinders the implementation and integration of IMNCI in public PHC facilities in Windhoek, Namibia.

1.7 RESEARCH OBJECTIVES

The objectives of this study were to:

- Explore how PHC nurses understand the IMNCI strategy
- Describe how PHC nurses operationalise the IMNCI strategy
- Describe the actions of PHC nurses towards the successful implementation of the IMNCI strategy
- Describe how the IMNCI strategy is evaluated and appraised by PHC nurses.

1.8 THEORETICAL FRAMEWORK

The Normalisation Process Theory (NPT) was applied as a theoretical framework for this research, to understand how Namibian PHC nurses perceive the implementation of the IMNCI (see figure 1.1 below). The researcher chose the NPT as a theoretical framework because it was proven to be effective in evaluating and understanding the implementation process of complex healthcare interventions (May, Cummings, Girling, Bracher, Mair, May, et al., 2018:1).

The four constructs of the NPT are coherence, cognitive participation, collective action and reflexive monitoring (Murray, Treweek, Pope, MacFarlane, Ballini, Dowrick, et al., 2010:2). Coherence explains the healthcare workers' awareness and understanding of the significance of implementing the new strategy (Gould, Hale, Waters & Allen, 2016:376). Cognitive participation describes the level at which healthcare workers are willing and prepared to engage and implement the new strategy (Murray et al., 2010:4). Collective action describes the responsibility of healthcare workers towards the success of implementing the IMNCI strategy (Murray et al., 2010:4). Reflexive monitoring refers to the evaluation of the progression and success of the strategy by healthcare workers, and the recommendations for improvement (Gould et al., 2016:376). Figure 1.1 illustrates the NPT with its four components. Additional discussion on the framework will be provided in chapter 2.

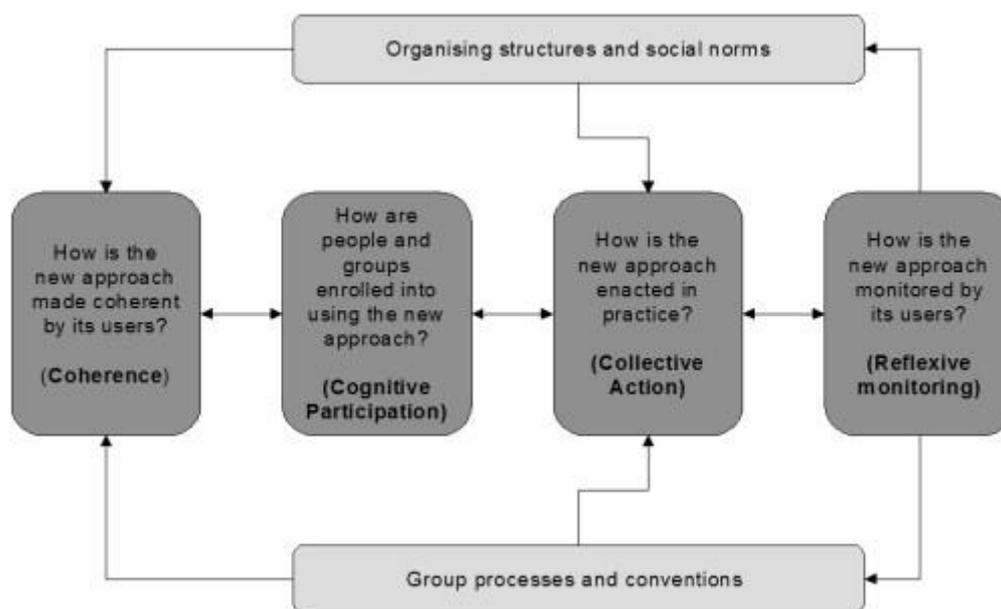


Figure 1.1: The Normalisation Process Model

(Ong, Morden, Brooks, Porcheret, Edwards, Sanders, et al., 2014)

1.9 RESEARCH METHODOLOGY

In this section, the researcher provides a brief description of the methodology applied for this study. A detailed discussion of the research methodology will be provided in chapter 3.

1.9.1 Research design

This study used a qualitative, exploratory, descriptive and contextual study to explore and describe the perceptions of nurses on factors that influence the implementation of IMNCI.

1.9.2 Study setting

This study was conducted in Katutura and Khomasdal health centres. These two health centres are part of the Windhoek district in Khomas Regional Health Directorate (KRHD). The reasons for selecting these centres are that they are the largest PHC facilities in Windhoek and are among facilities that have introduced the IMNCI. Therefore, they represent the overall picture of all the other facilities.

1.9.3 Population and sampling

The population for this study were all nurses (N=60) that are working in the IMNCI practicing healthcare centres (n=2). The purposive sampling method was used to choose participants for this study.

For this study, the researcher conducted individual interviews until data saturation was achieved. Ten (10) out of 60 nurses that were allocated to the two selected healthcare centres

were interviewed. This includes two facility managers (n=2), six registered nurses (n=6) and two enrolled nurses (n=2).

1.9.4 Data collection tool

In this study, data was collected through individual face-to-face interviews, using a semi-structured interview guide (Appendix A). The interview guide was developed based on the study objectives.

1.9.5 Pilot interview

One pilot interview was conducted by the researcher to test the feasibility of the interview guide and to correct any errors that might arise. Data from the pilot interview was included in the final report.

1.9.6 Trustworthiness

Trustworthiness of this study was enhanced through the application of the four criteria as suggested by Lincoln and Guba (1985) as described in Brink, Van der Walt and Van Rensburg (2018: 158-160) and Jooste (2018: 351-357). The four criteria credibility, dependability, conformability and transferability were applied to ensure trustworthiness of the study.

1.9.7 Data collection

Individual interviews using a semi-structured interview guide (Appendix A), were utilised for data collection. Interviews took place at the participants' preferred venues. However, it was the responsibility of the interviewer to ensure that the interview venue was conducive for interviews, free from distractions (Creswell & Poth, 2018: 232). Data collection took place from July to September 2020. All the interviews were tape recorded, and notes were taken throughout the interviews.

1.9.8 Data analysis

This study used the qualitative content analysis. Data analysis was done using Tesch's eight steps of data analysis as outlined by Creswell and Creswell (2018: 196).

1.10 ETHICAL CONSIDERATION

Ethical approval for this study was obtained from the Health Research Ethics Committee (HREC) of Stellenbosch University on 13 September 2019, S19/05/094 (Appendix D). Furthermore, approval was obtained from the research unit of the MoHSS on 13 November 2019, 17/3/3 EM (Appendix E). Approval from the KRHD was also obtained, S4/9 (Appendix F & G).

The researcher applied ethical principles to ensure that the rights of the study participants are protected. These include the right to self-determination, anonymity and confidentiality, as well as protection from discomfort and harm (American Nurses Association, cited in Grove, Gray and Burns, 2015: 101-109).

1.10.1 Right to self-determination

The participants' right to self-determination was ensured by informing them that their participation is voluntary, and they have a right to withdraw from the study at any time, without fear of a penalty. Essential information about the study and its process were given to the participants, and informed consents (Appendix B) were obtained from those interested. No incentives or any form of coercion were used to persuade participation.

1.10.2 Right to anonymity and confidentiality

The right to privacy, anonymity and confidentiality was protected by ensuring that the interviews were conducted in a secured place, where no other person apart from the researcher and the participant, were able to hear the conversation. The researcher ensured that any personal information that might reveal the identity of the participants was not published. To cover the participants' identity, no names were mentioned in the report. Instead, participants were assigned codes. Participants were assured that results will not be made public without their permission, and all the records and transcripts will be stored in a locked place for a period of five years.

1.10.3 Right to protection from discomfort and harm

To ensure the right to protection from discomfort and harm, the researcher applied all possible measures to ensure that participants are comfortable throughout the research. The researcher observed the participants for signs of discomfort during the interviews. Preparations were made to refer participants for counselling, should they become distressed.

1.11 OPERATIONAL DEFINITIONS

Healthcare worker- In this study, healthcare workers refer to health professionals i.e. doctors, nursing managers, registered nurses and enrolled nurses whose job description includes working with children under 5.

IMCI- Integrated management of childhood illness is a strategy developed by WHO and UNICEF, to improve health and lessen the number of deaths in countries with high U5MR (Costello & Dalglish, 2016: 1).

IMNCI-Integrated management of neonatal and childhood illness, the latest version of IMCI with a new-born component added (Costello & Dalglish, 2016: 16).

Enrolled nurse- Any person authorised to practise as an enrolled nurse after obtaining the prescribed qualifications, as stipulated by the Nursing Act, No 8 of 2004 (Ministry of Health and Social Services, 2019 :2).

Facility manager- In this study, a facility manager refers to a senior registered nurse who oversees the healthcare centre or clinic.

Perceptions- Ways of understanding or interpreting something (Oxford South African Pocket Dictionary, 2015: 659). For the purpose of this study, it refers to the views of healthcare workers on factors that hinder or promote the implementation of the IMNCI.

PHC facilities- In this study, PHC facilities refer to clinics and healthcare centres.

Registered nurse- Any person authorised to practise as a registered nurse after obtaining the prescribed qualifications, as stipulated by the Nursing Act, No 8 of 2004 (Ministry of Health and Social Services, 2019: 2).

1.12 DURATION OF THE STUDY

The study framework is presented in table 1.1 below.

Table 1.1: Study Framework

Year	Month	Activity
2019	13 September	Ethics approval from Stellenbosch University
2019	13 November	Ethics approval from the Ministry of Health and Social Services (MoHSS)
2019	6 December	1 st Institutional approval
2020	28 May	Pilot interview
2020	21 July	2 nd Institutional approval
2020	23 July to 10th September	Data collection
2020	July to November	Data analysis
2020	August to December	Writing of chapters under supervision of the supervisor
2021	January	Technical and language editing
2021	January	Submission of thesis

1.13 CHAPTER OUTLINE

The thesis outline is as follow:

Chapter 1: Foundation of the study

This chapter introduces the study, its rationale, and its objectives. It also provides a brief introduction of the theoretical framework, study methodology and the ethical consideration.

Chapter 2: Literature review

This chapter provides evidence of the reviewed literature as related to IMNCI.

Chapter 3: Research methodology

This chapter provides an in-depth description of the methodology used in this study.

Chapter 4: Study findings

In this chapter, the findings of the study are presented.

Chapter 5: Discussion, conclusions and recommendations

This chapter provides a discussion of the findings, drawn conclusions and proposed recommendations.

1.14 SIGNIFICANCE OF THE STUDY

This study aimed to describe and explore the perceptions of PHC nurses on what promotes or hinders the implementation and integration of IMNCI in public PHC facilities in Windhoek, Namibia. Currently, there is no evidence of a similar study conducted in Namibia. The researcher is of the opinion that knowledge of the nurses' perceptions on the implementation of the IMNCI will lead to the improvement in child health care, thereby reducing morbidity and mortality rates among children.

1.15 CONCLUSION

IMNCI is a strategy developed by the WHO to reduce child morbidity and mortality rate in countries with limited resources. It provides an easy-to-follow algorithm that helps healthcare workers assess and manage sick children at the PHC level, focusing on the common causes of childhood deaths. However, there is evidence that healthcare workers are failing to adhere to the IMNCI guidelines. This necessitates a need to investigate and explore the perceptions of healthcare workers on the factors that influence the implementation of these guidelines. Knowledge thereof will help in the planning of IMNCI improvement strategies.

Chapter 2 contains a detailed description of the literature review on the IMNCI and the factors that influence its implementation.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

In chapter 1, the foundation for this study is laid. This chapter will review the existing literature on IMNCI and the factors that influence the implementation thereof. A literature review is a process of searching different studies that are relevant to the topics of interest, examine and compare them to identify gaps in the existing knowledge (Grove et al., 2015:163).

2.2 SELECTING AND REVIEWING THE LITERATURE

The researcher conducted the literature review using various search engines, such as Google Scholar, PubMed and ScienceDirect. The search terms used in this review are IMNCI/IMCI, implementation, nurses, perceptions, factors and influencing. Boolean operators (AND, OR) were used to combine the search terms. The review included literature published between 2010 and 2020. Sixty-seven articles were used in this review. The review took place between March 2018 and December 2020.

The findings of the review are presented in this chapter, under the following headings:

- IMNCI strategy
- Components of IMNCI
- Adherence to IMNCI
- Factors influencing the implementation of IMNCI.

2.3 THE IMNCI STRATEGY

The WHO and UNICEF developed the IMCI in 1995, as a preventive, curative and health promotion strategy in countries with an U5MR of more than 40 per 1 000 live births (Costello & Dalglish 2016:6). It aims at reducing child mortality and morbidity caused by significant childhood illnesses, namely malaria, pneumonia, diarrhoea, measles, malnutrition and HIV/AIDS (Meno, Makhado & Matsipane, 2019: 1). The strategy was later renamed as IMNCI in many countries, to accommodate neonates (Iita, et.al., 2016:76; Costello & Dalglish, 2016: 6; Venkatachalam, Kumar, Gupta, & Aggarwal, 2011:298). Namibia is among the countries that renamed the strategy. However, there are still countries that are using the acronym IMCI. Therefore, the two acronyms will be used interchangeably in this study. IMNCI comprises of three components, namely the improvement of the case management skills of health personnel, the improvement of the health system support, and the improvement of community and family practices (Rana, Kumar, Kumar, Choudhary, Roy & Roy, 2015:66-67).

The IMNCI guidelines provide an algorithm that helps healthcare workers to assess and manage sick children, focusing on the common causes of childhood deaths (Steinhardt, Onikpo, Kouamé, Piercefield, Lama, Deming et al., 2015:1). In IMNCI, a set of crucial assessment questions should be asked irrespective of the child's key complaints, thereby enabling healthcare workers to identify other health problems that were omitted by the caretaker (Gombe, Mabaera, Tshimanga, Shambira & Chadambuka, 2010:10). The child's illness is then classified, based on its severity, and appropriate treatment, including pre-referral treatment determined, as recommended in the guidelines (Mulaudzi, 2015:89). The guidelines also give directives to healthcare workers on the appropriate health advice and the follow-up date (Robertson, Manson & Fioratou, 2018:2). To ensure correct administration of medicine at home, healthcare workers are directed to administer the first dose in the health facility while the mother or caregiver is watching (Tshivase, Madumo & Govender, 2020:1). IMNCI also incorporates disease prevention strategies, such as the promotion of breastfeeding, and provision of counselling on nutrition and immunisation (Mansoor, Chikvaidze, Varkey, Higgins-Steele, Safi, Mubasher et al. 2017: 56).

The uniqueness of the IMNCI strategy lies in the fact that, unlike the traditional methods of screening, it focuses on the holistic well-being of a child (Mupara & Lubbe, 2016:2). The IMNCI management charts are colour coded, and healthcare workers follow chart booklets as guidance during consultations (Goga & Muhe, 2011:1). The strategy includes both curative and preventive elements, and the responsibility of its implementation is shared by healthcare workers, communities and families (Abebe, Kassaw & Mengistu, 2019:1). The utilisation of this strategy enables PHC nurses to initiate management of ill children without the doctors' help (Rhode & Mash, 2015:101). When implemented correctly, IMNCI reduces the inappropriate use of antibiotics and increases vaccination coverage (Al-Nuaimi & Saleem, 2019: 79).

There is evidence that IMNCI implementation contributed to a decrease in the child mortality rate. Findings of a study done in India indicated that the implementation of IMNCI contributed to a substantial reduction in neonatal and infant mortality rates (Bhandari, Mazumder, Taneja, Sommerfelt, & Strand, 2012:1). Furthermore, a Cochrane review of studies done in Bangladesh, India and Tanzania, reported a reduction in the mortality rate among children under the age of five, after the implementation of IMCI (Gera, Shah, Garner, Richardson, & Sachdev, 2016:3). This is similar to findings of studies done in Egypt where the implementation of IMCI was associated with doubling in the reduction of the U5MR (Rakha, Abdelmoneim, Farhoud, Pièche, Cousens, Daelmans, et al., 2013:1). In Tanzania, the implementation of IMCI

is reported to have contributed to the reduction of child mortality by 13% (Bhandari, et al., 2012:5).

2.4 COMPONENTS OF THE IMNCI

The three components of the IMNCI are: improvement of the case management skills of health personnel, improvement of the health system support, and improvement of community and family practices. Below follows the discussion of these components.

2.4.1 Improvement of the case management skills of health personnel

This component focuses on training and reinforcement of correct practice (Rana et al. 2015: 66). It includes basic training on the implementation of IMNCI, refresher courses and supervisory support visits by the programme administrators (Ministry of Health and Social Services 2014: 41). This is the only component of IMNCI that has been implemented in many countries (Ahmed et al., 2010:129; Basaleem & Amin, 2011:102; Nguyen, Leung, McIntyre, Ghali & Sauve, 2013:1).

IMNCI basic training is offered as an 11 days' course, combining theory and practical sessions on the management of sick children up to the age of 5 years (Goga & Muhe, 2011:1). Practical sessions are done as scenarios, and on real patients in health facilities (Mugala, Mutale, Kalesha & Sinyinza, 2010:2). In this training, healthcare workers are equipped with the skills of using IMNCI algorithms as guides to make a thorough assessment of the signs and symptoms, classify the illness based on its severity, and provide appropriate treatment and parent counselling (Rana et al. 2015: 67). According to the WHO, the course should be run by a course director and several facilitators of which a ratio of 1 facilitator per 4 trainees and a limited number of 24 trainees per training course are recommended (Mushi, Mullei, Macha, Wafula, Borghi, Goodman et al., 2011:395). Some counties have also incorporated the IMNCI training in the curricula of basic health care training (Ministry of Health and Social Services, 2014:41; Mushi et al., 2011:399).

Findings from various studies indicated a significant relationship between IMNCI training and the successful implementation thereof. According to Nguyen et al., (2013:9), IMCI-trained healthcare workers were more likely than their non-trained counterparts to classify illnesses correctly regardless of baseline performance. Furthermore, IMCI-trained healthcare workers in Iraq were reported to do correct assessments rather than their IMNCI-untrained counterparts (Al-Samarrai & Jadoo, 2018:4).

2.4.2 Improvement of the health system support

This component aims at strengthening the delivery of child healthcare services through the provision of adequate support for IMNCI implementation in PHC facilities (Pillay, 2012:26). It includes health-promoting exercises such as improvement of infrastructures, effective supervision, provision of adequate human resources, availability of essential medicine and the correct use of the health information system (HIS) data (Rana et al., 2015:67).

For successful implementation of IMNCI, the WHO required that "...all health facilities should have the necessary manpower, essential equipment, materials and IMCI drugs on hand" (Pillay, 2012:26). The availability of essential medicine is vital in the implementation of IMNCI (Nsabagasani, Ogwal-Okeng, Hansen, Mbonye, Muyinda & Ssenooba, 2016: 2). Findings of a study done in Sudan indicated high adherence to IMCI in facilities without a shortage of medicine (Izudi, Anyigu & Ndungutse, 2017: 4). Report of the WHO strategic review identified poorly functioning health systems as a significant contributing factor to the non-implementation of IMNCI in many countries (Costello & Dalglish, 2016:13).

Supervision and monitoring are significant activities in the strengthening of health systems and provision of quality care (Boschi-Pinto, et al., 2018:5). After the IMNCI basic training, supervisory support is required to reinforce the practice. The IMNCI guidelines recommend that trainees should be followed up within 4-6 weeks post-training, and then after every six months (Basaleem & Amin, 2011: 106). This follow-up aims to reinforce skills gained during the training and to solve problems experienced by trainees during the implementation of the IMCI guidelines (Goga & Muhe, 2011:2).

According to Hogue, Arifeen, Rahman, Chowdhury, Haque, Begum, et al. (2014:761), the combination of good quality training and supportive supervision results in adequate performance among IMCI-trained service providers. Supervisory support enables health care workers to identify their weaknesses and strengths, thereby improving their performance (Ontiro, 2015: 65). In a study done in Bangladesh, monthly supervisory visits were reported to be contributing to improved quality care in IMNCI facilities (Hogue et al., 2014:761). Similarly, Ugandan healthcare workers who received supervisory support after their IMNCI training were reported to be performing better in comparison to those who did not receive this supervision (Magge, Anatole, Cyamatara, Mezzacappa, Nkikabahizi, Niyonzima et al., 2014: 565). In Rwanda, the implementation of a mentoring and supervision programme was reported to have contributed to a significant improvement in the quality of IMCI (Magge, et al. 2014: 565).

2.4.3 Improvement of community and family practices

This component involves community involvement and the development of community and family-based interventions aimed at the prevention of diseases and promotion of health among children (Rana et al., 2015:674). Among the activities in this component, is the deployment of community health workers (CHWs) whose responsibilities include conducting home visits to promote good health practices, identify health needs, and promote access to healthcare services in case of illness (Gera et al., 2016:10). Community empowerment is achieved through educating families on key household practices that influence child health (Jibo, Iliyasu, Abubakar, Umar & Hassan, 2014:71). According to Duke, Ezenwa, Roberts and Ekanem (2020:2), mothers or caregivers with knowledge of the danger signs will seek immediate care, thereby reducing mortality from underlying causes.

2.5 ADHERENCE TO IMNCI

According to Boschi-Pinto et al. (2018:1), over 100 countries around the world have adopted the IMCI strategy. However, evidence from various studies indicated poor adherence to IMNCI guidelines and implementation thereof. Findings from a study done by Venkatachalam, Aggarwal, Gupta and Sathya (2012:49), indicated unsatisfactory adherence to IMNCI guidelines by Indian healthcare workers. Although healthcare workers in Benin were found to be doing thorough assessments and correctly classifying the children, they also failed to give recommended treatment (Steinhardt et al., 2015:8). Similarly, findings of a study done in Tanzania, indicated inconsistency in the implementation of IMCI (Kiplagat et al., 2014:2). Furthermore, incorrect IMNCI classification and inappropriate treatments were also observed in Ethiopia (Gerensea, Kebede, Baraki, Berihu, Zeru, Birhane et al., 2018:5). In an IMCI study done in South Africa, participating professional nurses were reported to be only focusing on selected items of the strategy (Maleshane, 2012:54). Apart from nonadherence, healthcare workers in South Africa were also found to be giving wrong classifications and failing to provide treatment as recommended in the IMNCI guidelines (Mulaudzi, 2015:92).

According to the report of the health facilities' census, IMNCI was implemented in 20 out of 34 health districts in Namibia, by the year 2009 (Ministry of Health and Social Services, 2011:53). However, findings from the same census also indicated poor adherence to IMNCI guidelines which led to the inappropriate use of antibiotics (Ministry of Health and Social Services, 2014:41). These findings are similar to those of a study done by Kruger, et al. (2017:10), to assess the IMCI adherence of low to middle-income group, concentrating on Kenya, Namibia, Tanzania and Uganda. Low rates of IMNCI adherence, especially by nurse practitioners, were observed in all four countries.

2.6 FACTORS INFLUENCING THE IMPLEMENTATION OF IMNCI

According to retrieved literature, the implementation of IMNCI is influenced by factors such as coherence (sense-making, value and benefits), cognitive participation (buy-in, engagement and support), collective action (enactment and integration into everyday practice) and reflexive monitoring (assessment and evaluation of the impact). Each of these factors is discussed below.

2.6.1 Coherence

Coherence refers to whether and how the intervention is understood by stakeholders (O'Reilly, Lee, O'Sullivan, Cullen, Kennedy & MacFarlane, 2017:3). Healthcare workers' awareness of IMNCI, is among factors that were identified to have an influence on the implementation of IMNCI.

2.6.1.1 Health care workers' awareness of IMNCI

Evidence from various studies indicates different views on IMNCI awareness and understanding among nurses. The study findings of an Ethiopian study showed that only 28% of the interviewees were aware of IMNCI (Seid & Sendo, 2018:4). Whereas 73% of the respondents in a study done in Nigeria, indicated their IMNCI awareness (Adekanyo & Odetola, 2014:32). Also, Kiplagat et al. (2014:5), reported that in Tanzania, 51% of healthcare workers, including nurses indicated that they understood the IMNCI strategy.

In a study done in Pakistan, healthcare workers demonstrated sufficient knowledge of IMNCI. They indicated their appreciation of the strategy as the best option for improving the children's health (Pradhan, Rizvi, Sami & Gul, 2013:8). Furthermore, the study findings of Basaleem and Amin (2011:104), indicated that Yemen healthcare providers, including nurses were aware of the benefits of IMCI in the community, such as improvement in breastfeeding, decreased deaths from diarrhoea and malnutrition, as well as a decrease in cases of malaria and infectious diseases. These findings are similar to those of a study done in Indonesia, where almost all the participants indicated that they have benefited from the IMCI implementation, citing more exact treatment procedures, rational administration of drugs and increased patient satisfaction, as some of the benefits (Titaley et al., 2014: 165).

2.6.2 Cognitive participation

Cognitive participation refers to whether the target users are willing and prepared to implement the intervention (O'Reilly et al., 2017:3). Engagement and buy-in are being influenced by factors such as supervisory support and attitudes of healthcare workers. (Adekanye & Odetola, 2014; 33; Kiplagat et al., 2014: 7-9; Titaley et al., 2014: 167-168).

2.6.2.1 Supervisory support

Supervision by skilled personnel is a critical component of IMNCI implementation, as it strengthens practical skills (United Nations Children's Fund, 2016:14). According to Mansoor et al. (2017: 61), IMNCI training alone is not sufficient in the improvement of care, unless it is followed up with quality supervision. Findings from several studies identified low or lack of supervisory support as one of the factors that have a negative influence on the implementation of IMNCI. In Bangladesh, infrequent supervisory visits that do not involve observation of health care workers were reported (Hogue et al., 2014:8).

According to Titaley et al. (2014:165), Indonesian healthcare workers, some of whom had received IMCI training more than five years ago, reported lack of, or inadequate supervisory visits, since their training. Similar observations were made in Nigeria, where healthcare workers said that IMCI supervisory support was rare and inconsistent (Adekanye & Odetola, 2014; 33). Furthermore, healthcare workers in Tanzania indicated that lack of supervisory support and mentoring of IMCI discourages them from implementing the IMCI guidelines (Kiplagat et al., 2014:7).

A study done in Botswana attributed inadequate supervision to the fact that some senior managers are not trained in IMNCI. Therefore, they lack confidence in supervising trained personnel (Mupara & Lubbe, 2016:4). These findings are similar to those of a study done in Pakistan where lack of trained supervisors was identified as a contributing factor to inadequate supervision and monitoring mechanism (Pradhan et al., 2013:13). High supervision workload, lack of motivation and prioritisation of non-supervision activities, are some of the factors that were identified as harming the supervision of IMCI implementation in Benin (Rowe, Onikpo, Lama, & Deming, 2010:132). However, findings of a multi-country evaluation of IMCI indicated significant improvement in supervision which is attributed to the adoption of a decentralised health system in Tanzania (Bryce et al., as cited in Mohan, Kishore, Singh, Bahl, Puri & Kumar, 2011: 636).

2.6.2.2 Attitudes of healthcare workers

Various studies on IMNCI revealed that healthcare workers' attitudes are influencing adherence to IMNCI. The study findings of various studies showed that the majority of healthcare workers display a positive attitude towards the IMNCI approach (Adekanye & Odetola, 2014: 33; Kiplagat et al., 2014: 7). However, negative attitude of healthcare workers was identified as one of the factors that has a negative influence on the commitment to IMNCI (Salem, Mohamad & Nafee, 2019: 19).

According to Carai, Kuttumuratova, Boderscova, Khachatryan, Lejnev, Monolbaev et al., (2019: 1142), healthcare workers from Asia and Europe indicated the exclusion of widely used diagnostic tools, such as urine dipstick and stethoscopes, as a demotivating factor towards the implementation of IMCI. An IMNCI evaluation study done in Moldova produced mixed results with some healthcare workers embracing the strategy, while some displayed a negative attitude towards it (Stefanet & Laur, n.d.: 35). In Tanzania, healthcare workers indicated their reluctance to follow the IMNCI algorithm, as it is time-consuming (Ahmed, et al., 2010:130). Similarly, in Ethiopia, healthcare workers indicated that the IMNCI assessment is time-consuming, and this results in longer waiting queues (Abebe et al., 2019:10). In another study done in Tanzania, healthcare workers were reported to view IMCI as an unimportant approach (Kruger et al., 2017:10).

In Zambia, healthcare workers indicated that they are not comfortable to follow the chart booklets in front of clients as they fear to be labelled as incompetent (Mugala et al., 2010:6). In South Africa, "...doctors and nurses with special PHC training frequently view IMCI as an inferior strategy for case management, despite lack of evidence to support this" (Fick, 2017:209). According to Pandya, Slemming and Saloojee (2018:175), South African nurses who received primary care clinical training perceived the IMCI strategy as superficial. On the contrary, the findings of a recent study done in South Africa indicated that nurses perceived IMCI as an essential skill (Tshivase et al., 2020:4).

2.6.3 Collective action

"Collective action refers to the operational work that people do to enact a set of practices, whether these represent a complex intervention or new technology" (Gillespie, Harbeck, Lavin, Gardiner, Withers & Marshall, 2018:2). Retrieved studies indicate that organisational factors such as training, availability of human resources, availability of essential medicines and supplies, the cooperation of clients and governmental support of IMNCI influence the implementation of the IMNCI.

2.6.3.1 Training

Evidence from various studies indicates that training improves IMNCI awareness and knowledge among healthcare workers, including nurses. According to Adekanye and Odetola (2014:33), training improves IMNCI knowledge and awareness among nurses. "Nurses working in paediatric areas need to undergo training on the IMCI strategy to improve their skills in caring for under- fives and keep them abreast of innovations, strategies and technology involving management of children" (Adekanye & Odetola, 2014: 34). Similarly, Seid, Sendo, Haso and Amme (2019:5) opined that the implementation of IMCI will be improved through the training of all the nurses working in public health institutions. Findings

of a study done by Nguyen et al. (2013:1), indicate a significant relationship between IMCI training and the provision of quality care.

The WHO recommends that at least 60% of healthcare workers who are working in child healthcare services should be IMNCI trained (Kiplagat et al., 2014: 6). However, the findings of studies conducted in different countries confirmed that less than 60% of staff working in child healthcare services were trained in IMNCI. In a study done in Indonesia, only 43% of the participants were reported to have received IMCI training (Titaley et al., 2014:168). Findings of a study done in Ethiopia indicated that only 58% of healthcare workers were IMCI trained (Seid & Sendo, 2018:1). Similar observations were made in Tanzania, where only 51% of healthcare workers were reported to have received IMCI training (Kiplagat et al., 2014:1). Lack of training harms the implementation of IMNCI, as untrained nurses find it challenging to use the chart booklets (Meno, et al., 2019:5).

Although, the WHO initially recommended IMNCI training to be offered over 11 days, some countries have tried to shorten the training period. The higher cost associated with IMNCI training is cited as one of the factors that are limiting the training coverage. (Mushi et al. 2011:402). This cost is attributed to the length of the training and limited funding (Mupara & Lubbe, 2016: 4). According to Mushi et al. (2011:401), "...the training cost reflects the long duration of the training, its residential nature and the high numbers of facilitators required". The long duration of the IMNCI course contributes to the absence of healthcare workers from their duties, and this adds to the strains linked to staff shortage (Boschi-Pinto et al., 2018:7). Reducing the duration of the training is aimed at cost-saving and the possibility of training more health workers (Mayhew, Ickx, Newbrander, Stanekzai & Alawi, 2015:143). In Tanzania, a distance learning IMCI programme was introduced to cut costs and maximise training coverage (Muhe, Iriya, Bundala, Azayo, Bakari, Hussein, et al., 2018:1).

The majority of IMNCI trained healthcare workers feel that the 11 days' training was not adequate and suggested the extension of the training period (Mushi et al., 2011: 399). In a study done by Kiplagat et al. (2014:5), long-duration training was associated with increased IMCI awareness. However, various studies on IMNCI found no significant difference between the performance of health workers who received a short duration IMCI course and those who received the 11-days' training. Findings of a study done in Afghanistan indicated similar performance between health workers who received a 7-days' IMCI training and those who were trained for 11 days (Mayhew et al., 2015:150). Furthermore, in Rwanda, no significant difference was found on the IMNCI classification and treatment skills of health workers who underwent a 6-days' training in comparison to those who underwent the standard course (Harerimana, Nyirazinyoye, Ahoranyezu, Bikormana, Hedt-Gauthier, Maldoon et al.,

2014:99). According to Rowe et al. (2010:189), "...standard in-service IMCI training seemed more effective than short training, although the magnitude of the difference is unclear and might be small".

Since its introduction, the IMNCI guidelines have been reviewed and updated with new components being added, such as the care and management of children living with HIV/AIDS. Findings of a follow-up study done on Indian IMNCI trained healthcare workers three years after their training, indicated a significant decline in the knowledge and skills irrespective of the training duration (Venkatachalam et al., 2011:299). According to Kruger et al. (2017:4), healthcare workers who have received IMCI retraining were found to be performing better, in comparison to those who did not receive retraining. A pre-test post-test study on IMNCI done in India concluded that "...a regular teaching program is needed to update the knowledge of trained nurses" (Anurami, Mohammed, Prashanth, Shomiya, Shilpa, & Umarani, 2014:80). However, trained healthcare workers from Yemen and Tanzania have indicated that apart from their initial training, they have never received refresher training (Basaleem & Amin, 2011:103; Kiplagat et al., 2014:4). Similarly, healthcare workers in South Africa indicated that they do not receive updates on the implementation of the reviewed guidelines (Meno et al., 2019:5). In Namibia, only 48% of healthcare workers were reported to have received IMNCI retraining (Kruger et al., 2017:5).

2.6.3.2 Human resources

IMNCI consultations take longer; therefore, an adequate number of healthcare workers is needed for the effective implementation thereof (Titaley et al., 2014:164). The recommended time for an IMNCI consultation is 15-20 minutes (Abebe et al., 2019:2). The implementation of IMNCI is reported to be a contributing factor to long patient queues in health facilities, and this results in children being attended to by non-IMNCI trained nurses (Mupara & Lubbe, 2016:4).

The findings of studies conducted in various countries confirmed that shortage of staff has a negative influence on the implementation of IMNCI. In Yemen, healthcare workers indicated that multiple roles associated with a shortage of staff, prevented them from devoting quality time for IMNCI implementation (Basaleem & Amin, 2011: 104). Due to staff shortages, IMNCI trained healthcare workers in South Africa are responsible for providing other healthcare services, and this minimises their time to implement IMNCI guidelines successfully (Meno et al., 2019:4). Similar findings were made in Botswana, where participants identified understaffing as one of the factors that harms the implementation of IMNCI (Mupara & Lubbe, 2016:4). According to Mugala, et al. (2010:6), healthcare workers in Zambia recommended that shortage of PHC workers should be addressed, to enable effective implementation of IMNCI.

Shortage of staff can be attributed to low motivation that leads to frequent staff turnover (Kiplagat et al., 2014:9). Healthcare workers "...lack clear role around the IMCI program and often received no clear directives from higher authorities, resulting in fragmentation of service" (Reñosa, Dalglish, Bärnighausen & McMahon, 2020:8). Unclear directives demotivate healthcare workers, leading to poor performance and staff turnover (Reñosa et al., 2020:3).

2.6.3.3 Availability of essential medicines and supplies

The availability of IMNCl medicines and supplies is another factor identified as influencing the implementation of IMNCl. Inadequate space, and shortage of water and electricity, are among factors that were found to have a negative effect on the implementation of IMNCl in Yemen (Basaleem & Amin, 2011: 106). Furthermore, a study done in Afghanistan indicated lack of necessary equipment such as weight scales and thermometers, as well as supplies to mix oral rehydration solution (ORS), as contributing factors to poor implementation of IMNCl (Mansoor et al., 2017: 60).

In Ethiopia, healthcare workers indicated a shortage of resources such as medicine, wall charts and chart booklets, as a contributing factor to poor implementation of IMCI (Seid & Sendo, 2018:5). Similarly, the unavailability of essential medicine and supplies such as weight scales and chart booklets were found to be significant challenges to the implementation of IMCI in South Africa (Meno et al., 2019:4). Furthermore, the shortage of mid-upper arm circumference measurement tapes and length measurement boards were indicated as some of the contributing factors to poor implementation of IMCI in South Africa (Pandya et al., 2018:176). In another study done in a South African military hospital, shortage of wall charts, equipment and medicine, were identified as some of the factors that have a negative influence on the implementation of IMCI (Cilliers, 2019:76).

IMNCl studies done in Tanzania yielded contrasting findings on the availability of essential medicine and equipment. A study done by Kiplagat et al. (2014:17) indicated lack of critical medications such as antibiotics, zinc supplements and oral rehydration solution, as one of the factors that is negatively affecting the implementation of IMCI. These findings are in contrast with findings of another study done in Tanzania where adequate infrastructures, items and equipment that are necessary for the implementation of IMNCl were found in the observed facilities (Idindili, Zaeem, Ayella, Thawar, Selemani, Dragana, et al., 2018:7). Similarly, findings of studies done in Nigeria indicated significant availability of IMNCl medicine and equipment (Jibo, 2010:91; Ontiro, 2015:61).

2.6.3.4 Governmental support

One of the factors that were found to influence the implementation of IMNCI is support from governments and health systems. "Governments could play a significant role in ensuring that IMCI strategy is not only implemented but also its recommended practices are applied in clinical setting" (Al Araithi, 2017:221). According to findings of a study done in Kenya and Tanzania by Mushi et al. (2011:400), IMNCI was given low priority by both the government and donor organisations, and this resulted in inadequate funding. Other health programmes such as malaria, HIV/AIDS and Tuberculosis, were reported to receive better funding and monitoring than IMNCI (Ahmed et al., 2010:130).

In India, lack of political commitment and ownership by the government, coupled with low sustainability of donor funding, were identified as some of the factors that harm the implementation of IMNCI (Aneja, 2019:625). These findings are similar to those of a study done in an Indonesian province, where health workers indicated lack of government support, as one of the factors that is contributing to poor implementation of IMCI (Zulaikha, Triasih & Purwanta, 2018:168). According to Fick (2017:209), governmental support of IMCI in South Africa has been declining over the years. Unsupportive health systems and lack of clear directives on the execution of IMNCI, demotivate staff to perform their duties (Reñosa et al., 2020:9).

2.6.3.5 Cooperation of clients

Some healthcare workers indicated poor cooperation of clients as a barrier to the implementation of IMNCI. According to Meno et al. (2019:6), clients make negative comments when consultations take longer than expected, and this discourages healthcare workers from implementing strategies that require more time, such as IMNCI. To avoid being labelled as slow or being disorganised, healthcare workers refrain from implementing IMCI (Maleshane, 2012:47). Besides, some clients demand antibiotics, although the classifications of their children do not warrant that (Meno et al., 2019:6). Clients' dissatisfaction was also reported in cases where the guidelines do not recommend any medicine prescription (Titaley et al., 2014:165).

The above findings differ from those of a study done in Bangladesh, where the introduction of IMCI was reported to have resulted in increased utilisation of healthcare facilities (Hoque, et al., 2014:760). Similar findings were recorded in Egypt where caregivers indicated their satisfaction with IMNCI, citing good child treatment, proper clinical examination and adequate health education, as some of the benefits (El Ayady, Meleis, Ahmed & Ismaiel, 2015:229).

2.6.4 Reflexive monitoring

Reflexive monitoring refers to how the intervention is being evaluated by those involved after it has been implemented for a certain period (Coupe, Anderson, Gask, Sykes, Richards & Chew-Graham, 2014:2).

2.6.4.1 Appraisal of IMNCI by health care workers

Healthcare workers hailed IMNCI as the best accurate assessment tool for children under five years (Gerensea et al., 2018:3). Although findings from various studies indicate poor adherence to the IMNCI, multiple categories of healthcare workers have appraised the strategy and revealed its benefits in the improvement of children's health. In Indonesia, healthcare workers appraised the IMCI strategy, indicating that it gives clear directives and leads to the rational use of medication (Titaley et al., 2014: 165). Similarly, healthcare workers in Yemen indicated their appreciation of the strategy as a useful tool in the management of sick children (Basaleem & Amin, 2011: 104). Furthermore, healthcare workers in Pakistan viewed the strategy as the best treatment option for children (Pradhan et al., 2013: 9). In South Africa, healthcare workers appraised the strategy, attributing its accurate implementation to the decrease in the number of follow-up visits (Tshivase et al., 2020:3). However, the absence of a transparent monitoring and evaluation system was identified as one of the factors that is negatively influencing the implementation of the IMCI strategy (Fick, 2017: 211).

2.6.4.2 Recommendations on IMNCI improvement

Recommendations were made on how to improve the implementation of the IMNCI. A study done in Ethiopia by Seid and Sendo (2018:6), recommended improvement in the provision of medicine and human resources, consistent supervisory support and follow-up training, as some of the measures necessary for effective implementation of IMNCI. According to Mupara and Lubbe, (2016:5), recommendations of health care workers in Botswana include, "...adopting short-duration IMCI training courses, scaling up both pre-service and in-service training, and extending IMCI training to lower-level cadres, as well as addressing the challenges related to health systems and the unique features of the strategy". In South Africa, recommendations include adequate staff, availability of essential drugs and equipment, practical supervisory support and mentoring, as well as improvement or upscaling of the IMNCI training programmes (Meno et al., 2019: 6-7).

2.7 THEORETICAL FRAMEWORK

The NPT theory was applied as a theoretical framework for this research. This theory aims at explaining how newly introduced interventions can be integrated into routine healthcare

practice (Murray, Treweek et al., 2010:2). It is designed to identify and explain personal or environmental factors that are influencing the implementation of new interventions (May, Finch, Ballini, MacFarlane, Mair, Murray, Treweek et al., 2011:2). As an implementation theory, the NPT is developed to ensure that the implementation and embedding of new intervention into routine practice is effective (Pope, Halford, Turnbull, Prichard, Calestani, & May 2013:2). The four constructs of the NPT are: coherence, cognitive participation, collective action and reflexive monitoring (Murray et al., 2010:2). "These components are not linear but are in dynamic relationships with each other and with the wider context of the intervention, such as organisational context, structures, social norms, group processes and conventions" (Murray et al., 2010:2). The detailed explanation of the constructs is given below.

2.7.1 Coherence

Coherence is defined as "...a set of ideas about the meaning, uses and utility of practice, which holds the practice together and makes it possible to share and enact it" (Coupe et al., 2014:3). De Brun, O'Reilly-de Brun, O'Donnel and MacFarlane, (2016:3), explain the subconstructs of coherence, namely differentiation, individual specification, communal specification and internalisation. Differentiation refers to whether stakeholders consider the intervention as applicable in their environment. Individual specification is concerned with how individuals understand their expected role in the implementation of the intervention. The communal specification refers to whether the stakeholders understand the purpose of the intervention, while internalisation refers to whether they are aware of the intervention's importance (De Brun et al., 2016:3).

2.7.2 Cognitive participation

Cognitive participation entails the commitment of stakeholders towards the successful implementation of an intervention (May et al., 2011:2). The four subconstructs of cognitive participation are initiation, enrolment, legitimation and activation. Initiation is concerned with the contributions made by team leaders towards the implementation of the intervention. Enrolment refers to organising activities that should be performed to ensure that all team members are actively involved in the implementation. Legitimation entails actions to ensure that team members are aware that it is right for them to participate in the implementation. At the same time, activation refers to the work that should be done to ensure the sustainability of the intervention (Carroll & Conboy, 2020:3).

2.7.3 Collective action

Collective action is concerned with the efforts invested by the stakeholders to ensure the functionality of the intervention (May et al., 2011:2). The subconstructs of collective action are: interactional workability, skill set workability, relational integration and contextual integration.

Interactional workability refers to how the intervention "...helps or hinders professionals in performing various aspects of their work" (Morrison & Mair, 2011:351). Skill set workability relates to the skills and training that are required for the implementation of the intervention (De Brun et al., 2016:3). Relational integration is concerned with whether team members have confidence in the intervention and contextual integration refers to the availability of resources and policies to support the intervention (Carroll & Conboy, 2020: 3).

2.7.4 Reflexive monitoring

Reflexive monitoring involves evaluation of the intervention and recommendations on the improvement and sustenance thereof (O'Reilly et al., 2017:3). The subconstructs of reflexive monitoring are systematisation, individual appraisal, communal appraisal and reconfiguration. Systematisation refers to whether the stakeholders found the intervention practical and useful (De Brun et al., 2016:3). Individual assessment refers to how individuals judge the intervention, while communal appraisal refers to how the intervention is collectively considered by all the role players (Chambers, Boydell, Ford & Eadie, 2020:3). Reconfiguration refers to modification of the intervention based on the evaluation and experience (De Brun, et al., 2016:3).

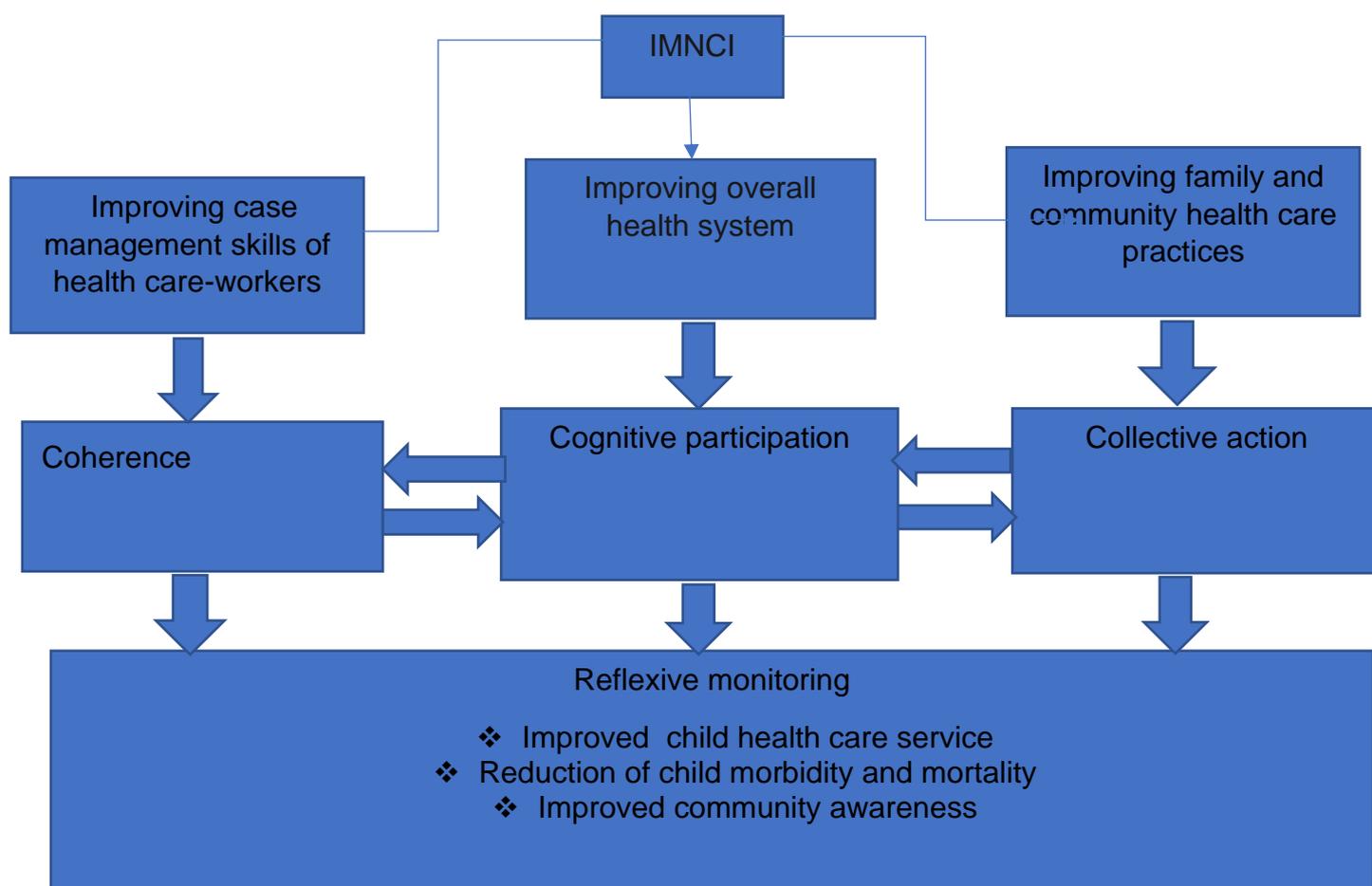


Figure 2.1: NPT as applied in this study

2.8 CONCLUSION

Evidence indicates that IMNCI is poorly adhered to. Among the factors that are influencing the implementation of IMNCI is lack of trained personnel, staff shortage, lack of supportive supervision, lack of essential medicine and supplies, attitudes of staff members, cooperation of clients and governmental support. Despite the poor adherence, healthcare workers appraised the IMNCI strategy, emphasising its role in the improvement of children's health.

Chapter 3 will discuss the research methodology that was used to conduct this study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

The previous chapter discussed the literature findings on the implementation of the IMNCI. In this chapter, the researcher describes and explains the research method and designs that were followed to explore Namibian PHC nurses' perceptions of the factors influencing the successful implementation of the IMNCI. According to Leavy (2017:263), research methodology refers to the explanation of steps that the researcher follows to conduct a study.

3.2 AIMS AND OBJECTIVES

The study's aim was to explore and describe the perceptions of PHC nurses on the factors that promote or hinder the implementation and integration of IMNCI in public PHC facilities in Windhoek, Namibia.

The study was based on the following objectives:

- To explore how PHC nurses understand the IMNCI strategy
- To describe how PHC nurses operationalise the IMNCI strategy
- To describe the actions of PHC nurses towards the successful implementation of the IMNCI strategy
- To describe how the IMNCI strategy is evaluated and appraised by PHC nurses.

3.3 STUDY SETTING

According to Polit and Beck (2018:569), the study setting refers to the physical environment and conditions in which data is collected. The study was conducted at Katutura and Khomasdal health centres. These are public PHC facilities situated in the Windhoek district in the KRHD in Namibia. Windhoek district has 12 PHC facilities, of which two are health centres, and the rest are clinics. The two facilities were selected for this study because they are the largest in the district. They also have different childcare services, unlike most of the facilities where services are mixed. In addition, the selected facilities are among those that have adopted the IMNCI strategy. Figure 3.1 shows the map of Namibia with her 14 regions, including Khomas region where this study took place.

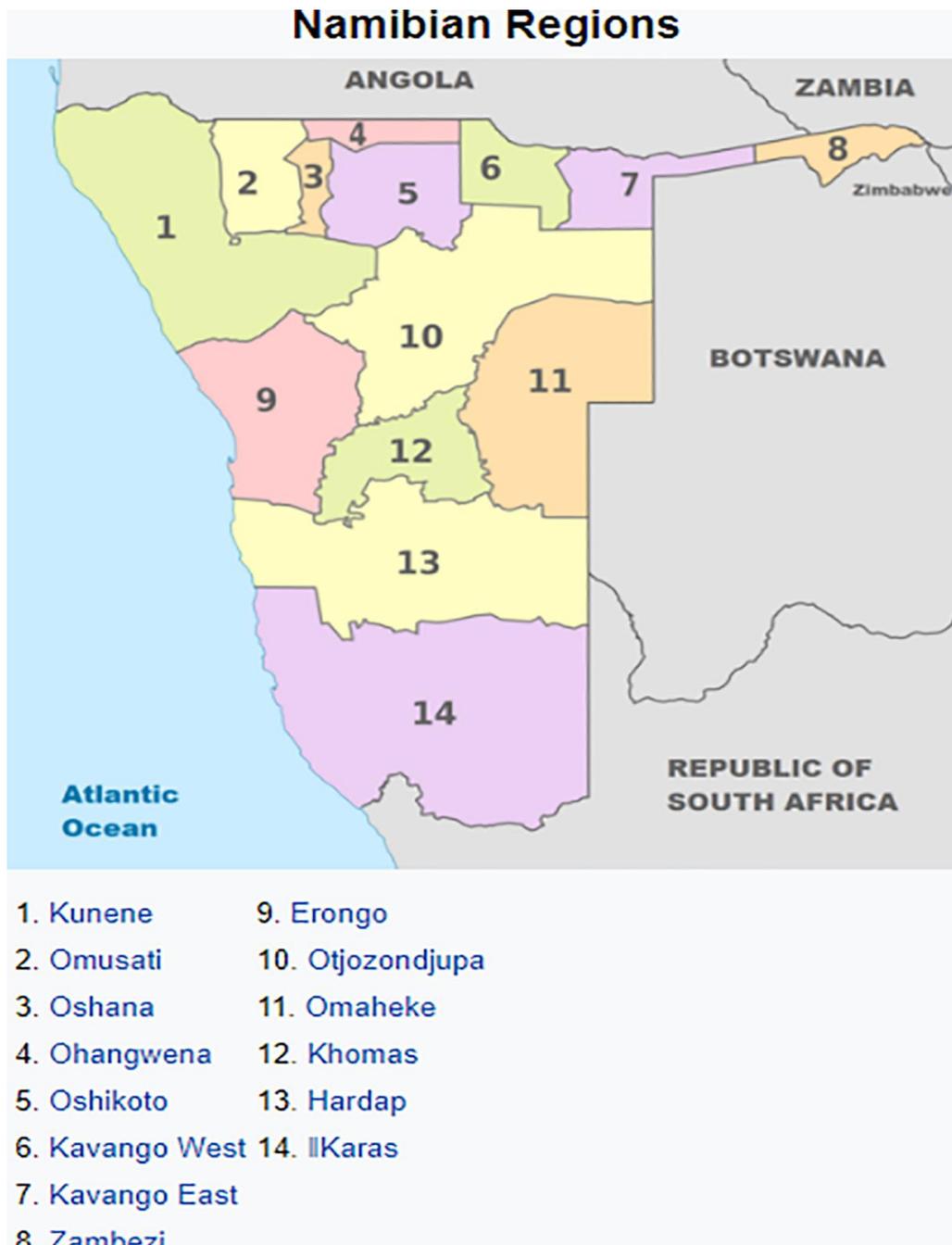


Figure 3.1: Namibian regions

Ntirampeba, Neema & Kazembe, 2018: 4

3.4 RESEARCH DESIGN

Brink et al. (2018:81), define a study design as a set of logical steps that the researcher takes to gather information on the research topic. A qualitative, exploratory, descriptive and contextual design was used in this study to explore and describe the perceptions of nurses on factors that influence the implementation of IMNCI.

3.4.1 Qualitative approach

Qualitative research focuses on exploring participants' views and understanding of a particular phenomenon (Jooste, 2018:332). According to Hammarberg, Kirkman and De Lacey (2016:499), "...qualitative methods are used to answer questions about experience, meaning and perspective, most often from the standpoint of the participant". Qualitative studies allow the researcher to explore and get a better understanding of a phenomenon (Mohajan, 2018:43). In this study, the researcher is interested in exploring the opinions and views of PHC nurses on the implementation of IMNCI. Therefore, the qualitative approach was chosen as a research design.

3.4.2 Exploratory-descriptive qualitative study

Exploratory studies are conducted to gather information about phenomena with little available information (Nieswiadomy & Bailey, 2018:375). While descriptive designs "...are used in studies where more information is required in a particular field about certain characteristics through the provision of a picture of the phenomenon on certain situations as it occurs naturally" (Brink et al., 2018:96). An exploratory-descriptive design was used to study the perceptions of PHC nurses on the factors that are influencing the implementation of IMNCI because evidence of such a study done in Namibia could not be found.

3.4.3 Contextual design

In a contextual design, the researcher tries to understand the thoughts and feelings of the study subjects as related to the research topic, by talking to them and observing their actions in their natural contexts (Korstjens & Moser, 2017:275). In this study, the thoughts and feelings of the nurses towards the implementation of the IMNCI in their facilities were researched. Furthermore, the researcher explored the roles and actions of the nurses in the implementation of the IMNCI.

3.5 STUDY POPULATION AND SAMPLING

A study population is a whole group of people who possess the characteristics that the researcher is interested in (Jooste, 2018:334). The target population of this study was all the nurses (N=60) working in the two PHC facilities in Windhoek Namibia. The researcher chose nurses because according to her observations, they are mostly involved in the initial assessment of children in the health centres and clinics.

Sampling refers to the process through which the researcher selects a portion of the study population to represent the whole population (Polit & Beck, 2018:568). A sample refers to a group of participants that is selected to represent the entire population (Jooste, 2018: 335). In qualitative studies, a sample size is determined by data saturation. Data saturation occurs

when the research reaches a point where it stops to yield new information (Grove et al., 2015: 275). The researcher used the purposive sampling method to select participants for this study. In the purposive sampling, a researcher selects participants that are considered to have the desired knowledge on the research question (Jooste, 2018: 338). Therefore, the participants that were chosen for this study are those who are working in facilities that are applying the IMNCI guidelines. In these facilities, nurses rotate on a weekly basis, therefore all of them get a chance to work in paediatric screening.

After obtaining ethical approval (S19/05/094), the researcher made appointments with the persons in charge of the two facilities, to introduce her study. Thereafter, potential participants were approached individually during break times and explained the study in detail. Diversity in age, gender, category and years of experience were ensured when the participants were recruited. Consent forms (see Appendix B) were also handed over to those who showed interest, to read and get more information about the study, when they were off duty. The researcher took note of the days that the potential participants would be on duty, and returned on those days to get feedback on their willingness to participate. Seventeen nurses, including facility managers, registered nurses and enrolled nurses, were approached, out of which thirteen (13) responded positively. Those who decided to participate, signed consents and arrangements were made for the dates, times and venues of the interviews. However, two (2) of the potential participants withdrew from the study a day before their interviews.

3.5.1 Inclusion criteria

These included all the enrolled nurses, registered nurses and facility managers who were working in Khomasdal and Katutura health centres, during the period of data collection, irrespective of their IMNCI training status.

3.5.2 Exclusion criteria

Nurses who were not available during the time of data collection or those who were not willing to participate were excluded.

3.6 DATA COLLECTION TOOL

Data collection is the process of gathering information to answer the research question (Brink, et al., 2018:133). Data collection in this study was done through individual, semi-structured, face-to-face interviews, using a semi-structured interview guide. Interviews are appropriate in studies that aim to explore complex phenomena such as opinions, feelings, emotions and experience, in order to understand them in depth (Denscombe, 2017: 203). In a semi-structured interview, the researcher prepared a list of guiding questions, but also used probes based on the participants' responses (Nieswiadomy & Bailey, 2018:383). Therefore, the

researcher deemed it appropriate to use semi-structured interviews in exploring the nurses' perceptions on the implementation of the IMNCI.

3.6.1 Interview guide

A semi-structured interview guide was used as a data collection tool in this study. In a semi-structured interview guide, the researcher has a list of pre-determined questions, but allows participants to develop ideas and elaborate on points of interest (Merriam & Tisdell, 2016:125). Researchers use interview guides to ensure that all their questions are answered (Polit & Beck, 2018:297). For this study, the interview guide was divided into two sections. Section A elicited demographic data of participants, including age, gender, category, years of experience and the status of IMNCI training. Section B included four open-ended questions that were formulated based on the theoretical framework and objectives of the study. The four questions that guided the interview in this study are:

- How do you understand the IMNCI?
- Can you describe your role in the implementation of IMNCI?
- What actions do you take to ensure the successful implementation of IMNCI?
- In your opinion, what promotes or hinders the implementation of IMNCI in your facility?

In addition, the researcher used probes such as what do you mean by, tell me more about it or can you explain that. Probes are used as follow-up to answers in a semi-structured interview, with the purpose of searching for new information and clarifying responses. In a semi-structured interview, the researcher asks some specific questions, while probing for additional information and clarification of responses (Nieswiadomy & Bailey, 2018:211). The interview guide was written in English, as it is the only official language in Namibia, therefore all the nurses were able to communicate in it.

3.7 PILOT INTERVIEW

A pilot study allows the researcher to test the data collection tool beforehand, thereby determining how well it will work in practice (Denscombe, 2017:180). The researcher conducted one pilot interview with a registered nurse from Katutura health centre. The interview took place at the participant's residence. Before the interview, the researcher reminded the participant about the objectives of the study, as well as the ethical considerations that guide the research. As the consent was already signed during the selection and recruitment process, the participant was again asked about the willingness to participate, and the answer was affirmative.

The pilot interview took 23 minutes and 13 seconds, and it was audio-recorded. The transcription of the pilot interview was sent to the research supervisor for revision. Feedback

was given on the areas that needed improvement. The suggested adjustment included an indication of question numbers, asking about the importance of the IMNCI, the recommendations for improvement, as well as performance of member checking. Data from the pilot study was included in the final report.

3.8 TRUSTWORTHINESS

The trustworthiness of this study was enhanced through the application of the four criteria as suggested by Lincoln and Guba and described in Brink, et al. (2018: 158-160) and Jooste (2018: 351-357).

3.8.1 Credibility

Credibility is the ability of the study to present findings and conclusions that reflect the experiences and perceptions of the participants (Yin, 2016:88). To enhance credibility, peer debriefing of the study was done with a colleague who has experience in research, to review the data and provide feedback on where to improve (Jooste, 2018:351). Also, triangulation was done by using various data verification techniques such as recording of interviews and taking fieldnotes, as well as collecting data from participants with various characteristics. Triangulation is a strategy in which researchers use multiple data sources, researchers, theories or research methods, to ensure data accuracy (Moon, 2019: 105).

Furthermore, the researcher performed member checking with all the participants. Member checking is a method of checking for the accuracy of qualitative data through debriefings and discussions with informants (Polit & Beck, 2018:409). In this study, the researcher paraphrased and summarised the participants' answers, to ensure accurate understanding and interpretation of the information.

3.8.2 Dependability

Dependability refers to the ability of the study to produce the same results if it is to be repeated in a similar context after some time (Polit & Beck, 2018:546). Dependability and credibility are interdependent; therefore, they were enhanced through similar techniques, such as triangulation, peer debriefing and member checking (Jooste, 2018: 354). Also, the researcher used the same interview guide with similar questions for all the participants. In addition, the researcher transcribed all the recordings, while checking them for consistency, and all the transcripts were sent to the supervisor for accuracy check. Furthermore, the researcher did the coding of data and developed themes and subthemes. The themes and subthemes were checked for validity by the researcher and the supervisor.

3.8.3 Confirmability

Confirmability refers to the degree of objectivity in the study that can be tested by engaging two or more independent people to determine the accuracy, relevance and meaning of the data (Polit & Beck, 2018:542). Confirmability of the proposed study was enhanced through independent revision of the raw data and analysis of the transcriptions, documents and results by the supervisor and a peer with research experience. Member checking was also done to confirm the accuracy of information.

3.8.4 Transferability

Transferability refers to the extent to which the findings of a study can be transferred from one context to another (Brink et al., 2018:159). To enhance transferability, the researcher provided a thorough, detailed description of the background information of the participants, research context and technique used to select participants. A detailed description of the results with supporting direct quotations from the participants were also provided. Besides, the researcher ensured data saturation before stopping to conduct further interviews.

3.9 DATA COLLECTION

The researcher conducted face-to-face individual interviews, from May to September 2020. Although eleven participants indicated their availability, the researcher interviewed only 10 participants, due to the occurrence of data saturation by the 10th interview. The interviewed nurses include, two facility managers (n=2), six registered nurses (n=6) and two enrolled nurses (n=2). All the interviews were conducted in English, which is Namibia's only official language, and all the participants indicated that they are comfortable to be interviewed in English. The researcher used the interview skills learned during her academic training. The interviews' duration ranged from twenty-three to forty minutes.

Both parties mutually agreed on the venues and time for interviews. Six of the participants preferred to be interviewed at their workplace during break times, while four participants chose to be interviewed at their residential places during their days off from work. The researcher ensured that the interview venues was free from disturbances, offered privacy, and were reasonably quiet (Denscombe, 2017:213). However, this was not possible with some of the interviews that took place at the workplace, as the noise of crying children was audible from the screening rooms. Despite this, all the audios were audible.

Before the interviews, participants were again reminded of the purpose of the study and the reason why they were selected to take part. They were also reminded of their rights to withdraw from the study at any time, even though they initially consented to participate. Also, the confidentiality of the study was emphasised, by informing the participants that their names

will not be referred to anywhere in the study and the data will be only available to the researcher, the supervisor and the research ethics committee.

The interview started with questions on biographic data, followed by the guiding questions. Probes were used in-between to clarify answers and get more information. Paraphrasing and summarising of responses were also done, and this prompted participants to add information that they initially omitted and to clarify unclear answers. The interviews were audio-recorded with permission of the participants and notes were also taken. All the participants were given snacks after the interviews as a token of appreciation.

3.10 DATA ANALYSIS

Data analysis refers to a detailed examination of the collected data to interpret what it means (Denscombe, 2018:261). Data analysis in this study occurred concurrently with the data collection process. Content analysis procedures were used. The content analysis enables researchers to categorise data and develop rules through which data will be coded into those categories (Nieswiadomy & Bailey, 2018: 72). After each interview, the researcher transcribed the audio-recordings and saved them in a password-protected file on the laptop. After that, data coding was done using Tesch's eight steps of coding, as explained by Creswell & Creswell (2018:196).

- The researcher started the process by immersing herself in the data through repeatedly listening to the audio-recordings and thorough reading of the transcripts.
- The first step was followed by the selection of one interview, which the researcher scrutinised, to make sense of the data. Thoughts that emerged from this scrutiny were written down.
- The above step was then repeated with all the interviews, after which a list of topics was developed. Topics that are similar were grouped together and formed into columns.
- The emerging topics were then compared to the data. Similar topics were grouped together, and columns of topics were formed.
- Thereafter, the researcher compared the developed topics to the data, abbreviated them as codes and wrote them next to the appropriate segments. Codes such as negligence, few nurses trained, shortage of staff, shortage of diagnostic tools, etc., emerged from this step.
- The researcher looked for the most descriptive wording for the topics and categorised them.

- The researcher decided on the abbreviations of the developed categories and arranged them alphabetically. Categories such as adherence, human resources, supervision, training and understanding, were developed.
- Materials belonging to one category were assembled, and a preliminary analysis was done, whereby themes were developed.
- Data recoding was not necessary.

Final themes and subthemes were developed during the coding process, through comparison of data collected from various participants. Themes such as awareness, control, etc. were developed, with their subthemes such as understanding, training, supervision, support visit, evaluation, etc. Table 3.1 presents an example of how codes were developed from the raw data.

Table 3.1: Development of codes

Narrative	Code
It is more IMNCI, because they feel the questions are too many, and the patients are a lot	Long process
So, if you have to spend that time with one child, then I believe there will be other kids that will be left over, not being attended to	Patient left unattended
The guidelines also. At least, they should update us with the new things or changes, for us to be on par with other people.	Lack of information on the new developments

3.11 CONCLUSION

Research methodology refers to the steps and procedures that the researcher followed to answer the research question. An exploratory, descriptive, qualitative method was used to explore the perceptions of PHC nurses on the factors that are influencing the successful implementation of IMNCI. The study took place in the two health centres in Windhoek district, Khomas region. The study population included all the nurses that are working in PHC facilities. A purposive sampling method was used to select participants. Data collection was done through face-to-face interviews, using a semi-structured interview guide. Content analysis and Tesch's steps of data coding were used to analyse data in this study.

The next chapter presents the study findings.

CHAPTER 4: FINDINGS

4.1 INTRODUCTION

In chapter three, the study methodology was discussed. This chapter will present the findings from the data that was collected in two public PHC facilities in Windhoek. The aim of the study was to explore and describe the perceptions of PHC nurses on what promotes or hinders the implementation and integration of IMNCI in PHC facilities. Semi-structured face-to-face interviews were conducted with ten participants. Verbatim transcription of raw data was done by the researcher. Content analysis procedures were used to analyse data. Data coding was done using Tesch's eight steps of coding. A detailed description of these steps was presented in chapter 3, section 3.10.

This chapter begins with the discussion of demographic data with the aim of indicating the appropriateness of the participants that took part in this study. The chapter then proceeds to the discussion of the themes and subthemes that emerged from the data analysis process. The discussion of the themes and subthemes includes narratives that interpret and give meaning to the themes, while the indirect and direct quotations provide evidence of the perceptions and opinions of the participants.

4.2 BIOGRAPHICAL DATA

The biographical data that was collected comprised of age, gender, category, years of experience and status of IMNCI training. The biographical characteristics of the participants are explained below and summarised in table 4.1.

4.2.1 Age

Ten nurses (n=10) that are working in two health facilities were interviewed. Of these, five (5) participants were between the ages of twenty-four (24) to twenty-six (26) years, three (3) participants were between the ages of thirty-three (33) to thirty-six (36) years, and two (2) participants were between the ages of forty-eight (48) to fifty-eight (58) years. The majority of participants were in the age group twenty-four (24) to twenty-six (26) years of age.

4.2.2 Gender

In order to understand the gender groups of the participants, the researcher asked participants about their gender and nine (9) of them were female, while one (1) was male. This is an indication that nursing is a female dominated career (Barrett-Landau & Henle, 2014:10).

4.2.3 Category

The participants comprised of two (2) senior registered nurses who are also facility managers, six (6) registered nurses, and two (2) enrolled nurses. This shows that the researcher collected data from different categories of PHC nurses.

4.2.4 Years of service

From the ten (10) participants that the researcher interviewed, two (2) had less than one (1) year work experience in PHC, while three (3) had worked within one (1) to ten (10) years, and three (3) participants' work experience ranged from eleven (11) to twenty (20) years. The other two participants had work experience of twenty-one (21) and thirty (30) years respectively. That shows that data was collected from individuals with varied levels of work experience.

4.2.5 IMNCI training

The researcher needed to understand whether the participants had some form of training on the IMNCI and asked the participants to relate their training regarding the IMNCI. In response, nine (9) of the participants indicated that they had received some sort of training, while one (1) participant had not received any training in line with IMNCI. The result shows that most of the participants that took part in this study had been trained on the IMNCI and could relate to its implementation by the PHC nurses.

Table 4.1: Biographical data of research participants

Interview no.	Age	Gender	Category	Years of experience	IMNCI trained
1 (Pilot interview)	36	Female	Registered nurse	17 years	Yes
2	58	Female	Senior registered nurse	30 years	Yes
3	35	Female	Registered nurse	14 years	Yes
4	48	Female	Senior registered nurse	25 years	Yes
5	24	Female	Enrolled nurse	2 years	No
6	25	Female	Registered nurse	6 months	Yes
7	24	Female	Registered nurse	6 months	Yes
8	24	Female	Registered nurse	17 months	Yes
9	24	Female	Registered nurse	1 year	Yes
10	33	Male	Enrolled nurse	11 years	Yes

4.3 DESCRIPTION OF PARTICIPANTS

For the purpose of this study, participants are presented in codes, as described in the table below.

Table 4.2: Description of participants

Participant	Code
The first participant interviewed	Participant P001
The second participant interviewed	Participant P002
The third participant interviewed	Participant P003
The fourth participant interviewed	Participant P004
The fifth participant interviewed	Participant P005
The sixth participant interviewed	Participant P006
The seventh participant interviewed	Participant P007
The eighth participant interviewed	Participant P008
The ninth participant interviewed	Participant P009
The tenth participant interviewed	Participant P010

4.4 SECTION B: THEMES AND SUBTHEMES EMERGING FROM THE INTERVIEWS

After an exhaustive examination of the data, themes and subthemes were derived, which are discussed in this section. Particularly, the data revealed that the implementation of the IMNCI faces significant challenges which largely hinder its effective implementation within the PHC facilities. Within the ambit of this study four themes have been identified from which two to three subthemes were identified. The themes, subthemes and codes are presented in table 4.3, below.

Table 4.3: Themes, Subthemes and Codes

Themes	Subthemes	Codes
Implementation	Adherence	Negative attitudes Negligence Diverting from the right thing
	Workload	Patient overload Long process Patients left unattended
Awareness	Understanding	Systematic approach Focuses on the well-being of the whole child Prevention of illness, disability and death Improvement of growth and disability
	Training	Few nurses trained Lack of in-service training Lack of information on the new developments
Resource capability	Human resources	Shortage of staff Need for recruitment Language barriers Teamwork
	Time Equipment and supplies	Limited time Shortage of guidelines Shortage of diagnostic tools Shortage of nutritional supplements Shortage of medicine

Control	Supervision	Lack of supervision Subordinate supervision Appointment of focal person
	Support visit	District, regional and national support
	Evaluation	Lack of follow-ups after training

4.4.1 Theme 1: Implementation

One (1) of the major themes that emerged from the study is the implementation of the IMNCI, which the participants confirmed is happening within the PHC facilities in Namibia. However, there was consensus among the participants on the need for improvement in the implementation of IMNCI. Particularly, participant P001 was of the opinion that an improvement in the way the IMNCI is implemented would decrease childhood mortality.

“Yes, and we are trying also to avoid these deaths in OPD.” (Participant P001)

Under the major theme implementation, two (2) subthemes emerged and these are adherence and workload.

4.4.1.1 Adherence

One (1) of the subthemes that emerged under the major theme implementation was, adherence to the IMNCI guidelines. Nurses do not always make use of the IMNCI guidelines, as evident in the following statements:

“I am not going to lie, I don’t use it all the time.” (Participant P006)

“What hinders most, sometimes is the attitude of the nurses. Some are trained, but they are not ... I don’t know why they are negative.” (Participant P002)

Participants were of the opinion that there was a lack of adherence to the guidelines by most of the PHC nurses due to various reasons such as negligence by certain individuals. For example, participant P006 opined that staff negligence hinders the adherence to IMNCI due to lack of accountability towards their superiors. The view centres on the idea that when senior officials do not hold their subordinates accountable, there is a tendency to neglect guidelines.

“So, that also makes the staff negligent because no one is going to ask you, why did you screen the child like this or not.” (Participant P006)

Other reasons for negligence include individuals that are used to traditional means of screening and are unprepared to adopt new effective ways of patient management. Participant P001 was quoted as suggesting the challenge caused by PHC nurses that do not follow the guidelines, despite clear directives from management.

“It is really a challenge, because you find that we differ. So, you might delegate those staff to work and they will try to do it, but you might find that there are other individuals that are trying to divert from the right thing.” (Participant P001)

4.4.1.2 Workload

High workload has a negative influence on the implementation of the IMNCI in the PHC facilities. Most of the participants complained that the high workload in their facilities made it difficult for them to follow the IMNCI guidelines. For example, participant P002 had this to say:

“You know the nurses...(laughing). Yeah, they are also overworked and so, so they are complaining about a lot of things. Like, no, I am tired I cannot use IMNCI, what, what...” (Participant P002)

The high number of patients was identified as a contributing factor to non-usage of the IMNCI guidelines as evident in the following statements.

“...patient overload, as our facility is ever full. Sometimes, patients are up to...., they cannot fit in the facility, they are outside...” (Participant P004)

“...at our facility we have one problem. There is a lot of patients.” (Participant P006)

The comprehensiveness of the guidelines was indicated by some participants, as a contributing factor to high workload. For example, participant P004 emphasised that, multiple questions in the IMNCI guidelines discourages nurses from implementing it.

“It is more IMNCI, because they feel the questions are too many, and the patients are a lot.” (Participant P004)

Some participants expressed their fear that the implementation of the IMNCI guidelines might result in patients being sent back home unattended.

“So, if you have to spend that time with one child, then I believe there will be other kids that will be left over, not being attended....” (Participant P009)

“Also, it is about maybe a lot of clients, maybe there is a queue outside... And, then you end up sending people home because they are not done.” (Participant P008)

From the above comments, it is evident that negligence on the part of nurses and high workload in the PHC facilities contribute to non-adherence to the IMNCI implementation.

4.4.2 Theme 2: Awareness

Awareness is another theme that was identified during data analysis. Participants demonstrated awareness of the IMNCI guidelines. Ability to use the IMNCI guidelines depends on the level of understanding and access to training.

4.4.2.1 Understanding

The subtheme understanding emerged from the theme awareness. All the participants had something to say when asked about their understanding of the IMNCI, although their responses indicated that there are variations on their levels of understanding. Most of the participants demonstrated that they have a broad understanding of the IMNCI, as evident in the following statements.

“... it is a systematic approach to children’s health which focuses on the whole child. IMNCI prevents deaths, illnesses, disability and promote..., to improve the growth and development among children under the age of five. That is the way I understand IMNCI.” (Participant P005)

“IMNCI, what I understand is an approach that focuses on the wellbeing of the whole child, to reduce the deaths, the illness and the disability. Also, to promote health and development of children especially those under the age of five years.” (Participant P008)

Most of the participants appraised the IMNCI guidelines as an important strategy, as it enables them to do comprehensive assessment of children.

“I feel it is important, because if you only listen to what the caretaker is saying, we might omit some symptoms, because the caretaker might not also pick up everything. But if you probe... If you try and assess systematically, you might diagnose this child even with complains that the mother or caretaker did not pick up.” (Participant P004)

Participant P010 reflected the above views in the following statement:

“The reason I am saying the best treatment is because, for example if a mother brings a child, the mother will come with one complain. But if you have to use the guideline of IMNCI, you will have to include other problems that the mother didn’t mention about the child.” (Participant P010)

Participants also applauded the holistic nature of the guidelines, stating that it covers all the important aspects of childcare.

“It was just made to improve the way how us the health care workers, screen the children like assessment, and also how to manage the conditions. And, the nice thing about it, is it is more of a holistic approach, it does not only include the child, it also looks around the family.” (Participant P006)

Another aspect of the guidelines that was commended by the participants is, parent or caregiver involvement. Participants explained that provision of information to the parents, will enable them to give proper care at home.

“And to make sure that the mother is adhering to the instructions given, you explain to the mother what should be done and you show how it is done.” (Participant P008)

“... it will also be better if the parents are made aware of, or the caregivers are made aware of the importance of hygiene. ... This will also reduce the clinic burden, then it means not much patient will come because they will prevent the illnesses.” (Participant P009)

However, some of the participants demonstrated superficial understanding of the IMNCI. For example, participant P007 had this to say:

“The way I understand it is, it is just a guideline that provides an approach on how to provide care to the children under five years.” (Participant P007)

Although most of the participants demonstrated a broader understanding of the IMNCI approach, it emerged that there is a need to improve the understanding of some nurses.

4.4.2.2 Training

Training emerged as a subtheme within the realm of awareness of the IMNCI. There was a general consensus among the participants that more training is paramount to the increase of IMNCI awareness within the PHC facilities. While most of the participants confirmed that they received training on the IMNCI, some of them indicated that they were either given an in-service training or received training as part of their basic nursing training. These two forms of training are not as comprehensive as the IMNCI formal training. Hence, participants were of the opinion that more formal trainings would raise awareness. For example, participant P003 was quoted as saying:

“So, we are very few that are trained on that programme, and we find it really a challenge.” (Participant P003)

“Not all the nurses are trained in IMNCI. Ok..., it is fine with the in-service training. Like for me, I was never trained...ok... I was given in-service training, but that in-service training only lasted... not even for more than an hour.” (Participant P010)

Participant P002 echoed the same sentiments, through emphasising the need for IMNCI training among nurses.

“And also, the training. It is now how many years back that there was a training for IMNCI. So, most of the nurses are not trained. They don’t have certificates to do IMNCI.” (Participant P002)

Some of the participants bemoaned that they did not even receive in-service training to ensure that they are familiar with the IMNCI approach, yet they are expected to use it.

“They do not give in-service training in there.” (Participant P006)

“..., there was no such a thing. I just have to bring in my knowledge from school. Maybe if we could have been getting in-service training or so, just to refresh the minds, then it will help a little bit, but unfortunately, we do not have such things happening.” (Participant P009)

Participants emphasised the need for in-service training, especial for the newly recruited nurses to familiarise them with the IMNCI guidelines.

“... It can just even be a short orientation, when you get a new staff. With such a thing, then it can also be easier to implement this, because the staff will be aware of the guidelines and how to use it.” (Participant P009)

Apart from lack of IMNCI training, participants also complained that they are not given information on the adjustments of the guidelines, as stated by participant P003.

“We do not know whether there are updated guidelines or people are still using the same guideline that has been there for many years. It is never changed.” (Participant P003)

These views were emphasised by other participants, who complained that the lack of IMNCI refresher training deprives them from being abreast with the IMNCI amendments of the guidelines. Participant P003 had this to say:

“The guidelines also. At least, they should update us with the new things or changes, for us to be on par with other people.” (Participant P003)

“I will say we miss out on what is new in IMNCI. Because the only time, we got to get the updates is when you are sent for training and maybe that person sometimes come share now what they were taught from outside.” (Participant P005)

The above evidence indicates that lack of IMNCI training among nurses is contributing to poor usage thereof.

4.4.3 Theme 3: Resource capability

Resource capability is one the themes that emerged during data analysis. All ten (10) participants indicated that resource capability plays a role in the usage of IMNCI in PHC facilities. The three (3) subthemes that emerged within the domain of resource capabilities are human resources, time, as well as equipment and supplies.

4.4.3.1 Subtheme - Human resources

In terms of the human resources, which was one (1) of the subthemes under resource capability, it emerged that the PHC facilities do not have enough personnel. Participants complained that their usage of IMNCI is being hindered by the limited numbers of nurses in the PHC facilities.

“If I am to talk about our facility, which I know very well, shortage of staff is one of them...” (Participant P004)

This statement was echoed by other participants who opined that more staff members are needed to enable the effective usage of the IMNCI guidelines. In this regard, participant P008 stated:

“Ok, let me say, like we have shortage in the clinic. So, maybe enough staff or nurses are not available to perform the IMNCI.” (Participant P008)

“I believe with more staff members on duty, if we have more staff, then we will be able to attend to all the patients, using the guidelines. If the staff members are enough, then you do not need to be worried...” (Participant P009)

Apart from shortage of staff, some participants complained of the language barrier as another human resource factor that has a negative effect on the usage of the IMNCI guidelines.

“I think it is language barriers. Sometimes a parent comes in with a child, the parent does not speak English and the person offering the care only speak English”, stated (Participant P007).

Lack of understanding between nurses and clients results in some aspects of the guidelines to be left out.

“Especially when you speak different languages, and the patient does not really understand English, it is difficult to interpret or translate most of the things in the IMNCI to the patient’s language. So, you’ll end up just taking the things that you think this are the most important I should know, as long as the baby is not experiencing any danger sign, then I can treat this baby. I think language barrier can also contribute.”
(Participant P009)

Participants suggested the services of translators, to address the language barriers.

“With the language barrier, I do not know whether this is possible but it will be easier if there was a translator.” (Participant P009)

All the participants suggested that more nurses should be made available in the PHC facilities, to improve the usage of IMNCI.

“Recruitment of more staff will also promote, because the more staff you have, the better you will make use of IMNCI, because it takes time.” (Participant P002)

“... they must make sure that we have enough staff members.” (Participant P005)

“...people that are responsible for recruiting staff, they should find out how many nurses are needed in this facility, and then employ more people..., more nurses.” (Participant P008)

Contrary to the negative effects that shortage of staff has on the usage of the IMNCI in PHC facilities, teamwork was appraised as contributing to the usage of the guidelines by nurses, as stated by participant P005.

“I’ll say though we have shortage of staff, we have teamwork. At least you know that, even though I am alone, when my colleagues are done with whatever they are doing, they will come and help me.” (Participant P005)

The shortage of staff in the PHC facilities contributes to poor usage of the IMNCI strategy. Participants opined that recruitment of more nurses will improve usage of the guidelines.

4.4.3.2 Time

Participants indicated they do not have enough time to assess children, by applying the IMNCI guidelines. Most participants verbalised their inability to use the guidelines, due to the challenge of time.

“And also, I mentioned time. Like when the clinic is overcrowded and you see you have a lot of people, but you have to give time, maybe it the same nurse who supposed to see the kid and the other kid. So, that time is also a problem.” (Participant P001)

“And also, another challenge is the time that is so limited. You might find yourself alone in the baby room, and if babies are a lot, you might end up not even doing the systematic, I mean, following the guidelines, as you suppose to.” (Participant P003)

Participants complained that the IMNCI approach is a long process. From the view of most participants, the usage thereof is impossible given the additional challenges of workload and shortage of staff.

“If you have to follow the guidelines, it might take you 30-40minutes, just assessing one child.” (Participant P009)

“...you know this strategy of IMNCI is a bit hindering, because it takes time, it takes really time. Because, number one, the patients are lot and for you to finish one patient, you have to go through that guideline. It takes quiet sometime, and the patients are outside complaining...” (Participant P010)

One participant suggested that shortening of the IMNCI guidelines could improve usage thereof.

“Relook at the guidelines, review it, and may be remove some things that takes up more time.” (Participant P010)

More time is needed to complete the IMNCI guidelines. However, participants indicated that they have limited time, as their facilities are burdened with workloads.

4.4.3.3 Equipment and supplies

In this study, all the ten (10) participants stated that they were experiencing lack of equipment in their facilities and this limited their usage of the IMNCI. Participants mentioned that their facilities lacked equipment and supplies such as IMNCI guidelines, diagnostic equipment, supplements for malnourished children and medication.

“And also, sometimes the equipment is not enough. Let me say the scale is out of order, and then you as a registered nurse, you are not in control sometimes of such things.” (Participant P008)

“When we are talking of resources, even medication itself. You may find certain medications that are first line may not be available or they may not be in stock. So, in that way you are forced to go to the second line. Or, you may assess a child, and you diagnose that this child is having malnutrition, but you don’t have the nutrition food in stock.” (Participant P004)

Lack of equipment was reported to be a demotivating factor to nurses that were willing to follow the IMNCI guidelines. Participant P001 had the following to say in this regard.

“...sometimes the nurse wants to try, but you will find that there are other things missing. Like, let me say we use to give this NACS to prevent malnutrition to the kids, but I can’t even remember how long has it been out of stock...” (Participant P001)

Some participants raised their concerns that due to lack of medicine, patients might go home without treatment and return to the facilities with worsened conditions as stated by participant P006. Patients were referred to other facilities to get medicine, something that not all of them could afford as participant P006 stated:

“And then, we have the no stock syndrome now. So, there is no medication. So, we have to refer the patients, sometimes they do not taxi money, sometimes they cannot go there, sometimes they do not even go. You will see the child coming back the following day, because the antibiotics were not there, so the treatment was not effective.” (Participant P006)

Similar sentiments were echoed by participant P008 in the following statement:

“They just tell them to go to other clinics to go get. Also, it is like...transport money, the mother has to spent transport money to go to another facility, and if the mother does not have money, they just go home without getting the medication.” (Participant P006)

To ensure non-interruption of services, nurses sometimes contributed money to buy the required equipment. This is evident in the following statement:

“If there are no batteries, you might have to contribute money to buy batteries for the weighing scale and all that, such things...” (Participant P010)

Participants suggested improvements of stocking in the facilities, to ensure the effectiveness of the IMNCI.

“To be provided with more equipment to do IMNCI, and also with more guidelines, as we only have one guideline.” (Participant P002)

“If pharmacy can do their ordering on time, so that we have stock, I think it will also help. Because sometimes, the staff gets demoralised, because every time they stock out of medication.” (Participant P004)

Lack of equipment and medicine contributes to non-adherence to the IMNCI guidelines.

4.4.4 Theme 4: Control

Control emerged as a major theme from the analysis of data, with all ten (10) participants emphasizing the issue of controlling to promote the use of the IMNCI guideline by PHC nurses when assessing and treatment of children. Participants felt that control will contribute to the effective use of the IMNCI guidelines by PHC nurses. The three (3) subthemes that emerged from the domain of control are supervision, support visit and evaluation. These subthemes are discussed below.

4.4.4.1 Subtheme: Supervision

Participants at all levels emphasized the importance of supervision in one way or the other, as a promoting tool to ensure that PHC nurses are incorporating the IMNCI guideline in their daily operations. Hence, supervision emerged as a point of discussion within the major theme control. Participants indicated that those that are entrusted with the responsibility of supervising the IMNCI implementation, did not honour their duties. Lack of supervision results in nurses managing children without using the IMNCI guideline.

“And, I also think there is lack of supervision.” (Participant P006)

Participant P002 explained that the objective of supervising the use of the IMNCI is to ensure that the PHC nurses use the guideline regularly and correctly:

“So, you have to go through the passports, you have to go through your screening registers and find out how are they implementing it. Are they using it correctly? Are the kids screened the way they are supposed to be screened according the IMNCI or not?” (Participant P002)

The idea was supported by participant P004, who also confirmed having the responsibility of supervising that all staff members at the PHC facility adhere to the guidelines.

“Through supervision..., I ensure that all staff members adhere to the guidelines of IMNCI.” (Participant P004)

While the participants could confirm that some of them had been exposed to the IMNCI guideline, they indicated that there was a lack of supervision to ensure that they follow the guide.

“... some of these services were given to us, but people are not following to see whether people are really trying to do the right thing.” (Participant P001)

However, the results show that the senior personnel are more likely to provide supervision when dealing with subordinates. For example, as participant P003 indicated:

“I also work with students, whereby I have to delegate them and supervise them, and teach them how to use the IMNCI guideline.” (Participant P003)

Participant P007 also echoed the same sentiments, suggesting that those in charge have the obligation to supervise their subordinates. In this regard, the participant stated:

“... the person in charge always make sure that everyone that comes in or has a lower rank than the other one, is under the supervision of the second person.” (Participant P007)

Participants however raised the concern of not being able to maintain consistency in supervision; stated that workload sometimes hindered the ability of the senior officials to ascertain that PHC nurses used the guideline. To address this challenge, focal persons are appointed to oversee the effective implementation of the IMNCI.

“.... we have a focal person for IMNCI and every other services. So, the focal nurse for IMNCI is the one who must take responsibility in my absence, to see whether everything is going well.” (Participant P002)

“You can also have a focal nurse for IMNCI, who should also go around and check if the guidelines are applied. Because, you yourself you might not be able to supervise every time.” (Participant P004)

Despite having a focal person, this is not feasible since all personnel in PHC facilities have responsibilities. Due to their other responsibilities, focal persons are unable to dedicate all their time to IMNCI supervision.

“... this staff is not only supervising IMNCI, she will also be delegated. So, apart from supervising or being a focal nurse for IMNCI, she is also being delegated and she has her own room where she is treating.” (Participant P004)

Participants therefore suggested the need to allocate more time to supervision, to ensure correct usage of the guidelines.

“... if there is maybe somebody who can..., even maybe just once, go through how the sisters screen the patients, even the in-charge or something, then they could know like what really happens, where the problem is and where to fix..., how to make a better screening or better assessment of a child. Because, everyone is just screening differently, they came from different schools.” (Participant P006)

4.4.4.2 Subtheme: Support visit

Another subtheme that emerged within the ambit of the major theme control, was the aspect of support. In their opinions, participants thought that continuous support will contribute to consistence and commitment in proper use of the IMNCI guideline. The participants thought that the individuals that have the responsibility for the various PHC facilities ought to provide guidance and support to the nurses.

Some participants were of the opinion that support from the high-level officials is needed to motivate nurses to use the IMNCI guidelines. For example, participant P004 stated that there is need for support in the use of the guideline to ensure that staff members appreciate the significance of the tool.

“I feel support is needed. So, district and regional and national support is needed. Because at times, staff may..., maybe tired of just hearing from the supervisor. But if, program officers from national level and regional office, they also do their support visit, it also motivates staff...” (Participant P004)

4.4.4.3 Subtheme: Evaluation

The aspect of evaluation came out as a subtheme within the major theme control, with some of the participants stating that there is lack of evaluation to ensure that the PHC nurses use the IMNCI guideline in the right way as trained. For example, participant P001 argued that one of the challenges PHC nurses face is:

“... it just like you come from training, you are told go and do, no one will follow to come and see, even to be there for three to four hours to see how you are doing it in the clinic.” (Participant P001)

The above sentiments are echoed by participant P003, emphasising that there is a need for the trainers to check that the PHC nurses use the guideline in the right way.

“... there are no people that are coming like to guide us or to see how we are doing. Especially those that trained us, they never come and do follow-up on us, to assess whether what we are doing is right or wrong.” (Participant P003)

That explains the idea that there is lack of evaluation in the use of the IMNCI guideline to ensure correct use of the guidelines. Participant P003 therefore suggested the following:

“Maybe the trainers should always make a follow-up on us, and see how we are doing, and correct us where we are wrong.” (Participant P003)

The participants thought that having someone to assess how others use the IMNCI is important because the PHC nurses would more likely use the guideline as prescribed, knowing that someone would be watching what they do. Hence, participant P002 was of the opinion that in addition to the supervision of the enrolled and junior registered nurses, there is a need for assessing the way the IMNCI guideline is used.

4.5 CONCLUSION

This chapter presented the findings that emerged from data analysis in this study. The themes that emerged from this analysis are: implementation, awareness, resource capability and control.

The next chapter will discuss findings, draw conclusions and present recommendations for improvement of the IMNCI implementation.

CHAPTER 5: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of the study was to explore the perceptions of Namibian PHC nurses on factors that influence the successful implementation of IMNCI. The previous chapter presented the findings that emerged from the data analysis. This chapter presents the discussion, conclusions and recommendations that emerged from the intensive examination of the data collected through face-to-face interviews, and the review on literature. The chapter begins with the discussion of the research objectives in line with the study findings, to determine whether the study achieved its objectives. Furthermore, the chapter discusses the limitations of the study and draws conclusions and recommendations of the study. In addition, the chapter provides the dissemination section and concludes the study with final remarks in the concluding section.

5.2 DISCUSSION

After an intensive analysis of the findings, the study found that while there are significant attempts by PHC nurses to implement the IMNCI, there is a need for improvement of the implementation processes. The findings revealed that there is a lack of IMNCI adherence by nurses, and this is influenced by various factors. Based on the findings in this section, it can be observed that the objectives of the study were achieved. Section 5.2.1 to section 5.2.4 presents the discussion of the link between the objectives of the study and the findings. The discussion also shows the consistencies of the findings and the literature reviewed for this study.

5.2.1 Objective 1: Nurses' understanding of the IMNCI

The first objective of the study was to explore how PHC nurses understand the IMNCI strategy. The results from this study indicate understanding and awareness of the IMNCI strategy among nurses. Although various versions on the understanding of the IMNCI were given, most of the participants explained that it aims at the promotion of health among children. Furthermore, participants applauded the strategy for its holistic nature, indicating that it covers all the aspects of child health care. These findings are consistent with findings of previous research that indicate significant awareness of IMNCI among health care workers (Pradhan, et al., 2013:8; Adekanye & Odetola, 2014:32; Kiplagat et al., 2014:5).

5.2.1.1 Training

Training improves IMNCI awareness among health care workers (Nguyen et al., 2013:1; Adekanye & Odetola, 2014: 33; Seid, et al., 2019:5). In the current study, the understanding of the nurses on the guideline is attributed to the training interventions that the nurses received. In this regard, the findings indicate that the individuals that received adequate training of the guideline are more likely to use the IMNCI correctly as compared to the ones that have shorter training sessions and may have not fully understood the rationale behind adopting this new way of assessment. Nevertheless, because some of the nurses received in-service training that lasted for just a few hours, there is a feeling among the nurses that their understanding of the IMNCI is not sufficient and require supplementing with more formalized training. These findings are consistent with those of a study by Kiplagat et al. (2014:5), in which increased awareness was found among health care workers who received long-duration training as compared to those that received short-duration training. Hence, lack of IMNCI training among nurses emerged as a contributing factor to the poor application of the IMNCI guidelines.

In addition, it also emerged from this study that there is a need for refresher training to update nurses on IMNCI guidelines. IMNCI retraining improves the performance of health care workers (Kruger, et al., 2017:4). Participants in this study indicated that they do not receive refresher training, despite the revision of guidelines and amendments. According to Anurami et al., (2014:80), a regular IMNCI retraining programme is needed to update the nurses' knowledge of IMNCI.

5.2.2 Objective 2- Legitimisation of IMNCI usage by nurses

The second objective sought to describe how PHC nurses operationalise the IMNCI strategy. The findings showed that the nurses could identify their aptitude to use the guideline. However, they voiced credible challenges that they face in their attempt to implement the guideline. The identified challenges include negligence by nurses and unaccountability towards superiors, high workload in the PHC facilities and lack of resources.

5.2.2.1 Negligence by nurses

One of the findings that emerged from the data in this study is negligence of nurses towards the usage of IMNCI, which is associated with lack of accountability. Findings from this study indicate that, there is a tendency among nurses to ignore instructions from their superiors, as they will not be held accountable for their actions. Negligence results in nurses using the traditional methods of screening, despite possession of adequate skills and availability of required resources. These findings are consistent with those of other studies where health care workers were found to display negative attitudes towards the implementation of the

IMNCI (Stefanet & Laur, n.d.: 35; Fick, 2017:209; Kruger et al., 2017:10). Contrary to these findings, in a study done by Tshivase et al. (2020:4), nurses were reported to be displaying a positive attitude towards IMNCI implementation.

5.2.2.2 High workload

It also emerged that the effective implementation of the IMNCI is being hindered by the amount of work that the nurses perform, particularly with regard to the number of patients the nurses have to attend to per shift. Hence, the findings show that high workload in the PHC facilities makes it difficult for the nurses to follow the IMNCI guidelines consistently. As a holistic tool for extensively assessing and treating children, the IMNCI requires that the nurse spends more time with a patient. Consistently, Mupara and Lubbe (2016:2) noted that, contrary to the traditional methods of screening, the IMNCI focuses on the holistic well-being of a child and require that the healthcare worker devotes time to the assessments. Other authors (Ahmed, et al., 2010:130; Abebe et al., 2019:10) also revealed that healthcare workers argue that the IMNCI assessment is time-consuming, which results in longer waiting queues. Therefore, nurses resort to using the traditional methods of screening in attempts to serve as many patients as they can.

5.2.2.3 Shortage of resources

In terms of the resource available for the PHC facilities to implement the IMNCI effectively, the findings from this study show that human resources, time and equipment affect the implementation of the guideline largely. Adequate human resources, equipment, materials and resources are required for successful implementation of IMNCI (Pillay, 2012:26).

The findings in the present study revealed that the PHC facilities do not have adequate nurses to handle the volumes of patients that visit these facilities on a daily basis. As IMNCI consultations are time-consuming, an adequate number of nurses is required for effective implementation thereof (Titaley et al., 2014:164). The suggested time for IMNCI consultation is fifteen (15) to twenty (20) minutes (Abebe et al., 2019:2). Due to understaffing, health care workers are entrusted with multiple roles, thus they are left with limited time to use the IMNCI guidelines (Meno et al., 2019:4; Mupara & Lubbe, 2016:4; Basaleem & Amin, 2011: 104; Mugala, et al., 2010:6).

In addition, the findings show that nurses sometimes do not see the need for using the IMNCI guideline, while their facilities lack the required equipment, materials and medicine. Hence, they would rather use the traditional methods and prescribe the available medicine. In support of the findings of the study, various studies indicated that the shortage of essential medicine,

supplies and equipment, hinder the implementation of IMNCI (Cilliers, 2019:76; Seid & Sendo, 2018:5; Mansoor et al., 2017:60; Pandya et al., 2018:176).

5.2.3 Objective 3: The actions of PHC nurses towards the IMNCI implementation

The study further sought to describe the actions of PHC nurses towards the successful implementation of the IMNCI strategy. Findings of this study revealed the factors that contributed to effective implementation of the guideline, including the responsibilities of the senior personnel in the use of the IMNCI. Particularly, there is a need for all nurses to abandon traditional methods of diagnosis and treatment and begin to use the IMNCI at all times. Hence, there is a need for adequate control to ensure that nurses implement the IMNCI correctly.

5.2.3.1 Supervision

One aspect that the findings revealed is supervision about the use of the IMNCI guideline. The findings indicated that there is a standing obligation for the PHC facilities to have personnel responsible for ensuring that other nurses use the guideline when assessing and treating children. Supervision by a knowledgeable person is vital in IMNCI implementation, as it improves the health care workers' practical skills (Mansoor et al., 2017:61; United Nations Children's Fund, 2016:14). However, there was consensus among personnel at all levels that supervision lacks when it comes to the use of the guideline. The fact that those responsible for supervision have multiple roles, results in inability to carry out their supervisory functions. According to Rowe et al. (2010:132), high workload is among the factors that harms IMNCI supervision.

5.2.3.2 Support visits

The findings also reveal that the support that the personnel ought to receive from their trainers in their usage of the guideline lacks in the PHC facilities. Support after IMNCI training is necessary to strengthen the learned skills, thereby improving performance (Hogue et al., 2014:761; Basaleem & Amin, 2011: 106; Goga & Muhe, 2011:2). The lack of support leaves the nurses with no guidance on the usage of the IMNCI, which translates into improper use and eventually abandonment of the guideline. Coupled with the absence of formal evaluation of the way the nurses use the guideline, the lack of support also diminishes the value of the guideline in the minds of the nurses. Hence, the implementation of the IMNCI remains a challenge among Namibian PHC facilities, despite the benefits that it brings to the management of childhood illnesses.

5.2.4 Objective 4: PHC nurses' evaluation and appraisal of the IMNCI strategy

The last objective of the study was to describe how the IMNCI strategy is evaluated and appraised by PHC nurses. Although the strategy was highly appraised, concerns were also raised on the absence of formal evaluation strategies.

5.2.4.1 Importance of the IMNCI

Despite findings of poor adherence to the IMNCI strategy, participants in this study applauded the strategy as the best strategy for managing children under five years. On the importance of the IMNCI, most of the participants commended it as a comprehensive tool that enables them to do thorough assessment of the children, identify appropriate treatment and provide proper counselling to the parents or caretakers. These findings are similar to those of other studies, in which health care workers indicated their appreciation of the strategy, hailing it as the best treatment option for children (Tshivase et al., 2020:3; Gerensea et al., 2018:3; Titaley, et al., 2014:165; Pradhan et al., 2013:9; Basaleem & Amin, 2011:104).

5.2.4.2 Lack of formal evaluation strategies

However, findings of the current study show that there is no formal evaluation and or appraisal of the IMNCI guideline within the PHC facilities. That explains the poor implementation of the guideline by nurses, as well as the reluctance by many nurses to shift from the traditional diagnosis and treatment methods to the more robust method. These findings are consistent with findings of the study done by Fick (2017: 211), where lack of clear monitoring and evaluation systems were reported to contribute to poor implementation of the IMNCI strategy.

5.3 RECOMMENDATIONS

The correct implementation of the IMNCI contributes to a decrease in the U5MR (Gera, et al., 2016:3; Bhandari, et al., 2012:1). Therefore, in relation to the intensive examination of the Namibian PHC nurses' perceptions on the factors that influence the successful implementation of the IMNCI, the study proposes the following recommendations.

5.3.1 Training of personnel

IMNCI-trained health workers were observed to be implementing IMNCI correctly than their untrained colleagues (Nguyen et al., 2013:9; Al-Samarrai & Jadoo, 2018:4). As indicated by participants in the current study, lack of IMNCI trained nurses hampers the implementation of the IMNCI. Particularly, nurses expressed that they prefer to receive a formal training which is more comprehensive, unlike the curriculum-incorporated and the in-service trainings. Therefore, nurse managers should provide opportunities in IMNCI training, to ensure that all the nurses in PHC facilities are familiar and comfortable with the IMNCI guidelines. A more intensive in-service training was also recommended, especially to new recruits. The study

further recommends regular refresher training, to update the nurses' knowledge on the usage of the IMNCI guidelines.

5.3.2 Increase the number nurses in the PHC facilities

Having understood that workload hinders the use of the IMNCI guideline, there is need for the PHC facilities to consider increasing the number of nurses to cope with the growing population, which increases the ration of patients per nurse. Similar recommendations were made by Zambian healthcare workers, who suggested recruitment of more personnel to improve the implementation of IMNCI (Mugala, et al., 2010:6). Availability of adequate human resources will leave nurses with adequate time to implement the IMNCI guidelines.

5.3.3 Provide essential equipment and medicine

To improve the usage of the IMNCI strategy, facilities should have an adequate supply of essential equipment, materials and medicine (Pillay, 2012:26). Participants in the current study indicated that such resources are vital in the implementation of the IMNCI. It is therefore important that health facilities are provided with equipment and medicine that are necessary in the implementation of the IMNCI. Those responsible for procurement and purchasing of equipment and medicine, should ensure that orders are done on time, and that the facilities are always well-stocked. Clear directives should also be available on how and where to send broken equipment for repair. Measures should be taken to ensure that the services are not disrupted, in case of malfunctioning or broken equipment. Studies by Seid and Sendo (2018:6), and Meno et al. (2019: 6-7), also recommend provision of equipment and medicine, as an improvement strategy for IMNCI implementation.

5.3.4 Formalise control measures

There is also a need for the establishment of formal control measures to ensure that nurses adhere to the usage of the guidelines. This includes supervision in the facilities, formal evaluations and appraisals on the way the nurses use the guideline, as well as provision of feedback on the challenges that various nurses face in using the guideline. IMNCI focal persons should be relieved of other duties that will prevent them from devoting time to supervise. Supervisory support from the programme administrators is needed to identify areas of improvement. Trainees should be followed up within a month after their training for support and reinforcement of learned skills. Findings from various studies applauded supervisory support as a contributing factor towards the correct usage of the IMNCI guidelines by health care workers (Hogue et al., 2014:761; Magge, et al., 2014: 565).

5.4 LIMITATIONS OF THE STUDY

The study had limitations in terms of the scope and method. Firstly, the study only collected data from PHC facilities in the Windhoek local area. Therefore, these findings cannot be generalized to other PHC facilities across the country. Secondly, by adopting the qualitative method of data collection and analysis, the researcher did not test the findings. Nevertheless, the study achieved its objective by allowing for flexible collection of data detailing the unaided opinions of the sources. In addition, the findings appear to be similar to those from other low-income countries.

5.5 FUTURE RESEARCH

In relation to the limitations of the study, the study proposes further research that could adopt the quantitative methods in order to test the factors produced by this study of a large sample. Another study recommended is to include the perception of the regional health service administrators, who also ought to play a role in improving healthcare services in their jurisdiction.

5.6 DISSEMINATION

The study will be accessible on the website of Stellenbosch University and a copy will be available in the library. Furthermore, the researcher will submit the final report to the MoHSS as stipulated in the letter of approval.

5.7 CONCLUSION

As a child health promotional strategy, IMNCI aims at the reduction of mortality rates among children under five years. Its holistic nature enables nurses to perform comprehensive assessments and provide appropriate treatment and care to children. However, evidence indicates that healthcare workers in various countries, including Namibia, are not adhering to the strategy.

After intensively exploring the Namibian PHC nurses' perceptions on the factors influencing the successful implementation of the IMNCI, the study concludes that understanding of the IMNCI, its benefits towards holistic assessment and treatment of the children, as well as its correct use, influence the successful implementation thereof. The study also concludes that, despite efforts to implement the IMNCI, challenges such as negligence by the nurses, high workload in the PHC facilities, absence of accountability to superiors and lack of adequate control, negatively affect the successful implementation of the IMNCI. Furthermore, lack of resources such as human resources, time and equipment, materials and medicines, also have a negative effect on the implementation of the IMNCI.

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Appendices

Appendix A: Interview guide

Section A

Demographic information

Age:

Gender:

Category:

Years of service:

IMNCI trained: Yes/No

Section B

Guiding questions

1. How do you understand the IMNCI?
2. Describe your role in the implementation of the IMNCI
3. What actions do you take to ensure the successful implementation of the IMNCI?
4. In your opinion, what promotes or hinders the implementation of the IMNCI in your facility?

Examples of probing questions:

What do you mean by.....?

Can you please elaborate?

Tell me more about that

Appendix B: Participant information leaflet and declaration of consent by participant and investigator

TITLE OF THE RESEARCH PROJECT: Namibian Primary Health Care nurses' perceptions on the factors influencing the successful implementation of the Integrated Management of Neonatal and Childhood Illness (IMNCI).

REFERENCE NUMBER: S19/05/094

PRINCIPAL INVESTIGATOR: Eunike Mushelenga

ADDRESS: P.O Box 4254 Windhoek, Namibia

CONTACT NUMBER: CELL: +264 811240280

HOME: +264 61 272463

OFFICE: +264 61 4336000

Email: emushelenga@gmail.com

My name is Eunike Mushelenga and I am a Masters in nursing student at Stellenbosch University. I would like to invite you to participate in a research project that aims at investigating the perceptions of Namibian primary health care (PHC) nurses on factors influencing the successful implementation of the Integrated Management of Neonatal and Childhood Illness.

Please take some time to read the information presented here, which will explain the details of this project and contact me if you require further explanation or clarification of any aspect of the study. Also, your participation is entirely voluntary and you are free to decline to participate. Refusal to participate will not affect you negatively in any way. You are also free to withdraw from the study at any point, even if you did agree to take part.

This study has been approved by the Health Research Ethics Committee at Stellenbosch University and the research unit of the Ministry of Health and Social Services. It will be conducted according to the ethical guidelines and principles of the International Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.

WHAT IS THIS RESEARCH STUDY ALL ABOUT?

The Integrated Management of Childhood and Neonatal Illnesses (IMNCI) is a strategy developed by the World Health Organisation (WHO). The correct implementation of

this strategy improves health care workers' skills on assessment and management of childhood illnesses, thereby reducing childhood morbidity and mortality. As a country with a high rate of child mortality, Namibia has also adopted the IMNCI. However, there is evidence that health care workers, nurses included, are either not adhering to, or correctly following the IMCI guidelines. Therefore, the researcher is interested in exploring and describing the perceptions of PHC nurses regarding factors influencing the successful implementation of IMNCI. The study is being conducted in two PHC facilities in Windhoek, Namibia. The total population for this study is 60 health care workers.

The aim of the study is to describe and explore the perceptions of PHC nurses on the factors that promotes or hinders the implementation and integration of the IMNCI in public PHC facilities in Windhoek, Namibia.

The objectives of the study are to:

- Explore how PHC nurses understand the IMNCI strategy.
- Describe how PHC nurses operationalise the IMNCI strategy.
- Describe the actions of PHC nurses towards the successful implementation of the IMNCI strategy.
- Describe how the IMNCI strategy is evaluated and appraised by PHC nurses.

WHY HAVE YOU BEEN INVITED TO PARTICIPATE?

As a PHC nurse, you are responsible for assessment of patients including children. Therefore, it is important that you share your perceptions on the factors that promotes or hinders the successful implementation of IMNCI. Knowledge thereof may help policy makers to develop strategies that will increase adherence to IMNCI, thereby improving child health care services and reducing child mortality rate.

WHAT WILL YOUR RESPONSIBILITIES BE?

- ❖ Read this leaflet.
- ❖ Think about and reflect honestly on your understanding of the factors that influence the implementation of IMNCI
- ❖ Complete and sign this consent form in duplicate. Keep one form for yourself and give the other to the researcher.

- ❖ Participate in an in-depth interview conducted by the researcher

HOW WILL THE INTERVIEWS BE CONDUCTED?

- ❖ The researcher will schedule an appointment date and time with all interested participants
- ❖ The interviews will be conducted by the researcher
- ❖ The interviews will be audio-recorded and notes will be taken
- ❖ Pseudonyms will be used to protect the participant's identity and enhance confidentiality
- ❖ The duration for each interview will be 30-60 minutes

WILL YOU BENEFIT FROM TAKING PART IN THIS RESEARCH?

As a nurse, the opportunity to express what you feel may be enlightening and empowering. The researcher will gain an understanding of your perceptions regarding the factors that influence the implementation of IMNCI in PHC facilities. You may benefit from this study as your input may help policy makers to develop strategies that will increase adherence to IMNCI. This may result in improvement of child health care services and reduction of child mortality rate.

ARE THERE ANY RISKS INVOLVED IN YOUR TAKING PART IN THIS RESEARCH?

The researcher does not anticipate any direct risks. However, potential risks to data security such as, eavesdropping on the interview, unauthorised access to the data and loss of data, cannot be ruled out. These will be managed by:

- ❖ Conducting interviews in the place where no other person will be able to hear the conversations.
- ❖ Tape recording of the interviews and note taking to avoid loss of data.
- ❖ Storing the data in a locked place and using an encrypted password to avoid unauthorised access to computerised data.

WHO WILL HAVE ACCESS TO THE RECORDS?

All information collected during interviews will be treated as confidential. Your identity as a participant will remain anonymous at all times, including in any publication or

thesis resulting from the study. All data will be locked up in a safe for a period of five years and will only be made available to the supervisor and the research ethics committee upon request. If there is a need to make the results public, your permission will be sought.

WILL YOU BE PAID TO TAKE PART IN THIS STUDY AND ARE THERE ANY COSTS INVOLVED?

No, you will not be paid to take part in the study. There will be no costs involved for you, if you do take part. You will be reimbursed for travelling expenses to the maximum of R80.

IS THERE ANYTHING ELSE THAT YOU SHOULD KNOW OR DO?

You can contact the Health Research Ethics Committee at 021-938 9207 if you have any concerns or complaints that have not been adequately addressed by the interviewer.

If you have questions regarding your rights as a research participant, contact my supervisor Dr Elsa Eygelaar [elsa@eygelaar.co.za].

You will receive a copy of this information and consent form for your own records.

Declaration by participant

By signing below, I agree to take part in a research study entitled “*Namibian Primary Health Care nurses’ perceptions on factors influencing the successful implementation of the Integrated Management of Neonatal and Childhood Illness (IMNCI)*”.

I declare that:

- ❖ I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- ❖ I have had a chance to ask questions and all my questions have been adequately answered.
- ❖ I understand that taking part in this study is voluntary and I have not been pressurised to take part.
- ❖ I may choose to leave the study at any time and will not be penalised or prejudiced in any way.

- ❖ I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed aton 2020.

.....

Signature of participant

Signature of witness

Declaration by investigator

I, **Eunike Mushelenga**, declare that:

- ❖ I explained the information in this document to
- ❖ I encouraged him/her to ask questions and took adequate time to answer them.
- ❖ I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- ❖ I did not use an interpreter.

Signed at on..... 2020.

.....

Signature of investigator

Signature of witness

Appendix C: Extract from the Interview

Interview code: P003

Date: 07/08/2020

Duration: 24 min 4 sec

I-Interviewer

P-Participant

Age: 35 years old

Gender: Female

Category: Registered nurse

Years of experience: 14

IMNCI trained: Yes

I-As I explained to you during the time that you signed the consent, I am a student doing research and my research topic is, the perceptions of primary health care (PHC) nurses on the factors that are influencing the successful implementation of the integrated management of neonatal and childhood illness (IMNCI). As we know or what the previous research has found, the IMNCI is not really being implemented as it supposes to be, and that is what prompted me to do this research. If you remember, during the time that you signed the consent, I explained to you that this is a voluntary research, your participation is voluntary. You have a right not to take part or you have a right to refuse. If you are not comfortable with a question, you have a right to decline. And, if you are not comfortable with the whole interview, you have a right to stop it. And, as I told you, our interview is being recorded, but this recording is just to remind me when I am compiling the report. Your name will not be mentioned anywhere, either in the notes that I am taking or in the recording, and also in the report that I will write, as this is an anonymous research. I will just use a pseudonym or refer to you as participant number one or two. And, as I said the records will be locked away and they will not be made public without your permission. Is everything clear?

P-Yes, everything is clear

I-Are we still in the same line, can we continue with our interview?

P-Yes, we can.

I-I have introduced to you my leading questions, the guiding questions that we will use in our interview. The four leading questions. However, if you say something and I want to clarify it, I might ask for clarification or I might probe to find out more. So, you should not feel that I am asking you things that are not part of the interview.

P-Ok.

I-Question no 1. Can you please explain to me how do you understand the IMNCI?

P-Alright. According to my understanding, this is a systemic approach that merely focuses on children's health and general well-being of the whole child. So, we are mainly focusing on the curative care and also on the prevention and development of the child, mainly to children under the age of five years.

I-Ok. Anything else?

P-That is how I understand it.

I-So, IMNCI is used on children under the age of five years, and it is a systemic approach that is focusing on the well-being of the children, and it involves the curative and the development of children. Is that what you said?

P-Yes

I-Ok, thank you. Why do you think this strategy is important?

P-It is very important, because it is really needed for us to treat the children nicely and then, at least for us to pick up any illness as earlier as possible and then refer to hospitals for further management to avoid complications.

I-Ok. You mentioned early detection and referral? How does IMNCI helps us to detect diseases early?

P-As I said earlier, it is a systemic approach. We have to do it systematically, whereby we examine the child following the guideline of IMNCI, then we classify according to the chart. From there, when we pick up any abnormalities, you can easily pick it up through that.

I-So, what you are saying is, by following the IMNCI guideline, you will be able to pick up diseases easily?

P-Yes.

I-To make classification and to decide which case is for referral and which case can be managed at your health facility

P-Yes.

I-Ok, thank you. Our question number 2. Can you just explain to me what is your role in the implementation of IMNCI?

P-Ok. So, my role as a registered nurse is to assess the child, systematically as I said, following the chart, and if I happen to pick up any abnormality, I still have to refer. And, if I can treat, then I treat the baby. And it also helps us to determine which medicine should we give. And, we intervene early, if there is any medical condition that need attention.

I-Umhhh... Anything else?

P-So, I also work with students, whereby I have to delegate them and supervise them, and teach them how to use the IMNCI guideline. And then, we also have to give health education to the mothers or caretakers, on how to prevent diseases, on how to keep children healthy and then, we also have to assess their nutritional status, by doing MUAC, especially to children under the age of six months. And then, we also assess their immunisation status if they are up-to-date or not.

I-So, you are saying that you are responsible for the implementation of IMNCI, whereby you do the assessment, treat, refer, and you are also responsible for the delegation, and also responsible for teaching others how to use the IMNCI?

P-Yes.

I-And with the implementation, you also include health education to the mothers of the babies that are coming to your facility. And you also assess the nutritional and immunisation status. Is that what you said?

P-Yes.

I-Ok. So, is there anything that you want to add to the answer on your role?

P-Mhhhh....., that is basically it.

I-Ok. So, what actions do you take to ensure that, in your facility, you as a registered nurse who is IMNCI trained, as you said you were trained during your training as a registered nurse, so, what action do you take to ensure that IMNCI is implemented?

P-Ok. Like I said, we do assess the nutritional status. The action that we take especially to those kids that are behind with their immunisation, as soon as we pick it up, then we immunise the babies and give health education to the mothers on the importance of immunisation. And also, the main reason for us to assess the nutritional status, to do the MUAC, is also to pick up early malnutrition or malnourished babies, and then we enrol them on the feeding program as soon as possible.

I-Yes?

P-And, when I screen, I make sure that I follow the standard guideline of the IMNCI. And then, yeah....we give appropriate information and counselling services to the mothers and the caregivers. And then, we refer the seriously sick children to the hospital for further management.

I-So, you make sure that all the guidelines are followed when the assessment or the screening is done?

P-Yes.

I-So, now regarding the people that you are delegating, how do you ensure that they keep up with the IMNCI?

P-Oh, it is not an easy thing at all. It is a very challenging thing. And, not all the nurses are trained, and we also do not have enough...those are some of the challenges, enough guidelines. So, you might find somebody diagnosing a child, instead of classifying. It is really a challenge, it is not an easy thing.

I-Ok. But, is there anything that is put in place in the facility to encourage staff members to carry out the strategy?

P-Yeah, we help by all means to help others that are not trained, whereby we try by all means to be at least two in the babies' room. Yeah, most of the people are willing even though they find it as a challenge. It is not easy as I said.

I-Ok. So, when you talk of two people in the room, what do you mean?

P-I mean the one who is trained with the other one that is not trained.

I-Ok?

P-That is when we have enough staff, though. Because, normally we are few in the clinic.

I-Ok. So, the trained ones are placed with the untrained ones to....

P-Yes. So, it is screening and teaching at the same time

I-Ok. And as I understand, you said not everybody is willing, but some nurses are trying.

P-Yes.

I-Ok, thank you. So, now coming to our question number 4, as I told you, the existing research that is done, not just in Namibia, not just in Africa, but around the world found out that, we spent so much money and time trying to train people to do IMNCI. However, when you go into facilities, you'll find that it is not being done. And, there must be something that is preventing people from doing it. So, what factors do you think are either promoting or hindering the implementation of IMNCI in your facility?

P-Ok. Number one. Shortage of staff. So, we are very few that are trained on that programme, and we find it really a challenge.

I-Ok. Anything else?

P-And then, the materials. We do not have enough materials, like the guidelines, we only have one, and is even the old one. We do not know whether there are updated guidelines or people are still using the same guideline that has been there for many years. It is never changed. And another challenge again, there are no people that are coming like to guide us or to see how we are doing. Especially those that trained us, they never come and do follow-up on us, to assess whether what we are doing is right or wrong.

I- Ok. What else can you add?

P-And also, another challenge is the time that is so limited. You might find yourself alone in the baby room, and if babies are a lot, you might end not even doing the

systematic, I mean, following the guidelines, as you suppose to. So, time is so limited to us. Thus, most of the time we find ourself diagnosing, instead of classifying.

I-So, the challenging factors are, shortage of staff, lack of materials like the guidelines, and you also just have the old version. You do not know whether there is any update or not. You do not get supervision from the trainers, to at least come and see whether you are doing it correctly or not, it is up to you. And then the time that is limited, and especially when the clinic is full, you are not able to follow the IMNCI?

P-Yes, because it is a long process. And you might even end up prescribing wrong treatment, or not giving the right dosages to the babies.

I-Now, when it comes to treatment, apart from the time that is limited, are there also other factors that leads to poor implementation of IMNCI?

P- Lack of medication also.

I-Ok. So, these are the hindering factors. Is there anything that you think is helping you to implement IMNCI successfully?

P-Mmmmm...

I-Anything positive

P-Anything positive....? (Laughter)

I-In your facility

P-Anyway, IMNCI is a nice strategy for me, but time is the problem and the patients are always many. So, maybe if we had more staff, then.... But to me, I think it is a nice thing.

I-So now, given that you have given your list of the factors that are challenging you, is there any recommendation that you want to improve on those?

P-Yes. Ok, especially when it comes to medication. Most of the medication, we do not have them at the clinic, and maybe they can just come up with alternatives, in case you do not have that type of antibiotic, then maybe they should at least tell us what to give.

I-Ok, thank you. Any other recommendation?

P- And....(silence)

I-I mean, based on your factors that you gave, you said you are challenged by shortage of staff, you are challenged by lack of materials, you are challenged by no supervision...

P-Maybe the trainers should always make a follow-up on us, and see how we are doing, and correct us where we are wrong

I-Can you elaborate on that?

P-I think it will be helpful if the trainers visit us in the facilities to see how we are doing after the training. The guidelines also. At least, they should update us with the new things or changes, for us to be on par with other people.

I-Ok. What else?

P-Then more training is needed. Everyone at least should be trained on IMNCI.

I-Ok. Is there else anything that you want to add to the recommendations?

P-Not really.

I-So, just to round it up. You said that IMNCI is a systematic approach that guides you when you are dealing with children under 5 years old, and it involves the curative services, and it also involves the growth monitoring and nutritional guidance. It is important as it helps you to detect diseases early, by following the guidelines and classifying according to the chart

P-Yes.

I-....and this helps you to refer cases that you cannot manage, cases that are severe. And, you said your role is to implement the IMNCI, to assess, to treat and also to teach, to delegate people to the IMNCI rooms, and also to give health education to the mothers, as well as giving immunisations.

P-Umhhh

I-And, with your subordinates, you said you are trying to train them, especially those that are not trained. And you also make sure that the IMNCI is being implemented, by putting two people in the kids' screening rooms.

P-Yes

I-And, although with all this trying people are still not coming forth, maybe they have their reasons for not doing that. And, when I asked about the factors you said, shortage of staff and lack of materials where you singled out the guidelines. However, when I probed you also mentioned the medication that are not sometimes there. And then, lack of supervision and the time that is not there because of long queues. And you said, you send your patients to the pharmacy for medication.

P-Yes.

I-However, you said IMNCI is a good strategy if everything was in place, you would prefer to implement it. And, for the recommendation, you said, maybe if, in the absence medication that is prescribed in the IMNCI guidelines, if an alternative can be given so that you know what to do. And also, the supervision from the trainers, to follow you and guide you and help where you are not doing well, and also, just to provide you with enough and updated guidelines.

P-Yes

I-Then, training of more people, so that everybody in the facility knows how to do it, because this will also save time. Because, you said that you spent time teaching while you are screening. But, if everybody was trained, it was going to be the other way round

P-Yes

I-Thank you, sister. Is there anything that you would like to add, before we wrap up

P-No, sister.

I-Ok. I really appreciated your time that you spent here. And, I'll keep you updated as I said.

P-Ok

I-Thank you

P-Ok. Thank you too.

Appendix D: Ethical approval, Stellenbosch University



UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

Approval Notice

New Application

13/09/2019

Project ID :9376

HREC Reference No: S19/05/094

Project Title: Factors influencing the implementation of the Integrated Management of Neonatal and Childhood Illness in Namibia

Dear Ms Eunike Mushelenga,

The **Response to Modifications** received on 29/08/2019 18:20 was reviewed by members of **Health Research Ethics Committee 2 (HREC2)** via **expedited** review procedures on 13/09/2019 and was approved.

Please note the following information about your approved research protocol:

Protocol Approval Period: This project has approval for 12 months from the date of this letter.

Please remember to use your Project ID [9376] and Ethics Reference Number [S19/05/094] on any documents or correspondence with the HREC concerning your research protocol.

Please note that the HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review

Please note you can submit your progress report through the online ethics application process, available at: [Links Application Form Direct Link](#) and the application should be submitted to the HREC before the year has expired. Please see [Forms and Instructions](#) on our HREC website (www.sun.ac.za/healthresearchethics) for guidance on how to submit a progress report.

The HREC will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility, permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Please consult the Western Cape Government website for access to the online Health Research Approval Process, see: <https://www.westerncape.gov.za/general-publication/health-research-approval-process>. Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.

For standard HREC forms and instructions, please visit: [Forms and Instructions](#) on our HREC website <https://applyethics.sun.ac.za/ProjectView/Index/9376>

If you have any questions or need further assistance, please contact the HREC office at 021 938 9677.

Yours sincerely,

Mr. Francis Masiye,

HREC Coordinator,

Health Research Ethics Committee 2 (HREC2).

National Health Research Ethics Council (NHREC) Registration Number:

Appendix E: Institutional approval, MoHSS



REPUBLIC OF NAMIBIA

Ministry of Health and Social Services

Private Bag 13198
Windhoek
Namibia

Ministerial Building
Harvey Street
Windhoek

Tel: 061 - 203 2507
Fax: 061 - 222558
E-mail: itashipu87@gmail.com

OFFICE OF THE EXECUTIVE DIRECTOR

Ref: 17/3/3 EM

Enquiries: Mr. A. Shipanga

Date: 13 November 2019

Ms. Eunike Mushelenga
PO Box 4254
Windhoek

Dear Ms. Mushelenga

Re: Namibian Primary Health Care nurses' perceptions on factors influencing the successful implementation of the Integrated Management of Neonatal and Childhood Illness (IMNCI).

1. Reference is made to your application to conduct the above-mentioned study.
2. The proposal has been evaluated and found to have merit.
3. **Kindly be informed that permission to conduct the study has been granted under the following conditions:**
 - 3.1 The data to be collected must only be used for academic purpose;
 - 3.2 No other data should be collected other than the data stated in the proposal;
 - 3.3 Stipulated ethical considerations in the protocol related to the protection of Human Subjects should be observed and adhered to, any violation thereof will lead to termination of the study at any stage;

A handwritten signature in black ink, appearing to be 'AS', located at the bottom right of the letter's content area.

- 3.4 A quarterly report to be submitted to the Ministry's Research Unit;
 - 3.5 Preliminary findings to be submitted upon completion of the study;
 - 3.6 Final report to be submitted upon completion of the study;
 - 3.7 Separate permission should be sought from the Ministry for the publication of the findings.
4. All the cost implications that will result from this study will be the responsibility of the applicant and not of the MoHSS.

Yours sincerely,



BEN NANGOMBE
EXECUTIVE DIRECTOR

"Health for All"

Appendix F: 1st institutional approval, KRHD

9 - 0/0001



REPUBLIC OF NAMIBIA
Ministry of Health and Social Services

Private Bag 13322 Windhoek Namibia	Regional Office Khomas Region Florence Nightingale Street	Telephone (061) 203-5011 Telefax (061) 235997
Enquiries: Mr. B. Isaacs	Reference: S 4/9	Date: 6 December 2019

OFFICE OF THE DIRECTOR

STAFF MATTER: CONFIDENTIAL

MS. EUNIKE MUSHELENGA
P.O.BOX 4254
WINDHOEK

Dear Ms. Mushelenga

RE: NAMIBIAN PRIMARY HEALTH CARE NURSES' PERCEPTIONS ON FACTORS INFLUENCING THE SUCCESSFUL IMPLEMENTATION OF THE INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESS (IMNCI).

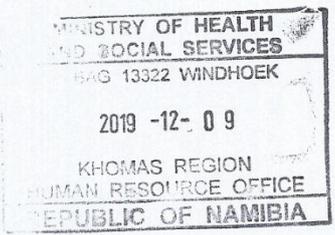
I have the pleasure to inform you that as per Executive Director's approval, permission is granted for you to conduct a study on "Namibian Primary Health Care Nurses perceptions on factors influencing the successful implementation of the Integrated Management of Neonatal and Childhood Illness (IMNCI)" at Katutura and Khomasdal Health Centre in District Windhoek in Khomas Region from 2 January 2020 until 31 May 2020.

The office wishes you success with your research.

Yours sincerely



MRS. PATEMOSHELA HAMUNYELA
ACTING DIRECTOR: KHOMAS REGION



"Health for All"

Appendix G: 2nd institutional approval, KRHD

9-0/0001



REPUBLIC OF NAMIBIA
Ministry of Health and Social Services

Private Bag 13322 Windhoek Namibia Enq: Mr. B. Isaacs	Khomas Region Directorate Florence Nightingale Street Windhoek Ref: S4/9	Tel: 061 - 2035011 Fax: 061 - 235997 Date: 21 July 2020
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OFFICE OF THE DIRECTOR

STAFF MATTER: CONFIDENTIAL

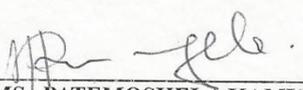
MS. EUNIKE MUSHELENGA
P.O. BOX 4254
WINDHOEK

Dear Ms. Mushelenga

I have the pleasure to inform you that as per Executive Director's approval permission is granted for you to conduct a study on "Namibian Primary Health Care nurses' perceptions on factors influencing the successful implementation of the Integrated Management of Neonatal and Childhood Illness (IMNCI)" at Katutura and Khomasdal Health Centre, in Windhoek District in Khomas Region from 23 July until 11 September 2020.

The office wishes you success with your research.

Yours sincerely



MS. PATEMOSHELA HAMUNYELA
ACTING DIRECTOR: KHOMAS REGION

MINISTRY OF HEALTH
AND SOCIAL SERVICES
P/BAG 13322 WINDHOEK

2020 -07- 28

KHOMAS REGION
HUMAN RESOURCE OFFICE
REPUBLIC OF NAMIBIA

"Your Health, Our Concern"

Appendix H: Declaration by the language editor



3 Beroma Crescent Beroma Bellville

Cell 0782648484

Email illona@toptutoring.co.za

English/Afrikaans
Afrikaans/English

* Translations * Editing * Proofreading
* Transcription of Historical Docs
* Transcription of Qualitative Research
* Preparation of Website Articles

TO WHOM IT MAY CONCERN

This letter serves to confirm that the undersigned

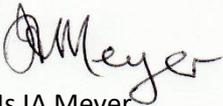
ILLONA ALTHAEA MEYER

has edited and proofread the **thesis of EUNIKE MUSHELENGA**

for language correctness and translated the Abstract.

TITLE: Namibian Primary Health Care nurses' perceptions on factors influencing the successful implementation of the Integrated Management of Neonatal and Childhood Illness (IMNCI)

Signed



Ms IA Meyer

25 January 2021

Appendix I: Declaration by technical formatter



To whom it may concern

This letter serves as confirmation that I, Lize Vorster, performed the language editing and technical formatting of Eunike Mushelenga's thesis entitled:

Namibian Primary Health Care nurses' perceptions on factors influencing the successful implementation of the Integrated Management of Neonatal and Childhood Illness (IMNCI)

Technical formatting entails complying with the Stellenbosch University's technical requirements for theses and dissertations, as presented in the Calendar Part 1 – General or where relevant, the requirements of the department.

Yours sincerely

Lize Vorster
Language Practitioner

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