THE EVALUATION OF INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESSES TRAINING FOR LEARNER NURSES IN KWAZULU-NATAL COLLEGE OF NURSING

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Declaration

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is entirely my own and not of any other person, unless explicitly acknowledged (including citation of published and unpublished sources).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

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Abstract

Introduction

South Africa is one of 12 countries where the under-five child mortality rate has increased. In response to this challenge, the WHO and UNICEF in the 1990s developed Integrated Management of Childhood Illness (IMCI), a strategy to reduce child mortality and morbidity. IMCI training was launched in South Africa in 1998. Health care workers trained in IMCI face many challenges when applying the new integrated case management approach. Training settings tend to differ from the actual work environment. Simulation is practiced in an enclosed environment and certain assessments are not possible for example chest in drawing, level of consciousness, oedema amongst others. In South Africa, there has been limited research on IMCI in-service and pre-service training and no research has been conducted regarding the training of student nurses on IMCI and follow up of these learners in the clinical field.

Purpose of the study

The purpose of this study was to evaluate the IMCI training of learners in the use of IMCI Guidelines in the KwaZulu-Natal College of Nursing (KZNCN).

Methodology

This study followed a descriptive quantitative approach and evaluates the training of the learners and the facilitation and training of lecturers with regards to IMCI in the KZNCN campuses. Data was collected using questionnaires for facilitators and learners on the three campuses.

Results

The findings of this study revealed that teaching and learning approaches used to facilitate IMCI were adequate except for clinical practice and theory which was reported to be insufficient.

Dedication

I thank God for giving me a second chance in life. If not for His grace and blessings, this study would not have been possible.

I dedicate this dissertation to my husband Shanan for his love, support and encouragement and sleepless nights he was there for me, as well as driving me to collect my data. To my beautiful daughters, Talia and Ariana for their patience and understanding, and for being my motivation and inspiration to complete this study.

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Glossary of Terms

Course Director: Oversees the quality of the training, liaises with Stakeholders to ensure the facilities are available for theory and practice, and monitors the performance of participants.

Facilitator: IMCI facilitators are carefully selected, on the basis of their performance as IMCI, to attend an additional 5-day IMCI facilitators training course.

In-service training: refers to training of persons already employed, e.g. health providers working in the public or private sector (WHO 2008:1).

Integrated Management of Childhood Illnesses: An integrated approach to child health that focuses on the wellbeing of the whole child. IMCI includes both preventive and curative elements that are implemented by families and communities as well as by health facilities to reduce morbidity and mortality of children under-five years (WHO 2013: 1).

Pre-service: refers to activities which take place before a person takes up a job which requires specific training, i.e. before a person 'enters service'. (WHO 2008:1).

Professional nurse: A person registered with the South African Nursing Council (SANC) as a nurse under Article 16 of *Nursing Act, No 33 of 2005,* as amended (Republic of South Africa 2005). The terms 'registered nurse' and 'professional nurse' are used interchangeably.

South African Nursing Council: The body entrusted to set and maintain standards of nursing education and practice in the Republic of South Africa. It is

an autonomous, financially independent, statutory body, initially established by the Nursing Act, No. 45 of 1944, and currently by the Nursing Act, No. 50 of 1978 as amended to the Nursing Act No. 33 of 2005 (Republic of South Africa 2005).

List of Acronyms

CAH	Child and Adolescent Health
CHC	Community Health Centre
CMR	Child mortality rate
DAMMM	Diarrhea, acute respiratory infection, malaria, measles and malnutrition
DHS	District Health System
HCW	Health care worker
IMCI	Integrated Management of Childhood Illnesses
KZNCN	KwaZulu-Natal College of Nursing
MDG	Millennium Development Goal
PHC	Primary Health Care
PHCN	Primary Health Care Nurse
SANC	South African Nursing Council
UNICEF	United Nations Children's Fund
WHO	World Health Organisation
WPRO	Regional Office for the Western Pacific

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND TO THE STUDY

Globally, ten million children below the age of five years die every year from illnesses such as pneumonia, diarrhoea, measles, malaria or malnutrition. Seventy percent of these deaths occur in developing countries. These illnesses will continue to be a major contributor to child deaths unless greater efforts are made to control them (WHO 2005: 1b.) Millions of children in developing countries and South Africa die from illnesses that are preventable and easy to treat and the greatest causes are pneumonia, diarrhea, and malnutrition. In South Africa HIV/AIDS is also a leading cause of death (Kerry 2005: 32-38). In response to this challenge, WHO and UNICEF in the 1990s developed Integrated Management of Childhood Illness (IMCI), a strategy to reduce child mortality and morbidity. The IMCI strategy became South African government policy in 1998 to meet the fourth MDG by 2015 (Saloojee and Bamford 2006: 189). South Africa is one of 12 countries where the under-five child mortality rate has increased (MDG Report 2010:4). The under-five mortality rate in South Africa has increased from 56/1000 live births in 1990 to nearly 67 to 73/1000 live births in 2008 (Jonker 2012: 2).

The IMCI approach focuses on identifying the major causes of deaths in children through improving case management skills of health care workers (HCWs), strengthening the health system, and addressing family and community practices by providing quality care to sick children under five years (WHO 2001:2). The initial IMCI modules did not include care of the sick newborn infant during the first week of life, even though one in three child deaths occur at this stage, and it did not emphasise home-based newborn care. IMCI has become a main child survival strategy in almost all countries

in the African region (Ketsela, Habimana, Martines, Mbewe, Williams, Thiam, Narayanan and Bahl 2006: 91).

The IMCI if used correctly assists HCWs to care for a sick child by using clear guidelines ensuring that a holistic approach is used to care for the child at a single visit. All the skills and interventions in IMCI are carefully researched and evaluated to make sure that they are effective. IMCI is taught to HCWs in a structured 11-days training course. All IMCI trained HCWs are then visited at their own clinics to help them transfer the skills they have learnt into the workplace. This aspect of IMCI is known as Case Management (WHO 1999a: 5). IMCI strategy seeks to reduce childhood mortality and morbidity by adopting a broad and cross-cutting three-pronged approach (WHO 1999a: 5), namely:

1. Improving health worker skills through:
    - Provision of case management guidelines and standards;
    - Training of public and private health care providers (pre- and in-service);
    - Follow up, support and supervision of trained HCWs.
2. Improving the health system through:
    - Sound district planning and management based on burden of disease analysis;
    - Facilitating essential drug supply and management;
    - Improving support supervision at health facilities;
    - Facilitating appropriate and timely referral of severely ill children.
3. Improving family and community practices by promoting:

- Appropriate and timely care seeking behaviour;
- Appropriate feeding practices;
- Appropriate home case management and adherence to recommended treatment prescriptions;
- Community involvement in health service planning and monitoring.

Each component is adapted in different countries to suit their epidemiology of the main health problems of children under-five years of age as well as the health system and culture. One of the components focuses on improving skills of HCWs through training and reinforcement of correct training in managing childhood illnesses.

The foundation of an IMCI strategy is a set of clinical guidelines that should be used by HCW's for management of childhood illness at first level health facilities. The first version of these guidelines was completed in 1995 (WHO 2009a: 4). The IMCI practitioners need continuous supervision in regards to the implementation of IMCI, commencing four to six weeks after training (Horwood, Vermaak, Rollins, Haskins, Nkosi and Qazi, 2009: 1).

HCWs are trained to assess, classify and treat sick children using clear guidelines developed specifically for IMCI. These guidelines approach childhood illness in a holistic way (UNICEF 2006: 10). The WHO recommends that 44.2% of course time be spent on clinical practice, 1.2% on the introduction; 20,8% on assess and classify; 4.9% on identify treatment; 11.6% on treat the child; 6.9% on counsel the mother; 6.9% on sick young infant and 3.5% on follow up. The IMCI management algorithms are colour coded and each trained health care workers is provided with a chart booklet to use during consultation. Each case management training course is facilitated by trained

facilitators and a 1:4 facilitator to participant ratio is recommended (Goga and Muhe, 2011: 2).

The findings of this study regarding the quality of trained HCWs in IMCI revealed that there were shortcomings in the training and implementation of the IMCI strategy. Assessments were frequently incomplete and children requiring urgent referrals were omitted (Horwood *et al*. 2009: 5).

In order for HCWs to acquire skills in IMCI to promote survival of children under-five years of age in countries where infant mortality rate is high, there has to be a concerted effort between health departments and establishments involved in training of health professionals. IMCI needs to be included in the training curricula so that this increases the number IMCI HCWs within the health system in a cost effective and sustainable manner (Abdelrahman and Alfadil 2008: 732).

The 11-days training course combines theoretical work in the classroom with practical performance in a clinical setting. Participants accomplish competency by repetition combined with individual feedback from facilitators. To attain high quality training, IMCI facilitators are stringently selected on the basis of their performance to attend an additional 5-day IMCI facilitators training course. The WHO recommends at least one facilitator for every four participants (WHO/WPRO 2008b: 1). A Course Director ensures the desired quality of the training is maintained, and evaluates the performance of participants. A recorded detailed checklist guides facilitators in conducting each learning activity, so that content and activities are measured and are consistent amongst different training sites and different countries. All IMCI trained HCWs should receive at least one follow-up visit in their own health

facility after training by delegated officers, to reinforce their skills and solve implementation problems at their own institutions (Horwood *et al*. 2009: 2).

1.2 PROBLEM STATEMENT

HCWs trained in IMCI face many challenges when applying the new integrated case management approach. Training settings tend to differ from actual work environment and it is therefore very important to follow up HCWs to ensure continual supervision and updating the skills of HCWs to ensure a holistic approach to management of IMCI (WHO/WPRO 2008a: 7). Studies in South Africa have revealed that the infant morbidity and mortality rate of children under-five years of age is declining at a very slow pace and will not meet the target of MDG 4 by 2015 (UNICEF 2011: 6). Many studies have indicated that there could be shortcoming and challenges in the implementation of IMCI in South Africa and globally, mainly in regards to the proper implementation of IMCI by nurses due to lack of lack of human, material resources, lack of adequate medication and time for IMCI implementation (Amaral, Leite, Cunha, and Victora 2005: i43 and Horwood, Voce, Vermaak, Rollins, and Qazi, 2009:7). It is, therefore, important to find out if a problem exists in the training strategies used in teaching IMCI.

Primary health care (PHC) was introduced by Limpopo Province to overcome the health challenges of the people by the year 2000. Primary health care nurses (PHCNS) were made available at numerous clinics to meet these needs. Regardless of all these efforts, the challenges of providing care to children under-five years remained, particularly in the face of childhood illnesses such as diarrhoea, acute respiratory infection, malaria, measles and malnutrition (DAMMM). A gap was identified in the training of the PHCNS as it did not prepare PHCNS sufficiently to manage children below five regarding DAMMM. Therefore a new strategy, namely, IMCI was introduced to solve this shortcoming (Vhuromu and Davhana-Maselesele 2009: 61). In South

Africa, there has been limited research on IMCI in-service and pre-service training and no research has been conducted regarding the training of student nurses on IMCI and follow up of these learners in the clinical field.

1.3 PURPOSE

The purpose of this study was to evaluate the IMCI training of learners in the use of IMCI Guidelines in the KZNCN.

1.4 RESEARCH QUESTION

The following question guided the study:

- How is the IMCI training of learners in the use of IMCI Guidelines in the KZNCN?

1.5 OBJECTIVES

The objectives of the study were to:

- Assess the teaching and learning methods used by facilitators in preparing learner nurses for the management of childhood illnesses against the guidelines set by the WHO;
- Assess the logistics with regard to clinical placement, clinical practice and supervision with regard to IMCI training;
- Determine the supply of IMCI teaching material to all learner nurses;
- Determine the ratio of trained IMCI facilitators to the number of learner nurses;
- Determine the timing of teaching IMCI in the R425 programme.

1.6 SIGNIFICANCE OF THE STUDY

This study can serve as a basis for improving the curriculum and training programme of IMCI nurses and facilitators. By helping to identify gaps in the implementation of IMCI and so improving follow up and support supervision of trained HCWs, this study can contribute to the reduction of the morbidity and mortality rate of children less than five years of age. This study can also form the baseline for further research in the field of IMCI training.

1.7 A THEORETICAL FRAMEWORK OF THE STUDY

Burns and Grove (2007: 171) define a theoretical framework as a brief explanation of a theory or those portions of a theory to be tested in a quantitative study. The conceptual framework for assessing quality of care developed by Donabedian in 1988 is still a major reference point. Donabedian's conceptual framework consists of the structure/process/outcome (SPO) model (WHO 2008: 10-11) as outlined below:

- ***Structure*:** this involves assessing the adequacy of facilities and equipment, administrative process, quality and quantity of health personnel in terms of their training.

- ***Process*:** it is the co-operation between all staff members involved in the execution of the programme.

- ***Outcome*:** it is related to the outcomes of each facet of the personnel development programme person's current and future status. Further details of how this framework was used to guide the study will be explained in Chapter 3.

1.8 OUTLINE OF THE DISSERTATION

Chapter 1: Introduction and background to the study.

Chapter 2: Literature review.

Chapter 3: Research methodology.

Chapter 4: Presentation of the results.

Chapter 5: Discussion of results.

1.9 CONCLUSION

This chapter introduced and gave an overview of the study. The research problem; purpose, objectives and significance of the study; population, sampling, and data collection and analysis were briefly discussed. Chapter 2 discusses the literature review conducted on IMCI training and the theoretical framework suggested as a basis for the study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Literature reviews are published studies that provide a background for the problem studied. Such a review includes a description of the current theoretical and scientific research problem and identification of gaps in the literature (Burns and Grove 2007: 135). The literature review provides a foundation on which to base new evidence (Polit and Beck, 2012: 58). It is an integral part of research that aims to provide a better understanding of the nature and meaning of the problem that has been identified (De Vos, Strydom, Fouche and Delport 2011: 123). The literature review shares with the reader the results of studies that are similar to the study being undertaken, describes the on-going dialogue on the subject, and provides the basis for indicating how the current study is filling gaps and extending prior studies. Results and findings of the current study are compared with the findings of studies which appear in the literature review (Creswell 2009: 25).

2.2 GLOBAL VIEW ON IMCI

The IMCI strategy has been shown to improve care for ill children by assessing and classifying the sick children below five years of age by using standardised algorithms and instituting treatment in outpatient settings in developing countries. A central component of the strategy is an 11-days in-service training course for HCWs on IMCI clinical guidelines. The 11-days course duration is recommended by the WHO, which developed IMCI. In some countries, the course has been shortened to reduce training costs and the time HCWs are away from their clinics during training. However, it is not

known whether shortening IMCI training reduces its effectiveness (Rowe Rowe, Holloway, Ivanovska, Muhe and Lambrechts. 2011: 2).

The implementation of IMCI has shown great improvement in the HCWs performances and quality service by training HCW's to use guidelines to detect more than one problem in a child during the same consultation and managing those problems through an integrated approach. This approach is integral in treating children with common childhood illnesses that are responsible for 70% of deaths in children under-five years of age. Presently, 100 countries have adopted the IMCI strategy. Pre-service training was later introduced to increase coverage of IMCI but coverage remained inadequate due to lack of resources, inadequate facilitators and long duration of IMCI training (WHO 2007a: 5).

A meeting was held by the Child and Adolescent Health (CAH) department of WHO to address the challenges of inadequate funds for training, long duration of training, shortage of facilitators / clinical instructors and lack of commitment of national authorities by assessing 26 countries. The 26 countries included in the survey of in-service IMCI training approaches, are presently implementing IMCI courses shorter than 11 days. Some countries are conducting only shortened IMCI courses, whilst others are offering both the 11-days standard course and the shortened IMCI courses. Many of the countries have also introduced and are implementing pre-service IMCI. The adaptations include reducing the amount of reading, eliminating redundant text, reducing the number of exercises and individual feedback and increasing group work or group feedback. However, there is a lack of data on measuring the quality of training and health worker's skill in regards to the shortened IMCI courses. The main challenges for both in-service and pre-service IMCI include lack of commitment from government and partners, inadequate fund, shortage of facilitators and inadequate supply of training materials(WHO 2007a:6)

According to UNICEF, in 2010 7.6 million children died before reaching their fifth birthday. This is a decline from 12 million children who died under the age of five in 1990, but 7.6 million is still too high. With less than three years left to reach the 2015 MDG deadline on reducing child mortality, drastic steps need to be taken to reduce the child mortality rate (UNICEF 2011: 1). With the implementation of the IMCI strategy there has been a definite improvement in the quality and performance of nurses in the health care settings.

IMCI training is an 11-days course that combines classroom work with hands-on clinical experience. Under the guidance of course facilitators and a skilled clinical instructor, participants work in small groups (6-8 participants with two facilitators per group). Each participant attends 10 clinical sessions, sees 30 to 50 sick children in an outpatient clinic or inpatient ward. Clinical sessions allow participants to practise assessment, classification, treatment and counselling skills using the IMCI case management guidelines. Several clinical sessions, and practice with hospitalized children presenting signs of severe disease, help participants to learn the accurate assessment of all clinical signs covered by the course, including even the uncommon signs, which indicate a need for urgent referral.

The guidelines for facilitation of classroom work contain instructions on working with the seven training modules, including written exercises, individual feedback, group discussions, drills, presentations, demonstrations, short answer exercises, and role plays. Several exercises cover the identification of clinical signs using a booklet of photographs and a video which demonstrate the assessment of sick children and presents several case studies (WHO 2005b: vi).

Almost 100 countries have introduced IMCI into their curriculum as this is integral in the meeting of the MDG 4 but there are still many challenges and shortcomings faced in the training of nurses. These include the lack of trained IMCI nurses and facilitators, inadequate resources, and long training sessions.

A comparative study conducted by the WHO to assess the impact between the standard 11-days IMCI training and the shortened courses suggests that standard training might be more effective than short training in improving behaviors that are harder to change. For example, regarding prescribing all necessary drugs with the correct doses the study results revealed that the shortened courses were not as effective as the standard 11-days courses, but the extent was not conclusive (WHO 2008b: 22 and Rowe *et al.* 2011: 189).

The WHO held an inter-country workshop to accelerate IMCI training in South East Asia and pre-service training in various regions was discussed. Bangladesh pre-service experiences were positive but they did highlight certain shortcomings in their training programme. They proposed that teaching students IMCI in their fourth year would be more beneficial because they would have studied all the conditions and therefore have a better understanding of childhood illnesses. They also recommended that additional facilitators be trained, follow up support be increased, supply of logistics be more regular and monitoring and assessment of the IMCI approach (WHO 2005 a: 2-6).

Indonesia's major shortcomings in IMCI were lack of trained staff in IMCI and shortage of training material. The trainees reported that the classroom teachings were too long and time away from work was too long as these

clinics were short staffed. The chart booklets are not freely available and on-going training of teachers was required. In order to overcome these constraints many countries have modified the teaching strategies (WHO 2007a: 7). The CAH and the WHO assessed the training approaches in 26 countries from the WHO region. The positive findings were that clinical practice was a non-negotiable part of IMCI training but training was very slow and this was due to inadequate funds, training was too long as well as a shortage of facilitators (WHO 2005c: 7).

Recent findings have shown that IMCI coverage has been sparse. It is also uncertain if training covers all facets of IMCI adequately as certain factors hinder the implementation of IMCI e.g. lack of equipment and supervision. A systematic review and meta-analysis of whether IMCI training improves health worker performance in five domains of classifying illnesses, prescribing appropriate medications, providing vaccinations, counseling caregivers on adequate nutrition, and instructing caregivers on administering oral therapies selected based on known survival benefits revealed that IMCI trained HCWs are more likely to classify and treat correctly (Nguyen. Leung, McIntyre, Ghali and Sauve 2013: 1-13).

Chaudhary, Mohanty and Sharma (2005) assessed HCWs' performance after training within four to eight weeks or one year after IMCI training. The supervisors and HCWs were trained for five days using the WHO manual. Their findings concluded that nurses who were followed up after 4-6 weeks after training showed that their skills were better than those followed up after a year, but in order to achieve the desired outcomes all necessary equipment needs to be available (Chaudhary *et al.* 2005: 735-739).

A research study carried out in Loa Peoples Democratic Republic in South Asia on the Success and Challenges of the IMCI training course, revealed that although IMCI had been implemented on a large scale, the quality of care and skills remained suboptimal. IMCI did not vastly improve child mortality in Tanzania and India. The major factors found to be contributing to the poor outcomes of IMCI implementation was because some HCWs did not follow proper IMCI guidelines. They focused mainly on HW training which are the strategies used to teach IMCI. Takada, Oudavong and Kuroiwa (2007: 178) revealed that trainees were of the opinion that IMCI training was too long and that important steps in the algorithm were omitted to save time (Takada *et al.* 2007: 178-184). Assessment of recording forms showed that they were incomplete because the HWs felt looking at the chart booklet was time consuming and they tried to work from memory resulting in incorrect treatment.

Sudan started IMCI in their teaching program in 2001 and after five years they felt the need to assess the role of IMCI in improving learners' competencies, find weaknesses and strengths in the teaching process and the teacher and students perspective on IMCI teaching. The evaluation showed positive findings that IMCI does improve quality care and communication but interdepartmental cooperation was needed for more effective IMCI teaching. Teaching material needed to be made available and for there to be continuous updates on IMCI. Proper training of teaching staff members was imperative for the success of IMCI (WHO 2010: 19).

A multi-country survey conducted by Goga and Muhe (2011) revealed that according to WHO the time spent on each module should be as follows: clinical practice 44.2%, introduction 1.2%, assess and classify 20.8%, identify treatment 4.9%, treat the child 11.6%, counsel the mother 6.9%, sick young infant 6.9%, follow up 3.5%. These researchers further put emphasis on the importance of follow up after training. The global coverage of IMCI is still

fairly low. They researched the approaches and methods used for IMCI training and how shortcomings have been dealt with so as to give guidance on future training. Their findings were similar to those of other studies, that the challenges were: high cost of training, follow up was seldom done, length of training was too long, lack of political support, lack of human and material resources and time for IMCI implementation, poor reading ability of HCWs, staff were hindering IMCI Implementation. Solutions were to shorten training days, find other training methods and follow up on trained staff, decrease reading time, “better funded” training, increase donor support of funds and redistribution of funds (Goga and Muhe 2011: 1-10).

According to the Report of Technical Consultation on IMCI training approaches and pre-service IMCI training (WHO 2007a: 6), IMCI training is progressing slowly and the following were identified as the main barriers to rapid acceleration:

- Inadequate funds for training;
- Long duration of training. shortage of facilitators / clinical instructors;
- Lack of commitment of national authorities.

In poor countries, it is important for HCWs to deliver health care but ineffective delivery of health care is a major problem and because of this millions of children are dying from treatable diseases. One of the major steps in dealing with this problem is assessing the training of IMCI (Rowe *et al*. 2011: 1).

In Brazil, IMCI was implemented in 1997. Amarel *et al.* (2005: 144) conducted a survey to compare the difference in the management of IMCI between HCWs trained in IMCI and those that were not trained in IMCI. They found that the IMCI trained nurses performed significantly better than those not trained in IMCI. The survey showed that trained registered nurses

classified and treated sick children correctly, they performed as well as and sometimes better than the medical officers trained in IMCI. The survey also indicated that IMCI training coverage is increasing at a slower rate than expected. The Department of Child and Adolescent Health and Development (CAH/WHO) commissioned survey showed that 36 countries have included IMCI training in their curriculum.

2.3 IMCI TRAINING IN AFRICA

Forty-four out of 46 countries in the African region have adopted the IMCI strategy, including Ghana. Ghana commenced IMCI in 1998. Child mortality rate (CMR) was 111/1000 and Infant mortality rate was 64/1000. Teaching usually took place in the hospitals where most of the classifications could be observed. Many problems were encountered in the hospitals which caused delays and rescheduling of training as well as missing out on observing cases such as mastoiditis and convulsions. The 11-day introduction to IMCI training for HCWs was eventually phased out and replaced by a 2-days training course. The two day training course was found to be not intensive enough to give proper understanding and caused limitations of understanding and compromised care of sick children (WHO 2004: 5).

In Uganda a Multi Country Evaluation of IMCI evaluated the impact of IMCI on child mortality rate. Several reports indicated that training of IMCI greatly improved the management of sick children. The study assessed health facilities in 10 districts in Uganda. Uganda's under-five mortality rate is 156.5/1000. To reduce this IMCI training was commenced in 1996 and by 2000 IMCI was practised in 55 of the 56 districts in Uganda. They evaluated HCWs with and without IMCI training HCWs with IMCI training performed significantly better in managing sick children than HCWs without IMCI training. Despite the improvement in training of HCWs in IMCI the assessing, classifying and treatment of sick children remained low, as only half of the

children received complete and correct treatment (Pariyo, Gouws, Bryce and Burnham 2005: 58-61).

Counselling is a key component of IMCI as it covers skill and knowledge regarding feeding, fluid administration, medication, immunization and follow up care for children under-five years of age. Counselling empowers the mother to make decisions to save her and her baby's life. Karamagi, Lubanga, Kiguli, Ekwaru and Heggenhougen (2004: 31-38) report on research conducted in Uganda in 19 health facilities regarding the counselling of caregivers in IMCI by trained HCWs in in-patient and outpatient services. Their counselling was assessed by a medical doctor and a social scientist using an observational checklist designed by social science and IMCI experts. There were few Registered Nurse/midwives trained in IMCI and those trained were working in the inpatient department. The more experienced IMCI health care providers listened to the caregivers well and invited questions or praised the mother more than those less experience in IMCI. In Tanzania, most HCWs reported that the IMCI algorithm was time consuming and they preferred to conduct the protocol from memory.

The WHO analytical review of IMCI reported long term cost savings from IMCI implementation, but also reported that many countries perceived training to be too long and expensive and so offer a 5-8 day course instead of the 11-days course (Ahmed, Mitchell and Hedt 2010: 128-133). The authors further argue that the constraints in the implementation of IMCI in many countries were the low compliance of HCW's to the IMCI guidelines. These researchers found that IMCI training was too long and expensive. The participants of this study reported that the use of the chart booklet was time consuming and they used rote learning instead to assess and classify. Ahmed *et al.* (2010: 131) also highlighted research conducted in South Africa regarding adherence to IMCI guidelines and found that after 2½ years of training, less than 2% of HCWs refer to IMCI guidelines. Twelve percent assessed for general danger signs in every child and 18% assessed all the main symptoms in all children.

The WHO recommends that at least 60% of HCWs should be trained in IMCI and it was estimated that only 14% were trained (Prosper and Borghi 2009: 2). The reason for the low percentage of trained nurses was due to the 11-days training course being too expensive, but the cheaper course like pre-service and on the job training is not adequate and the standard training on IMCI is still needed. Some of the reasons for the poor adherence to the IMCI protocol may be due to the HCWs finding using algorithms to be time consuming so cut corners to save time. There is also a concern related to shortage of facilitators and funds and therefore follow up and monitoring of staff is seldom or infrequently done. Due to the expense of the standard IMCI training course it would be beneficial to train staff using the shortened versions and to make follow up by facilitators more frequent (WHO/WPRO 2008b: 1).

A study by Walter, Lyimo, Skarbinski, Metta, Kahigwa, Flannery, Dowell, Abdullab and Kachurc (2009: 3) was conducted in Tanzania on the use of IMCI guidelines in the assessment of children with severe diseases. A total of 502 cases were reviewed at 62 facilities. The findings revealed that the majority of the HCWs did not adhere to IMCI protocols. They did not assess the sick children using the IMCI holistic approach and ended up treating the sick child for one classification only. HCWs did not refer these sick children to hospitals and did not give broad spectrum antibiotics because they felt it was nonessential.

A case study carried out in Kenya revealed that in spite of the increase in training of HCWs and facilitators, the implementation of IMCI still remains suboptimal and this was mainly due to low training coverage and insufficient execution of IMCI by trained HCWs. Adherence to the IMCI approaches was very poor and this was attributed to the length of the protocol and lack of

supervision of IMCI case management practices (Mullei, Wafula and Goodman 2010: 7-29).

Research carried out in Ethiopia concerning pre-service training on IMCI revealed that in-service training is very challenging therefore the implementation of pre-service training was commenced to overcome deficiency in the training. A cross sectional survey was conducted to evaluate pre-service training. The findings indicated that IMCI training was introduced in many of the training institutions. The preferred teaching style was the mixed method i.e. group discussion and demonstration. The problems encountered were the lack of IMCI trained staff and teaching material, the chart booklet and training modules and the inadequate time (Haileamlak Hailu, Nida, Desta and Tesema 2010: 2-14).

The findings of a study conducted in Botswana revealed that most of the HCWs managed sick children aged five years and younger but only 45% used the entire IMCI strategy (Nkosi, Botshabelo, Jorosi, Makole, Nkomo and Ruele 2012: 90-103). The participants in this study reported the following challenges in implementing IMCI: lack of resources, shortage of staff, lack of time, untrained staff and lack of supervision. They were of the opinion that if these challenges could be addressed then IMCI implementation would be successful.

According to the recommendation, 60% of HCWs should be trained in IMCI (WHO/WPRO 2008b: 3). However, in Tanzania research has revealed that only 14% were trained and the reasons cited were that training was too expensive because of the high facilitator: participant ratio and training a single health worker costs $1000. Despite in-service training the standard training is also required, pre-service training has its own difficulties because it is difficult to trace workers after training. On the job training is difficult as those trained do not give adequate feedback, there are not enough aids for staff to use, and

untrained workers are reluctant to learn from others opting to rather go for the training instead. Funding was also cited as a major problem. Follow up after training is limited and not done within the recommended time frame (Prosper and Borghi 2009: 2).

The findings of a study that was conducted in Niger revealed that the recording forms utilized to record their findings after assessing the sick child were incomplete (Tawfik, Legos and Geslin 2001: 4). Six percent of the HCWs failed to indicate if it was an initial or follow up visit, 21% did not complete nutritional status, and only 33% of children with general danger signs were referred and follow up visits were virtually ignored. The HCWs interviewed reported that there was inadequate time to counsel the mother and of the 182 follow up visits required only 11 returned. It was concluded that quality assurance and clinical IMCI was essential as well as long term follow up to ensure proper implementation of IMCI.

The implementation of IMCI in pre-service and continuing in-service training has revealed challenges, preventing large scale coverage and this is largely due to costs of training, lack of experienced trainers, inadequate supply of training materials, lack of follow up support and frequent decline in trained staff. A recent report on the poor performances of nurses after training in IMCI in Bulawayo mentioned other studies conducted in Brazil, Tanzania, Uganda and South Africa which indicated that the poor performances of IMCI trained HCWs which was largely due to inadequate health system support and supervision. To decrease the high costs of IMCI training, a “train the trainer” model has been instituted instead of hiring professional trainers that are costly (Woods 2010: 28).

2.4 TRAINING OF HEALTH CARE WORKERS IN SOUTH AFRICA

South Africa commenced training of IMCI in 1996 in order to equip HCWs so that they are able to implement the IMCI strategy (Kerry 2005: 32). This course included the following training modules:

- Introduction
- Assess and classify the sick child ages 2 months to 5 years
    - This includes assessing signs and symptoms of illness, nutritional and immunization status and classifying the illness
- Identify treatment
    - Treatment identified for child's classification and deciding if referral needed to a hospital
- Treat the child
    - Administration of pre-referral treatment
    - Administration of immunization, Vitamin A, Mabendazole, oral rehydration therapy
    - Teaching the mother to continue treatment at home
- Counsel the mother
    - Feeding and when to return to the clinic
- Manage the sick young infant ages from 1week to 2 months
- Follow up
    - To return on dates given for follow up
    - Reassessment the child
- Facilitators guide

- Course Directors guide.

IMCI case management training equips HCWs with skills to manage sick children for various illnesses; identify, treat and refer urgently, and; provide relevant information to child carers. The WHO recommends that newly trained IMCI practitioners receive follow-up visits from IMCI supervisors, starting 4–6 weeks after training, to assist them in transferring their newly acquired skills to the workplace. IMCI implementation has been shown to improve the quality of management of sick children, and IMCI trained HCWs communicate better with caregivers. Horwood *et al*. (2009: 4) assessed IMCI trained HCWs in Limpopo and KZN in South Africa to evaluate the quality of their skills, and their findings yielded the same results as Goga and Muhe (2009: 7). The HCW assessments were frequently incomplete and children needing urgent referrals were often missed. For the improvement of morbidity and mortality rate of under-five years the health care practitioners need constant supervision to ensure skills are improved and maintained. The two provinces chosen were Limpopo and KZN because they are regarded as the two provinces at the forefront of IMCI implementation in South Africa. Information gained during training is the skills required for the implementation of IMCI. They also investigated if IMCI training was the reasons for the poor performances of HCWs because most deaths were preventable, although IMCI was meant to decrease child mortality rate. IMCI facilitators are selected to do a 5-day additional IMCI training to become a Course Director and oversee training of learners and follow up is done in the health care facilities after training to reinforce what they have learnt and assess if there are any implementation difficulties. Assessing a sick baby is time consuming but very cost effective and their findings revealed exactly same as the previous research that they had done. The IMCI training course was reported to be an effective method of acquiring skills, but more time is required, either during the course, or with follow-up, to improve IMCI implementation. Innovative solutions may be required to ensure that adequate skills are acquired and maintained. All observed HCWs were registered nurses with a minimum of

three years nursing training, and had attended an 11-days IMCI training course, with no other special training in child health. The time since being trained in IMCI was an average of 32.2 months. Most HCWs had received at least one follow up visit following IMCI training. The average number of nurses at the clinics where research was carried out was 6, and on average 74% of these had been trained in IMCI. In 50/74 (67%) clinics visited, more than 60% of nurses were IMCI trained. HCWs' performance in identifying children with moderate to severe classification was inaccurate. Only half of the children requiring urgent referral to hospital were identified. IMCI can improve quality of care for sick children, and is being implemented in those countries where most child deaths occur. Almost all IMCI trained HCWs were using IMCI to assess children, but incomplete implementation means IMCI is failing to achieve maximum benefits for child survival. Improvements in training and supervision can rectify these shortcomings (Horwood *et al*. 2009: 2-4).

In Goga and Muhe's (2009:2) report on the multi-country survey, IMCI implementation in South Africa revealed that HCWs found training beneficial, but the training time was too short and follow up visits were not done. Clinical assessments on IMCI were frequently incomplete, only 18% checked for all main symptoms. It was also discovered that training was interesting, informative and empowering but the training time was short and follow-up visits, though helpful, were often delayed resulting in no on-going clinical supervision (Goga and Muhe 2009: 2). In South Africa less than 2% of HCW referred to IMCI guidelines, 12% of IMCI trained HCW were found to check general danger signs in every child and 18% assessed all the main symptoms in every child. As a result, less than half of the children with severe classifications were correctly identified (Ahmed *et al.* 2010: 128).

The challenges faced with sending staff away for IMCI training was causing a strain on the already scarce human resources and after training the staff did

not disseminate the information to other HCWs. Some staff refused to go for training due to family commitments. The financial implications further compounded the problem because of accommodation and travel costs.

IMCI has been expanded to include care of new born and young infants and children infected with HIV (Woods 2010: 28). In Geneva, it was recommended that innovative approaches be used in IMCI training, to strengthen individual study, group learning, local clinical mentoring, limited facilitation by a regional trainer and on-going evaluation and monitoring in order to increase IMCI coverage with limited budget and training constraints (WHO 2007a: 8-9).

2.5 CONCLUSION

The researcher used the information obtained from the literature review to guide this study. The literature review provides an understanding of how IMCI training is being implemented globally, in Africa and South Africa and provides a review of training approaches and methods used for IMCI case management. The following chapter will describe the research methodology that was used to evaluate the IMCI training of learners.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter describes the research design, the setting of the research, population and sample, data collection, data analysis and ethical considerations.

3.2 RESEARCH DESIGN

This study followed a descriptive quantitative approach and focused on the learners and lecturers trained in IMCI at the selected campuses. A quantitative research is a formal, objective systematic process in which numerical data is used to obtain information about the world, usually under conditions of considerable control (Burns and Grove, 2007: 17-18). Polit and Beck (2012: 13) state that quantitative research uses deductive reasoning to generate predictions that are tested in the real world, and research design is an overall plan for obtaining answers to the research question.

3.3 SETTING

KZNCN comprises 25 sites that are made up of 11 campuses and 14 sub campuses. The study was carried out on three of the 11 campuses that provided the four year diploma course (R425) programmes. KZNCN is located in the uMgungundlovu District which includes the city of Pietermaritzburg. Pietermaritzburg is the capital and second largest city in the province of KZN, South Africa. It was founded in 1838, and is currently governed by uMsunduzi Local Municipality. The 11 campuses are situated throughout the KZN Districts (Figure 3.1). Three campuses were randomly

selected from the eleven campuses for the research using simple random sampling method.

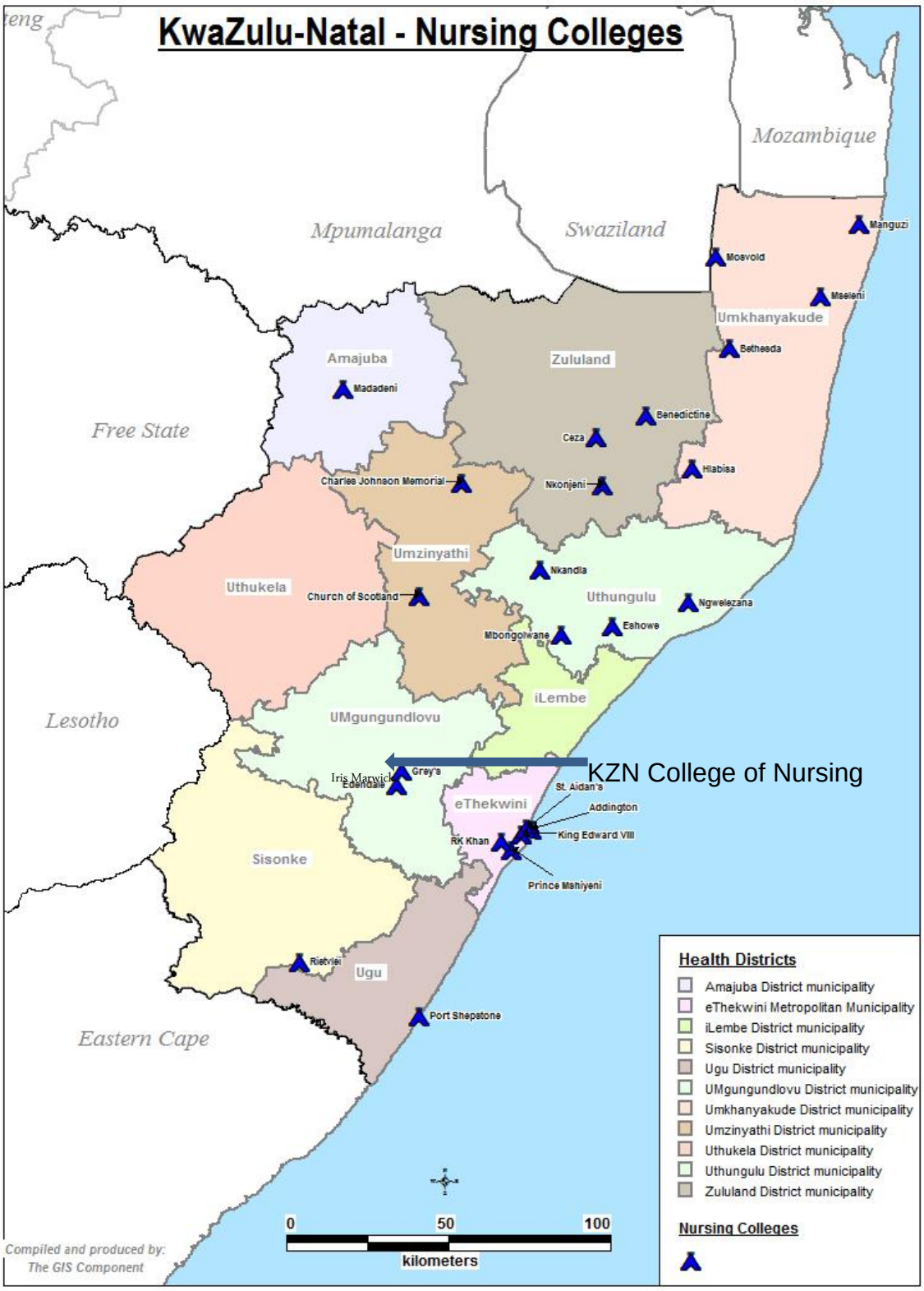


Figure 3.1: Map showing location of KZNCN Campuses

3.4 THEORETICAL FRAMEWORK: DONABEDIAN'S FRAMEWORK

The theoretical framework on which this research was based is Donabedian's framework on structural, process and outcomes standards as it apply to training (Donabedian 2005:692-695).

- **Structure**: Physical equipment and facilities, Finance
- **Process**: How the training was implemented
- **Outcome**: The final product, results

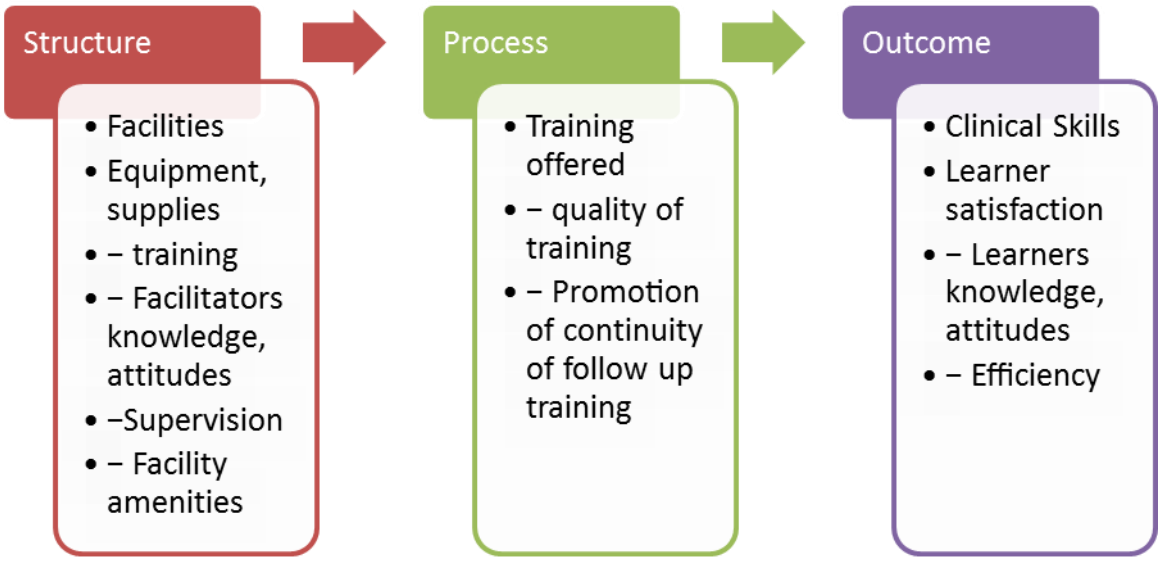


Figure 3.2: Adapted from Donabedian's structural model. (Donabedian 2005:692-695).

3.5 SAMPLING PROCESS

Sampling according to De Vos *et al.* means taking a percentage of a population as representative or having particular characteristics of that total

population. Sample involves a subsection of the population considered for inclusion in the study (De Vos *et al* 2011:227-228). Random sampling ensures that each individual has an equal opportunity to be selected from the population, so that the sample would be representative the population.

The KZNCN campuses were clustered according to their location that is urban, semi-rural and rural in order to provide variance in results because of differences in staffing patterns and infrastructure. The participants were those learners that undertook the R425 programme and had completed the IMCI module, which was done in the first semester of the second year. The total population of 2nd, 3rd, and 4th year learners were approximately 240 in total in each campus. The 2nd, 3rd and 4th year learners were used in the study because they provided a better insight into the question because they had been through IMCI training and therefore, had the expertise and the experience to respond to the questionnaire. The sample size was determined with the assistance of the statistician and 100 learners were randomly selected from each campus, about 34 learners from each year and all the lecturers 100% (n=20) lecturers that were trained in IMCI were included in the sample.

3.5.1 Inclusion criteria

- All lecturers trained in IMCI case management.
- All lecturers trained in IMCI facilitation.
- All learners who have undergone training in IMCI (2nd 3rd and 4th year learners).

3.5.2 Exclusion criteria

- Sub campuses because the R425 programme is not offered on these sub-campuses.
- Lecturers not trained in IMCI case management.
- Learner nurses who have not undergone IMCI Training (1st year learners).

3.6 DATA COLLECTION PROCESS

Data collection was conducted using a questionnaire designed by Goga and Muhe (2011) that had been adapted to focus on lecturers and learners trained in IMCI. Permission was requested and granted (Appendix 6). There was a questionnaire for facilitators (Appendix 4a) and a questionnaire for learners (Appendix 4b). The researcher personally handed the questionnaires to the lecturers and learners during working hours asked them to complete it at their leisure. The researcher collected the questionnaires after 48 hours.

3.7 PILOT STUDY

Pilot study is a smaller version of a proposed study and is conducted to refine the methodology. It determines whether the study is feasible and helps to refine data collection tool (Burns and Grove 2007:38).

Since the researcher used a validated questionnaire that had been modified, an expert group was used to pre-test the questionnaire before the commencement of the research. The expert group comprised of a four facilitators from the KZNCN campuses that were included in this study. Questionnaires were distributed to the expert group to read and complete. Comments were invited about the relevance of each question to the research

and suggested rewording or adding of questions that the researcher initially omitted.

3.8 DATA ANALYSIS

Questionnaires were analysed with the help of a statistician and the aid of computerised data analysis software, statistical software (SPSS) programme version 20.0. Descriptive statistics, in the form of tables and graphs, were used to describe the data graphically. In addition, measures of central tendency, including means and modes, as well as a measure of spread using the standard deviation were calculated, where applicable. In order to test for significant trends in the data, inferential statistics was applied. These included chi-square tests, t-tests and analysis-of-variance. Where the conditions were not met for the application of these tests, non-parametric equivalent tests was applied.

3.9 RELIABILITY

Wood and Haber described reliability as the ability of an instrument to measure the attributes of a concept or construct consistently (LoBiondo-Wood and Haber 2010: 286). A measurement is said to be reliable or consistent if the measurement can produce similar results if used again in similar circumstances (De Vos *et al*. 2011: 168). The researcher used two focus groups of experts with vast experience in the field being studied and to give their input to ensure reliability by having them evaluate the data collection tools and similar findings were obtained. The questionnaire was previously used by Goga and Muhe (2011).

3.10 VALIDITY

Burns and Grove (2007: 365) state that validity of an instrument is a determination of how well the instrument reflects the abstract concept being examined. To ensure content validity the researcher conducted an extensive literature review. Questionnaire was also presented to the statistician as well as the supervisor of the research and corrections made as recommended. Validity was tested by ensuring the questionnaires were designed to measure all the objectives and concepts in the conceptual framework. The questionnaire was planned to ensure that the questions were interpreted correctly.

3.11 ETHICAL CONSIDERATIONS

Three broad principles, namely; beneficence, respect for human dignity and justice on which standards of ethical conduct research are based were followed to ensure Codes of Ethics and good practice for the protection of the participants (Polit and Beck, 2012: 152).

3.11.1 Beneficence

The principle of beneficence is the researcher's duty to protect the participants from physical, emotional, social and financial harm (Polit and Beck, 2012: 153-155). Before the study was commenced, the Institutional Research Ethics Committee granted ethics clearance (Appendix 1). Permission was sought and granted by the Department of Health (Appendices 2a and 2b) and KZNCN and Campuses (Appendices 3a, 3b and 4).

3.11.2 Respect for human dignity

When humans are used as study participants, care must be taken to ensure that their rights are protected (Polit and Beck, 2012: 150). Facilitators and learners were given separate information letters and informed consent was obtained from the participants (Appendices 5 and 6). The participants were assured of confidentiality; privacy and confidentiality of the information given in the questionnaires. Participants were also informed that participation was totally voluntary and that they were free to withdraw at any time without penalty.

3.11.3 Justice

Polit and Beck (2012: 155) state that justice involves participant's right to fair treatment and their right to privacy and participant selection has to be based on study requirements and not on a group's vulnerability. Selection of potential participants was open and fair without any discrimination. Participants who declined to participate in the study were not treated in a prejudicial manner. To ensure the right to privacy, participants' details were not written in the reports.

3.12 CONCLUSION

This chapter described the research design and methodology used in the study, including population, sampling, data collection and analysis, data collection instrument, validity and reliability. Chapter 4 discusses the data presentation, analysis and interpretation.

CHAPTER 4

PRESENTATION OF THE RESULTS

4.1 INTRODUCTION

The previous chapter dealt with the research methodology. This chapter presents the results of the study. This chapter provides a report and interpretation of the research findings obtained from the questionnaires. A detailed analysis of findings follows and includes a graphic presentation of results. The study was a quantitative, descriptive study to determine the evaluation of IMCI training for learner nurses on three KZNCN Campuses. Two sets of questionnaires were used to collect data. One was for the learners and other for the facilitators. Data analysis is the statistical examination of the numerical data gathered in a study (Burns and Grove, 2007: 402).

Questionnaires were distributed to 300 learners in second, third and fourth year levels of study on Campus A (Semi Rural) Campus B (Urban) and Campus C (Rural) as well as all the IMCI facilitators from these three Campuses. One hundred percent (n=300) questionnaires were returned by the learners and 100% (n=20) returned from the facilitators. The learners' questionnaire consisted of the participants' demographic data and 17 questions concerning the learners' views on the IMCI training. The facilitators' questionnaire consisted of 22 questions concerning the facilitators' views on IMCI training. The objectives were:

- To assess the teaching and learning methods against the guidelines set by the WHO;

- To assess the logistics with regard to clinical placement, clinical practice and supervision;
- To determine the supply of teaching material to all learners;
- To assess the ratio of trained facilitators to the number of learner;
- To determine the timing of teaching IMCI in the R425 programme.

Inferential statistical tests were applied to investigate significant patterns in the data. These include:

- A chi-square goodness of fit test which is univariate test, used on a categorical variable to test whether any of the response options are selected significantly more/less often than the others. Under the null hypothesis, it is assumed that all responses are equally selected.
- A Wilcoxon Signed Ranks test which is a non-parametric test used to test, in this study, whether the average value of an ordinal variable is significantly different from a value of 3 (the central score).

4.2 LEARNERS' QUESTIONNAIRE

The questionnaire consisted of questions covering the information regarding the learner's views on IMCI training.

4.2.1 Sample size

Table 4.1: Campus-group (n=300)

Campus		Group						Total
		7/2009	1/2010	7/2010	1/2011	7/2011	1/2012	
Campus	A	20	24	17	24	15	0	100
	B	25	20	15	20	20	0	100
	C	0	20	20	20	18	22	100
Total		45	64	52	64	53	22	300

Table 4.1 presents the sample of 300 participants used in the research, 100 learners' from each of the three Campuses in their second, third and fourth year of study. The sample was made up as follows:

- Group 7/2009: Campus A n=20, Campus B n=25 and Campus C n=0 as learners on this campus had completed the R425 programme at the time of data collection;
- Group 1/2010: Campus A n=24, Campus B n=20 and Campus C n=20;
- Group 7/2010: Campus A n=17, Campus B n=15 and Campus C n=20;
- Group 1/2011: Campus A n=24, Campus B n=20 and Campus C n=20;
- Group 7/2011: Campus A n=15, Campus B n=20 and Campus C n=18;

- Group 1/2012 n=22 as these learners had completed the IMCI approach at the time of data collection and to compensate for group 7/2009.

4.2.2 Period of training

Table 4.2: Period trained in IMCI (n=300)

Trained in IMCI	Year trained in IMCI				Total
	2010	2011	2012	2013	
March	0	20	44	0	64
June	0	44	20	22	86
July	0	20	0	0	20
August	45	0	33	0	78
September	0	32	20	0	52
Total	45	116	117	22	300

Table 4.2 shows the month and the year of training that took place across all campuses in the R425 programme. The results indicate:

- A significantly small number of participants were trained in August 2010 n=45;
- In 2011 a total of n=116 participants were trained: March n=20, June n=44, July n=20 and September n=32;
- The majority of the participants were trained in 2012 n=117: March n=44, June n=20, August n=33 and September n= 20;
- In 2013, a total of n=22 were trained.

4.2.3 Duration of training

Table 4.3: Duration of IMCI training (n=300)

Duration of IMCI training		Frequency	Percent
Valid	<11 days	295	98.3
	11 days	3	1.0
	>11 days	2	.7
	Total	300	100.0

As can be seen from Table 4.3:

- The majority of participants 98.3% (n=295) were trained for less than 11 days;
- 1.0% (n=3) were trained for 11 days which is according to the WHO training strategy for IMCI;
- 7% (n=2) were trained for more than 11 days.

4.2.4 Clinical practice

Table 4.4: Number of hours spent on clinical practice (n=300)

Hours spent		Frequency	Percent
Valid	8	9	3.0
	10	2	.7
	16	56	18.7
	17	1	.3
	24	1	.3
	32	12	4.0
	40	63	21.0
	48	3	1.0
	76	1	.3
	80	63	21.0
	120	7	2.3
	126	1	.3
	136	5	1.7
	152	1	.3
	160	55	18.3
	172	1	.3
	210	1	.3
	240	18	6.0
	Total	300	100.0

Table 4.4 indicates the hours the participants spent on clinical practice during IMCI training. The results indicate that nearly half of the participants 48% (n=144) did not spend the prescribed minimum of 44 hours in clinical practice according to the WHO stipulations.

4.2.5 Learners' competence in IMCI

Table 4.5: Competency rating of the learners in IMCI (n=300)

Competence rating		Frequency	Percent
Valid	2	2	.7
	3	2	.7
	4	7	2.3
	5	29	9.7
	6	30	10.0
	7	56	18.7
	8	96	32.0
	9	42	14.0
	10	36	12.0
	Total	300	100

Table 4.5 shows how participants self-rated their skills after IMCI training out of 10, according to how competent they felt after IMCI training. A significant minority felt their competence level to be below average mainly due to the fewer number of hours spent in the practical setting:

- 0.7% (n=2) rated themselves 2/10;
- 0.7% (n=2) rated themselves 3/10;
- 2.3% (n=7) rated their skills 4/10.

A significant number felt their competence level was average:

- 9.7% (n=29) rated themselves 5/10;
- 10.0 % (n=30) rated their skills 6/10.

Majority of the participants rated themselves above average, due to the adequate time spent in the practical area after training:

- 18.7% (n=56) rated themselves 7/10;
- 32.0% (n=96) rated 8/10;
- 14.0 % (n=42) rated 9/10;
- 12.0 % (n=36) rated their skills 10/10.

4.2.6 Adequacy of training time on each module

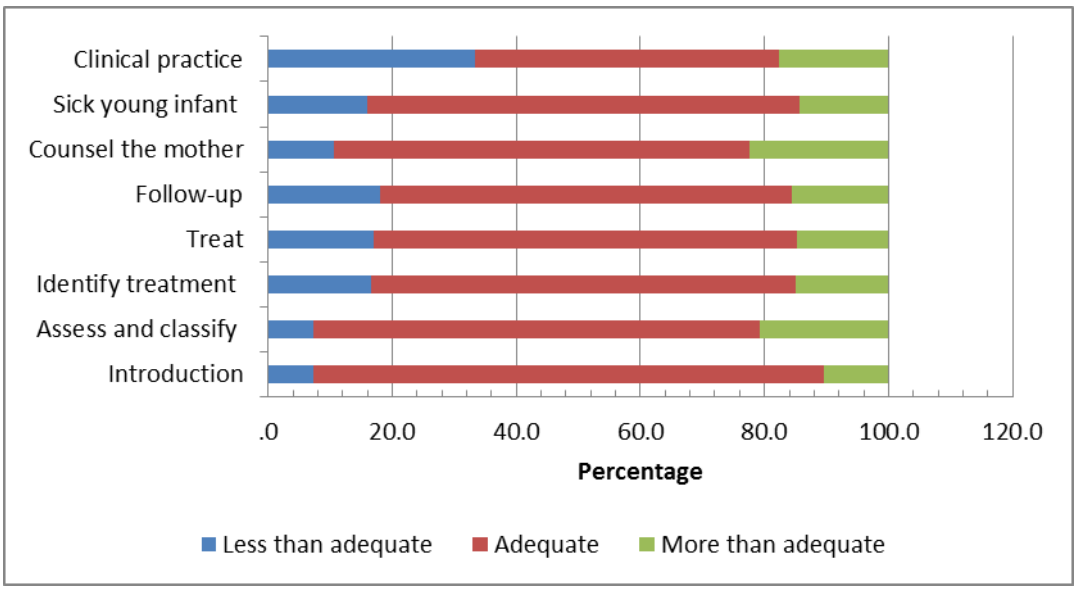


Figure 4.1: Adequacy of training time (n=300)

Table 4.6 Percentage of training time on each module (n=300)

Module	Less than adequate	Adequate	More than adequate
1.Introduction	7.3% (n=22)	82.3% (n=247)	10.3% (n=31)
2. Assess and classify	7.3% (n=22)	72.0% (n=216)	20.7% (n=62)
3.Identify treatment	16.7% (n=50)	68.3% (n=205)	15.0% (n=45)
4.Treat	17.0% (n=51)	68.3% (n=205)	14.7% (n=44)
5.Follow – up	18.0% (n=54)	66.3% (n=199)	15.7% (n=47)
6.Counsel the mother	10.7% (n=32)	67.0% (n=201)	22.3% (n=67)
7.Sick Young Infant	16.0% (n=48)	69.7% (n=209)	14.3% (n=43)
8.Clinical practice	33.3% (n=100)	49.0% (n=147)	17.7% (n=53)

A chi-square goodness of fit test was performed on each of the above items to ascertain whether the adequacy options were selected equally or not. Figure 4.1 and Table 4.6 show that the majority of participants indicated that the time spent on each module was adequate. However, with the 'Introduction' module 'Adequate' was selected significantly more frequently. The participants found the time spent on each module was adequate although 7.4% (n=23) found time spent on the introduction module 'Less than adequate' whilst 92.6% (n=277) found training time to be 'Adequate'. A minority 7.3% (n=22) of participants found the 'Assess and classify' module which follows the introduction module less than adequate whereas 92.7% (n=278) found the time spent on the 'Assess and classify' module to be 'Adequate'. 'Identifying treatment: 16.7% (n=50) of the participants indicated time was 'Less than adequate'. However, 83.3% (n=250) of the participants found the time to be 'Adequate'. For the 'Treat the child' module 17% (n=51) of participants indicated that the time was 'Less than adequate' but 83% (n=249) stated the time spent was 'Adequate'. A fair number of participants 18.0% (n=54) indicated time spent on the 'Follow-up' module was 'Less than adequate' whilst 82% (n=246) found it adequate. With the 'Counsel the mother'; module 10.7% (n=32) indicated the time was 'Less than adequate'

yet a majority 89.3% (n=268) indicated that it was 'Adequate'. A reasonable number of participants 16.0% (n=48) found the module 'Less than adequate' and a significantly large number 84% (n=252) found it 'Adequate'. In the clinical component, the participants indicated by 33.3% (n=100) that the 'Clinical practice' component during training was 'Less than adequate' nevertheless 66.7% (n=200) indicated that it was 'Adequate'.

4.2.7 Benefits of IMCI approach to the learners

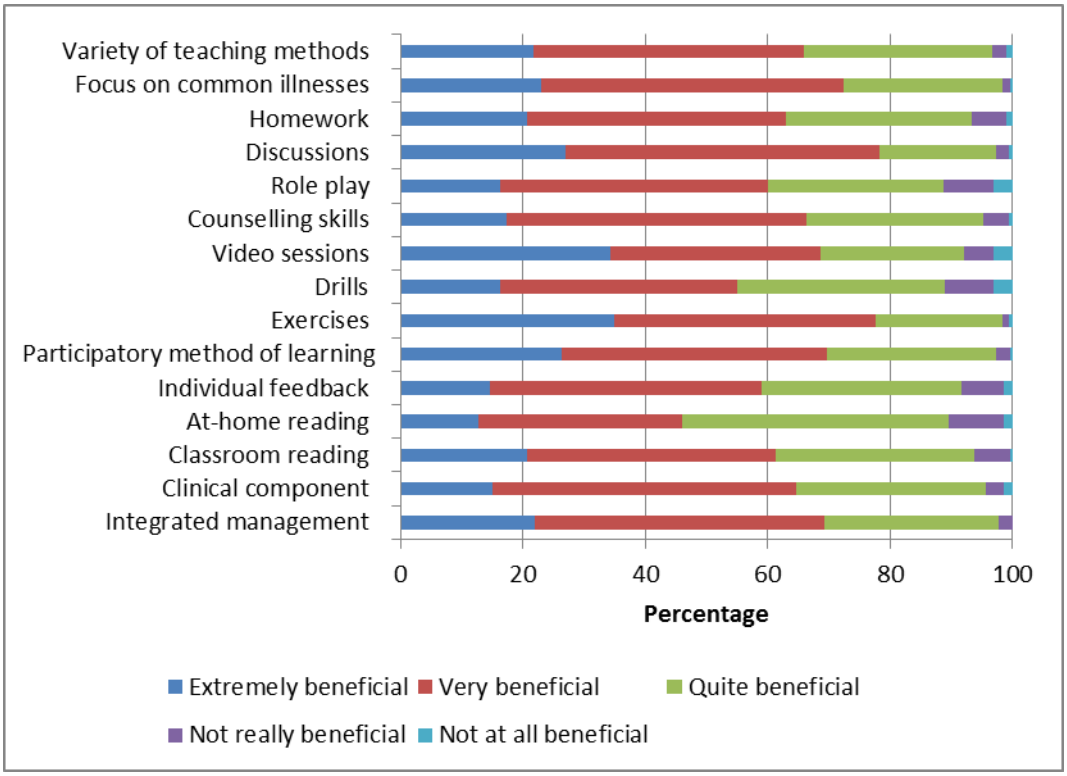


Figure 4.2: Benefits of different aspects of the course to the learners (n=300)

Participants were asked to rate the IMCI approach. Figure 4.2 indicates a significant number of participants 97.6% (n=293) felt that 'Integrated management' was 'Quite beneficial' and only a small number of participants indicated that it was 'Not really beneficial' 2.3% (n=7). A compelling number of the participants 95.7% (n=225) indicated that the time spent on the 'Clinical component' was 'Extremely beneficial' while 4.3% (n=13) stated it was 'Not

really beneficial'. 'Classroom teaching' was found to be 'Very beneficial' by 93.7% (n=281) of participants and 'Not really beneficial' by 6, 3% (n=19). Figure 4.2 indicates 89.7% (n=269) of participants found 'At home reading' beneficial while a relatively minor number 10.3% (n=31) found it 'Not at all beneficial'. The majority of the participants 91.7% (275) found 'Individual feedback' 'Quite beneficial' and 8.3% (n=25) 'Not really beneficial'. The majority of participants found the 'Participatory method of learning' 'Extremely beneficial' followed by 2.6% (n=8) that found it 'Not really beneficial'. The results indicate that 98.4% (n=295) of participants found 'Exercises' 'Extremely beneficial' and 1.6% (n=5) found exercises 'Not really beneficial'. Figure 4.2 indicates that 89% (n=267) of participants found the 'Drills' beneficial and 11.0% (n=33) found it 'Not really beneficial'. A large percentage of participants 95.3% (n=286) found 'Counselling skills' 'Extremely beneficial' and 4.7% (n=14) found it 'Not really beneficial'. A number of participants 88.7% (n=269) found 'Role play' 'Very beneficial' and 11.3% (n=34) found it 'Not really beneficial'. Figure 4.2 indicates that 97.3% (n=292) of participants found the 'Discussions' 'Quite beneficial' while 2.7% (n=8) found them 'Not really beneficial'. The majority of participants 93.3 (n=206) found 'Homework' 'Very beneficial' while 6.7% (n=20) found it 'Not really beneficial'. The majority of participants 98.3% (n=295) found 'Focus on common illnesses' 'Quite beneficial' and a small number of participants 1.6% (n=5) found it 'Not at all beneficial'. The majority of participants 96.7% (n=290) found 'Variety of teaching methods' to be 'Very beneficial' and 3.3% (n=10) found it 'Not really beneficial'.

4.2.8 Content of IMCI course

Table 4.7: IMCI course was too detailed (n=300)

IMCI course to detailed		Frequency	Percent
Valid	Strongly disagree	23	7.7
	Disagree	59	19.7
	Neither agree nor disagree	32	10.7
	Agree	149	49.7
	Strongly agree	37	12.3
	Total	300	100.0

Table 4.7 represents the participants' responses to how detailed the IMCI course was: 27.4% (n=82) disagreed that IMCI was too detailed, 10.7% (n=32) neither agreed nor disagreed with the statement and 62% (n=186) agreed it was too detailed.

4.2.9 Relevance of exercises

Table 4.8: Exercises were not relevant (n=300)

Exercises not relevant		Frequency	Percent
Valid	Strongly disagree	95	31.7
	Disagree	168	56.0
	Neither agree nor disagree	15	5.0
	Agree	17	5.7
	Strongly agree	5	1.7
	Total	300	100.0

The participants were asked to indicated whether the exercises were relevant and as can be seen from Table 4.8, 87.7% (n=263) disagreed, 5.0% (n=15) neither agreed nor disagreed and 7.3% (n=22) agreed that the exercises were relevant.

4.2.10 Number of exercises

Table 4.9: Frequencies of exercises (n=300)

Exercises too few		Frequency	Percent
Valid	Strongly disagree	76	25.3
	Disagree	162	54.0
	Neither agree nor disagree	39	13.0
	Agree	20	6.7
	Strongly agree	3	1.0
	Total	300	100.0

As can be seen from Table 4.9, 79.3% (n=238) disagreed that there were too few exercises while 13.0% (n=39) neither agreed nor disagreed and 7.7% (n=23) agreed there were too few exercises.

4.2.11 Reading of the modules

Table 4.10: Too little reading (n=300)

Too little reading		Frequency	Percent
Valid	Strongly disagree	89	29.7
	Disagree	163	54.3
	Neither agree nor disagree	28	9.3
	Agree	18	6.0
	Strongly agree	2	.7
	Total	300	100.0

As can be seen from Table 4.10, 84% (n=252) disagreed that there was too little reading in the IMCI course although 9.3% (n=28) neither agreed nor disagreed and 6.7% (n=20) agreed there was too little reading.

4.2.12 Length of training

Table 4.11: Training was too long (n=300)

Length of training		Frequency	Percent
Valid	Strongly disagree	45	15.0
	Disagree	113	37.7
	Neither agree nor disagree	36	12.0
	Agree	74	24.7
	Strongly agree	32	10.7
	Total	300	100.0

As can be seen from Table 4.11, 52.7% (n=158) of participants disagreed that the training was too long, 12.0% (n=36) neither agreed nor disagreed and 35.4% (n=106) agreed that training was too long.

4.2.13 Too much repetition

Table 4.12: Extent of repetition (n=300)

Too much repetition		Frequency	Percent
Valid	Strongly disagree	23	7.7
	Disagree	96	32.0
	Neither agree nor disagree	38	12.7
	Agree	86	28.7
	Strongly agree	57	19.0
	Total	300	100.0

As can be seen from Table 4.12 regarding too much repetition in the IMCI training: 39.7% (n=119) of participants disagreed, 12.7% (n=38) neither agree nor disagree and 47.7% (n=143) agreed.

4.2.14 Ideal year of offering IMCI training

Table 4.13: Year that IMCI would be beneficial (n=300)

Year IMCI beneficial		Frequency	Percent
Valid	First	19	6.3
	Second	202	67.3
	Third	48	16.0
	Fourth	31	10.3
	Total	300	100.0

Table 4.13 shows that the majority of the participants 67.3% (n=202) preferred the course to be conducted in the second year and a significant minority 6.3% (n=19) felt that IMCI should be conducted in the first year, while 16.0% (n=48) preferred the course to be done in the third year and 10.3% (n=31) chose the fourth year.

4.2.15 Adequacy of training period

Table 4.14: Adequacy of training period (n=300)

Adequacy of training period		Frequency	Percent
Valid	increased	261	87.0
	remain the same	35	11.7
	decreased	4	1.3
	Total	300	100.0

Table 4.14 indicates the participants' responses to the question of whether the IMCI training period was adequate. The majority 87.0% (n=261) of participants indicated that they would like the course time to be increased, 11.7% (n=35) indicated that the course should remain the same and 1.3% (n=4) stated that the course should be decreased.

4.2.16 Issuing of chart booklet

Table 4.15: Issuing of chart booklet (n=300)

Issuing of chart booklet		Frequency	Percent
Valid	yes	175	58.3
	no	125	41.7
	Total	300	100.0

The participants were asked if they were issued with chart booklets to use in the clinical area after training. As can be seen from Table 4.15, the majority of participants received chart booklets, 58.3% (n=175) and 41.7% (n=125) did not.

4.2.17 Adequacy of the 11-days training period

Table 4.16: Adequacy of the 11-days training period (n=300)

Adequacy of 11 days training		Frequency	Percent
Valid	Strongly disagree	64	21.3
	Disagree	162	54.0
	Neither agree nor disagree	21	7.0
	Agree	41	13.7
	Strongly agree	12	4.0
	Total	300	100.0

Participants were asked if the 11-days training period for IMCI was adequate and the majority 75.3% (n=226) disagreed with this statement, 21% (n=7) neither agreed nor disagreed and 17.7% (n=53) agreed.

4.2.18 Time spent of each module

Table 4.17: Time spent on the modules (n=300)

Time spent on modules		Frequency	Percent
Valid	Strongly disagree	41	13.7
	Disagree	150	50.0
	Neither agree nor disagree	26	8.7
	Agree	76	25.3
	Strongly agree	7	2.3
	Total	300	100.0

Table 4.17 shows that 63.7% (n=191) disagreed that the time spent on the modules was adequate, 8.7% (n=26) neither agreed nor disagreed and 27.6% (n=83) agreed that it was adequate.

4.2.19 Completion of training modules timeously

Table 4.18: Modules were completed timeously (n=300)

Modules completed timeously		Frequency	Percent
Valid	Strongly disagree	6	2.0
	Disagree	26	8.7
	Neither agree nor disagree	28	9.3
	Agree	208	69.3
	Strongly agree	32	10.7
	Total	300	100.0

Table 4.18 shows that 10.7% (n=32) disagreed that the modules were not completed on time; 9.3% (n=28) neither agreed nor disagreed and 80% (n=240) agreed.

4.2.20 Practice time in the clinical area

Table 4.19: Practice time in the clinical area (n=300)

Length of clinical practice		Frequency	Percent
Valid	Strongly disagree	66	22.0
	Disagree	118	39.3
	Neither agree nor disagree	26	8.7
	Agree	73	24.3
	Strongly agree	17	5.7
	Total	300	100.0

As can be seen from Table 4.19, a major portion of the participants 61.3% (n=184) disagreed that the clinical practical time was adequate, 8.7% (n=26) neither agreed nor disagreed and 30% (n=90) agreed.

4.2.21 Confidence in using chart booklet

Table 4.20: Confidence in using chart booklet (n=300)

Confidence in using chart booklets		Frequency	Percent
Valid	Strongly disagree	8	2.7
	Disagree	16	5.3
	Neither agree nor disagree	29	9.7
	Agree	155	51.7
	Strongly agree	92	30.7
	Total	300	100.0

As can be seen from Table 4.20, 8% (n=24) of participants disagreed with the statement they felt confident using the chart booklet, 9.7% (n=29) neither agreed nor disagreed, and the majority agreed that they felt confident using the chart booklet 82.4% (n=247).

4.2.22 Use of a chart booklet by the clinic staff

Table 4.21: Use of a chart booklet by the clinic staff (n=300)

Use of chart booklet in clinics		Frequency	Percent
Valid	Strongly disagree	13	4.3
	Disagree	32	10.7
	Neither agree nor disagree	37	12.3
	Agree	151	50.3
	Strongly agree	67	22.3
	Total	300	100.0

Table 4.21 shows that 15% (n=45) of participants disagreed that the clinic staff use chart booklets to assess and classify children five years and below, 12.3% (n=37) neither agreed nor disagreed and a majority 72.6% (n=218) agreed that the staff in the clinics are using chart booklets.

4.2.23 Use of IMCI approach after completion of the course

Table 4.22: Use of IMCI approach after completion of the course (n=300)

Use of IMCI after training		Frequency	Percent
Valid	Strongly disagree	12	4.0
	Disagree	49	16.3
	Neither agree nor disagree	24	8.0
	Agree	174	58.0
	Strongly agree	41	13.7
	Total	300	100.0

Table 4.22 shows that 20.3% (n=61) of participants indicated they strongly disagreed that they had used IMCI in the clinical areas since completing the course, 8.0% (n=24) neither agreed nor disagreed and the large majority of participants 71.7% (n=215) agreed that they had used IMCI.

4.2.24 Acquired skills to manage a sick child

Table 4.23: Acquired the skills to manage a sick child (n=300)

Able to manage a sick child		Frequency	Percent
Valid	Strongly disagree	7	2.3
	Disagree	26	8.7
	Neither agree nor disagree	41	13.7
	Agree	171	57.0
	Strongly agree	55	18.3
	Total	300	100.0

As can be seen from Table 4.23, some of the participants felt they did not acquire the necessary skills to manage a sick child: 11% (n=33) disagreed, 13.7% (n=41) neither agree nor disagree but the majority 75.3% (n=226) agreed they had acquired the necessary skills.

4.2.25 Supervision by facilitators

Table 4.24: Supervision received from facilitators was adequate (n=300)

Supervision from facilitators		Frequency	Percent
Valid	Strongly disagree	5	1.7
	Disagree	33	11.0
	Neither agree nor disagree	29	9.7
	Agree	178	59.3
	Strongly agree	55	18.3
	Total	300	100.0

Table 4.24 shows that 12.7% (n=38) of participants disagreed that they received adequate supervision from the facilitators, a few 9.7% (n=29) neither agreed nor disagreed and 77.6% (n=233), which is a significant majority of the participants, agreed that they did receive adequate supervision.

4.2.26 Skills of facilitators

Table 4.25: Skills of facilitators (n=300)

Skills of facilitators		Frequency	Percent
Valid	Strongly disagree	3	1.0
	Disagree	10	3.3
	Neither agree nor disagree	24	8.0
	Agree	187	62.3
	Strongly agree	76	25.3
	Total	300	100.0

As can be seen from Table 4.25, 4.3% (n=13) of participants disagreed that the facilitators were skilled IMCI facilitators, 8.0% (n=24) neither agreed nor disagreed and 87.6% (n=263) agreed that the facilitators were skilled in facilitating IMCI.

4.2.27 Learning in the clinical placement facilities

Table 4.26: Learning in the clinical placement facilities (n=300)

Learning in the clinical area		Frequency	Percent
Valid	Strongly disagree	15	5.0
	Disagree	64	21.3
	Neither agree nor disagree	51	17.1
	Agree	136	45.3
	Strongly agree	34	11.3
	Total	300	100.0

As can be seen from Table 4.26, a significant number of participants 56.6% (n=170) indicated they did not get all the learning they needed in the clinical placement facilities, 26.3% (n=79) disagreed and 17.1% (n=51) neither agreed nor disagreed and 56.6% (n=170) agreed.

4.2.28 Structure of theory and practice

Table 4.27: Structure of theory and practice (n=300)

Structure of theory and practice		Frequency	Percent
Valid	Theory in am and practical in pm	100	33.3
	one week theory; next week practical	117	39.0
	one week theory; 3 days practical	49	16.3
	no practical at all	10	3.3
	other	24	8.0
	Total	300	100.0

Table 4.27 reveals that 33.3% (n=100) of participants had theory in the morning and practical in the afternoon, 39.0% (n=117) did one week of theory and one week of practical, 16. 3% (n=49) had one week theory and 3 days of practical, 3.3% (n=10) had no practical at all and other 8.0% (n=24).

4.2.29 Follow-up after training

Table 4.28: Follow up after training (n=300)

Follow up after training		Frequency	Percent
Valid	within 6 weeks	248	82.7
	within 6 months	23	7.7
	within a year	4	1.3
	after a year	1	.3
	never	24	8.0
	Total	300	100.0

Table 4.28 indicates that the majority of participant, 82.7% (n=248) received follow up in the clinic within 6 weeks of training, 7.7% (n=23) stated they received follow up within 6 months and 1.3% (n=4) within a year, 0.3% (n=1) received follow up after a year and 8.0% (n=24) never received any follow up at all after IMCI training.

4.2.30 Best experiences during IMCI training

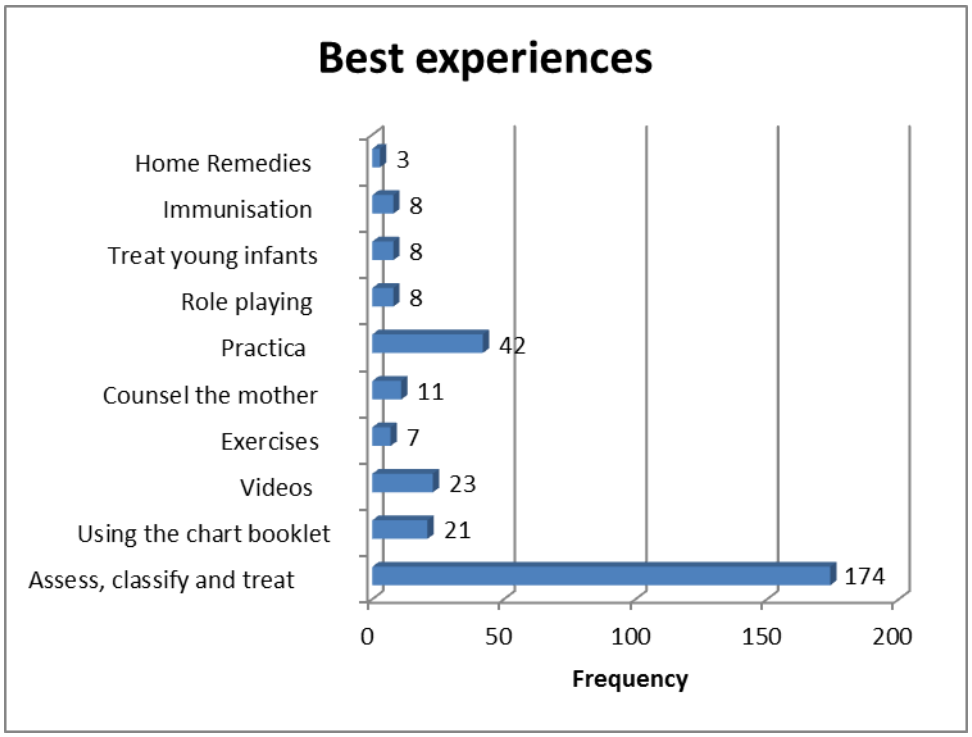


Figure 4.3: Best experiences during IMCI training (n=300)

As can be seen from Figure 4.3, a significantly large number of participants n=174 found the best experience to be the 'Assess, classify and treat' module whereas n=42 found the 'Practical' component to be their best experience. A small number of participants n=21and n=23 enjoyed 'Using the chart booklet' and 'Videos' of real life situations. A fairly small number of participants n=24 found 'Role playing', 'Immunization and 'Treat the young infant' their best experiences. Only n=11 enjoyed the 'Counsel the mother' module and n=3 enjoyed the 'Home remedies' module.

4.2.31 Least favourite experiences during IMCI training

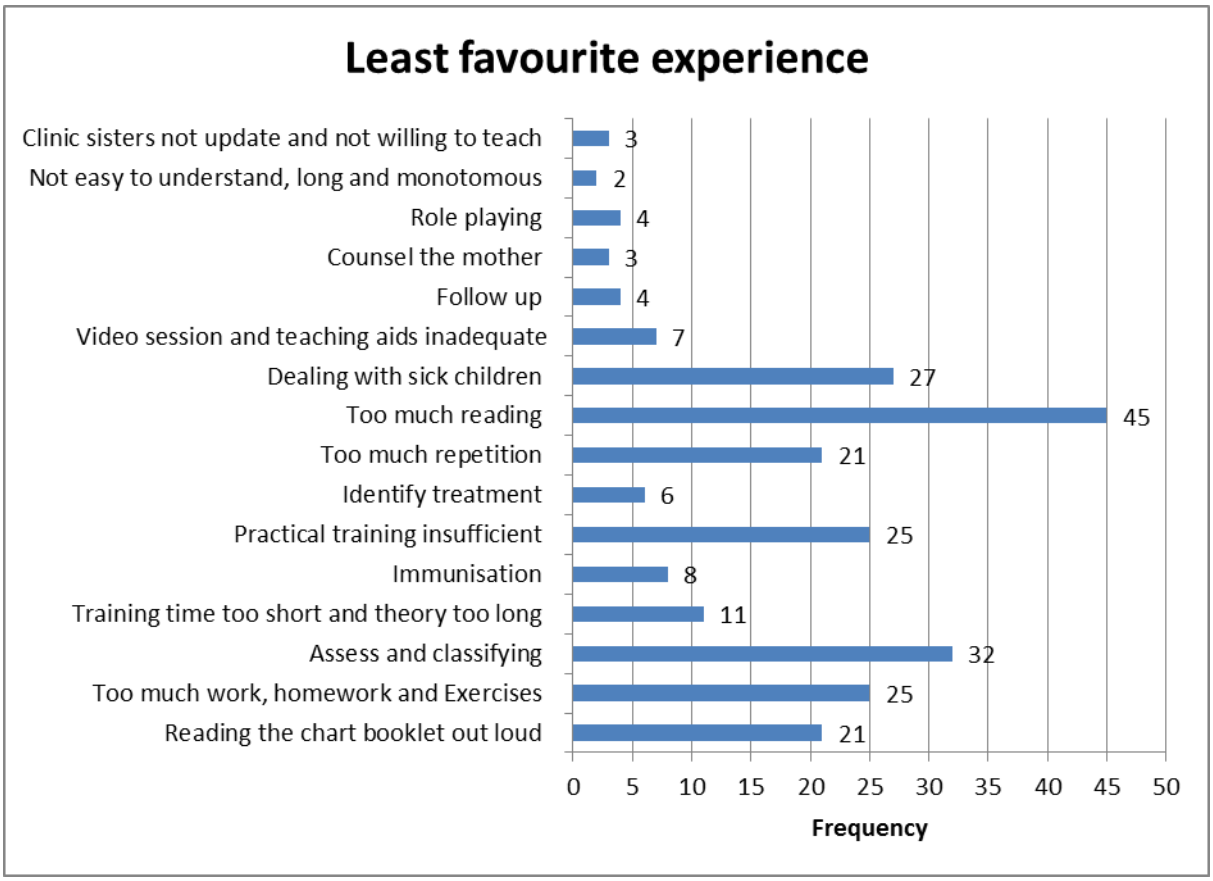


Figure 4.4: Least favourite experiences in IMCI training (n=300)

Figure 4.4 shows a fairly small number of participants 5.3% (n=16) who found their least favourable experiences to be 'Role playing', 'Counsel the mother', Follow up', 'Not easy to understand, long and monotonous', and 'Clinic sisters not up to date and not willing to teach'. A number of participants 14% (n=42) stated there was 'Too much repetition' and they disliked 'Reading the chart booklet out loud'. Of the participants, 16.7% (n=50) stated there was 'Too much work, homework and exercises' and 'Practical training insufficient' and 9.0% (n=27) indicated that 'Dealing with sick children' in the practical situation was their least favourite. A majority 15.0% (n=45) stated there was 'Too much reading' but 10.7% (n=32) indicated that the 'Assess and classifying' module was their least favourite experience while 3.7% (n=11) found the 'Training time too short' and 'Theory too long'. The least favourite

experiences for 7% (n=21) of participants was 'Immunisation', 'Identify treatment' and 'Video sessions and the teaching aids inadequate'.

4.2.32 Proposed changes for IMCI training

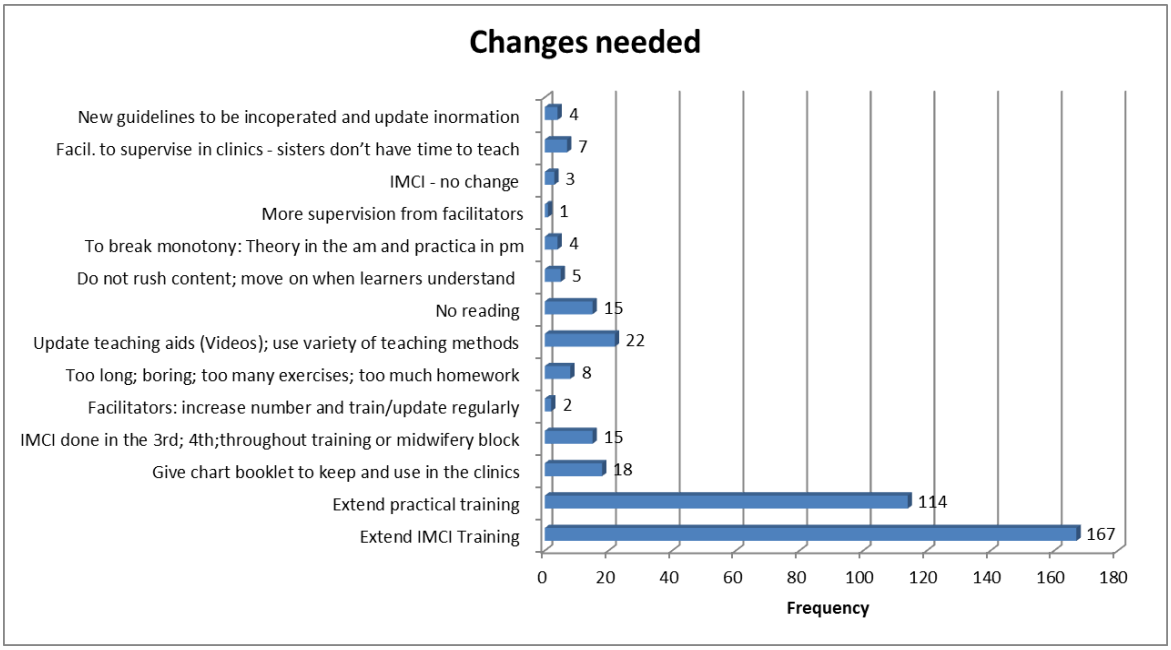


Figure 4.5: Changes in IMCI training (N=300)

As can be seen in Figure 4.5, participants made the following recommendation and suggestions for IMCI training:

- 55.7% (n=167) of the participants indicated that IMCI training should be extended as the time is too limited;
- 38.0% (n=114) indicated that practical training needed to be extended;
- 6.0% (n=18) stated that the chart booklet should be issued to participants to keep and use in the clinics;
- 5.0% (n=15) indicated that IMCI should be conducted either in third, fourth year or throughout the second, third and fourth year or in the midwifery block;

- 0.7% (n=2) indicated that more facilitators needed to be trained and the facilitators should be kept updated regularly;
- 2.7% (n=8) indicated that IMCI training was too long, boring, too many exercises and too much homework;
- 7.3% (n=22) would like the teaching aids to be updated and a variety of teaching methods to be used to make the learning process more enjoyable;
- 5.0% (n=15) indicated that the reading should be done away with;
- 1.7% (n=5) would like the training not to be rushed and only move to the next module once the content has been understood by the participants;
- 1.3% (n=4) indicated that to prevent monotony, theory should be handled in the morning and practical in the afternoon;
- 0.3% (n=1) indicated that there should be more supervision from facilitators;
- 1.0% (n=3) would like the IMCI training to remain unchanged;
- 2.3% (n=7) indicated the facilitators should assist with supervision in the clinics as the professional nurses in the clinics did not have the time to supervise;
- 1.3% (n=4) stated that new guidelines and information be incorporated in the modules timeously.

4.3 FACILITATORS QUESTIONNAIRE

The tables and figures below indicate the demographics of the sample and their views regarding IMCI training.

4.3.1 Number of facilitators

Table 4.29: Number of facilitators trained in IMCI (n=20)

Number of IMCI trained facilitators		Frequency	Percent
Valid	Campus		
	A	10	50.0
	B	5	25.0
	C	5	25.0
	Total	20	100.0

Table 4.29 indicates the number of facilitators trained in IMCI on each Campus:

- Campus A had 50.0% (n=10) facilitators but only eight were used for IMCI training of learners;
- Campus B had 25.0% (n=5) and only three were used for training of learners;
- Campus C had 25.0% (n=5) but only two were used for IMCI training.

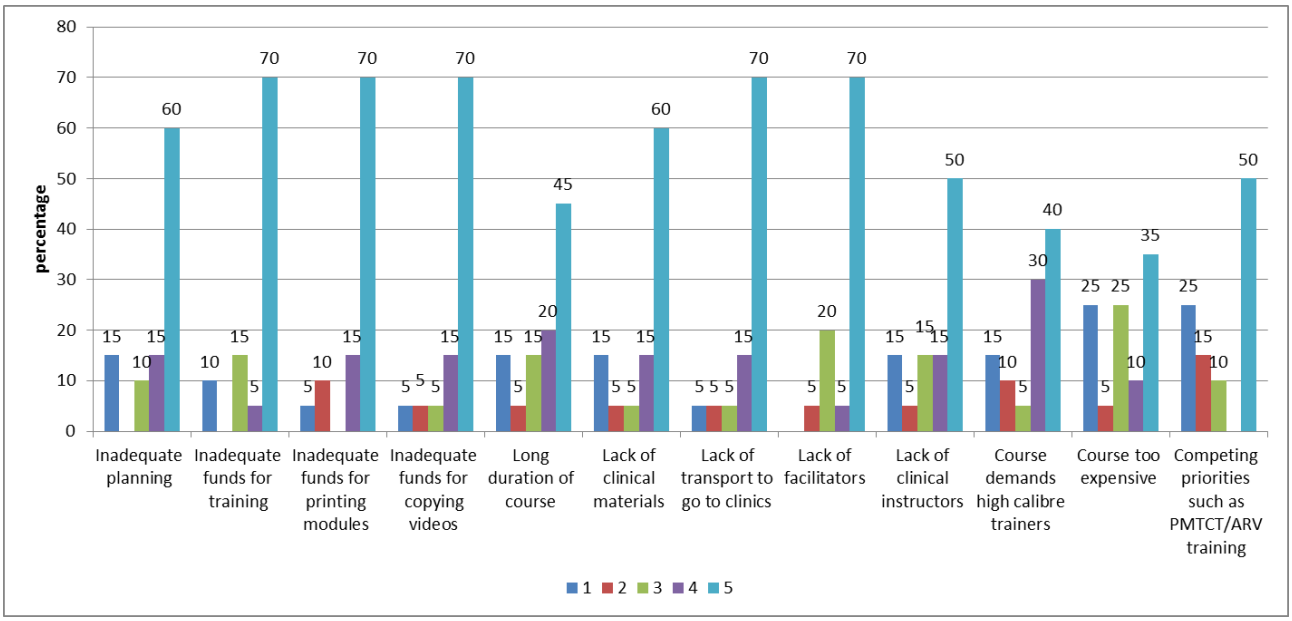
4.3.2 Number of trained Course Directors

Table 4.30: Number of trained Course Directors (n=20)

Trained course directors		Frequency	Percent
Valid	yes	3	15.0
	no	17	85.0
	Total	20	100.0

Table 4.30 shows that significantly more than expected of the sample were not trained as Course Directors in IMCI. Of the total n=20 15.0% (n=3) were trained as Course Directors. On Campus A there were two Course Directors, Campus B none and Campus C one. Eighty five percent (n=17) were not trained.

4.3.3 Barriers to the expansion of IMCI training



Key: 1 = Not at all important; 2 = not really important; 3 = important

4 = Very important 5 = extremely important (n=20)

Figure 4.6: Barriers to the expansion of IMCI training

From Figure 4.6 it is evident that a significant number of the participants (between 40% and 70%) found that the 'Extremely important' barriers to the training of facilitators and Course Directors were 'Inadequate planning', 'Inadequate funds for copying videos', 'Lack of clinical materials', 'Lack of facilitators', 'Lack of clinical instructors', 'Long duration of the course', 'Lack of transport to go to clinics', 'Course demands high calibre trainers', 'Course too expensive' and 'Competing priorities such as PMTCT/ARV training'. In light of the above barriers being highlighted as very important, 30.0% (n=6) of the participants felt these were adequately addressed.

4.3.4 Learning programme in which IMCI training should be offered

Table 4.31: Views on whether IMCI training should be offered in the R425 programme (n=20)

Views on IMCI being in the R425 programme		Frequency	Percent
Valid	Strongly disagree	4	20.0
	Disagree	3	15.0
	Agree	6	30.0
	Strongly agree	7	35.0
	Total	20	100.0

Table 4.31 shows that 35.0% (n=7) of participants disagreed that IMCI should be in the R425 programme and 65.0% (n=13) agreed.

4.3.5 Adequacy of 11-days training course

Table 4.32: Adequacy of 11-days IMCI training course (n=20)

11 days training		Frequency	Percent
Valid	Strongly disagree	1	5.0
	Disagree	8	40.0
	Agree	7	35.0
	Strongly agree	4	20.0
	Total	20	100.0

Table 4.32 shows that a significant number of participants 45.0% (n=9) disagreed that the 11-days training course was adequate and a significant majority 55.0% (n=11) agreed that the 11-days training course was adequate.

4.3.6 Challenges regarding clinical placement

Table 4.33: Challenges regarding clinical placement (n=20)

Challenges in clinical placement		Frequency	Percent
Valid	Strongly disagree	1	5.0
	Disagree	5	25.0
	Neither agree nor disagree	2	10.0
	Agree	6	30.0
	Strongly agree	6	30.0
	Total	20	100.0

The 20 participants were asked if clinical placement caused a logistical problem and Table 4.33 indicates that 30.0% (n=6) disagreed that it did, 10.0 (n=2) neither agreed nor disagreed and 60.0% (n=12) agreed.

4.3.7 Adequacy of training material

Table 4.34: Adequacy of training material (n=20)

Adequate training material		Frequency	Percent
Valid	Strongly disagree	2	10.0
	Disagree	7	35.0
	Neither agree nor disagree	2	10.0
	Agree	8	40.0
	Strongly agree	1	5.0
	Total	20	100.0

Table 4.34 indicates that 45.0% (n=9) of participants disagree that there was adequate training material, 10.0% (n=2) neither agreed nor disagreed and 45.0% (n=9) agreed.

4.3.8 Follow up after training

Table 4.35: Follow up after training (n=20)

Follow up after training is adequate		Frequency	Percent
Valid	Strongly disagree	3	15.0
	Disagree	5	25.0
	Neither agree nor disagree	1	5.0
	Agree	10	50.0
	Strongly agree	1	5.0
	Total	20	100.0

Table 4.35 indicates that 40.0% (n=8) of participants disagreed that follow up in the clinics to assess learners competency was adequate, 5.0% (n=1) neither agreed nor disagreed and 55.0% (n=11) agreed that the follow up in the clinics was adequate.

4.3.9 On-going training for facilitators

Table 4.36: On-going training for facilitators (n=20)

On-going training is adequate		Frequency	Percent
Valid	Strongly disagree	4	20.0
	Disagree	11	55.0
	Agree	4	20.0
	Strongly agree	1	5.0
	Total	20	100.0

As can be seen from Table 4.36, a significant majority of participants indicated the need for on-going training for facilitators 75.0%, (n=15) by answering 'Disagree' and 'Strongly disagree' and 25.0% (n=5) agreed that on-going training was adequate.

4.3.10 Timeous update of training manuals

Table 4.37: Timeous update of training manuals (n=20)

Updates of training manual was timeous		Frequency	Percent
Valid	Strongly disagree	1	5.0
	Disagree	3	15.0
	Neither agree nor disagree	2	10.0
	Agree	14	70.0
	Total	20	100.0

Table 4.37 shows that the majority of participants 70.0% (n=14) agreed that the modules were updated timeously, 20.0% (n=4) disagreed and 10.0% (n=2) neither agreed nor disagreed.

4.3.11 Monitoring of IMCI approach

Table 4.38: IMCI approach is adequately monitored (n=20)

IMCI approach is adequately monitored		Frequency	Percent
Valid	Strongly disagree	1	5.0
	Disagree	3	15.0
	Neither agree nor disagree	5	25.0
	Agree	11	55.0
	Total	20	100.0

Table 4.38 indicates that a significant number 55.0% (n=11) of participants found the monitoring of the IMCI approach adequate, 20.0% (n=4) disagreed with the statement and 25.0% (n=5) neither agreed nor disagreed.

4.3.12 Updates for facilitators after training

Table 4.39: Updates for facilitators after training (n=20)

Updates for facilitators		Frequency	Percent
Valid	Strongly disagree	4	20.0
	Disagree	5	25.0
	Neither agree nor disagree	4	20.0
	Agree	6	30.0
	Strongly agree	1	5.0
	Total	20	100.0

The participants were asked about updates of facilitators' IMCI training and Table 4.39 shows that 45.0% (n=9) disagreed that the updates were adequate, 20.0% (n=4) neither agreed nor disagreed and 35.0% (n=7) agreed.

4.3.13 Ratio of Course Directors and facilitators to learners

Table 4.40: Ratio of Course Directors and facilitators to learners (n=20)

Ratio of course directors and facilitators		Frequency	Percent
Valid	Strongly disagree	1	5.0
	Disagree	3	15.0
	Neither agree nor disagree	2	10.0
	Agree	8	40.0
	Strongly agree	6	30.0
	Total	20	100.0

Table 4.40 shows that 20.0% (n=4) of participants disagreed that the ratio of Course Directors and facilitators to learners was adequate, 10.0% (n=2) neither agreed nor disagreed and 70.0% (n=14) agreed.

4.3.14 Period of training

The results showed that there was 100% (n=20) agreement from the facilitators that the 11-days training course had been utilized.

4.3.15 Issuing of chart booklets to learners

The results indicated that 65.0% (n=13) of participants stated the learners were issued with their own chart booklets to use during and after training.

4.3.16 Ideal year of IMCI training

Table 4.41: Ideal year of IMCI training

		Frequency	Percent
Valid	second	9	45.0
	third	8	40.0
	fourth	3	15.0
	Total	20	100.0

As can be seen from Table 4.41, there was close to an even spread of responses amongst participants between having the course conducted in the second year 45.0% (n=9) and in the third year 40.0% (n=8) of training and only 15.0% (n=3) in the fourth year.

4.3.17 Number of learners trained in each campus

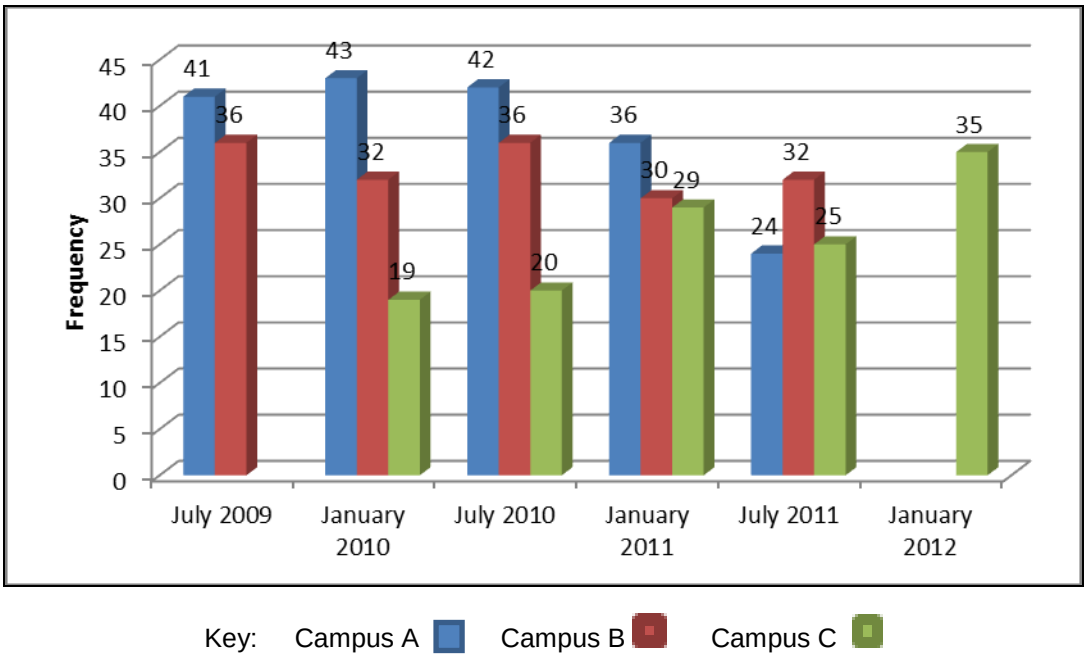


Figure 4.7: Number of learners trained in each campus (n=20)

Regarding the number of learners trained in IMCI in each Campus, Figure 4.7 shows that Campus A trained 186 participants from July 2009 to July 2011, Campus B trained 166 from July 2009 to July 2011 and Campus C trained 128 participants.

4.3.18 Teaching methods most commonly used in IMCI training

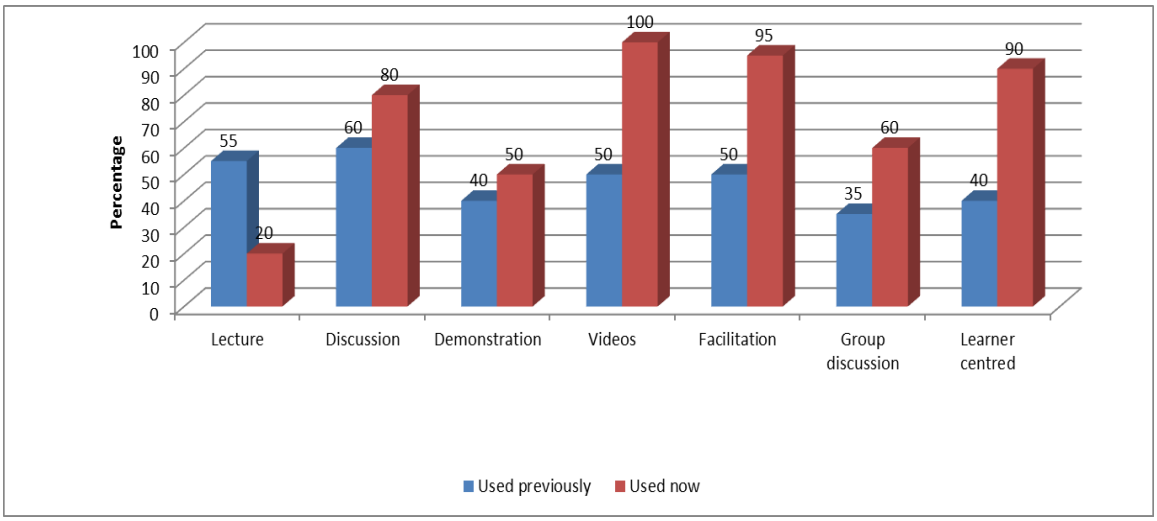


Figure 4.8: Teaching methods most commonly used in IMCI training (n=20)

Participants were asked about the methods of teaching used previously and how they have changed over time. Figure 4.8 indicates the following:

- Lectures decreased from 55.0% to 20.0%;
- Discussion increased from 60.0% to 80%;
- Demonstration increased from 40.0% to 50.0%;
- Videos increased from 50.0% to 100%;
- Facilitation increased from 50.0% to 95%;
- Group discussions increased from 35. 5% to 60.0%;
- Learner centred training increased from 40.0% to 90.0%.

4.3.19 Theory and clinical practice

Table 4.42: Structure of theory and clinical practice (n=20)

Structure of theory and clinical practice		Frequency	Percent
Valid	One week theory; next week practical	10	50.0
	One week theory; 3 days practical	1	5.0
	Other	9	45.0
	Total	20	100.0

Table 4.42 reveals that 50.0% (n=10) structured one week of theory and one week of practical, 5.0% (n=1) structured one week of theory and 3 days of practical and 45.0% (n=9) used other methods.

4.3.20 Frequency of updates

Table 4.43: Frequency of updates (n=20)

Frequency of updates		Frequency	Percent
Valid	Once a year	3	15.0
	Less often than once a year	3	15.0
	never	14	70.0
	Total	20	100.0

Table 4.43 indicates that 15.0% (n=3) of participants received updates once a year, 15.0% (n=3) received updates less than once a year and 70.0% (n=14) never received updates.

4.2.21 Time spent on clinical component

Table 4.44: Time spent on clinical component (n=20)

Time spent on clinical component		Frequency	Percent
Valid	increased	2	10.0
	remained the same	12	60.0
	decreased	6	30.0
	Total	20	100.0

The participants were asked if they felt the time spent on the clinical component with the learners was sufficient. Table 4.44 indicates that 10.0% (n=2) of participants were of the view that the time spent on IMCI practical should be increased, while the majority of 60.0% (n=12) were of the view that it should remain the same and 30.0% (n=6) indicated that time spent on practical should be decreased.

4.2.22 Follow up within 4-6 weeks after training

All participants 100.0% (n=20) indicated that follow up was conducted within 4-6 weeks after IMCI training.

4.3.23 Training of clinical facilitators

Table 4.45: Training of clinical facilitators (n=20)

Training of clinical facilitators		Frequency	Percent
Valid	Strongly disagree	2	10.0
	Disagree	3	15.0
	Neither agree nor disagree	1	5.0
	Agree	12	60.0
	Strongly agree	2	10.0
	Total	20	100.0

Table 4.45 indicates that 25.0% (n=5) of participants disagreed that the clinical practice facilitators are adequately trained, 5.0% (n=1) neither agreed nor disagreed and a significant majority 70.0% (n=14) agreed the clinical practice facilitators are adequately trained.

4.3.24 Adequacy of facilities for clinical practice

Table 4.46: The facilities for clinical practice were adequate (n=20)

Facilities for clinical practice was adequate		Frequency	Percent
Valid	Strongly disagree	1	5.0
	Disagree	6	30.0
	Neither agree nor disagree	1	5.0
	Agree	10	50.0
	Strongly agree	2	10.0
	Total	20	100.0

Table 4.46 indicates that 35.0% (n=6) disagreed that the facilities were adequate for clinical practice, 5.0% (n=1) neither agreed nor disagreed, and 60.0% (n=12) agreed that the facilities were adequate for clinical practice.

4.3.25 Adequacy of workshops to update facilitators

Table 4.47: Adequate number of workshops to update facilitators (n=20)

Adequate updates for facilitators		Frequency	Percent
Valid	Strongly disagree	4	20.0
	Disagree	14	70.0
	Neither agree nor disagree	1	5.0
	Agree	1	5.0
	Total	20	100.0

Table 4.47 indicates that a significant number of participants 90.0% (n=18) strongly disagreed that there are adequate number of workshops for facilitators, 5.0% (n=1) neither agreed nor disagreed and 5.0% (n=1) agreed that there are adequate workshops.

4.3.26 Training of Doctors in IMCI

Table 4.48: Training of Doctors in IMCI (n=20)

Training of doctors in IMCI		Frequency	Percent
Valid	Strongly disagree	8	40.0
	Disagree	7	35.0
	Neither agree nor disagree	1	5.0
	Agree	4	20.0
	Total	20	100.0

As can be seen in Table 4.48, 75.0% (n=15) of participants disagreed that doctors should participate in the IMCI clinical training, 5.0% (n=1) neither agreed nor disagreed and 20.0% (n=4) agreed with doctors assisting with IMCI training.

4.3.27 Attention given to learners during clinical practice

Table 4.49: Attention given to learners during clinical practice (n=20)

Attention to learners during clinical practice		Frequency	Percent
Valid	Disagree	5	25.0
	Agree	11	55.0
	Strongly agree	4	20.0
	Total	20	100.0

Table 4.49 indicates that 25.0% (n=5) of participants disagreed and 75.0% (n=15) agreed that they gave individual attention to learners during clinical training.

4.3.28 Adequacy of the chart booklets in the clinical facilities

Table 4.50: Adequacy of the chart booklets in the clinical facilities (n=20)

Adequate chart booklet in the clinics		Frequency	Percent
Valid	Strongly disagree	3	15.0
	Disagree	5	25.0
	Neither agree nor disagree	2	10.0
	Agree	10	50.0
	Total	20	100.0

Regarding adequacy of chart booklets in the clinical facilities, Table 4.50 indicates that 40.0% (n=8) of participants disagreed, 10.0% (n=2) neither agreed nor disagreed and 50.0% (n=10) agreed.

4.3.29 Adequacy of facilitators in the clinical practice

Table 4.51: Adequacy of facilitators in the clinical practice (n=20)

Adequate facilitators in the clinical area		Frequency	Percent
Valid	Strongly disagree	1	5.0
	Disagree	12	60.0
	Neither agree nor disagree	3	15.0
	Agree	4	20.0
	Total	20	100.0

As can be seen from Table 4.51, the results indicate that a significant majority found the number of facilitators inadequate, 65.0% (n=13) disagreed that there are adequate clinical facilitators, 15.0% (n=3) neither agreed nor disagreed and 20.0% (n=4) agreed that there are adequate clinical facilitators.

4.3.30 Barriers to conducting regular and quality follow up

The participants were asked to indicate the reasons for a lack of follow up in the clinic after IMCI training and a majority of the participants 65.0% (n=13) cited time constraint as the major barrier. Other barriers that were mentioned by small proportions of participants were lack of facilitators, transport to the clinics, too many learners and financial constraints.

4.3.31 Time spent on each module

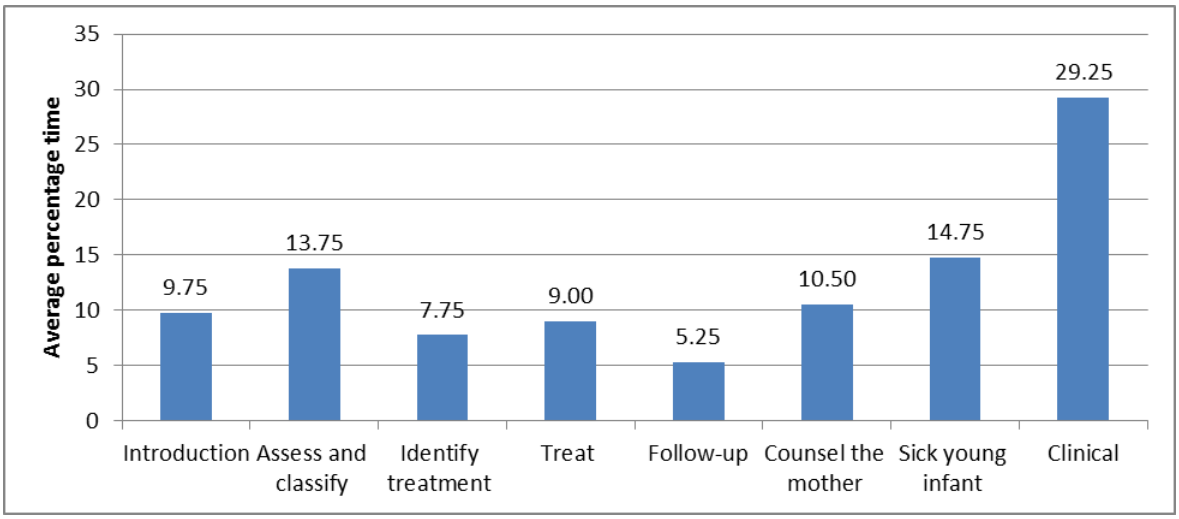


Figure 4.9: Time spent on each module (n=20)

Figure 4.9 indicates the percentage of time spent on the following modules:

- 'Introduction' 9.75%;
- 'Assess and Classify' 13.75%;
- 'Identify Treatment' 7.75%;
- 'Treat the child' 9%;
- 'Follow-up' 5.25%;
- 'Counsel the Mother' 10.5%;
- 'Sick Young Infant' 14.75%;
- 'Clinical Practice' 29.25%.

4.3.32 Proposed changes in the IMCI training programme

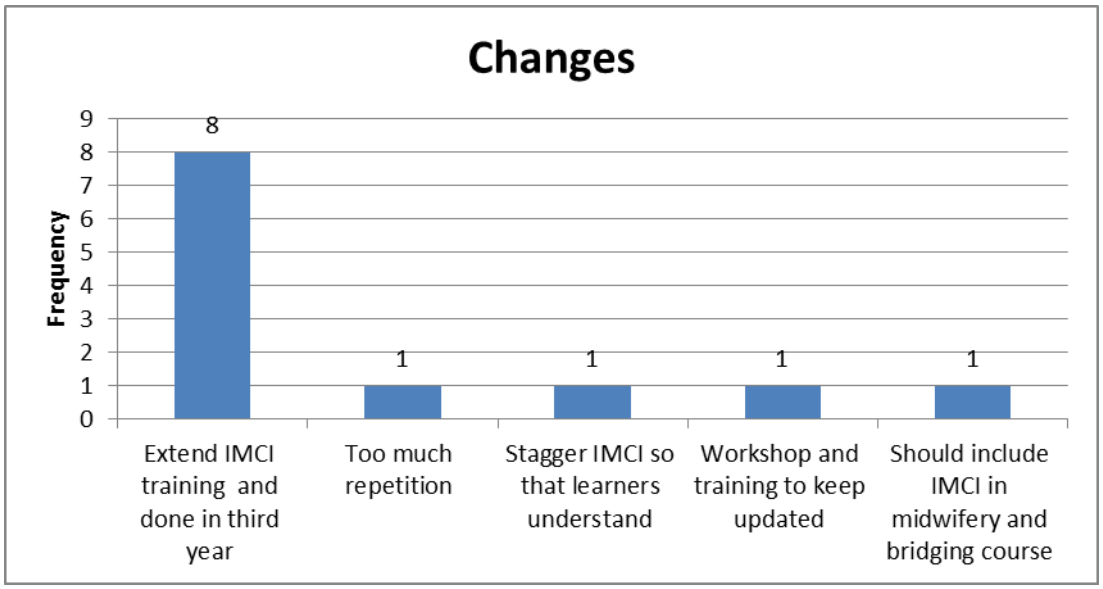


Figure 4.10: Changes in the IMCI curriculum (n=20)

The participants were asked to suggest changes they would like to see in the IMCI training programme. Figure 4.10 shows that the majority of participants n=8 felt that training should be extended and done in the third year of the learners' training, while n=1 participants felt there was too much repetition. A number of the participants felt that training should be staggered over 4 years of the training period, n=1 participant stated that there was a need to attend workshops to keep updated with information and the number that indicated IMCI should be included in the basic and advanced midwifery training was n=1.

4.3.33 Proposed recommendations on offering of IMCI training

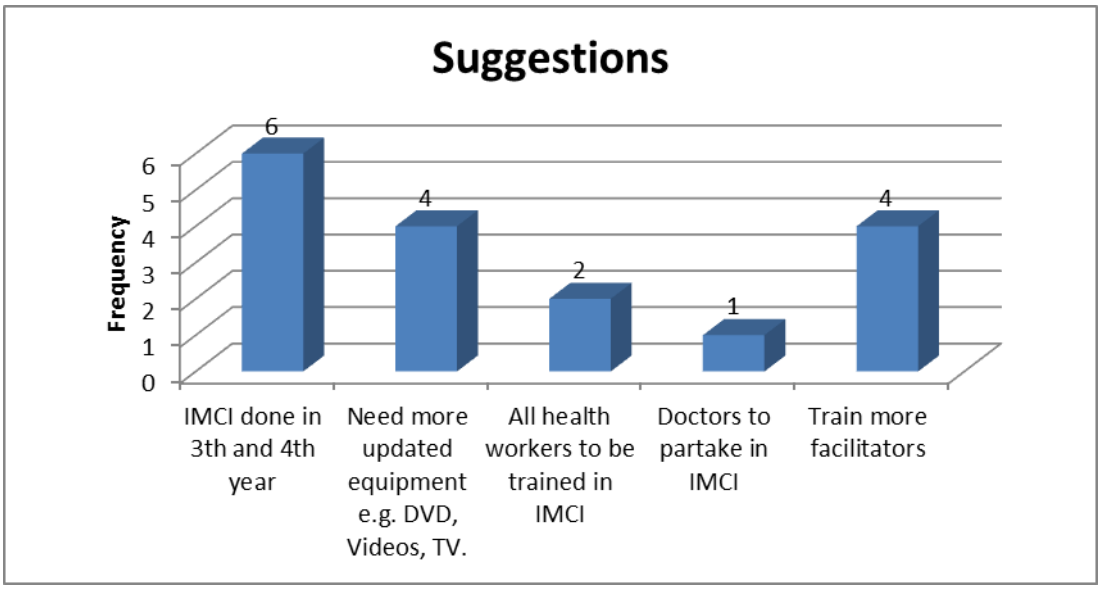


Figure 4.11: Suggestions or recommendations regarding the IMCI course (n=20)

As can be seen in Figure 4.11, a significant number of participants n=6 suggested that IMCI should be conducted in the third and fourth year levels of training, n=4 felt that equipment like television and digital video disc (DVD) should be made available and n=2 recommended that more lecturers be trained as IMCI facilitators, while n=1 suggested that all staff be trained in IMCI and n=4 suggested doctors should partake in IMCI training.

4.4 CONCLUSION

This chapter discussed the data analysis and interpretation with the use of frequency tables and descriptive statistics. Chapter 5 concludes the study with a discussion of the findings from Chapter 4 and discusses limitations and makes recommendations for further research.

CHAPTER 5

DISCUSSION OF THE RESULTS

5.1 INTRODUCTION

This chapter presents a discussion and interpretation of the findings the limitations of the study, and recommendations for further study. The aim of this study was to evaluate the IMCI training for learner nurses in KZNCN. The objectives of the study and the conceptual framework guided the discussion. The objectives were to:

- Assess the teaching and learning methods against the guidelines set by the WHO;
- Assess the logistics with regard to clinical placement, clinical practice and supervision;
- Determine the supply of teaching material to all learners;
- Assess the ratio of trained facilitators to the number of learners;
- Determine the timing of teaching IMCI in the R425 programme.

5.2 DISCUSSION OF THE FINDINGS

5.2.1 Competency rating

The results of the study revealed that the majority of participants indicated that they felt confident managing a sick child using the skills they learnt and the chart booklet. A study on IMCI protocol had been carried out in Bungoma and the neighbouring District of Vihiga in 1996 (Lin and Tavrow, 2000: 5). The findings of that study revealed that many trained HCWs in those two rural

districts of western Kenya were still not performing IMCI efficiently despite being IMCI trained. Focus groups revealed that many providers had in fact stopped performing IMCI regularly. The data indicated that nurses' knowledge of IMCI differed substantially by district irrespective of when they were trained.

5.2.2 Teaching methods

The findings of this study showed that participants appreciated the variety of adult learning methods employed and the reinforcement that was provided by utilising different methods to cover the same material. When the participants were asked to rate IMCI teaching methods, more than 80% of the participants reported that all aspects of IMCI were quite beneficial. The facilitators indicated the preferred teaching methods used during facilitation were 80% to 100% discussions, videos, facilitation and that it is mainly learner centred. The structure of theory and clinical practice used by the various campuses were one week theory and one week clinical practice. According to the WHO, training organizations differ significantly in their teaching practices. Several use problem-based teaching while others use traditional methods and a few combine both methods. Whatever training approach employed, learners must master the fundamental skills of IMCI case management (WHO/WPRO, 2008b: 4).

5.2.3 Duration of training

The KZNCN campuses use the WHO 11-days training course but the findings revealed that only 10 days were used but this is not very significant as many countries have undertaken to reduce the training days due to financial constraints and staff not being able to be away from work for long periods of time. A recent study of 24 countries offering shortened courses (five to eight days) was undertaken by Goga *et al.* (2009: 7) and yielded the same findings

as Rowe *et al*. (2011) that 11-day training is acceptable but in order to expand IMCI shortened courses have to be instituted and will work if proper clinical training and supervision is done post training. Most of the participants indicated that there was too much information to grasp in 10 days. Rowe *et al*. (2011: 179) conducted a systematic review on the duration of IMCI training. The findings revealed that the majority of the participants indicated that due to the length of the modules, IMCI should be increased to more than 11 days. These findings are supported by results of the study that was conducted by Horwood *et al*. (2009: 4) which revealed that the participants were of the opinion that IMCI was too detailed; therefore more than 11 days was needed to complete content and acquire the necessary skills. However, this poses a problem as most countries have shortened their training days due to high cost of the course and HCWs being away from work for long periods at a time.

5.2.4 Too much repetition

Almost half of the participants (47.7%) stated that there was too much repetition. A study conducted by (Horwood et al 2009:7) found that the participants were in agreement that there was too much repetition but on the other hand were content with this due to the fact that repetition helped them to understand the IMCI approach.

5.2.5 Amount of time spent on the modules

A significant number of the participants in this study indicated that the overall time spent on each module was sufficient. The findings are in contrast with the recommended time for each module by the WHO. Goga and Muhe (2011: 2-3) state that according to the WHO, 44.2% of the course time should be spent on the clinical component, 1.2% on ‘Introduction’, 20.8% on ‘Assess and Classify’, 4.9% on ‘Identify Treatment’, 11.6% on ‘Treat the Child’, 6.9 per

cent on ‘Counsel the Mother’, 6.9% on ‘Sick Young Infant’ and 3.5% on ‘Follow-up’. The WHO specifies that 44.2% of the course time should be spent on the clinical component. In contrast, the findings of the study showed that the time spent on clinical practice was 29.25%; hence most of the participants indicated that time spent on the clinical component was insufficient.

5.2.6 Components of the IMCI Course

The results of the study revealed that IMCI was too detailed and therefore there was too much information to grasp. On the other hand, the participants indicated that the time spent on clinical practice was not adequate. They also indicated that although beneficial, there was too much repetition and reading. A study conducted by Goga *et al.* (2009: 3-4) revealed that the National IMCI Adaptation sub-committees made numerous adjustments to the training modules. These comprised erasing exercises, changing drills and adding role plays. The commonest variations to training approaches comprised reducing the number of exercises, increasing at-home reading or homework, increasing group work and reducing individual feedback.

5.2.7 Benefits of IMCI and use of chart booklet

The majority of participants (94.6%) agreed that IMCI was beneficial and that it was used by staff in the clinics and after training the participants practiced assessing and classifying using IMCI approach. DeRenzi, Parikh, Mitchell, Maokola, Chemba, Hamisi, Schellenberg and Barrielo (2008: 1) agree that IMCI contributes to child survival when used appropriately. IMCI improves the skills of health workers by using the chart booklet that manages children below five years of age using a holistic approach and trained health workers were found to be able to correctly assess and classify (Nguyen *et al.* 2013: 6).

Goga and Muhe (2011: 50) recommend that chart booklets with colour coding should be issued to IMCI trained staff to use during consultations.

5.2.8 Views on follow up

According to the WHO (1995: 1), IMCI is difficult to put into practice after training because the training environment is completely different from the real practical situation, therefore the IMCI nurses need support and guidance by the supervisor to put what they learnt into practice by following up within one month after training. Follow up is an integral part of IMCI as it assists nurses to make a transition to using IMCI in their working environment, reinforces skills and support, and identifies and solves problems (WHO 1995: 1). The facilitators in this study reported that follow up was conducted within six weeks of training, with the majority of the learners agreeing that this was the case. Learners indicated that they received follow up in the clinic within six weeks of training. A small number received follow up within six months, within a year, after a year and some never received any follow up at all after IMCI training. Those that received follow up after a year indicated that this was due to supervision being conducted by lecturers with no IMCI training. Some of the learners were supervised by lecturers not trained as IMCI facilitators therefore they were followed up at a much later date. According to the WHO, supervision should be done at least once every six months and should include observation of case management (Huicho, Davila, Campos, Drasbeck, Bryce, and Victora 2005: 20). Participants reported that follow-up visits were helpful; but usually delayed, leading to a lack of skills. In KZN and Limpopo, IMCI facilitators do follow-up visits because clinic staffs do not have the skills. Follow-up in countries like Bangladesh, Uganda, Peru, and Tanzania has proven to be difficult to implement and sustain (Horwood *et al*. 2009: 7).

5.2.9 Barriers to the expansion of IMCI training

The facilitators in this study indicated that there were challenges regarding the expansion of IMCI training and follow up. These included many factors such as inadequate planning, funds for training, for printing of modules, for copying of videos, lack of clinical material, lack of transport, lack of clinical instructors and lack of facilitators. Goga and Muhe (2011: 2) support these findings in that some of the barriers were lack of financial resources, inadequate funds for travelling or planning, lack of gas for travelling, inadequately trained or few supervisors, and inadequate resources for follow-up.

5.2.10 Hours spent on clinical practice

Findings of this study revealed that a few participants spent less than the prescribed time in the clinical area. According to the WHO requirements, the number of clinical hours to be spent during training should be 80 hours with 30% of the time allocated for clinical practice with a minimum of 20 sick children managed by each trainee (WHO 2007a: 1). The findings of the study that was conducted in Sudan also showed that the challenges posed to clinical practice include the logistics in terms of space, large number of students per group and limited number of clinical facilitators (WHO 2007b: 29).

For continuity, clinical activities should follow immediately after the relevant session in order to correlate theory and practice, thereby allowing for immediate application of the classroom work and reinforce the participants understanding (Riptoningrum 2003: 219). A study conducted in Zambia to assess knowledge of nurses in IMCI revealed that 66% of the participants had average skills, 22% had above average and 12% had below average knowledge on IMCI. The findings also revealed that although the participants

had an above average knowledge of IMCI, the implementation of the IMCI approach was poor *(*Banda, Alice and Njovu 2012: 82).

5.2.11 Clinical facilities and supervision

The findings revealed that a large number of participants (56.6%) indicated that they did not receive all the information they required in the clinical field. These findings are supported by the WHO Report which states that the absence of collaboration among the different departments and the large number of learners at the training colleges creates problems and makes the placement of learners in the clinical area and supervision of learners challenging (WHO/Africa, 2007c: 13). Goga *et al.* (2009: 2) state that learners should spend 30% of training time on clinical training and manage about 20 children in the clinical area. In the WHO multi-country survey, sustainability of training materials was among the most frequently mentioned challenges and there was a concern that this could affect the quality of the trainings (WHO 2005a: 8). Limited resources and large number of learners' makes logistics and organization of clinical practice and supervision difficult to implement (WHO 2007c: 6). The WHO agreed with the above findings stating learners have a problem in the clinical area during training because of the lack of sufficient clinical cases and lack of clinical training sites to practice IMCI (WHO 2008b: 7).

5.2.12 Supply of teaching material to all learners

The learners and facilitators responses findings indicated that chart booklets were not issued to learners after training to utilize in the clinic during consultation. Goga *et al.* (2011: 2) stated that the IMCI chart booklet is essential and must be issued to learners to keep after training as a reference. Dale quite aptly wrote that the "HCWs are armed with a new weapon called the chart booklet which significantly lessens the margin for error when used to

assess, classify and manage sick children". Chart booklets, wall charts and recording forms were usually in short supply, restricting training and therefore compliance to IMCI strategy (Dale 2004: 1). WHO agreed that supplying learners after training with IMCI material greatly assists them with skills and helps them recall information which they are able to apply during clinical consultation. It's been discovered that less half of the learners in the clinical area had the availability of the chart booklet (WHO 2008a: 6).

5.2.13 Number of trained IMCI nurses

This study indicates that from 2009-2012 there were more than 300 IMCI trained nurses in the three campuses that participated in this study. According to KZNCN statistics (Moses 2008: 1), 395 learners from seven of the 11 campuses doing the R425 programme graduated in 2008. The 2013 KZNCN preliminary graduation list indicated that 526 learners from the R425 programme graduated. The nursing schools, colleges and universities have commenced with the implementation of training IMCI facilitators. This is projected to guarantee that IMCI is integrated into all nursing curricula. It is being amalgamated into the basic training curriculum so that all health workers will be able to implement it, including doctors (Vhuromu and Davhana-Maselesele 2009: 1).

It is currently recommended that in-service IMCI case management training (ICMT) occur over 11 days; that the participant: facilitator ratio should be 1:4 (WHO 2008b; Goga *et al.* 2009: 2). According to the findings of this study, Campus A had eight facilitators used in IMCI training and the ratio is adequate as the groups of learners did not exceed 24 at a time whilst Campus B has only three facilitators and no course director. Their groups did not exceed 25 but the facilitator-learners ratio exceeded 1:4 therefore groups were divided into two, training two weeks per group at a time. Campus C has 20 as their maximum number of learners in training and utilizes two facilitators and one course director

and the facilitator-learner ratio is 1:7. These findings are supported by the WHO which states that one of the challenges to expansion of IMCI is the lack of trained facilitators (WHO 2007b: 1).

5.2.14 Updates for facilitators

The results revealed that updates for facilitators were inadequate. The majority of the participants indicated that they had never received updates after the facilitation course of which most facilitators and Course Directors were trained between 2001 and 2007. According to the Philippines Department of Health (2008:1), training for facilitators includes a basic 11-days course. Thereafter, a further 5-day facilitation course is undertaken and later a further 5 day follow up course is carried out for IMCI supervisors to ensure they are equipped with the skills to provide quality training. According to a study conducted in Afghanistan it was established that HCWs who were provided with updates in IMCI performed considerably better (Edward, Dwivedi, Mustafa, Hansen, Peter and Burnham 2006: 942)

5.2.15 Timing of teaching IMCI in the R425 programme

The majority of the participants reported that they would prefer the course to occur in the second year, which is the case in the KZNCN curriculum. The WHO (2005c: 4-6) revealed in their study that pre service IMCI training of health professionals in Bangladesh was done in the 4th year. It would be beneficial to the students because they will be more aware of different childhood problems. According to WHO/WPRO (2008c: 2), Fiji conducts IMCI over two years in nursing colleges.

5.3 LIMITATION OF THE STUDY

The study was conducted in three of the 11 campuses and due to the original number of learners declining due to the attrition rate it made it a challenge to meet the numbers for the sample size. The numbers of Course Directors and facilitators were limited and had to include all IMCI trained facilitators which most of the Campuses complied with except for one where the facilitators were not very cooperative. Accessibility to one of the campuses proved a challenge as learners were sent to a different district for their psychiatric module and therefore, were not accessible and improvisation had to be made to utilize a group that had just received IMCI training.

5.4 CONCLUSION

It has been generally agreed that IMCI is essential to the reduction of morbidity and mortality rate of children below five years of age and quality training is essential in achieving this goal. Although the participants reported a number of factors that hinder this process, they were of the opinion that there was a lot of information to cover in 11-days training and one must remember these are learners not trained nurses who have experience in already nursing these conditions so it will take them longer to grasp the information. The addition of a HIV module and lengthening of the infant module were instituted but the number of days remained unchanged. The numbers of learners trained per year in the KZNCN campuses were adequate but factors like human and material resources hamper the training process: Lack of training modules, lack of facilitators, lack of training in the clinical area and chart booklets are collected therefore learners do not have aids to use when placed in the clinics. In order for these learners to become effective in the clinical area, these barriers need to adequately resolved.

5.5 RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

5.5.1 Duration of IMCI course

There is a need to increase the training days because in South Africa, the HIV component was included in the IMCI training programme which was appropriate for the local epidemiology but the training days remained the same. Training material also needs to be revised to ensure that only the crucial information is retained. Areas that are repeated should be deleted and the number of exercises should also be decreased. Attention should to given to improving skills rather than concentrating on theory mainly and this can be attained by spending more time in the clinical area.

5.5.2 In-service and updates for facilitators

In-service and updates for facilitators should be conducted on a regular basis to ensure quality training. Importance should be placed on selecting appropriate HCWs to train as facilitators and not necessarily having more and in order to sustain IMCI skills, on-going clinical mentoring and supervision of trained health workers is vital.

5.5.3 Follow up of learners in the clinical facilities

Regular monitoring and evaluation are essential for regular tracking of expansion of IMCI. Follow-up should be done continuously to assess how IMCI approach is implemented. Follow up is used to monitor IMCI progress and is an essential component of IMCI training therefore follow-up needs to be intensified.

5.5.4 Further research

There is a need for an evaluation study to assess IMCI knowledge and skills of the newly qualified professional nurses.

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Appendix 1.

DURBAN UNIVERSITY of TECHNOLOGY

INSTITUTIONAL RESEARCH ETHICS COMMITTEE (IREC)

14 March 2013

IREC Reference Number: **REC 59/12**

Ms N Jacpasad
164 Paradise Drive
Orient Heights
Pietermaritzburg
3201

Dear Ms Jacpasad

The evaluation of Integrated Management of Childhood Illnesses training for learner nurses in KwaZulu-Natal College of Nursing

The Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the questionnaire has been APPROVED; you may now proceed with data collection on the proposed project.

Yours Sincerely

[redacted]

Dr D. F. Naude
Chairperson: IREC

Appendix 2a

164 Paradise Road
Orient Heights
Pietermaritzburg
3201
10 December 2012

The Health Research and Knowledge Management Component
KwaZulu-Natal Department of Health
Private Bag X9051
Pietermaritzburg
3201

Dear Sir

Re: REQUEST FOR PERMISSION TO CONDUCT STUDY AT GREYS, EDENDALE AND NGWELEZANA CAMPUSES

I am presently registered as a Masters student at the Durban University of Technology in the Department of Nursing. The proposed title of my research project is: '*The evaluation of Integrated Management of Childhood Illnesses training for learner nurses in KwaZulu-Natal College of Nursing*'. The purpose of the study will be to provide an in-depth analysis of the training of IMCI, within the KwaZulu-Natal College of Nursing. The three campuses will remain anonymous, and there will be no risks or discomfort to any of the participants. The study will require IMCI facilitators and learners to complete questionnaires.

Participation is voluntary, and informed consent will be obtained from all participants. Confidentiality will be maintained at all times. Please find a copy of my proposal and instruments designed for the study.

It would be greatly appreciated if you could forward me your response.

Yours sincerely

N Jacpasad (Mrs)

Contact number: 084 221 6583

Email address: jacpasad@worldonline.co.za

MN Sibiya (Dr)

Tel: 031-373 2606

Email: nokuthulas@dut.ac.za

Appendix 2b

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

Health Research & Knowledge Management sub-component
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg
3200
Tel.: 033 – 3953189
Fax.: 033 – 394 3782
Email.: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

Reference : HRKM 016/13
Enquiries : Mr X Xaba
Tel : 033 – 395 2805

Dear Mrs N Jacpasad

Subject: Approval of a Research Proposal

1. The research proposal titled **'The evaluation of Integrated Management of Childhood Illnesses (IMCI) training for learner nurses in KwaZulu Natal College of Nursing (KZNCN)'** was reviewed by the KwaZulu-Natal Department of Health.

   The proposal is hereby **approved** for research to be undertaken at Grey's, Edendale and Ngwelezana campuses of the KZNCN.

2. You are requested to take note of the following:
   a. Make the necessary arrangement with the identified facility before commencing with your research project.
   b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.

3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

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

Yours Sincerely

[redacted]

Dr E Lutge
Chairperson, Health Research Committee
Date: 11/02/2013

Appendix 3a

164 Paradise Road
Orient Heights
Pietermaritzburg
3201

The Health Research and Knowledge Management Component
KwaZulu-Natal Department of Health
Private Bag X9051
Pietermaritzburg
3201
17 August 2012

Dear sir / Madam

Re: REQUEST FOR PERMISSION TO CONDUCT STUDY

TITLE: THE EVALUATION OF TRAINING OF LEARNER NURSES ON INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESSES (IMCI) WITHIN THE CAMPUSES OF THE KWAZULU-NATAL COLLEGE OF NURSING

RESEARCHER: Mrs N. Jacpasad (Student Number 21237182)

SUPERVISOR: N.M. SIBIYA. – HOD: NURSING

Co Supervisor: D.G. SOKHELA – Lecturer.

I hereby request permission to undertake a research within the KwaZulu-Natal Department of Health. The study will involve three of the eleven campuses that are under the KwaZulu-Natal College of Nursing. This study will be conducted, as part of the requirement for a Master's Degree. I am currently registered as a Master in Nursing Student, at the Durban University of Technology.

The purpose of the study will be to provide an in-depth analysis of the training of IMCI, within the KwaZulu-Natal College of Nursing. The Eleven Campuses will remain anonymous, and there will be no risks or discomfort to any of the participants. The study will require participants to complete a questionnaire, with the target population, being Lecturers and Students. The name of the college will be kept confidential as well as the details of the participants.

Participation is voluntary, and informed consent will be obtained from all participants. Confidentiality will be maintained at all times. Should you require a copy of my proposal and instruments designed for the study, please feel free to contact me.

It would be greatly appreciated if you could forward me your response.

Yours faithfully

Mrs N. JACPASAD

Contact Details: Cell: 084 221 6583

Appendix 3b

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

KWAZULU- NATAL COLLEGE OF NURSING
P/Bag X9089, Pietermaritzburg, 3200
Tel.: (033) 264 7800, Fax: (033) 394 7238
e-mail: lulama.mthembu@kznhealth.gov.za
www.kznhealth.gov.za

Enquiries: Mrs. S. Maharaj
Telephone: 033 – 264 7806
Date: 23 January 2012

Principal Investigator:
Mrs. N. Jacpasad
Student Number: 21237182
C/O Durban University of Technology

Dear Madam

RE: PERMISSION TO CONDUCT RESEARCH AT THE KZN COLLEGE OF NURSING

TITLE: **THE EVALUATION OF TRAINING OF LEARNER NURSES ON INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESSES (IMCI) WITHIN THE CAMPUSES OF THE KWAZULU-NATAL COLLEGE OF NURSING**

I have the pleasure in informing you that permission has been granted to you as per the above request by the Acting Principal of the KZN College of Nursing

The data needed for the above research will have to be collected in all the Campuses of the KwaZulu-Natal College of Nursing

Please note the following:

1.1 Please ensure that you adhere to all policies, procedures, protocols and guidelines of the Department of Health with regards to this research.
1.2 This Research will only commence once this office has received confirmation from the Provincial Health Research Committee in the KZN Department of Health.
1.3 Please ensure this office is informed before you commence your research.
1.3.1 Permission is therefore granted for you to conduct this research at all the KZN College of Nursing Campuses
1.4 The KwaZulu-Natal College and its NEI's will not provide any resources for this research.
1.5 You will be expected to provide feedback on your findings to the Principal of the KwaZulu-Natal College of Nursing.

Thanking You

[redacted]

Ms JT Makhathini
Acting Principal: KwaZulu-Natal College of Nursing
2013 – 01 – 24

Appendix 4

164 Paradise Drive Road
Orient Heights
Pietermaritzburg
3201
26 October 2012

Campus Principal
P/Bag
Pietermaritzburg
3200

Dear Madam

Re: REQUEST FOR PERMISSION TO CONDUCT STUDY

I am presently registered as a Masters student at the Durban University of Technology in the Department of Nursing. The proposed title of my research project is: '*The evaluation of Integrated Management of Childhood Illnesses training for learner nurses in KwaZulu-Natal College of Nursing'*. The purpose of the study will be to provide an in-depth analysis of the training of IMCI within the KwaZulu-Natal College of Nursing. Your campus has been selected to be one of the three campuses that will participate in the study. Anonymity and confidentiality will be maintained and there will be no risks or discomfort to any of the participants. The study will require IMCI facilitators and learners to complete questionnaires.

Participation is voluntary, and informed consent will be obtained from all participants. Confidentiality will be maintained at all times. Please find a copy of my proposal and instruments designed for the study.

It would be greatly appreciated if you could forward me your response.

Yours sincerely

.....

N Jacpasad (Mrs)

Contact number: 084 221 6583

Email address: jacpasad@worldonline.co.za

……

Dr MN Sibiya (Supervisor)

Tel: 031-373 2606

Email: nokuthulas@dut.ac.za

Appendix 5

INSTITUTIONAL RESEARCH ETHICS COMMITTEE (IREC)
LETTER OF INFORMATION

Dear Participant

Thank you for participating in this study. Below are the details of the study:

Title of the Research Study: The evaluation of training of learner nurses on Integrated Management of Childhood Illnesses in the KwaZulu-Natal College of Nursing.

Principle Investigator/s/researcher: Neervani Jacpasad

Co-Investigator/s/supervisor/s: Dr MN. Sibiya (D Tech: Nursing) and Ms DG. Sokhela (M Tech: Nursing)

Brief Introduction and Purpose of the Study: Integrated Management of Childhood Illness (IMCI) is an evidence base child survival strategy to manage childhood illnesses of children less than five years of age which was Developed by the World Health Organisation (WHO) and United Nations Children's Fund (UNICEF) to improve the morbidity and mortality rate of children less than five years of age. Studies in South Africa reveal that the infant morbidity and mortality rate of children under five years of age is declining at a very slow pace and will not meet the target of MDG four by 2015. Many studies have indicated that there could be shortcoming and challenges in the implementation of IMCI in South Africa and globally, mainly in regards to the proper implementation of IMCI by Nurses, it is therefore important to find out if the problem that exists in the training strategies used in teaching IMCI. The purpose of this study is to evaluate the IMCI training of learners in the use of Integrated Management of Childhood Illness Guidelines in the KwaZulu-Natal College of Nursing and will follow a quantitative descriptive approach and will focus on the learners and lecturers trained in IMCI in the KwaZulu-Natal College of Nursing.

Outline of the Procedures: You are kindly requested to read the information letter and sign the consent form informing us that you agree to fill in the questionnaire, which will not take longer than thirty minutes.

Risks or Discomforts to the Subject: There are no known risks.
Benefits: This study will help to identify if any shortcomings do or do not exist and will be rectified if any problems are identified.
Reason/s why the Subject May Be Withdrawn from the Study: You have the right to refuse to partake in the research at any stage of the research.
Remuneration: There will be no remuneration for participating in this study.
Costs of the Study: None.
Confidentiality: You are not required to write your name on the questionnaires. The consent form is separate from the questionnaire therefore your name will not appear in the questionnaire and information will be kept confidential.
Research-related Injury: I do not foresee any injuries occurring during the sturdy.
Persons to Contact in the Event of Any Problems or Queries:
Researcher: Neervani Jacpasad: Tel: 033-391 0036; Supervisor: Dr MN. Sibiya (D Tech: Nursing): Tel: 031-373 2606; Co-Supervisor: Dudu Sokhela: Tel: 031-373 2292 or the Institutional Research Ethics administrator 031-373 2900. Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or dvctip@dut.ac.za

INSTITUTIONAL RESEARCH ETHICS COMMITTEE (IREC)
CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, **NEERVANI JACPASAD**(name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **59/12**,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

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

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

NEERVANI JACPASAD	_____	_____
Full Name of Researcher	**Date**	**Signature**

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

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

Appendix 6

INSTITUTIONAL RESEARCH ETHICS COMMITTEE (IREC)
LETTER OF INFORMATION

Dear Participant

Thank you for participating in this study. Below are the details of the study:

Title of the Research Study: The evaluation of training of learner nurses on Integrated Management of Childhood Illnesses in the KwaZulu-Natal College of Nursing.

Principle Investigator/s/researcher: Neervani Jacpasad

Co-Investigator/s/supervisor/s: Dr MN. Sibiya (D Tech: Nursing) and Ms DG. Sokhela (M Tech: Nursing)

Brief Introduction and Purpose of the Study: Integrated Management of Childhood Illness (IMCI) is an evidence base child survival strategy to manage childhood illnesses of children less than five years of age which was Developed by the World Health Organisation (WHO) and United Nations Children's Fund (UNICEF) to improve the morbidity and mortality rate of children less than five years of age. Studies in South Africa reveal that the infant morbidity and mortality rate of children under five years of age is declining at a very slow pace and will not meet the target of MDG four by 2015. Many studies have indicated that there could be shortcoming and challenges in the implementation of IMCI in South Africa and globally, mainly in regards to the proper implementation of IMCI by Nurses, it is therefore important to find out if the problem that exists in the training strategies used in teaching IMCI. The purpose of this study is to evaluate the IMCI training of learners in the use of Integrated Management of Childhood Illness Guidelines in the KwaZulu-Natal College of Nursing and will follow a quantitative descriptive approach and will focus on the learners and lecturers trained in IMCI in the KwaZulu-Natal College of Nursing.

Outline of the Procedures: You are kindly requested to read the information letter and sign the consent form informing us that you agree to fill in the questionnaire, which will not take longer than thirty minutes.

Risks or Discomforts to the Subject: There are no known risks.
Benefits: This study will help to identify if any shortcomings do or do not exist and will be rectified if any problems are identified.
Reason/s why the Subject May Be Withdrawn from the Study: You have the right to refuse to partake in the research at any stage of the research.

Remuneration: There will be no remuneration for participating in this study.
Costs of the Study: None.
Confidentiality: You are not required to write your name on the questionnaires. The consent form is separate from the questionnaire therefore your name will not appear in the questionnaire and information will be kept confidential.
Research-related Injury: I do not foresee any injuries occurring during the sturdy.
Persons to Contact in the Event of Any Problems or Queries:
Researcher: Neervani Jacpasad: Tel: 033-391 0036; Supervisor: Dr MN. Sibiya (D Tech: Nursing): Tel: 031-373 2606; Co-Supervisor: Dudu Sokhela: Tel: 031-373 2292 or the Institutional Research Ethics administrator 031-373 2900. Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or dvctip@dut.ac.za

INSTITUTIONAL RESEARCH ETHICS COMMITTEE (IREC)
CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, **NEERVANI JACPASAD**(name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **59/12**,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

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

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

NEERVANI JACPASAD	_____	_____
Full Name of Researcher	**Date**	**Signature**

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

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

Appendix 7

Dear Neervani

Please see attached the questionnaires used for the global IMCI review.
If you use any sections or adapted questions from the questionnaires then please acknowledge the source and the paper.
I am attaching both the papers as well.

Best wishes,
Ameena

From: jacpasad@worldonline.co.za [mailto:jacpasad@worldonline.co.za]
Sent: 01 June 2012 01:56 PM
To: Ameena Goga
Subject: RE: Questionnaire for Research.

Hello Ameena

This is just to remind you about the research questionnaire, I would like to maybe incorporate portions or to adapt them to my research.

Thank you for your assistance.

Neervani.

From: Ameena.Goga@mrc.ac.za
Sent: 2012/05/28 07:23:59 PM
To: jacpasad@worldonline.co.za
Cc:
Subject: RE: Automatic reply: Questionaire for Research.

I am out of the office.For any administrative / HR / procurement / budgetary queries on the SAPMTCT Evaluation please contact Mr Fred Koopman (fred.koopman@mrc.ac.za) or Ms Jazelle Kiewitz (jazelle.kiewitz@mrc.ac.za).For scientific / data / cell-phone related queries please contact Ms Selamawit Woldesenbet (Selamawit.woldesenbet@mrc.ac.za) or Ms Vundli Ramokolo (Vundli.Ramokolo@mrc.ac.za).To contact any of the PI's please contact Dr Thu-Ha Dinh (dvt1@cdc.gov) or Prof Debra Jackson (debrajackson@mweb.co.za).For anything urgent please send an sms or contact me on my cell phone: 082 302 3168.Best wishes, AmeenaThis e-mail and its contents are subject to the South African Medical Research Council e-mail legal notice available at.http://www.mrc.ac.za/about/EmailLegalNotice.htm

Appendix 8: Questionnaire for Facilitators

The evaluation of training of learner nurses on integrated management of childhood illnesses in the Kwazulu-Natal College of Nursing.

Thank you for agreeing to participate in this study. This questionnaire forms part of a systematic review of in-service IMCI training approaches currently being conducted in various campuses under Kwazulu-Natal College of Nursing. This questionnaire is being used to gather in-depth information about the range of training approaches used for IMCI training and their effectiveness in improving health worker competencies. Data obtained from this review will be synthesized to guide me in the search to improve mechanisms for IMCI training delivery. It is hoped that this will facilitate the global attainment of MDG4, making the world a better place for children

This questionnaire is divided into 3 sections:

(i) Information about the respondent
(ii) Information about IMCI training in your campus
(iii) General comments and open-ended questions

- Your honest assistance and time will be sincerely appreciated.
- Although the questionnaire is long, there are several notes and check/tick boxes to assist you in its completion.
- Please take note of all the writing in italics, and the examples – they are important in assisting you to complete the questionnaire.
- Please answer the questionnaire honestly. Your views will be confidential, and whatever you say/write will help us improve IMCI training.
- Your name is not required.

We look forward to hearing and reading your thoughts and comments about IMCI training.

Note:

Tick the most appropriate box, or where relevant, write down your answers.
Please write CLEARLY and LEGIBLY so that the information you contribute is useful.

Campus Code (Official Use)

1. Campus _____ (Optional)

2. Date of filling in questionnaire.

yyyy:_____mm_____dd_____(Optional)

3. Job title: _____

4. In which year did you complete your IMCI training _____

5.	YES	NO
5.1 Are you a trained course director in IMCI?		
5.2 Are you a trained IMCI facilitator?		

6. Indicate the number of lecturers at your campus in each of the following categories.

6.1. Trained Case Managers in IMCI	
6.2. Trained Facilitators in IMCI	
6.3. Facilitators used for IMCI training of learners	
6.4. Case managers used to teach IMCI	

7. If you have received any other training on managing children/child health e.g. training on breastfeeding / immunisation / PMTCT, please indicate what training you received and when you received the training. The shaded row serves as an example.

Training course	**when received - mm/yyyy**
Neonatology	04/2003

8. Please rate (from 1 to 5) how important a role you perceive each of the following items play as a barrier to the expansion of IMCI training.

1=Not at all important; 5=Extremely important.

	Rating (1 to 5)
8.1 inadequate planning	
8.2 inadequate funds for training	
8.3 inadequate funds for printing modules	
8.4 inadequate funds for copying videos	
8.5 long duration of course	
8.6 lack of clinical materials	
8.7 lack of transport to go to clinics	
8.8 lack of facilitators	
8.9 lack of clinical instructors	
8.10 course demands high calibre trainers	
8.11 course too expensive	
8.12 competing priorities such as PMTCT/ARV training	

9. Indicate your agreement with the following statements:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
9.1 The barriers listed in Q8 have been adequately addressed since 2009.					
9.2 I think the IMCI training should be in the R425 programme					
9.3 I think that the eleven day training course is sufficient					
9.4 Clinical placement is causing a logistical problem					
9.5 Adequate resources, e.g. training material, are available					
9.6 Follow up of learners in the clinics to assess their competence is adequate					
9.7 On-going training of facilitators/teachers is adequate					
9.8 Manuals are modified/updated when and where necessary					
9.9 There is adequate monitoring of the IMCI programme					
9.10 The updates received by facilitators on IMCI after training are adequate					
9.11 I think IMCI would benefit the Bridging group i.e. from Bridging to professional Nurse (R683)					
9.12 I think IMCI would be beneficial in the one year midwifery training.					
9.13 I think IMCI would be beneficial in the advance midwifery training.					
9.14 The ratio of case managers and facilitators to students is adequate					

10.	YES	NO
10.1 Do you use the eleven day training course?		
10.2 Are learners given their own chart booklet?		

11. In which year of study do you think IMCI would be most beneficial to the learners? (Select **ONE** option only)

First	
Second	
Third	
Fourth	

12. Enter the number of learners you have trained in the following categories.

YEAR	January intake	July intake
2012		
2011		
2010		
2009		

13. Teaching methods most commonly used in IMCI training: Tick the appropriate box (CAN CHOOSE MORE THAN 1 BOX)

	Previously used methods	Methods most used Now.	Rate the method most preferred from 1- bad to 5- excellent.
13.1. Lecture			
13.2. Discussion			
13.3. demonstration			
13.4. Videos			
13.5. facilitation			
13.6. Group discussion			
13.7. Learner centred			
Specify reason for change.			

14. How is the theory and clinical practice structured in your IMCI training? Please select **ONE** option only

14.1 Theory in the morning and practical in the afternoon	
14.2 One week theory and the next week practical	
14.3 One week theory and 3 days practical	
14.4 No practical at all.	
14.5 Other: Please specify _____	

15. How often do you attend updates on IMCI? Tick the **ONE** option that is closest to your situation.

About once every 6 months	
About once a year	
Less often than once a year	
Never	

16. On average, the proportion of time spent on clinical practice has...
(Select **ONE** option only)

Increased	
Remained the same	
Decreased	

17. At what stage is follow up of learners in the clinics usually done?
Select **ONE** option only.

Within 4-6 weeks	
Within 6 months	
Within a year	
After a year	

18. Indicate your agreement with the following statements regarding challenges in **clinical practice**:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
18.1 The clinical practice facilitators are adequately trained.					
18.2 The facilities for clinical practice are adequate.					
18.3 There is adequate availability of workshops to keep facilitators updated on IMCI?					
18.4 The doctors assist with clinical IMCI training in the ward.					
18.5. Students receive individual attention during clinical practice					
18.6. There are adequate chart booklets in the clinics					
18.7 There are enough clinical practice facilitators					

19. Indicate the extent of your agreement that the following items are main barriers to conducting regular and quality follow-up visits

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
19.1 Time constraints					
19.2 Lack of IMCI facilitators					
19.3 Transport to clinics unavailable					
19.4 Too many students to attend to					
19.5 Financial constraints					
19.6 IMCI not done at some clinics					
19.7 Other: Please specify _____					

19. For the IMCI course what percentage of training time (during the course) is spent on the following content areas?

The percentages must add up to 100%

20.1 Introduction	
20.2 Assess and classify	
20.3 identify treatment	
20.4 treat	
20.5 Follow-up	
20.6 Counsel the mother	
20.7 Sick young infant	
20.8 Clinical	
	100%

21. What changes (if any) would you like to make or see in the IMCI curriculum?

_____
_____
_____

22. Do you have any recommendations or suggestions about IMCI training course?

_____
_____
_____
_____
_____

Your time and cooperation has been greatly appreciated

Thank you.

Appendix 9: Questionnaire for Learners

The evaluation of training of learner nurses on integrated management of childhood illnesses in the Kwazulu-Natal College of Nursing.

Thank you for agreeing to participate in this study. This questionnaire forms part of a systematic review of in-service IMCI training approaches currently being conducted in various campuses under Kwazulu-Natal College of Nursing. This questionnaire is being used to gather in-depth information about the range of training approaches used for IMCI training and their effectiveness in improving health worker competencies. Data obtained from this review will be synthesized to guide this research to improve IMCI training delivery.

- You have been selected to fill in this questionnaire because you have been recently trained in IMCI.
- Your honest assistance and time in completing this questionnaire will thus be 100-fold appreciated.
- Your views will be confidential, and whatever you say/write will help us improve IMCI training.
- Your name is not required.

Note: Tick the most appropriate box/boxes

Campus code(official use)

1. Campus_____ Group_____(Optional)
2. Indicate the month and year when you were trained in IMCI:

   mm_____yyyy_____(Optional)
3. Indicate the duration of IMCI training that you received

Less than11 days	11 days	More than 11 days

4. How many hours did you spend doing clinical practice (inpatient and Outpatient combined) during your training? _____
5. On a scale of 1 to 10 where **1=very bad** and **10=excellent**, how would you RATE your competency in managing children after you attended the IMCI training course?

   Please answer this question as honestly as you can

_____ out of 10

6. Indicate the adequacy of the training time for the modules of the IMCI Course that you attended.

		LESS than adequate	ADEQUATE	MORE than adequate
6.1.	Introduction			
6.2.	Assess and classify			
6.3.	Identify treatment			
6.4.	Treat			
6.5.	Follow-up			
6.6.	Counsel the mother			
6.7.	Sick young infant			
6.8.	Clinical practice			

7. Rate how beneficial you found the following aspects of the IMCI course : Choose one option per sub question.

	Extremely beneficial	Very beneficial	Quite beneficial	Did not really benefit from it	Did not benefit from it at all
7.1 integrated management					
7.2 clinical component					
7.3 classroom reading					
7.4 at-home reading					
7.5 individual feedback					
7.6 participatory method of learning					
7.7 exercises					
7.8 drills					
7.9 video sessions					
7.10 counselling skills					
7.11 role play					
7.12 discussions					
7.13 homework					
7.14 focus on common illnesses					
7.15 variety of teaching methods					

8. Indicate your agreement with the following Choose one option per sub question.

In the IMCI course I Found that	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
8.1. It was too detailed					
8.2. There was too little clinical training					
8.3. There was too much clinical training					
8.4. The exercises were not relevant					
8.5.There were too many exercises					
8.6.There were too few exercises					
8.7.Too much reading was required					
8.8.Too little reading was required					
8.9.It was too long					
8.10. It was too short					
8.11.There was too much repetition					

9. In which year of study do you think IMCI would be most beneficial to the learner (Select **ONE** option only)

First	
Second	
Third	
Fourth	

10. Do you think training for IMCI should: (select **ONE** option only)

Be increased	
Remain the same	
Be decreased	

11. Were you given a Chart Booklet to keep so that you could utilise it when placed at the clinics?

Yes	
No	

12. Indicate your agreement with the following.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	strongly agree
12.1. IMCI is beneficial					
12.2. 11 days training is adequate					
12.3.Time spent on the modules is adequate					
12.4. All the modules were completed					
12.5. Practice time in the clinical area was adequate.					
12.6. I Feel confident using the chart booklet to manage a sick child.					
12.7. The staff in clinics is using the chart booklet to manage the sick child.					
12.8.Since completing the IMCI course, I have used IMCI in practice					
12.9. I believe I have acquired the necessary skills to manage a sick child.					
12.10. The supervision I received from the IMCI facilitators was adequate.					
12.11. The skills of facilitators were good.					
12.12. I was able to get all the information I needed from the clinical facilities.					

13. How is the theory and clinical practice structured in your IMCI training? (Please select **ONE** option only)

13.1 Theory in the morning and practical in the afternoon	
13.2 One week theory and the next week practical	
13.3 One week theory and 3 days practical	
13.4 No practical at all.	
13.5 Other: Please specify_____	

14. How long after training were you assessed on IMCI in the clinic?
(Select **ONE** option only)

14.1. Within 6 weeks	
14.2. Within 6 months	
14.3. Within a year	
14.4. After a year	
14.5. Never	

15. What was the best experience of IMCI training?

_____
_____
_____

16. What was your least favourite experience in IMCI?

_____
_____
_____

17. For future learners what changes, if any, should be made in IMCI training?

_____
_____
_____
_____

Your time and cooperation has been greatly appreciated

Thank you.

Appendix 10

Gill Hendry B.Sc. (Hons), M.Sc. (Wits)
Mathematical and Statistical Services

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July 2012

To whom it may concern

Please be advised that Neervani Jacpasad who is presently studying for a Master of Technology: Nursing has consulted me regarding the sampling process she will use for her study.

Yours sincerely

Gill Hendry (Mrs)