Learning to care: Nurses' experiences of learning in a quality improvement intervention in uMgungundlovu District, KwaZulu-Natal, South Africa.

by

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I, Thandeka Khumalo, declare that:

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Dedication

All Glory belongs to The Mighty God for affording me strength and serenity to persevere and complete this thesis through all the odds I faced.

I dedicate this work to my children (*Bandile, Akhona and Aphiwe),* who tolerated me as I was forever absent due to the demanding career I chose and when working on the thesis. Your love motivated me to press on and dream big to achieve more.

To my late mother (*Lindiwe MaNjilo-Khumalo*), you were always my inspiration and instilled in me a seed of working hard and putting the family first and I truly am thankful to you. I am also grateful to my only sister (*Thembeka Khumalo*) for her motivation, love, prayers, and good wishes in my personal and professional life.

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Abstract

This study examined nurses' experiences of a quality improvement (QI) intervention to increase the identification and treatment of children and adolescents with HIV in KwaZulu-Natal, South Africa. Despite the high prevalence of HIV in the country, progress in the paediatric population lags behind that of adults. The study employed a basic qualitative research design within the interpretivist paradigm to understand nurses' perceptions of QI in nursing care. Data were collected through semi-structured interviews, focus group discussions, and the photovoice method and analysed using a data-driven inductive approach and deductive analysis. The study adopted Kolb's experiential learning theory to theorise the findings that revealed that although the QI training was successful, the layout and mentoring processes did not facilitate the sustainability of the developed skills. Barriers to providing good clinical management of children and adolescents with HIV included a lack of institutionalisation and sustainability of the QI intervention and a non-conducive environment. This study highlights the importance of equipping healthcare workers with QI skills to improve healthcare quality and contribute to good health outcomes in the paediatric population. Based on the findings, the project was recommended to revise the training layout and adopt mentoring processes to develop sustainable interventions.

Key Concepts

Human Immuno-Deficiency Virus (HIV), Adult learning, Quality Improvement, Experiential Learning Theory.

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Chapter 1 – Overview of the Study

1.1 Introduction

HIV has been a global phenomenon for decades. In 2019, Statistics South Africa reported estimates of HIV prevalence at 7.5 million.

According to Archary et al. (2021p.1), the latest global Joint United Nations Programme on HIV and AIDS (UNAIDS) estimates indicate that 1.8 million children lived with HIV worldwide, 340 000 of whom are South African with 150 000 new infections in children aged 0–14 years contributing to 9% of the overall new infections in 2019. Of these new infections, 84% occurred in sub-Saharan Africa, with around 95 000 HIV-related deaths in children reported in 2019. The South African government has enabled everyone, including children, to access Ante-Retroviral Therapy (ART). According to Bamford et al. (2018) the Paediatric European Network for Treatment of AIDS (PENTA) Steering Committee - HIV medicine (2009), achieving treatment goals requires that children with HIV have access to multidisciplinary care teams, and supervision of medical care by clinicians experienced in the management of paediatric HIV, either directly or through treatment networks. Despite the significant efforts to strengthen clinical management, access to quality health care for children and adolescents remains challenging. In South Africa, the adult population seems to be taken good care of, while the progress in the paediatric subpopulation is lagging far behind. Archary et al. (2021, p.1) stated, "Only 79% of children living with HIV know their status, 47% are on treatment, and 34% of those are virally suppressed."

The KwaZulu-Natal Department of Health (KZN-DoH), in collaboration with the Paediatric and Adolescents Unfinished Business (UB) project (which the researcher was the Project

Manager for), identified a need to equip the nurses with quality improvement skills. Quality Improvement (QI) training was considered one of the priorities even though there could have been other factors that might have contributed to the barriers to children accessing care and treatment. This study sought to understand why nurses who attended the QI training provided through the Paediatric and Adolescents Unfinished Business project do not meet their set targets: to increase the identification of children and adolescents with HIV through testing and ensure that they start and remain on Anti-Retroviral Therapy.

This chapter will focus on the research problem and outline the research background, objectives, questions, and critical concepts. It will also explain the significance of the study, and the theoretical foundation of the study, and offer a brief overview of the methodology. It concludes by defining terms and providing the overall dissertation structure.

1.2 Problem statement

Nurses are bound by the South Africa Nursing Council Nursing Act 2005 (2013, p 5). *Code of Ethics for Nursing Practitioners*, to demonstrate the art of caring by applying professional skills and passion that will benefit both the nurse and the patient with inner harmony and the patient's health benefits. Ongoing training is provided for nurses to equip them with skills to ensure they are competent in executing their tasks independently. The researcher embarked on this study to understand the reason for the poor clinical management of children despite the training provided. The researcher wanted to explore whether the training received assisted the nurses or not with the skills to improve quality and health outcomes, hence the topic, ‘Learning to care: Nurses’ experiences of learning in a quality improvement intervention in uMgungundlovu District, KwaZulu-Natal, South Africa.’

1.3 The Background and Rationale for the Study

The study emerged from the Elma Foundation; one of the largest private non-profit organisations in Africa, contracted Health Systems Trust as one of the consortium participants who worked with the Department of Health providing technical assistance to improve the Paediatric and Adolescents' health outcomes. Part of the project scope and activities were to assist the districts in achieving targets towards eradicating HIV amongst young people through identifying the barriers towards testing young people, starting them on HIV treatment to suppress the spread of HIV, and ensuring that they remain virally suppressed. The health facilities with more pregnant mothers and children living with HIV were identified. Training on the Quality Improvement approach was the approach of choice that was identified for the nurses so that they gain the skill of identifying gaps or challenges and develop plans to be implemented.

This research study thus explicitly focused on the Professional and Enrolled Nurses' experiences of the QI training and its implementation. This formal training was conducted for five days and had to be accompanied by eight mentoring sessions to ensure that the nurses were supported post-training. There were sixty-five nurses trained in uMgungundlovu District. The criteria for selection included nurses in the paediatric sections of the health facilities who provided sub-optimal services concerning the clinical management of children.

The content of the QI training included identifying the main categories of potential challenges, working through all possible causes of problems under each category, and conducting process

mapping to understand the process to change it if need be. The QI training identified bottlenecks, unnecessary steps, duplication, and gaps in a process, showing what happens rather than what should happen, and helped to inspire improvement efforts. The nurses trained in the QI training are exposed to post-training technical support through mentoring sessions, which are provided weekly for two months. It was envisaged that by the end of the eight mentoring sessions, nurses should have learnt the skills and knowledge of quality care and be able to assist the clinic in achieving child health outcomes focusing on long and healthy lives for all.

1.4 Objectives of the Study

The objectives of the study were to:

1. To explore the nurses' experiences of the Quality Improvement Intervention/ learning experience.
2. To find out what nurses think they learned from the intervention.
3. To understand whether and how nurses implemented the QI approach subsequent to the interventions.
4. To identify the implications of nurses' experiences of the current training for future QI interventions targeting nurses.

1.5 Research Questions

This study aims to answer the following research questions:

1. What are the nurses' experiences of the QI intervention?
2. What do nurses think they learned from the intervention?
3. What factors influenced whether and how nurses implemented the QI approach?
4. What are the implications of the current QI workshop for future QI interventions targeting nurses?

1.6 Significance of the Study

This study aims to contribute new knowledge about how nurses acquire and implement knowledge and skills from the QI training to improve the quality of care and reach the intended health outcomes contributing to a healthy nation. This study intended to enhance suitable training and support supervision by transferring skills and responsibilities. The lived meaning of quality nursing care from the perspective of practising nurses has yet to be fully explored. In their study of quality nursing care, Burhans and Alligood (2010, p. 1689) alluded to the fact that "analysis of quality care literature reveals that practising nurses are rarely involved in developing or defining improvement programs for quality nursing care, and therefore, two major study ideas were that quality nursing care must be meaningful and relevant to the nurses and that uncovering their meaning of quality nursing care could facilitate more effective improvement approaches." Clearly, in terms of the broad field, studying what kinds of QI interventions are effective and improving the existing QI interventions could be a valuable contribution.

1.7 Research Methodology

This study is a case study that explores the quality improvement training on the learning experiences of the participants and follows the qualitative research design within the interpretive paradigm. According to Patel and Patel (2019, p. 48), “research methodology is the science of studying how research is done scientifically.” It is further explained that the methodology is a way to systematically solve the research problem by logically adopting various steps.

As stated by Teherani et al. (2015, p. 669), “Qualitative research is the systematic inquiry into social phenomena in natural settings. Such phenomena may include but are not limited to, how people experience aspects of their lives, how individuals and/or groups behave, how organizations function, and how interactions shape relationships.”

Teherani et al. (2015) further explained that qualitative research focuses on the events that emerge and the outcomes of those events from the viewpoint of those involved. The current research employed a basic qualitative research design within the interpretivist paradigm. The researcher used qualitative research to understand the impact of QI training on the learning experiences of participants. According to Schwandt (1994, p. 118), “an interpretive approach provides a deep insight into the complex world of lived experience from the point of view of those who live it.” This study intends to gain rich and deep insight into professional nurses` understanding of Quality Improvement concerning nursing care. The study focuses on interpreting, understanding, and constructing meaning about the change phenomenon in the nurses` lives within the broader context of the nursing practice. Chilisa and Preece (2005, p.

29) state that “the interpretivists believe that knowledge is subjective because it is socially constructed and mind-dependent”.

The data collection methods used in this research include semi-structured interviews, focus group discussions, and the photovoice method to allow for deeper, richer data. The analysis method chosen for this study was the data-driven inductive approach and the deductive analysis, using codes and themes derived from the theoretical framework, Kolb’s Experiential Learning Theory (ELT).

1.8 Location of The Study

The study is in uMgungundlovu District Municipality, one of the eleven districts in KwaZulu Natal. uMgungundlovu District comprises the seven local municipalities based in the accompanying towns: Impendle – Impendle, Mkhambathini – Camperdown, Mpofana – Mooi River, Msunduzi – Pietermaritzburg, Richmond – Richmond, uMngeni – Howick, and uMshwathi – New Hanover/Wartburg. The research sites were five out of thirty-one public health facilities in Msunduzi Local Municipality, the biggest local municipality accommodating the urban, semi-urban, and rural communities. The identified health facilities were part of the Unfinished Business project, one of many projects that Health Systems Trust ran.

1.9 Measures to Ensure Trustworthiness.

As cited by Cohen et al. (2011, p. 180), Lincoln and Guba suggested that the key validity criteria in qualitative research are: ‘credibility; transferability; dependability; conformability and authenticity’. The concept of trustworthiness (used in preference to ‘validity’ in qualitative research) upholds values such as scholarly rigour, transparency, and professional ethics.

Credibility will be assured by engaging with the nurses in the focus group during the first encounter, as suggested by Wang (1999), who stated that the photovoice concept should be discussed to familiarise the participants with the fundamental issues and risks involved while taking pictures and how to deal with those risks. It will be necessary to provide an explanatory letter to the Operational (Facility) Manager giving details about the pictures taken at the clinic, as supported by Wang et al. (2001). Member checking will be done with the nurses during the interviews and after data collection and analysis to ascertain whether the nurses' experiences have been reliably recorded.

To ensure that the questions were clear and easily understood, the interview schedule was piloted with a nurse working in the same field but not participating in this study and trustworthiness was enhanced by using multiple data collection methods (interviews, a focus group discussion, and photovoice). Cohen et al. (2011) endorsed that the use of various sources of data collection (triangulation) is a powerful way of enhancing validity and reliability in qualitative studies.

1.10 Ethical Consideration

Any research has the potential to raise ethical issues; hence researchers must conduct research ethically. As this study involves Professional and Enrolled Nurses working in the public health sector, a proposal for approval was submitted and granted by the KwaZulu-Natal Department of Health Research Committee. The reference number is - NHRD Ref: KZ_201912_009. The study's permission was received from the Research and Ethics Committee of the University of KwaZulu-Natal College of Humanities: School of Education and the reference - HSS/0500/019M.

Since the interviews are about collaboration between the interviewer and interviewee and produce information about the human condition, respecting the participants' autonomy is essential. After giving complete information and the purpose of the study, the participants were requested to sign a written consent letter. They chose and allocated pseudonyms that were used instead of their real names. However, the context of the various clinics was fully described to contextualise the research.

1.11 Anticipated Problems/Limitations

As this is an interpretive case study, it cannot readily be generalised. The advantages of using this design far outweigh the potential limitations. The researcher`s position as the QI workshop facilitator and Paediatrics and Adolescents Unfinished Business Project Manager could affect the reliability of the data the researcher collected as the nurses might feel threatened and be reluctant to provide complete and frank responses. As Johnson et al. (2020, p. 139) stated, "reflexivity is the idea that a researcher's preconceptions and biases can influence decisions and actions throughout qualitative research activities," the researcher reassured the participants that everything they said would be kept confidential. The confidentiality clause in the informed consent letter was discussed with all participants to allay anxiety. To remove the barrier between the participants and the researcher, the latter was respectful, approachable, polite, and friendly whilst trying to prevent the discussions from going astray during engagements. Finally, the study did not include all nurses who attended the QI training but only focused on those allocated to the health facilities that did not meet their set targets. However, the reliable sample allowed the study to generate credible findings.

1.12 Definition of Key Concepts

Human Immuno-Deficiency Virus (HIV) **–** According to World Health Organization (2009), HIV is an infection that attacks the body's immune system, specifically the white blood cells called CD4 cells. HIV destroys these CD4 cells, weakening a person's immunity against opportunistic infections, such as tuberculosis and fungal infections, severe bacterial infections, and some cancers. Initially, the body can replace the CD4 lymphocyte cells (immunological cells designed to ward off infections/parasites) lost through the virus, and patients are asymptomatic. However, if left untreated, the virus will eventually cause a time-dependent reduction in CD4 cells, weakening the body's immune system. This process can take several years.

Quality Improvement **–** Atkinson et al. (2010, p. 238) defined quality improvement as "an active process that involves taking action, making changes and measuring progress towards an agreed aim." One crucial ingredient in successful and sustained improvement is how the change is introduced and implemented. A way of approaching change in healthcare centres around self-reflection, assessing needs and gaps, and considering how to improve in a multifaceted manner. According to Atkison et al. (2010), the Department of Health has recently commissioned the National Institute for Health and Clinical Excellence to produce a series of quality standards, the measures against which the quality of clinical services will be judged. Clinicians rightly see themselves as guardians of healthcare quality; they must involve themselves in determining quality standards.

Training **–** The researchers` understanding of training is that it increases employment upward and progresses in line with changes affecting skills and attitudes to perform a task or improve performance. Viljoen (2014 p. 1) states that training for nurses includes learning activities

designed to augment nurses' knowledge, skills, and attitudes and enrich the nurse`s contribution to quality health.

1.13 Outline of the Dissertation

Chapter 1 – Overview of the study: This chapter presents background information about the research problem. It specifies the research problem, presents the aim, objectives and significance of the study, the framework used, clarifies concepts and summarises the research methodology. It eventually displays the layout of the thesis.

Chapter 2 - Literature Review: This chapter provides detailed information on the existing knowledge that informed and directed the research study. It highlights the source of the research problem. It identifies gaps in healthcare workers' ability to demonstrate the art of caring by applying professional skills and the other necessary skills to ensure they are competent in independently executing their tasks.

Chapter 3 - Theoretical Framework: This chapter presents and justifies the theoretical framework relevant to this study. It provides the rationale for selecting the Experiential Learning Theory (ELT) framework as a lens to guide the conduct of the current research, and how the framework was applied is discussed.

Chapter 4 – Methodology: This chapter focuses on the overall design of the research and specific techniques used in the study. It provides comprehensive information regarding sampling, data collection tools, and data collection and analysis methods. It discusses processes to ensure the validity and reliability of the study and concludes by discussing the ethical considerations adhered to throughout the research.

Chapter 5 – Analysis, Presentation, and Description of Findings: The study's qualitative findings are presented in Chapter 5, which focuses on key stakeholders' perceptions of the uptake of the training. Based on the research results, the researcher contextualises and connects the results to develop answers to the main research questions. This chapter will also engage with the findings using the theory.

Chapter 6 –Conclusion: This chapter concludes the research with a summary of the results and findings. In this chapter, the researcher also presents her final thoughts.

Summary

This chapter began by detailing the broad view of HIV & AIDS epidemiology and introducing the study's problem statement, aims, and objectives. Furthermore, the study methodology was introduced, highlighting which data collection process was systematically followed in conducting the research. The overall layout of the dissertation was discussed for the current study, which comprises six chapters. The subsequent chapter presents a detailed literature review and aligns with the main research problem, research questions, and methods.

Chapter 2: Literature Review

2. 1 Introduction

In the previous chapter, the researcher gave the background and rationale for the study. This is a study of the professional development of nurses and adult learning. The study sought to explore the nurses' experiences of learning in a quality improvement intervention and what capacity they require to provide quality nursing care to all who need it across all ages in the uMgungundlovu District, KwaZulu-Natal. This chapter covers the literature review and discusses the main concepts related to this study: epidemiology of HIV infection among paediatrics and adolescents, health sector policies, history and models of Quality Improvement, and adult learning.

2.2. Epidemiology of HIV Amongst Children and Adolescents in South Africa

Broadbent (2013, p.1) states, "Epidemiology is the study of the distribution and determinants of disease and other health states in human populations through group comparisons to improve population health.

According to Chimbindi et al. (2018, p.2), an estimated six million people in South Africa live with HIV, and nearly 400,000 new HIV infections occur yearly. The survey report conducted by Simbayi et al. 2019 in South Africa indicated that new HIV infections decreased from

360 000 in 2012 to 270 000 in 2016. The decline is reported to be due to a combination of interventions, including social and behavioural change communication (SBCC), condom distribution, the scaling-up of HIV testing, voluntary medical male circumcision (VMMC), Ante-Retroviral Therapy (ART), and pre-exposure prophylaxis (PrEP) provided for selected

populations and vulnerable groups. This progress is attributed to a well-coordinated multisector response guided by the South African National AIDS Council (SANAC, 2017) championed by the deputy president as stated in the National Strategic Plan (NSP) (2017-2022). According to SANAC (2023) the revised National Strategic Plan for HIV, TB, STIs, 2023-2028, states that the proportion of People Living with HIV (PLHIV) in South Africa was 13.5% in 2022, which equates to approximately 8 million PLHIV. Of these, 5.1 million were adult females, 2.7 million were adult males and 2 million were children. Adolescent girls and young women are disproportionately affected. They have a higher prevalence than their male counterparts (8.8% versus 3. 7%).The highest HIV prevalence varies across provinces. KwaZulu-Natal and Gauteng provinces constitute almost half of the total burden of HIV in the country. The prevalence is 21.8% in Gauteng and 17.6% in KwaZulu-Natal.

According to the District Health Information System (2022) - DHIS data in June 2022, the country has increased the number of people who initiated antiretroviral treatment to 5 million, with KwaZulu-Natal leading with 1.5 million.

However, van Wyk, Kriel & Mukumbang (2020, p. 1) argued that despite success in ART roll-out in most countries, including South Africa, over the last decade, acquired immune deficiency syndrome (AIDS)-related deaths among children and adolescents have increased whilst declining in other age groups. According to Horwood et al. (2009), identifying and screening HIV-infected children and early initiation of ART would significantly improve child mortality. However, 50–70% of those children under the age of 15 in South Africa, who require ART, are not receiving it (UNAIDS, 2015) despite the HIV/AIDS Policy 2016 stating that all children who have been tested and found to be HIV infected should be started on Ante-Retroviral

Therapy (ART). The following section will discuss barriers that prevent children and adolescents from accessing treatment.

2.2.1 *Barriers to children and adolescents accessing treatment.*

Kelly et al. (2022 p. 159) alluded to the changing priorities faced by the health system when there are outbreaks. The classic example is, when the country was faced with the COVID 19 pandemic, young people battled accessing services from health facilities. Other barriers that were mentioned by young people are, waiting times; shortages of basic resources; discomfort and perceived stigma from having to queue outside health facilities. Doherty et al. (2009) conducted a study investigating barriers to managing children in rural areas of South Africa. The findings highlighted that healthcare institution-related, provider-related, patient-related, and socioeconomic-related barriers were significant barriers to working with HIV-exposed children in rural areas. They further expanded that healthcare system-related factors included but were not limited to shortage of staff, unclear roles, and responsibilities, lack of staff knowledge and competencies; lack of motivation and low confidence in the interpretation of policies and protocols; or client-related factors such as mothers' or caregivers' fear of disclosure or knowing the child's HIV status and that mothers or caregivers are not adequately informed. The findings from this study concurred with the above that staff shortage and unclear responsibilities contribute to ineffective children and adolescent healthcare provision.

Swart et al. (2015) concurred with the above barriers and alluded that inadequate quality of care and safety can be linked to severe scarcity of human resources and nurses` incompetence. According to Tsondai et al. (2020), a contributing factor associated with a greater risk of disengagement from care for adolescents and young adults living with HIV (AYLH) is that

they are at the age of transition, where they are expected to take responsibility for their care and are managed as “adults.” This period poses an urgent need for suitable interventions and specific models of care tailored to the needs of transitioning adolescents and young adults. This assertion points to other factors contributing to poor health outcomes besides the clinical mismanagement of adolescents and young adults. There is a conviction that quality improvement is one such intervention; hence the findings of this study have revealed several implications for future Quality Improvement (QI) interventions in healthcare. One such implication is sustainability and institutionalisation within the healthcare system. Another is that the QI interventions must be evaluated regularly to assess their impact on healthcare outcomes.

According to Iwelunmor et al. (2015), one of many other challenges with the sustainability of quality interventions is the unavailability of funds, particularly for public health programmes implementation. As South Africa, we are one of many low-resourced countries dependent on donor funding, which has shortfalls as the health programs are implemented according to the funder`s directives. Children and adolescent programmes require special resources that are sometimes unavailable because of the lack of financial resources.

The following section will explore the history and policies that guide Quality Improvement in healthcare in more detail.

2.2.2 *Health sector policies that are guiding the provision of public Healthcare, especially Child Health*

According to Rispel (2015, p.1), Human Resources for Health (HRH) are critical to health systems development and functioning and patient and population health outcomes. Nurses in South Africa, as elsewhere in the world, comprise the largest solitary group of health service providers. Their role in promoting and providing essential health services is undisputed.

According to Council, S A; Verpleging, S A. (2005) the Code of Ethics for Nursing Practitioners stated that one of its values is the right to provide quality nursing and healthcare for all. Nurses must demonstrate the art of caring by applying professional skills and passion for benefiting the nurse and the healthcare user with inner harmony.

One of the international guiding documents designed to address the significant public health issues for children is the WHO and UNICEF Programming Framework (2018). The framework aims to help national health managers and implementing partners scale up HIV prevention, diagnosis, care, and treatment for children exposed to or are HIV infected within broader child survival and HIV programmes. It is evident that healthcare workers need to adhere to the guiding policies and standard operating procedures like the WHO and UNICEF programming framework (2018, p. 20), which indicate that:

> Early recognition of HIV exposure among infants and early diagnosis of HIV is crucial to the early initiation of life-saving care, including Anti-Retroviral Therapy. Many opportunities to diagnose HIV infection in infants and children, including through services for preventing mother-to-child transmission, are currently being missed, resulting in increased mortality and late initiation of ART when children are at an advanced stage of the disease. Healthcare providers should recommend HIV testing and counselling as part of the normal standard of care provided to infants and children if

> they show signs and symptoms suggesting HIV infection or are known to be HIV exposed.

The same WHO and UNICEF framework refers to the guiding principles underpinning the strategies for scaling up interventions for children. Of the seven guiding principles, this study will concentrate only on two. These strategies are: - immediate scale-up of HIV prevention, diagnosis, care, and treatment interventions for children exposed to or with HIV and high-quality care that should be constantly monitored through a system of improvement.

Aligning with the WHO and UNICEF Programming Framework, the South African HIV Testing Services Policy (2016, p. 25) stated that:

> The HIV-related mortality rate for untreated HIV-infected infants is remarkably high in the first year of life. Programmes are mandated to prioritise strategies that yield a higher positive rate than the estimated HIV prevalence among children. Integrating all child health programmes and developing a systematic process to identify and prioritise high-yield testing among infants and children is one of the National Department of Health`s non-negotiable activities.

The South African Lancet National Commission (2019) proposed some priority interventions to deliver better quality care, thus reducing neonatal deaths. The priorities included solid provincial leadership to ensure accountability at the health facility level, training the existing health workforce, and providing supportive supervision to ensure adherence to clinical protocols. This indicates the importance of a collaborative effort between the healthcare teams

to ensure quality healthcare delivery. Healthcare workers must adhere to these prescripts to promote the provision of standardised, good, quality healthcare services.

2.3 History and Quality Improvement in healthcare.

Quality improvement is a way of approaching change in healthcare that focuses on self-reflection, assessing needs and gaps, and considering how to improve in a multifaceted manner. One crucial ingredient in successful and sustained improvement is how the change is introduced and implemented; hence this study seeks to understand how QI-trained nurses implemented the QI approach in their respective health facilities.

According to Chassin and Leob (2011, p. 559), quality improvement in health care has a long history, including heroes such as Ignaz Semmelweis. This obstetrician introduced hand washing to medical care in the nineteenth century. Another is the English nurse Florence Nightingale, who determined that poor living conditions were a leading cause of the deaths of soldiers at the army hospital. The same article alludes to the conceptual framework for measuring healthcare quality by assessing structures, processes, and care outcomes. The above demonstrates that the issue of quality healthcare is important and not new to the sector.

Whittaker et al. (2011, p. 61) argued that before 1950 there was a minimal formal evaluation of quality in healthcare services except for the work of the United States surgeon Ernest Codman, an activist for the creation of hospital standards, whose strategy was to assess the results of care carefully and was acknowledged as the founder of outcomes management in patient care. Codman's pioneering work resulted in many evaluation processes in healthcare facilities today. It led to the American College of Surgeons and its Hospital Standardization Program, which eventually evolved into the Joint Commission on Accreditation of Healthcare

Organizations (JCAHO). JCAHO inspired healthcare accreditation programmes worldwide and marked the beginning of the formalisation of quality improvement methods linked to quality and safety standards between 1950 and 2000.

Such commendable initiatives influenced the review of the health systems, which improved the quality of healthcare services. It is for the same reason that this study is conducted as it seeks to explore the experiences of nurses relating to the skills gained during the QI training, which were meant to assist them in identifying the barriers towards testing young people, starting them on HIV treatment to suppress the spread of HIV and ensuring that they remain virally suppressed. For such targets to be achieved, the healthcare services should be of decent quality. As alluded to in Chapter 1, the focus of the study targeted the health facilities that did not meet their set targets.

Some interventions targeting nurses have been implemented across the globe. However, the lived meaning of quality nursing care from practising nurses should have been examined more closely. Burhans & Alligood (2010, p. 1689) mentioned that quality healthcare continued to be a subject of intense criticism and debate. Although it was acknowledged that quality nursing care is vital to patient outcomes and safety, meaningful improvements must be more robust. Coulon et al. (as cited by Burhans & Alligood 2010) identified professionalism, holistic care, practice, and humanism in Australian nurses` quest for excellence. This differs from Chassin and Leob (2011), who suggested that leadership commitment and robust adoption of methods and tools enhance healthcare quality. These themes denoted that high-quality nursing is at par with competence in the cognitive, affective, and psychomotor domains` among USA nurses. However, when trying to define quality nursing care, diverse researchers do not consider the

lived meaning from the perspective of the frontline teams, which is what this study is attempting to do. There arose a need to study the importance of quality nursing care for practising nurses globally. The background was that the nurses were rarely involved in developing and defining improvement programmes for quality nursing care. The findings identified that the practising nurses` lived experience of quality nursing care differed from that of patients and the nursing managers. The nurses` curricula design needed to accommodate the affairs of the frontline health care providers.

A study conducted in Canada by Thompson (2005) exploring the nurses` perception of quality end-of-life care in an acute medical ward to understand nursing behaviours and processes essential in providing care to the dying person is compared to the current study. These nurses were generalists and were pulled in all directions carrying other vital duties. They could lack skills in providing quality end-of-life care, and their perspectives of what constitutes this activity have yet to receive adequate attention. Caring for the dying and children and adolescents is a speciality, and one needs to have received the capacity to provide exceptional care services. The nurses' abilities and skills were not well nurtured since the doctors had always carried out the clinical management and interpersonal communication with the families of the dying person, which is similar to the current study as the participants alluded to the fact that the doctors were the cadre that was skilled in caring for children and adolescents with HIV. Therefore, nurses' ongoing personal and professional development is crucial for quality healthcare services.

In another article by Needleman & Hassmiller (2009) that looked at the critical role in delivering high-quality, efficient care in United States hospitals, the study illustrated how

nurses and staff supported by leadership could be actively involved in improving the quality and efficiency of healthcare. This supports Chassin and Leob (2011), who posited that sustainable and consistently excellent quality healthcare could be achieved through leadership commitment and robust adoption of improvement tools and methods.

The report further asserts that nursing education will require adjusting and preparing new graduates to implement outcome-based practice and quality improvement strategies. This assertion is supported by a Consensus Report of the South African Lancet National Commission (2019) that stresses the strengthening or inclusion of the compulsory module on quality of care in pre-service training and continuing professional development programmes of health professionals.

A study conducted in China by Williams et al. (2006, p.710) inspected the effectiveness of a multidimensional HIV&AIDS educational intervention on the knowledge, attitudes, and willingness of Chinese nurses to care for patients with HIV. The finding indicated a successful response to the HIV & AIDS epidemic in China, including effective prevention through clinical care. The distribution of antiretroviral medication required a significant drive to strengthen the nurses` efforts. It is evident in the findings that capacity building of the healthcare providers was vital for them to be able to provide good quality care, as indicated that intensive and interactive HIV&AIDS professional workshops can contribute to the national effort by increasing knowledge and improving attitudes and willingness to provide quality nursing care to patients. This study aligns with the current research as it seeks to explore the knowledge capacity and the nurses' ability to provide good quality after they attended the QI workshop.

Some of the studies explicitly conducted related to QI-related interventions include the one that was conducted in Lesotho by Labart et al. (2013) as it concluded that when the healthcare teams identified that starting eligible HIV-infected children on ART was challenging, they decided to implement the quality improvement approach using several tools, such as cause-effective diagrams and process mapping, to identify the challenges, what caused them, and what bottlenecks and gaps existed in the HIV management of infected children. The approach yielded good results as it reduced HIV-related mortality and improved social development outcomes, as Morris et al. (2012, p. 18) mentioned. The method used in the study discussed above conducted in Lesotho is similar to the one adopted for the current research as it seeks to capacitate the nurses with the QI skills to identify gaps that could be the root causes of the poor clinical management of children in KwaZulu-Natal.

Within the South African context, studies have shown that nurses have not generally met expected levels of care. One of the studies was conducted by Olaleye et al. (2016) in the Free State Province. They concluded that healthcare providers face challenges with counselling and testing children due to a lack of skills or structural issues concerning humiliation and judgement against people living with HIV in society, including children. Olaleye et al. (2016, p. 233) suggested that community mobilisation could be used to ensure more children are tested for HIV. The researcher agreed with the latter statement as the researcher is exposed to a similar working environment. She noticed that community engagement and mobilisation could be used to enhance HIV testing for children.

Another barrier to HIV Counselling and Testing (HCT) services among exposed children was the extreme workload reported by nurses calling into question the WHO-recommended “task-

shifting" strategy. Labhardt et al. (2013, p.1) stated that "task-shifting is effective because a capacitated healthcare worker offers high-quality and cost-effective HIV care to more patients, including children."

Whittaker et al. (1998, p. 62) highlighted the history of evaluation of healthcare standards in South Africa and stated that:

> Three evolutionary periods can be identified in the history of healthcare standards evaluation, and those are - the period before 1950, when pioneering groundwork set the platform for later developments; a reactive period between 1950 and 2000, when poor outcomes in healthcare were addressed with increasing efficiency; and from 2000 onwards a proactive period during which evaluations of healthcare facilities have benefited from the application of increasingly sophisticated methods, with evidence of improvement in quality of healthcare provision.

The exact text by Whittaker et al. (1998) continued explaining that some developments in the area of quality took place in the South African health sector. These are described as the Council for Health Service Accreditation of Southern Africa Hospital (COHSASA). Later, primary health care (PHC) clinic accreditation was introduced in SA in 1993 at six pilot sites representing public and private hospitals. By the end of 1995, 13 hospitals had completed the accreditation programme. The not-for-profit COHSASA was registered in the same year to implement quality improvement and accreditation in South African hospitals. COHSASA's approach differs from that of its counterparts in that it encourages and facilitates gradual improvements in quality in hospitals; for example, healthcare staff has been assisted in understanding and implementing standards, and a graded, stepwise system of awarding certificates to provide momentum and encouragement

towards accreditation has been introduced. The hospital staff was then trained to understand the intention behind setting standards and how to implement and monitor quality improvement programmes to achieve standard compliance in all areas. Performance improvements were noted in the 2004 assessment, where scores achieved by the various departments improved from poor to good. This indicates that capacity building of the health care implementers, as was stated in the previous paragraphs by other authors, does contribute to quality improvement. Thompson et al. (2005) concurred with the above statement, noting that nurses' continuous personal and professional development is crucial for providing quality healthcare services.

The article by Zerbi and Marquez, as cited by Whittaker & Rooney (1999), also stated that:

> COHSASA is a pioneer in using the facilitated accreditation approach in developing countries. COHSASA used an approach based on facility empowerment and continuous quality improvement (CQI). Its facilitators initially assisted each participating facility in understanding the accreditation standards and performing a self-assessment (baseline survey) against the criteria. Detailed written reports on compliance with the standards and reasons for non-conformance were generated and sent to the hospital for use in its quality improvement program. As a follow-up, the facilitators would assist the hospital in implementing a CQI program to enable the facilities to improve on standards identified as suboptimal in the baseline survey. This preparatory phase usually took hospitals 18 months to two years to complete.

There has been increasing public sector attention on improving the quality of care and the setting of standards of health care in South Africa as the country is moving towards implementing the National Health Insurance (NHI), as stated by Whittaker et al. (2011, p. 66). The National Health

Act (No. 61 of 2003), in section 30 (2)17, which relates to the district health system, states that services rendered must have due regard to the principles laid down in the Constitution of SA (Sections 27 and 195)18 as well as, among other things - quality, effectiveness, and efficiency. Section 36 of the Act refers to licensing public and private health establishments, setting out the process for issuing a Certificate of Need. In 2008 the Office of Standards Compliance (OSC) within the NDoH developed and piloted a set of National Core Standards (NCS), which form the basic requirements for quality and safe care while reflecting existing Government policies and guidelines. The NCS set the benchmark for quality improvement in public health establishments' standards, defined as `an expected level of performance`. The primary purposes of the NCS are to develop a standard definition of quality of care which should be found in all health establishments in SA as a guide to the public and managers and staff at all levels; to establish a benchmark against which public health establishments can be assessed, gaps identified, and strengths appraised; and provide a framework for national certification of public health establishments.

This move for South Africa is almost the same as the Latin American move that Zerbi and Marquez (2000) talk about, which is the adaptation of the traditional accreditation model focusing on specific services or areas of care, in a process often referred to as 'focused accreditation'. This is defined as the process by which a recognised body performs a selective (or focused) review of one or more functions of a healthcare organisation and assesses its ability to meet a set of standards and criteria specifically related to the selected function or service. In focused accreditation programs, healthcare organisations that meet pre-established standards receive recognition from the assessing body and could be awarded a symbol (e.g., gold star, special plaque) to exemplify their achievement. The symbolic quality award and public recognition make focused accreditation a powerful vehicle for improving individual provider and organisational performance.

Webster et al. (2011, p. 315) reported the results of the study conducted in the Johannesburg Region T sub-district, which indicates that the QI approach, using learning networks to teach simple data-driven methods for addressing systems failure with increased training and resource input, can assist districts in reaching universal coverage targets quickly. This indicates that the QI approach can improve health outcomes if implemented accordingly. Nurse practitioners can positively improve health outcomes, as evidenced by Iwu and Holzemer (2014, p. 50). They alluded in their study that nurses can improve quality care with excellent results by acquiring the necessary knowledge, skill, and mentoring. The above factors support the view that healthcare implementers' learning and capacity building contributes to quality improvement, and this study seeks to explore that phenomenon.

2.4 Understanding How Adults Learn

This study explores the knowledge capacity and the nurses' ability to provide good quality after they attended the QI training. All the participants in this study are adults, and the phenomenon of how adults learn is explained in this section. Goldman, as cited by Viljoen (2014 p. 46), argued that adults learn by choice as learning is voluntary and motivation to learn is suppressed when an adult is forced to acquire knowledge, leading to resistance to change." However, this assertion contradicts the current study, as the health facility managers pre-selected the participants. Data show that all five nurses did acquire knowledge and portrayed a willingness to effect change in their places of work. Merriam (2008, p. 97) insinuated that:

> Connecting new learning with the learner`s previous experience is a long-standing strategy advocated by adult educators. Research has confirmed the importance of processing further information or experience with prior experiences. Brain-based

> research has documented that when storing new sensory input, the brain 'looks for' connections to earlier information. These connections are our 'learnings,' and with no meaningful links to prior experience, little, if anything, is retained.

Soong and Shojania (2019, p. 4) emphasised that passive education delivers little value as a change strategy. It can serve the purpose of 'raising awareness' but achieving beneficial impact requires designing high-value improvement interventions highlighting more effective systems-based changes. Foley (2004, p. 4) alluded that people come together for and with a purpose; there is order and sequence in what they gather to do, and a programme has a recognisable starting and ending date or time. This means an educational program is about teaching and learning interaction that has been entered into and consciously organised instead of incidental learning.

Table 3.2 Conditions for Adult Learning as borrowed from Koon's Article.

Adults learn best when:

1. they feel the need to learn and have input into what, why, and how they will learn.
2. the content and the process of learning bear a perceived and meaningful relationship between experience and present experience is effectively utilised as a learning resource,
3. learning content relates well to the individuals` developmental changes and life tasks/goals,
4. the level of autonomy is congruent with the learning method,
5. the learning environment is conducive to mental well-being and encourages freedom to experiment with newly learned skills and
6. their learning styles are taken into consideration.

Source: Koon`s article (2004, p. 18) 'Applying adult learning to improve medical education.

Aligning to the conditions for adult learning, the study participants, like most adults mentioned in Chapter 5, developed their knowledge by engaging in collaborative activities such as participating in group discussions and demonstrating their newly acquired knowledge and skills. The study further revealed that the training content was suitably designed to assist in carrying out clinical and quality improvement skills competently and confidently in the clinical setting. These were due to good facilitation skills that challenged students` preconceptions considering new experiences, creating a conducive environment for teaching and learning.

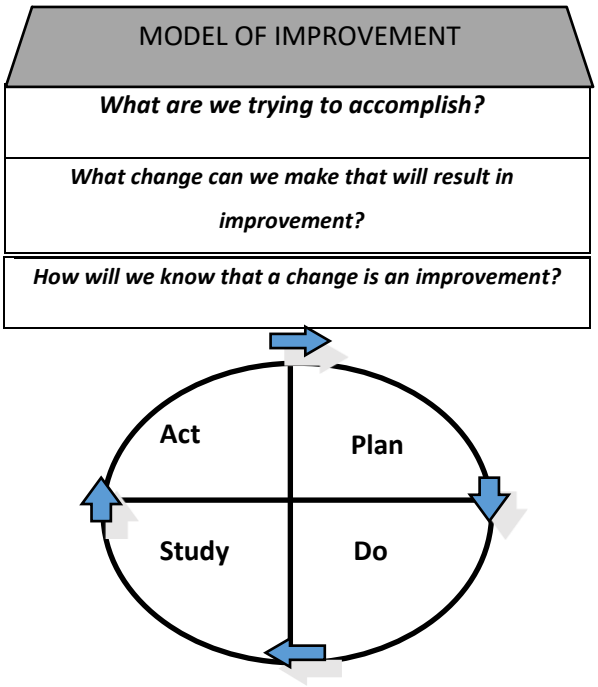
2.5 Approaches and Techniques to Quality Improvement

Neyestani (2017, p. 2) indicated that scholarly work globally suggests that the roots of quality improvement approaches and techniques can be traced back to the early 1920s and further developed in Japan in the 1940s and 1950s. The US forerunners were Deming, Juran, Feigenbaum, and Berwick, whereas the pioneer was Ishikawa from Japan. 'The philosophical basis for improvement links Deming's system of profound knowledge and frames an applied science of improvement. Concluding their study, Black and Copsey (2014) alluded to the fact that a Systems Thinking approach based upon a broad understanding of the four areas of competence emphasised by Deming (1994); understanding systems, the theory of variation, psychology, and the theory of knowledge, would enable leaders to influence program performance positively.

Of the number of approaches to quality improvement, Deming's Plan, Do, Study, Act cycle of continuous improvement, as presented in Figure 2.2 below, was more appropriate for improving quality within the health system. The Model for Improvement established by Associates in Process Improvement was devised to document learning on how to secure

improvements from the theories of Edward Deming. This framework turned out to be the bedrock of improvement activity performed over the years and across the world.

Figure: 2.2 The Model for Improvement as a basic framework for the Science of Improvement (including PDSA)



Source: Adapted from Moen (2009, p. 8)

According to Moen (2009, p. 8), "the Model for Improvement supports improvement efforts in a full range from the very informal to the most complex (e.g., the introduction of a new product line or service for a major organisation)." Deming`s work is underpinned by his philosophy which offers insight into how to make changes that will improve in various settings. The effectiveness of the quality improvement intervention is evidenced by the study conducted in Lesotho by Labhart et al. (2013), where the nurses adopted the quality improvement approach that resulted in an improvement. There was a reduction in HIV-related mortality as the HIV

clinical management of children improved. The improvement model (including planning, doing, studying, and acting PDSA cycle) is used for continuous improvement. Moen (2008, p. 9) asserted, “It is not enough to determine that a change resulted in improvement during a particular test.” Changes are tested in small cycles involving (PDSA) before returning to planning if the change idea does not yield positive results. Still, if it produces a positive result, the change idea is adopted and can be implemented in different settings.

Each cycle commences with a ‘guess’/theory and an idea and helps these evolve into knowledge that can inform action and produce positive outcomes. The cycles are always linked with the three questions 1) What are we trying to accomplish? (The aim) 2) What changes can we make that will result in improvement? (The change) Furthermore, 3) How will we know that a change is an improvement? (measurement)

According to Webster et al., (2011), the interventions applied for health systems strengthening using quality improvement methods at a sub-district level in Gauteng to accelerate highly active antiretroviral treatment (HAART) were a success. The initiative seemed to have worked at delivering crucial changes across the HIV cascade, and the success could be attributed to increased staff involvement in solving problems, testing solutions, and using local data to set targets and monitor progress. The quality improvement approach is more effective if addressed at a whole-system level rather than some independent projects and must be approached as a long-term, sustained change effort. Webster et al. (2011, p. 322) alluded, “Forming a network of clinics that gather together across several workshops accelerates the spread of awareness of best practices across clinic sites”. This Gauteng study of strengthening health systems using quality improvement methods to improve the HIV cascade is similar to the current study as it also attempted to improve the quality of nursing by applying the QI principles. However, the

methodology applied for the current study seemed to have lacked sustainability as it was implemented as a short-term project with no learning opportunities afforded as a "community of practice (CoP) approach" to the other neighbouring health facilities, which is the approach implemented in the Gauteng study by Webster et al. (2011). Smith et al., as cited by Wenger et al. (2011) defined CoP as a "learning partnership among people who find it useful to learn from and with each other about a particular domain. They use each other's experiences of practice as a learning resource". Learning together involves benchmarking best practices that could have been adopted and utilised in the current study to improve healthcare quality. Kampstra et al. (2018, p. 8) stated that the "commitment of a team to participate in a QI program, developing a sense of common responsibility as an organization for an improvement, measuring outcomes and processes as well as patient involvement was defined as key ingredients for healthcare QI."

2.5.1 *The QI training conducted for the current study for the Nurses from the selected clinics in uMgungundlovu.*

The study sought to explore the Professional Nurses' (PN) and the Enrolled Nursing Assistants' (ENA) experiences of Quality Improvement interventions after attending a five-day formal workshop conducted in a neutral place away from their workplace. The training focused explicitly on continuing education and professional development of the Professional Nurses and the Enrolled Nursing Assistants, as it has been mentioned in Chapter 1 that the lack of skills and competencies could have been the barriers to children accessing care and treatment. As part of the criteria for attending this training, the unit manager identifies the potential participants based on staff availability, focusing less on assessing the individual training needs and commitment.

The training methodology adopted Deming`s Plan-Do-Study-Act (PDSA) cycle of continuous improvement, which is more appropriate for improving quality within the health system. The study conducted by Kampstra et al. (2018) where they applied the Chronic Care Model in children with various chronic conditions, in combination with PDSA cycles, failure mode and effect analysis, and Pareto charts of failures, the study resulted in improvement of respective outcomes. This study is in line with Deming`s work which is underpinned by his philosophy which offers insight into how to make changes that will improve different situations. One of the main tools used in the QI training is the cause-and-effect tool, which can be used in many different ways, and it encourages more breadth of thinking and helps identify the main categories of potential challenges. It identifies bottlenecks, unnecessary steps, duplication, and gaps in a process, showing what happens rather than what should happen, and helps to inspire improvement efforts. During the current study, QI tools were tested with some of the clinic's teams during the post-training technical support through mentoring sessions, which were provided by competent mentors once a week for two months. It was envisaged that by the end of the eight mentoring sessions, the nurses would have learnt the skills and the implementation of the QI approach to assist the clinic in achieving the set child health outcomes. However, this was not sustained.

Summary

Several conclusions can be drawn from the discussion in this chapter concerning how nurses are capacitated to provide quality nursing care. The key was literature from various countries that supported the need for continuous capacity building for the frontline healthcare workers, the implementation of the evidence-based quality improvement approaches, lived meaning, and understanding of quality nursing care that was discussed. Several factors that contribute to the success of any training and professional development were also discussed. These include but

are not limited to shift driven from the top by a visionary leader; a defined set of activities; teamwork where roles and responsibilities are clearly outlined; breaking down traditional hierarchies for the multidisciplinary approach; and community participation. Suitable training, and transfer of skills and responsibilities with support - supervision to those providing care is vital to enable them to render quality care. Some interventions targeting nurses have been implemented across the globe however, the lived meaning of quality nursing care from the perspective of practising nurses seems not to have been fully studied. Analysis of quality care literature reveals that practising nurses are rarely involved in developing or defining improvement programs for quality nursing care. Therefore, two main study ideas were that quality nursing care must be meaningful and relevant to the nurses and that discovering the meaning of quality nursing care could facilitate more effective improvement approaches. In the next chapter, a theoretical framework that guides this research study is discussed.

Chapter 3: Theoretical Framework

3.1 Introduction

This chapter seeks to describe and justify choosing Experiential Learning Theory (ELT) as the most suitable adult learning theory for this study. The researcher started by providing an overview and development of adult learning theories and an understanding of the ELT framework by looking at its origins, purpose, the studies that have used ELT, and the reasons why it was specifically selected for this study.

A theoretical framework is a set of ideas that guide research. Alla et al. (2017, p. 1) stated that "the pressure on researchers to provide information in a systematic, timely and thorough way has increased". The researcher decided to use the Experiential Learning Theory (ELT) by Kolb (2005) as the lens to guide the conduct of the current study, stating that learning is a holistic process of adaptation to the world. Not just the result of cognition, learning involves the integrated functioning of the total per- son - thinking, feeling, perceiving, and behaving. This theory is appropriate to the current study, as alluded to by Van Wart et al. (2020, p. 1) in that "experiential learning is a hands-on educational process that produces knowledge and skills through a combination of experience, reflection, the conceptualisation of the experience, and use of learned ideas to make decisions or solve problems (Kolb, 1984)." Baker et al. (2012, p. 90) suggest that to improve learning, the focus should be placed on engaging students in a process that facilitates optimal learning. This includes providing feedback on the effectiveness of students' learning efforts. The ELT allows for the fact that nurses may not have learned anything from the QI intervention, may have learned content but not the skills necessary to implement this, or may have learned but not have been able to implement this for other reasons.

3. 2 Development of Adult Learning Theories

Adult learning theory as described by Wiseman (2022) is a set of guiding principles and best practices for teaching adult learners. Adult learning is a concept that was spread by the American educator and scholar Malcolm Knowles under the name "andragogy" in the 1960s. Knowles is not the only modern adult learning theorist. Jack Mezirow, the sociologist, also developed a theory in the 1970s called "Transformative Learning", which focused on how an adult's viewpoints, expectations, and assumptions change after encountering a new experience.

Dirkx (1998, p. 2) stated that:

> Adult learning is guided by an instrumental view of the learning process, one that is designed to foster change as a form of adapting to the needs and demands of the broader, socio-cultural context. Such could be current information that the adults seek, new skills for a different job or ways of doing their current jobs. Such goals often bring about desires on the part of individuals or groups to adapt more effectively to demands they perceive within that particular context.

Another educational theorist, David Kolb, brought forth the idea that adults are shaped by their experiences and learn best by reflecting on those experiences. According to Deslauriers et al. (2016, p.308), "Experiential learning is an educational model that views learning as the result of an interaction between discovery and experience. This model is based on immersing learners in an environment with relevant, "real-world" experiences that allow them to build upon prior knowledge and learn more meaningfully." While this model is not ideal in every context, it often provides learners with a unique realization of how their knowledge is relevant and useful. Below is a table that lists learning theories and to what they are best suited to.

Table 3.1 – List of learning theories from the Western Governors University (2020)

THEORY	SUMMARY	BEST SUITED FOR
Andragogy	- Adult learners are autonomous and self-directed and seek out learning based on personal needs. - Adult learners must be able to apply what they learn practically.	- Problem-solving - Structured formal learning. - Learners with a defined need to know
Transformational Learning	- A person's beliefs and expectations shape their view of the world. - Through a rational analytical process, a person can consciously change their old beliefs and implement new ones.	- Complex analytical processes - Evaluation and analysis - Long-term personal growth
Experiential Learning	- A hands-on approach where individuals learn by doing. - Places the learner at the centre of the learning process. - Learning happens through an active process of doing and reflection.	- Mechanical skills - Leadership skills - Process improvement - Systematic thinking
Self-Directed Learning	- A process where individuals take complete ownership of the learning process to diagnose learning needs, identify resources, implement learning, and assess their results.	- Process updates - Self-motivated learners with Technology and software skills
Project Based Learning	- Learners engage in an active investigation of a real-world problem. - Gives learners a voice in the overall process through a process of inquiry, critical thinking, problem-solving, collaboration, and communication.	- Project management - Process improvement - Manufacturing
Action Learning	- Learning is the result of programming and questioning. - Learners take action on a problem and reflect upon the results.	- Team building - Fill in knowledge gaps. - Uncover areas of learning need

Source: Adapted from Western Governors University (2020)

As mentioned above, for the current study, the researcher adopted the Experiential learning theory as learning happened through an active process of doing and reflection, exploring whether the nurses did or did not learn from the QI training. The Experiential learning theory is described in the next section.

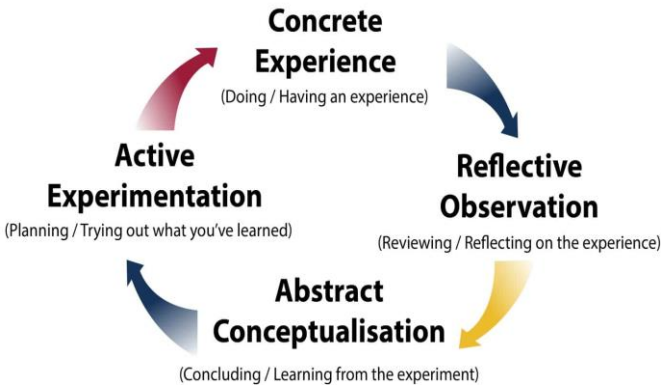
3.3 Understanding the Experiential Learning Theory (ELT)

The American experiential learning theorist David Kolb emphasized that learning is human beings` primary adaptation mode and is central to human life. According to Lawrence (2006, p. 13), Kolb's work can be traced back to that famous statement of Confucius around 450 BC: "Tell me, and I will forget, show me and I may remember. Involve me, and I will understand." Scholars like Turesky and Gallagher (2011), stressed that the heart of learning lies in the way individuals process experience, in particular, their critical reflections on experiences and the meanings they draw from them. The model of human learning developed by David Kolb was adopted as the framework underpinning this study as it explores the extent to which students are exposed to all four modes of learning during the QI training. The theory`s goal is to help learners to learn better through self-directed learning. Strong et al. (2013, p. 177) posited that self-directed learning can be defined as "individuals [taking] the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" According to Kolb, learners go through a process that encourages previous lessons reinforcement which leads to key skills retention for future learning opportunities. When learners are taught using distinct resources, they can develop better reasoning and communication skills. Also with this theory, a skilled facilitator can observe and assess where learners are making mistakes and to what extent they established the depth of their subject understanding.

Kolb & Kolb (2005, p. 194) stated that "learning is the process whereby knowledge is created through acquisition and transformation of experience". Turesky and Gallagher (2011); McCarthy (2016), postulated that there are four modes that people may engage in any given experience. These are concrete experience, reflective observation, abstract conceptualisation,

and active experimentation. Using each mode leads to a specific way of approaching, understanding, and acting on a problem. Grasping experience occurs between concrete experience and abstract conceptualisation; transforming experience occurs between reflective observation and active experimentation. As stated by Deslauriers et al. (2016) Kolb's (1984) model provides a structure for meaningful learning environments in which learners can apply prior knowledge within a real-world hands-on setting. The four modes and learning cycle where the learner 'touches all the bases' in a recursive process that is responsive to the learning situation and what is being learned are discussed below.

Figure 3.1: The Experiential Learning Cycle illustrates the key concepts (Kolb, 1984).



Kolb's Learning Cycle adapted from Threeton, Ewing, & Clark 2010

3.4 Kolb`s learning cycle phases/modes.

3.4.1 First phase - Concrete Experience

At this phase, the learner portrays their involvement with other learners in everyday contact.

The learner tends to rely more on what she/he feels, with open-mindedness and adaptivity to change, as opposed to a systematic approach to situations and challenges. This phase talks

about trying or involving in “doing”. During that time, the individual does not reflect on anything but intends to reflect on it.

3.4.2 *Second phase* - Reflexive observation

The reflection includes returning to the beginning point of the task and reviewing what has been done and tried. During this phase, one uses listening skills, paying attention, distinguishing the differences, and applying ideas that might help find results and share them with others. At this stage, learners understand situations and ideas from different points of view. They depend on objectivity, patience, and careful judgment but do not essentially take any action. The learners create an opinion based on their feelings and thoughts. Vocabulary is important for verbalising and discussing the perceiving and comprehending of the experience.

3.4.3 *Third phase.* Abstract conceptualising.

Conceptualising includes interpretation of the marked results and understanding the connections between them. Theory can be useful as a base for shaping and explaining the results. In that phase, the adjustments, values, and beliefs also influence the interpretation of the results. During the critical reflection, questions are asked from the perspective of the previous experience, while during the conceptualising phase, an attempt to find answers is done. Generalisation and conclusions are made; hypotheses for experience are formed. About abstract conceptualising, Kolb says, “In that phase [abstract conceptualizing], learning involves more logic and ideas than feelings of understanding the problems or the situations. It is typical to follow systematic planning and development of theories and ideas for solving problems.”

3.4.4 *Fourth phase.* Active experimenting (planning)

Active experimenting allows one to master the new understanding and predict what is likely to happen later or what other actions must be taken to improve the way that the task is being treated. About the active experimenting, Sharlanova (2004 p. 38) stated that Kolb thought, "Learning during that phase has an active form – experimenting, influence or change of the situation. One has to have a practical approach and to be interested in what is working."

Kolb & Kolb (2005, p. 209) alluded that "learners need to be offered space to take control and be responsible for their learning so that their abilities are enhanced to learn from their experience." Baker et al. (2012, p. 2) suggested that "to improve learning, the focus should be placed on engaging students in a process that facilitates optimal learning. This includes providing feedback on the effectiveness of students' learning efforts." ELT allows for the fact that the current study participants may not have learnt anything from the intervention, may have learnt content but not the skills necessary to implement the intervention, or may have learned but not have been able to implement this for other reasons. When granted an opportunity to participate in their curriculum design to incorporate their thoughts and experience, learners feel empowered and comfortable in their learning process.

3. 5 The Core Tenets of Experiential Learning

According to Tarlit (2016, p. 24), Kolb and Kolb (2005) identify core tenets of experiential learning which are: -

> Learning is viewed as ongoing and promotes student acknowledgement of previous informal and formal learning; grounded in inexperience, which implies introducing

> student learning experiences at an appropriate pace and progress and challenges student preconceptions in light of new experience, theory, and reflection; learning involves mastery of all four learning modes that provide students with opportunities to experience, reflect, theorise and apply; a holistic process of adaptation by addressing students` feelings, perceptions thoughts, and actual behaviour through the experience. Learning occurs when an individual interacts with their environment that can provide them with experience in the wider real-world environment, like in a workplace context. Finally, knowledge is created through a learning environment which is individualised to each student and gives them responsibility over their learning."

Learning is a concept built upon how experiences change people, notwithstanding that the experience does not represent learning. Instead, the learner must reflect, draw ideas, and experiment with developing knowledge to transform learning. During the QI training, nurses were allowed to build on their prior knowledge and personal interest so that learning continues, as alluded to by Baker al. (2012) that experiential learning curriculum, when designed and executed correctly, can have positive effects on both formal and informal assessments. Evidence and the researcher`s experience support the idea that experiential learning produces better results than traditional educational models.

Lo (2004, p. 219) postulated that:

> in recent years, education has become learner-oriented. When designing courses, educators should reconsider their roles and those of the learners thoroughly to bring about more appropriate and effective instruction. In postgraduate courses, educators act as facilitators or delegators. They support learners in their self-learning rather than acting as authoritarian teachers. Postgraduate learners are generally more mature,

> highly motivated, and eager to acquire a full understanding of the course materials by reading reference materials and other online information. Self-directed learning and facilitator-style teaching form an optimal match. With teaching and learning roles redefined, the effectiveness of teaching and learning can be increased.

Merriam (2008, p. 97) alluded that:

> connecting new learning with the learner`s previous experience is a long-standing strategy advocated by adult educators. Research has confirmed the importance of processing new information or experience with prior experiences. Brain-based research has documented that the brain 'looks for' connections to earlier information when storing new sensory input. These connections are our 'learnings' and with no meaningful links to prior experience, little if anything is retained.

Soong and Shojania (2019, p. 4) emphasised that "passive education delivers little value as a change strategy. It can raise awareness, but achieving beneficial impact requires designing high-value improvement interventions highlighting more effective systems-based changes." At the same time, Foley (2004) accentuated that learning is a mysterious process. Deciding on designing and conducting a program for a group of adults requires imagination, flexibility, and willingness to take risks. "People learn continually, formally and informally and in many different settings viz.: in workplaces, family settings, leisure activities, and political action" Foley (2004, p. 4). The text further alludes that people come together for and with a purpose; there is order and sequence in what they gather to do, and a programme has a recognisable starting and ending date or time. This means an educational program is about teaching and

learning interaction that has been entered into and is consciously organised instead of incidental learning.

In his study, Koons (2004, p. 6) indicated that "there is strong evidence that as the individuals mature, their need and capacity to be self-directing, to identify their readiness to learn, and organise their learning around life problems increases steadily from infancy to pre-adolescence, and then increases rapidly during adolescence."

McCarthy (2016, p. 96) further stated that experiential learning, or active learning, learning by doing, or interactive learning, requires that students not passively acquire knowledge instead, they are actively engaged in the learning process as Hawtrey (2007, p. 145) stated, "Students remember only a fraction of what they hear but a majority of what they actively do."

There is strong evidence from various studies indicating that as individuals mature, their needs and capacity to be self-directing, identify their readiness to learn, and organise their learning to suit their day-to-day life. In numerous scholarly works, the recommendations include strengthening and comprising a compulsory module on quality of care in pre-service training and continuing professional on-site development programmes for health professionals. To provide quality healthcare, professional nurses could benefit from the short courses on HIV care and treatment initiatives, including theory, practical training, and continuous mentoring. Appropriate training and quality mentoring are emphasised throughout the literature as essential for supporting nurses toward adequate healthcare provision. "Competent mentors should provide clinical mentoring and support supervision with the necessary skills to

supervise the health workers to whom tasks are allocated", as stated by Horwood et al. (2009, p. 2).

The study by Fewster-Thuente et al. (2018) examined the qualitative data using a case study simulation to demonstrate changes in the inter-professional attitudes and the behaviours of the healthcare provider students when aligned with Kolb`s Experiential Learning Theory (ELT). This study was conducted on 515 first-year students from eight professional healthcare programs and indicated that using thematic analysis and qualitative results could demonstrate a significant alignment with the four stages of Kolb`s ELT. According to the study results, using ELT allowed students to learn at each stage. Some gained substantial experience during the simulation exercises, reflected on their experiences, were able to explain their thinking, and understood the importance of teamwork. Lastly, they actively experimented with the newly accumulated experience as they experienced it.

Another study by Senok et al. (2021) explored the added value of a co-curricular program designed and implemented based on Kolb's Experiential Learning Theory from a holistic social constructionism perspective. This was a case study of randomly selected medical students who participated in an experiential co-curriculum program and were part of the focus sessions. Data were inductively analysed using thematic analysis. According to the study, to be effective, such co-curricular programs needed to ensure that the participants go through the four steps of Kolb`s ELT simultaneously while engaging in the social world. These steps included undergoing the experience, observing and reflecting upon the experience, organising the thinking patterns of analysis, and testing the assimilated knowledge through action. The medical students perceived themselves to be independent learners, cognitively reflecting on concrete experience to construct new understandings; they became aware of how the

experiential learning opportunities are improving their attitudes and enabling lifelong learning; in alignment with Kolb's ELT, they recognised that they could reflect upon the concrete experiences that they had and to revisit their mental models in the process of developing. They also highlighted that they had fun and that the interaction in the various real contexts among the differing communities offered them a sense of pride.

The discussions above relate to two studies of healthcare professionals where the ELT was successfully implemented during their capacity-building activities portraying the same picture as the current study. The results of the studies indicated the ELT`s benefits for the participants as they observed and reflected upon their experiences, organised their thinking patterns of analysis, and tested the assimilated knowledge through action.

Summary

The theoretical framework underpinning this study is discussed to comprehend and investigate learning phenomena within Kolb`s Experiential Learning Theory. The ultimate adoption of the ELT framework was essential for this study concerning the determining factors affecting how nurses learn to care. This chapter highlighted the theoretical framework, Kolb`s ELT stages, and the studies using ELT. The next chapter will provide the research design and the methodology for this study.

Chapter 4: Methodology

4.1 Introduction

The previous chapter provided the theoretical framework underpinning this study. This chapter deals with an important pre-requisite in research which is knowing precisely the methods that are used to answer the research question best. In contrast, a sound research methodology systematically dictates how research methods and tools are used.

This study aims to contribute new knowledge about how professional nurses acquire and implement learning and skills obtained from the QI training, which intends to improve the quality of care, contributing to reaching the intended health outcomes. The objectives of the study are:

- To explore the nurses' experiences of the Quality Improvement Intervention/ learning experience.
- To find out what nurses think they learned from the intervention.
- To understand whether and how nurses implemented the QI approach subsequent to the interventions.
- To identify the implications of nurses' experiences of the current workshop for future QI interventions targeting nurses.

It is essential to state here that researchers vary in their philosophical underpinnings, beliefs, and ways of interacting and viewing their surroundings, which informs their decision on the methodology to conduct their studies. This belief system is often referred to as a paradigm.

Below is the rationale for the belief system (paradigm) that persuaded this study's choice of research methodology.

4.2 Research Paradigm for the Study

Creswell and Plano Clark (2011, p. 39) described a paradigm as “basic beliefs and values that direct the research”. Whereas (Cohen et. 2011) defines a paradigm as a way of looking at or researching phenomena, a world view, a view of what counts as accepted or correct scientific knowledge or way of working, and an accepted model or pattern. For the current study, the researcher adopted Cohen`s definition as the study seeks to explore the nurses’ experiences of the Quality Improvement Intervention to understand its impact on children and adolescents' health outcomes.

There are three fundamental paradigms, viz. positivism, critical, and interpretivism, and each can be categorised further by examining their: ontology, epistemology, and methodology. The interpretivist paradigm was the paradigm the researcher opted for as it seeks to understand the world's experiences from the participant's point of view. by drawing inferences or judging the match between the data and some abstract patterns.

According to Schwandt (1994), as cited by Andrade (2009, p. 43), “an interpretive approach provides a deep insight into the complex world of lived experience from the point of view of those who live it.” The interpretive paradigm is chosen as the current study intends to gain rich and deep insight into professional nurses` understanding of Quality Improvement in nursing care.

4. 3 The Research Design

Faryadi (2019, p. 770) defined the research design as “the way the researcher establishes a road map to the research, what type of strategy will the researcher adopt to integrate all parts of the

investigation. It dictates the type of data needed to be collected, what methodology to apply, and how the researcher will analyse data to answer the research questions." It is further explained by (Aliyu 2014) that the research design is the overall blueprint used by the researcher to find answers to the object being studied and to handle some of the difficulties that the researcher might have encountered during the research process.

There are two types of research approaches, namely qualitative and quantitative. Qualitative research, in general, refers to a study process that investigates a human social problem where the researcher conducts the study in a natural setting and builds a whole and complex representation by a detailed description and explanation as well as a careful examination of informants' words and views (Creswell, 1998; Miles & Huberman, 1994). In educational research, if a researcher pursues the understanding and experiences of a group of students like the study, the qualitative method is likely the best-suited method. The researcher adopted this approach based on the assumption that collecting assorted data would provide a better understanding of the nurses' experiences after they attended the quality improvement training.

Research methodology refers to collecting and examining information to respond to research questions or the stages, techniques, and approaches for generating and analysing data in research. It is concerned with developing knowledge and exploring it to derive meaning. This research is a case study of the nurses' experience of a Quality Improvement intervention in the uMgungundlovu district in KwaZulu-Natal. Cohen et al. (2011, p. 289) alluded, "a case study provides a unique example of real people in real situations, enabling readers to understand ideas more clearly than simply presenting them with abstract theories", which is what this current study intends to do.

The researcher used a case study to explore the experiences of the nurses who underwent the QI training and to ascertain whether they learned any new knowledge and skills to improve the clinical management of the paediatric and adolescent sub-populations. I chose to use case study design because it is “a systematic and in-depth investigation of a particular instance in its context to generate knowledge” (Rule & John, 2011, p. 4). Using a case study enabled the researcher to provide a clear sense of the participants and their experiences. The researcher was able to include a variety of data to draw considerable explanations from the case (Widdowson, 2011). Based on the data collected, the researcher could assess the nurse's experiences of the QI intervention, what they have learned, and how they have implemented the QI approach.

4.4 Setting for the Study

The research study was conducted in the five public health facilities that are situated in Msunduzi Local Municipality, which is one of the seven municipalities in uMgungundlovu District Municipality, as was explained in Chapter 1.

4.5 Target Population

The target population for this research study included nurses who attended the QI training provided by the Health Systems Trust and Unfinished Business QI facilitators. Out of forty-seven nurses who participated in the QI training, a sample of five nurses was identified.

4.6 Sampling Strategy

According to Cohen et al. (2011, p. 143), “the quality of a piece of research not only stands or falls by the appropriateness of methodology and instrumentation but also by the suitability of sampling strategy that has been adopted.” (Turner III 2010), posited that the researcher should utilise various sampling strategies such as criterion-based sampling or critical case sampling

(among many others). According to Campbel et al. (2020, p. 653), “purposive sampling is used to select respondents who are most likely to yield appropriate and helpful information.”

The five female nurses participating in the study were all employed at the health facilities in the uMgungundlovu district within the Msunduzi sub-district where the Unfinished Business project was implemented. These nurses were allocated to different health facilities to provide services at the children and adolescents section, and their facility managers preselected them to attend the QI training.

As part of the selection process, the criteria indicated five identified health facilities underperforming at various levels. Nurses were of different ages and years of experience to get rich, varied data concerning their learning experiences and whether and how they have applied the QI intervention. These health facilities were reported to be failing to reach the set healthcare targets for children and adolescents as expected by the Department of Health.

4.7 Data Collection Methods

The data collection methods used in this research include semi-structured interviews, focus group discussions, and photovoice method to allow for deeper, richer data, in which the nurses were asked (at the end of the interviews) to take photographs using their cell phones showing how they have tried to implement QI in their health facilities and challenges they have encountered that might have prevented them from doing so. Cohen et al. (2011, p. 530) state that “photographs catch the texture, the mood, the atmosphere, the `feel` of real life and different places, emotions and `flesh-and-blood-drama.”

4.8 Data Collection Technique

Data was collected from experienced and knowledgeable participants on the subject matter through semi-structured interviews, focus group discussions, and the photovoice method. Elo et al. (2014, p. 4) state that "identifying the most appropriate method of data collection is important for ensuring the credibility of content analysis." Cohen et al. (2011) endorsed that using multiple sources of data collection is a powerful way of demonstrating trustworthiness in qualitative studies.

4.8.1 Semi-structured Interviews

Semi-structured interviews are used when the researcher wants to cover certain topics in the interview and to understand the complexity of the phenomenon. Such interviews are valuable in that they allow space for the researcher to clarify participant answers and probe further into specific lines of inquiry (Nieuwenhuis, 2007) and are said to be the most preferred method of collecting data in qualitative research.

To ensure that the interview questions of the current study were clear and easily understood the interview schedule was pilot tested with a colleague who is a nurse from the neighbouring clinics who also attended the QI training but not a subject of the current study. According to Noor (2008, p. 1603) who stated that "an essential element of a pilot test is identifying ambiguities, helping to clarify the wording of questions and permitting early detection of necessary additions or omissions before the study commences." This allowed for an opportunity to adjust, and some questions were revised based on the comments and contributions from this process.

The interviews were face-to-face and took about thirty minutes per participant. The researcher explored the answers given by the participant by using probing as one of the powerful communication skills. Probes included phrases like “Tell me more” and “What is your understanding”. This led to a better understanding of the participant's experiences. Notes of any additional observations (non-verbal and affective cues) during the interview were entered in the researcher`s field journal.

4.8.2 Focus Group Discussions

According to Cohen et al. (2011, p. 81), “the reliance with the focus group is on the interaction within the group that discusses a topic supplied by the researcher, yielding a collective rather than an individual view. Focus group discussions with all the participants who participated in the study allowed for gathering data on attitudes, values, and opinions of the experiences of the QI intervention, what they learnt from it, and whether and how they tried implementing it.

The researcher opted to conduct focus group discussions. After reading all five transcripts, it was noted that some of the responses from the participants were contradictory, which created a dilemma that needed to be clarified. The focus group discussion started with each participant sharing the photographs taken in their workplaces, enabling them to communicate their views about positive or negative working conditions. Group dynamics were handled, and the researcher facilitated dialogue, encouraging participants to engage positively with the research process**.** This method of collecting data empowered participants to speak out about shared experiences and challenges they faced at the clinics in attempting to implement QI and allowed for clarifying and contextualising data from the interviews. The contradicting assertions that the researcher identified were clarified accordingly.

The researcher asked focused questions during the sessions to inspire dialogue, and an opportunity was afforded to the participants to listen to other people`s views and perspectives.

Cohen et al. (2011) posit that groups help gather data on attitudes, values, and opinions and empower participants to speak out about everyday experiences and challenges when attempting to implement QI intervention.

4.8.3 *Photovoice*

According to Wang and Burris (1997, p. 369), photovoice is a powerful photographic technique that enables people to assess the strengths and concerns of their community and communicate their views. Wang et al. (2001) emphasised that one of the scholarly theorists, Paulo Freire noted explicitly that the visual image is one tool for enabling people to think critically about their community. To allow for deeper, richer data, the researcher used the photovoice method, in which the nurses were asked (at the end of the interviews) to take two photographs using their cell phones showing how they have tried to implement the QI intervention in their clinics and challenges they have encountered that might have prevented them from doing so. Each participant forwarded their pictures to the researcher, which were printed and made available on the day of the focus group discussion.

Each participant was allowed to share and discuss their photographs, promoting dialogue about clinics` strengths and concerns. Questioning and interactions were left for later when the platform would be open for group discussions. Each participant was given a notepad and a pen to write down their questions and comments. The pieces of paper were collected post-discussion for review by the researcher and to be archived and or audited with all the research data.

The use of photographs helped to encourage dialogue amongst participants about their insights into the issues under discussion. This exercise allowed the participants to voice their points of

importance to the community in large and small groups to promote critical dialogues and produce shared knowledge.

4.9 Ethical Considerations

Guided by the University of KwaZulu-Natal policy, the proposal was sent to the UKZN Ethical Research Committee and applied for ethical approval. The committee approved the study with reference number HSS/0500/019M (Appendix A).

After the researcher gave complete information about the study's purpose and data collection methods, participants were requested to sign a written consent. The researcher held on to the principles of confidentiality, ensuring that the information not be shared, not repeated with individuals and groups outside the study parameters. Participants chose pseudonyms that were used instead of their real names. They were not required to disclose any personal, identifiable information to protect their privacy rights further. It was clearly stated on the information sheet that participation in the study was voluntary and that they could withdraw from participation at any point in the study. The choice to participate, not participate or stop participating in the research was left to the participant. They were also advised to seek clarity at any stage if they wished. The study`s potential benefits, such as adding to the body of nursing knowledge, were also explained to the participants (see Appendices E and F) in the information sheet.

According to Wang and Redwood-Jones (2001), photovoice is grounded in the essential principles that underlie the code of ethics for the health education profession: respect for autonomy, promotion of social justice, the active promotion of good, and avoidance of harm. This includes the provision of written material describing the goals of the photovoice project,

who will participate, how photographs will be used, and whom to contact for more information. Guided by the above principles, the researcher provided a letter to the health facility Operational Manager (Appendix D) and a written consent form (Appendix E) that the participants gave to subjects regarding the goal and duration of the project and establishing how the pictures will be taken.

4.10 Rigour and Trustworthiness

The notion of trustworthiness is rooted in values such as scholarly rigour, transparency, and professional ethics. According to Elo et al. (2014, p. 20), trustworthiness in qualitative inquiry is to establish the credibility of the study's findings (Lincoln & Guba, 1985). In this study, trustworthiness was ensured by adopting a multi-method approach to data collection. The researcher engaged with the nurses through face-to-face interviews and focus group discussions using photovoice to ensure credibility. This allowed participants to provide narratives about their photos in their health facilities. The researcher also considered her positionality and its potential impact on the research process.

Dependability refers to data stability over time and under different conditions, which was ensured by reporting the research method in detail to allow the reader to determine that proper research practices were followed and that future researchers could replicate the study. The researcher spent sufficient time with each participant during interviews and focus group discussions.

Conformability, which pertains to objectivity and the potential for agreement between independent parties regarding data accuracy, relevance, or meaning, was ensured through

member checking. The researcher consulted with the nurses during and after data collection and analysis to ensure the accuracy and sincerity of the transcribed data.

Finally, transferability, which refers to the potential for a level of generalisability of findings of the current study to other settings or groups, as argued by Miles (2015, p. 309) that “case study generates accounts of practice in educational research, which provide knowledge of experience that has a conceptual contribution to research understandings of practice”, was addressed by clearly describing sampling factors, geographic location, number and characteristics of participants, data collection and data analysis procedures.

4.11 Data Analysis

In research, data analysis is a crucial process that involves deriving meaning from the collected data. This study followed specific procedures during the analysis, utilising an open-ended and exploratory approach. Initially, the data collected from interviews and focus group discussions were transcribed and organised into a template that showed each participant's responses. Then, the data was repeatedly read, and relevant information was identified and colour-coded to create themes. Significant information was extracted and placed under different themes, which required analysing the content of the data in line with the research questions. Thematic analysis, the chosen analysis method, allowed the researcher to uncover themes by looking at similarities and relationships in the data, which helped answer the research questions.

Moreover, the deductive analysis was carried out by considering the Experiential Learning Theory, the theoretical framework for this study. This facilitated the analysis of the findings by

exploring the framework concepts, specifically Kolb's four experiential learning stages, in light of the research questions. The researcher drew connections and patterns by considering these stages, which were discussed using the theoretical framework. The findings were presented narratively. However, it is important to note that the approach must align with the research purpose, as Vaismoradi, Turunen, and Bondas (2013) highlighted.

Summary

This chapter discussed the research paradigm that guided the study, which is an interpretive paradigm. It also discusses the research methodology, research design, the study setting, the research population, and the sampling procedure. The instrument for data collection, validity and reliability, and the method for data collection were also described. Issues concerning ethics in research, such as consent, voluntary participation, confidentiality, and data security, were also addressed in this chapter. Lastly, the method for data analysis, management, and dissemination was described.

The following chapter will focus on data analysis, interpretation, and research findings.

Chapter 5: Analysis, Presentation, and Discussion of Findings

5.1 Introduction

The previous chapter discussed the research methodology, research design, and the study's setting. This study focuses on how nurses acquire and implement knowledge and skills from the QI training they attended to improve the quality of care and reach the intended health outcomes for a healthy nation. As mentioned in Chapter 1, the QI training aims to provide the nurses with the skills and the ability to utilise necessary QI tools to identify challenges/gaps that seem to be barriers to achieving child health outcomes.

This chapter discusses the analysis of data and presents the findings. Direct quotations from the participants will also support the presentation of the findings.

5.2 Background

The findings are based on the data collected from a sample of five female nurses, aged 27 - 62 years, who worked with children and adolescents in public health facilities and attended a Quality Improvement training programme. The interviews were audio-recorded. The researcher used pseudonyms to make participants feel protected and more comfortable when discussing their experiences.

5. 3 Data analysis

Data analysis was first done inductively and is presented in section A below, where themes and sub-themes were developed and discussed, whereas, in section B, the researcher deductively analysed data employing Kolb`s Experiential Learning Theory (ELT)ELT as the theoretical framework of choice.

5. 3.1 Section A: Inductive Data Analysis

The researcher started by analysing data inductively using direct quotes from the participants to preserve their original responses to the research questions. Four main themes emerged, each presented separately while overlapping thoughts were observed. The researcher interpreted the participants` responses, and data suggested that healthcare workers faced multiple challenges that could be barriers to providing quality healthcare to the communities. Four themes with sub-themes emerged from the data that were analysed inductively. These are tabulated in Table 5.2 below.

Table 5.2: The study themes and sub-themes

Themes	**Sub-theme**
Theme 1: QI training was a success	Facilitator`s skills – interaction and good rapport Appropriate training content covered. New skills gained by the participants
	Recognition and acknowledgement to the individuals with positive feedback
Theme 2: Lack of Institutionalisation	lack of buy-in by the facility leadership and peers;
Theme 3: Non-conducive environment for successful application of skills for the clients` benefits	Barriers encountered by nurses to implement the intervention. Barriers encountered are: - Shortage of human resources - Working space No privacy
Theme 4: Lack of sustainability	Poor programme coordination makes implementation overwhelming. No monitoring of performance, as a result, sustainability was a problem

As mentioned earlier, the QI training aims to provide the nurses with the skills and the ability to utilise necessary QI tools to identify challenges/gaps that seem to be barriers to achieving child health outcomes. Other studies that took place in different countries, for example, Thompson et al., (2005) agreed with the fact that nurses' continuous personal and professional development is crucial for providing quality healthcare services; so, the study by Williams et al., (2006), whose findings indicated a successful response to the HIV & AIDS epidemic in China post capacity building of the study participants, including effective prevention through clinical care. Likewise, Iwu and Holzemer (2013) conducted a study in South Africa that showed that nurses could improve quality care with excellent results by acquiring the necessary knowledge and skills.

5.3.1.1 Theme One: QI training was a success. Although QI training was a success, data from the study indicated mixed views as it became evident that only three out of five nurses attempted to demonstrate how to implement the QI approach to their peers. Participants' perceptions of the success of the training are presented under three areas, namely, 1) facilitator and facilitation skills; 2) curriculum or content covered; 3) transferability of skill.

5.3.1.1.1 Facilitator and facilitation skills The participant's responses show that the facilitator portrayed good facilitation skills that challenged students` preconceptions in the light of new experience, theory, and reflection and connected with all the participants, creating a conducive environment for teaching and learning. The following statements reflect participants` views.

> The facilitator was funny and made it easy for you to understand things. She was full of jokes like she made it easy for you to be interested in anything she was teaching. (Cleo)
>
> We were allowed to ask questions and express our feelings, so it is important when you are a facilitator to involve your participants (Thobza Tea.)
>
> The facilitators asked us some questions… like, what do you know about this if we did not know much, then they expanded (Nolly)

The participant's responses above show they valued good interaction and rapport with the facilitator reflecting good facilitation skills by the facilitator. This finding reflects one of the principles of andragogy presented earlier, which states that adult learners learn better in a 'climate that minimises anxiety and encourages freedom to experiment' (Koon, 2004, p.26).

5.3.1.1.2 Curriculum covered. The study participants also mentioned in their verbal course evaluation that the training content was suitably designed to assist them in carrying out clinical and quality improvement skills competently and confidently in the clinical setting. The facilitators for the QI training used different phases and approaches to learning, which are necessary to structure, plan and execute successful learning experiences. This supports Koon (2004) in that adults learn best when the content and the process of learning bear a perceived and meaningful relationship to past experience, and experience is effectively utilized as a learning resource.

5.3.1.1.3 Transferability of skill. Pre-existing knowledge and skills were confirmed using questions posed to participants respectfully. Focusing on the participant`s experience is a strategy promoted by adult educators, emphasising that all learning

> starts with the learners` existing knowledge. Feedback on the learners` effort is one of the most crucial phases.

Wiseman, (2022); Merriam, (2008); Taylor and Hamdy, (2013) argue that learners enunciate newly acquired knowledge and check it against their peers and facilitators. Data presented agree with the above view on knowledge, and the following views from participants show this:

> We, as the participants, using our previous knowledge, like giving examples when we were asked questions (Reebs)

> We were allowed to interact with each other and the information we would use when returning to work. We gained experience from other peoples` experiences (Thobza Tea)

> When you gave an answer that they were not expecting, the facilitators had a way of correcting you without humiliating you in front of other participants … they involved us in any way they could (Nolly)

The above indicates that participants were engaging in collaborative activities such as participating in group discussions and demonstrating their newly acquired knowledge and skills to the audience. This is supported by Kroon (2004, p.18) in his argument that adults learn best when they feel the need to learn and have input into what, why, and how they will learn.

According to Horwood et al. (2009), it is important that after training, competent mentors provide clinical mentoring and support supervision to the healthcare workers to whom tasks are allocated. When analysing data, the researcher discovered that all five nurses who attended the training could use the QI tools. However, it was disappointing to learn from the data that only three attempted to demonstrate how to implement the QI approach to their peers. The transfer of knowledge and development of necessary skills are essential and have a good effect on the provision of good healthcare, as was stressed by the study participants. When providing

specialised care, the nurses' abilities and skills need to be nurtured to ensure high-quality healthcare and the safety of patients (Swart et al. 2015; Horwood et al. 2009; Thompson, 2005).

The study participants reported that they were empowered to confidently provide accurate, child-friendly, and age-appropriate information to children and their caregivers in an engaging, fun, and non-threatening way. This is reflected by the quotes below.

> I now know how to interact politely with my patients because of this training, especially the mothers (Nolly)
>
> Created a corner where children come and play with the toys provided, making the clinic environment conducive to children (Cleo)

Figure 5.1: Child-friendly spaces

Pictures from photovoice of a child-friendly corner where children are given health education on the diseases` onset and treatment, disclosure counselling, and a space to play.

> I have never worked with children, and I have never seen how vulnerable they are, so being able to play with them go down to their level needs a skill that I gained during the workshop (Thobza Tea)
>
> In our facility, we managed to start support groups for children (Bongs)

> The number of HIV-tested children increased in my facility. We reached our targets for the ages 0 – 19 years when the intervention commenced, and there was close support-supervision by the mentor visiting the clinic (Cleo)

In the few paragraphs above, the researcher discussed and provided perceptions of the participants on the success of the training. Four of the five participants mentioned areas where the training can be enhanced. According to the responses by the participants, extensive practical training was required to improve their skills in quality improvement as well as paediatrics and adolescents' clinical management. They also mentioned that even though they were provided with the skills to communicate with the children and their caregivers, they felt that the duration of training was too short and needed to be extended to at least two weeks. The following statements evidence some participants` frustrations and anxieties:

> Sometimes the workshop needs a practical part because as much as we can do theory, we need to include the practical aspect of it. For practical training, maybe bringing people who have been through situations perhaps might help (Thobza Tea)

> Maybe we were to have another mini workshop to develop our skills because everything has faded away (Cleo).

> Being trained on quality improvement should not be a once-off thing … for me, maybe even once a year to refresh ourselves on the QI practical skills (Bongs)

In support of the above, Georgeu et al. (2012) argue that the nurse`s clinical confidence in implementing services is influenced by practical training in clinical support and supervision that can be provided on or off-site.

5.3.1.2 Theme two: Lack of Institutionalisation in chapter one, it was mentioned that QI training was to be institutionalised. Scheirer et al. (2011), when defining the term institutionalisation, stated that it could reflect a larger set of accommodating changes within an organisation in response to implementing innovation. In the current study, the process of institutionalisation was to be driven by the facility manager. However, data from this study portrayed that the Quality Improvement intervention was not institutionalised in all the health facilities where the study was conducted. According to the study participants, they found it difficult for the new approach to be accepted, adopted, and eventually institutionalised in their places of work. All five study participants posed that they became solely responsible for implementing the QI intervention due to the lack of buy-in from facility managers.

One participant stated:

> … this newly introduced approach became ‘my baby’ (Bongs).

Another participant, showing frustration and banging the table showing to be despondent during the individual interview, stated that:

> … sometimes children are not consulted, or support groups are not being taken care of just because the one that attended the workshop is not there. Colleagues think that it is [your] the one who attended training`s responsibility and must attend to children and their caregivers (Thobza Tea)

All participants alluded to the lack of supervision by the health facility manager, which prevented them from rendering quality healthcare. Relating to the fear of being the only person to push for change in the workplace, one interview participant stated:

> The biggest challenge with learning something new as a nurse clinician is returning to the facility and introducing any new approach to be adopted … the challenge that one has is actually to be left alone with this huge task…it feels like it is 'gonna be your baby forever' (Bongs)

The above is contrary to the findings from studies conducted by Needleman & Hassmiller (2009), Chassin & Leob (2011), and Armstrong et al. (2014) that suggest that the role of leadership is crucial for good health practices to be customised and adopted. These suggest that efforts to institutionalise new practices should be focused on creating opportunities for the implementers to practice them. As discussed in Chapter 1, the nurses who underwent the QI training were to be exposed to post-training technical support through mentoring sessions to be provided weekly for two months. It was envisaged that nurses should have learnt the skills and knowledge of quality improvement and its implementation by the end of the eight mentoring sessions. The facility manager was expected to embrace the innovation and allocate time to the QI-trained team member to allow the opportunity to transfer skills to others.

Data from the study participants suggest that efforts to institutionalise new practices should be focused on creating opportunities for people to try them. During the focus group discussions, the study participants had a robust interaction regarding the post-training mentoring sessions which were supposed to be conducted as part of the technical support over three months. Below are direct quotes that show that this did not happen.

> Everything just dissolved after the QI training, and we do not even know where the external mentor disappeared to; we guessed that the project ended (Cleo)

> One of the facilitators and other colleagues from the project visited the facility on one occasion to provide mentorship to all those that were trained (Nolly)

> One project member who was visiting the facility and doing well with the parents and their children was moved from the clinic to work somewhere else…young people in my clinic were saying…this nurse used to help us a lot (Reebs)

The above shows that lack of support from the health facility managers and inadequate mentorship by the course facilitators have negatively impacted QI intervention implementation. This is evidenced by Chassin and Leob (2011), who posited that sustainable and consistently excellent quality healthcare could be achieved through leadership commitment and robust adoption of improvement tools and methods.

5.3.1.3 Theme 3: Non-conducive environment for successful application of Quality Improvement intervention.

When exploring the complexity surrounding the health facilities and lived experiences of the healthcare workers during the focus group discussions, several challenges were mentioned, including limited human resources. When responding to whether they could implement anything related to the QI approach in their health facilities, they unanimously indicated that they could not do so. Data from this study indicate that scarcity of human resources in all the health facilities is one major challenge that impacts the implementation of the QI intervention.

During focus group discussions, each study participant was allowed to share the photographs they took as part of the photovoice data generation, promoting dialogue amongst peers about health facilities` status regarding factors that contributed towards the inability to implement the QI intervention post-training. Figure 5.2 shows a picture of a teenager walking from one

facility to another where he could get counselling services due to a lack of resources in one facility.

Figure 5.2: Teenagers` clinics situated apart.

A picture from a photovoice of a teenage boy seen walking from one facility to another where he could get a Social Worker to provide disclosure counselling services.

Written below are statements revealing the meaning embedded in the pictures the participants took in their health facilities:

> Shortage of staff because others resigned and others were moved to other clinics, and there were no replacements (Nolly)
>
> Children do not even know why they are taking medication and what it is for; nobody is opening up to them … we need enough Social Workers in our facilities as currently, they are stationed at the clinic, which is situated a few meters away from the Teens Clinic (Bongs)

A child-friendly space/corner is a strategy taught during the QI training specifically dedicated to children under 12 years of age, providing a conducive environment that promotes disclosure. Due to the need for more space in some facilities, the equipment dedicated to implementing

such a strategy is being used for any other course besides the one intended. Portraying the situation in one of the facilities, one of the participants stated:

> "There is no space, you cannot even move around, and you cannot even breath, since there is no space, so ke we used the furniture for the child-friendly corner even to elevate our feet when tired later in the day" (Cleo)

Figure 5.3: Furniture for a Child –friendly space/corner

A picture from Photovoice shows limited space at her health facility and the equipment dedicated to children is used as a table to place her bag.

Another challenge was limited working space, resulting in them needing help to provide quality care to young people, the mothers/caregivers, and their children. According to Nolly, one of the participants indicated that some of the day`s activities are implemented from the veranda of the park home, which does not give enough space for the mothers and their babies.

> In my department, we need to have a dedicated child-friendly space to provide health education to the mothers and the children, which is currently impossible as all patients are waiting in the same limited space. (Nolly**).**

Figure: 5.4: Park home as a consulting room for children and adolescents.

A picture from Photovoice depicts a park home used as a space for consultations for mothers/caregivers and their children.

Young people are not happy to be in the same room with adults and other patients … they need their own dedicated space and not long queues (Reebs)

All patients are waiting in the same area irrespective of whether it is a child or adult patient (Nolly)

Figure 5.5: Waiting area for the adults and teenagers.

A picture from Photovoice depicting a congested health facility waiting area with adults and teenagers queuing to be registered.

According to the study participants, infrastructure in most health facilities is challenging. There were reports of health facilities having limited space, so patients` fundamental right to privacy is compromised. Two to three healthcare workers share one consulting room providing different services.

Figure 5.6: Consulting room shared by two nurses.

A consulting room is pictured from a photovoice that is shared by two nurses providing different services at the same time.

During group discussions, the participants discussed another common challenge in all the facilities. In the waiting areas where patient history is taken and vital signs are checked, the mothers carrying their babies sit very close to each other.

Figure 5.7: Waiting area for mothers and babies.

Picture from Photovoice portraying a tiny waiting area that is used by the mothers carrying their babies with limited space for any movement, even for the access of essential information from the mothers.

> Unable to ask confidential questions about family members, limited space, and there is no privacy (Nolly)

> No room. You cannot even move around, breathe and ask confidential questions about family members (index clients) – there is no privacy.

> Teenagers are unhappy being in the same room with adults and other patients. They cannot express themselves freely about their encounters the way they wish to (Reebs)

The above demonstrates common barriers to implementing the QI intervention that the participants experienced, ranging from a shortage of human resources, limited working space, and no privacy, compromising the patients` confidentiality rights. This concurs with what was highlighted by Doherty et al., (2009) that scarcity of human resources in some rural areas in South Africa was found to be one of the health systems strengthening barriers to providing good clinical management to children. The World Health Organization states that to achieve the best health outcomes, sufficient staff should be fairly distributed, competent, responsive, and productive World Health Organization (2010 p. vi).

5.3.1. 4 Theme 4: Lack of sustainability

Factors derived from the data associated with the need for sustainability of the new approach are now discussed. Scheirer et al. (2011, p. 2060) postulated that "sustainability is the continued use of program components and activities for the continued achievement of desirable program and population outcomes." The challenge faced by low and middle-income countries, including South Africa, is maintaining or supporting a continuous process over time, as mentioned by Iwelunmor et al. (2015) stating that sustainability of long-term quality health interventions is a

challenge, particularly for public health interventions as they are provided through donor-funded projects. Meanwhile, Webster et al. (2011, p. 315) stated that in working towards sustainability, "governments worldwide will need to meet service demands primarily through improvements in system efficiency and more effective utilisation of existing resources."

When interpreting data from the current study, the researcher discovered that sustainability is bound to be compromised as individuals and communities are provided with 'vertical' and 'fragmented' health services in a 'silo' manner as part of the Unfinished Business project scope instead of the provision of an organisation`s integrated, comprehensive package of care.

The facility teams needed to accommodate changes focusing on the innovations using an outcome-based approach as stated by Webster et al. (2011), "QI approach, using learning networks to teach simple data-driven methods for addressing system failures, with increased training and resource inputs, can assist organisations in reaching universal coverage targets quickly". The voices from the participants portraying their frustration were as follows:

> … pressure from above (Programme Managers) … workload implementation rather than testing the change ideas…. (Thobza Tea).

> … no project buy-in because peers are also focusing on other things rather than the new approach (Bongs)

Another participant concern was the challenge of prioritising basic healthcare programmes against funded projects. This was voiced out as follows:

> … focus is on the routine activities and less attention to the new QI approach … what one was trained to disseminate is ignored … you [QI trained person] on your own with the new approach, and when you leave, it vanishes (Bongs)

The donor effect, evidenced by interventions focusing on what the funder proposes instead of the actual local epidemiology challenges, is one of the causes of unsustainable programmes.

In one of the five targeted facilities where the project was implemented, the project team conducted support supervision and mentorship per the project outline. As a result, a slight improvement was noticed. The facility reached its monthly targets where the number of 0 – 19 years HIV tested children increased. However, due to a lack of proper and continuous mentoring, the facility could not sustain its good practice, as one of the participants mentioned:

> Since Ms Z (mentor from the supporting partner) stopped visiting the clinic, nobody took over, and the QI approach died ... we could not even access the QI tools that we were working with, and everything went back to square one (Cleo)

> Any programme becomes effective if implemented at a whole-system level rather than some independent projects. The approach should be long-term and aim at transforming and strengthening health systems. As part of the team that was mandated to lead the implementation of the Unfinished Business PEPFAR-funded project, the researcher is aware of the potential disadvantages of funded projects in the sense that funders have their priorities and often prescribe the project's scope and life span. Their requirements sometimes clash with the needs of that community.

In the next section, the researcher presents the deductive analysis employing Kolb`s Experiential Learning Theory as the theoretical framework of choice.

5.3.2 Section 2 - Deductive data analysis using David Kolb`s Experiential Learning Theory (ELT)

This study employed a deductive analysis using David Kolb's Experiential Learning Theory (ELT) to understand how participants experienced Quality Improvement (QI) training for child and adolescent health. The study began with an inductive analysis, where themes and sub-themes were developed and discussed. In contrast to inductive data analysis, this section presents data analysis using the ELT framework by Kolb's four-part learning cycle: concrete experience, reflective observation, abstract conceptualisation, and active experimentation (Kolb and Kolb 2005). This theory was chosen for the study as the participants were learners who sought to avoid learning in a static environment with a passive transmission of information. The ELT cycle, as discussed in Chapter 3, indicates that the learner should have substantial experience with the content that is taught, reflect on the experience, compare it to previous experiences, develop new ideas based on reflection and comparison, and finally act on the latest ideas formed by experimenting in an experiential setting (Lawrence, 2006; Senok et al. 2021).

5.3.2.1 Concrete Experience.

Concrete experience is the initial stage in the ELT cycle, indicating that the learner has solid experience with the content taught through feeling and doing Kolb (1984); Lawrence (2006); Senok et al. (2021). During this phase, attention is drawn from participating or observing individuals, which can lead to goal-setting behaviours and concepts of self-regulated learning Deslauriers et al. (2016). In the study, all five participants were trained professional nurses with previous experience in basic and clinical sciences. Although they had the experience, knowledge, and practical skills necessary for providing healthcare, applying the QI approach

in caring for children and adolescents appeared to be a new concept to all of them. The QI training provided the participants with hands-on experiences in child health in an environment safe and guided by mentors. As a result, the participants began to appreciate how the new experiences with the new concepts raised self-awareness regarding their knowledge and lack thereof. This learning included proper planning and the importance of teamwork. They got direct experience in communication skills, planning, and making follow-up activities on psychosocial support, which they do daily at work. As mentioned in Chapter 3, at this phase, the learner portrays their involvement with other learners in everyday contact. This phase talks about trying or involving in "doing". During that time, the individual does not reflect on anything but intends to reflect on it.

5.3.2.2 Reflective Observation

Reflective observation is the second stage in Kolb's cycle, in which learners develop observations about their own experience, reflect on the new experience, and compare it to prior experience Kolb & Kolb (2005); McCarthy (2016). During this phase, it is important to have a facilitator or mentor who consistently asks subject-related questions that initiate communication, as the learners benefit from such interactions during training. Once a learner gains new knowledge, the next step is to merge that knowledge with their existing experience and design ways to apply it. Meaningful gaps observed between experience and understanding are of importance during this stage.

The facilitators in the present study had focused reflective dialogues with the participants, who became more reflective of their intellectual processes and were thus reported to be able to communicate better with each other and clarify some questions. As a result, QI training was a

positive learning experience as it taught some participants how to give their opinions during sessions and beyond and improved their communication ability.

5.3.2.3 Abstract Conceptualization

The third element in Kolb's (1984) model is abstract conceptualisation. During this stage, learners form abstract concepts or generalisations that relate to their experiences (Kolb & Kolb, 2005; McCarthy, 2016).

The participants in the present study reported being more reflective of their intellectual processes and were thus better able to communicate with each other and clarify some questions. This is reflected by the quotes below.

> I now know how to interact politely with my patients because of this training, especially the mothers. (Nolly)

> Created a corner where children come and play with the toys provided, making the clinic environment conducive to children. (Cleo)

They also observed that QI training was a positive learning experience as it taught them how to give their opinions during sessions. One participant introduced a plan for the medication to be delivered if a patient misses appointment dates. One other participant mentioned that started to conceptualise the need for patient privacy, which was compromised before the QI training. In chapter 3 it was discussed that during this phase, participants use listening skills, paying attention, distinguishing the differences, and applying ideas that might help find results and

share them with others. At this stage, learners understand situations and ideas from different points of view. They depend on objectivity, patience, and careful judgment but do not essentially take any action.

5.3.2.4 Active Experimentation

The fourth stage of the ELT model, active experimentation, involves testing the latest ideas in an experiential setting, as mentioned by Kolb (1984), and cited by Senok et al. (2021). The learner needs to explore and experiment with the knowledge gained in the previous stages to create an understanding of the concepts. Through this process, the learner develops a further understanding of the subject; this stage allows for extended learning opportunities. In the context of the current study, active experimentation was performed by the participants through the development and implementation of a QI project in their respective healthcare settings.

The participants could apply the QI approach to their work environment, a significant part of their experiential learning. They developed action plans to improve the quality of the care of children and adolescents and established a culture of teamwork and communication with their colleagues. The participants indicated that they could regularly assist the team with managing adherence and refills for their patients. They also now have a feedback system that alerts them of any critical changes or deviations, which allows them to act immediately. One other participant mentioned that they had achieved a 15% increase in immunisation coverage for children under the age of five.

This means the QI project implementation phase allowed the participants to experiment with the new concepts and knowledge they acquired through the training. They were able to see the

results of their work and evaluate the effectiveness of their interventions, which provided them with a sense of accomplishment and encouraged them to continue applying QI principles in their practice.

However, data collected from some participants suggest that implementing the QI intervention became impossible due to the organisational (health systems) and structural hindrances. The common barriers to implementing the QI intervention that the participants in most facilities experienced were a shortage of human resources, limited working space, and no privacy-compromising the patients` rights to confidentiality. Other hindrances that prevented them from applying the newly learned QI intervention included the need for more institutionalisation and sustainability of the QI intervention.

In conclusion, using Kolb's ELT framework, the deductive data analysis allowed for a comprehensive understanding of the participants' experiential learning journey. The ELT model provided a theoretical basis for the study, and the findings illustrate how the four-cycle stages were present in the participants' learning experiences. The participants could apply the QI approach to their work environment and improve the quality of care provided to children and adolescents. The study highlights the importance of experiential learning in healthcare and the need for ongoing professional development to improve the quality of care. The above assertions are in line with Kolb and Kolb (2005) and Tarlit (2016) as they identified the core tenets of experiential learning in chapter three, and these are: -

> Learning is viewed as ongoing and promotes student acknowledgement of previous informal and formal learning; grounded in inexperience, which implies introducing student learning experiences at an appropriate pace and progress and challenges student

preconceptions in light of new experience, theory, and reflection; learning involves mastery of all four learning modes that provide students with opportunities to experience, reflect, theorise and apply; a holistic process of adaptation by addressing students` feelings, perceptions thoughts, and actual behaviour through the experience.

Summary

This chapter analysed and discussed the qualitative data using inductive and deductive approaches. The discussion reflected that improved outcomes through QI initiatives were observed, the nurses` experiences with the Quality Improvement training proved successful, and adult learning principles were adhered to. However, the course layout and the mentoring processes did not add much value to the sustainability of the developed skills required to improve paediatrics and adolescents` clinical management. It was discovered that the significant barriers to providing good clinical management of paediatrics and adolescents could be factors like lack of institutionalisation of the QI intervention and a non-conducive environment.

This study's results show that the QI intervention was aligned with Kolb's ELT stages and allowed for experiential learning to take place. Using ELT allowed students to learn at each stage. The QI training allowed the participants to learn from and about one another and work together towards achieving the programme goals.

The next chapter, chapter 6, summarises the findings that emerged from the study, and appropriate recommendations are proposed. Limitations of the study will also be highlighted.

Chapter 6 – Conclusion

6. 1 Introduction

In the previous chapter, the qualitative data were analysed inductively and deductively. This chapter summarises the findings and presents the limitations of the study. In addition, recommendations are made.

The study was set to explore the nurses' learning experiences in a Quality Improvement intervention in five of the selected Primary Health Clinics in uMgungundlovu in KwaZulu-Natal. The general theoretical literature on the subject of children and adolescents living with HIV and specifically in the context of South Africa is a challenge the country is experiencing concerning the burden of diseases, especially HIV and TB epidemics. All children in SA infected with HIV should receive Antiretroviral Therapy (ART), but only 30-50% of children under 15 are receiving it (UNAIDS, 2015). It is not entirely clear why this is the case. In an attempt to find out whether healthcare worker capacity building is the main challenge, the study sought to answer the following questions:

1. What are the nurses' experiences of the QI intervention?
2. What do nurses think they learned from the intervention?
3. What factors influenced whether and how nurses implemented the QI approach?
4. What are the implications of the current QI workshop for future QI interventions targeting nurses?

6. 2 Empirical Findings

Following the identification of the research problem, Chapter 2 reviewed the literature on the key challenges in the HIV management of children and adolescents who attend the public health system. Specifically, the researcher established why nurses who were trained in quality improvement do not implement knowledge and skills to improve the quality of care and reach the intended health outcomes contributing to a healthy nation. The review highlighted important key issues needed for the quality of healthcare to improve, and health systems should be strengthened when dealing with the health outcomes contributing to a healthy nation.

Literature also highlighted how the world has tried to improve healthcare quality, especially for children and adolescents, despite all the different initiatives by the health directorate.

6.3 Responses to the research questions

Research Question 1 - what are the nurses' experiences of the QI intervention? The study results indicate that the nurses had a mixed experience with the QI intervention. They reported satisfaction with the training, including the delivery method and the knowledge they acquired. The opportunity to share their experiences during the sessions was also appreciated. However, the implementation of the approach was challenging due to constraints related to organisational culture and infrastructure. The nurses believed having mentors to support them during implementation and post-training reminders would have been beneficial.

The nurses identified the need for more practical training to enhance their skills in quality improvement and paediatric and adolescent clinical management. Despite being taught how to communicate with children and their caregivers, they considered the training duration insufficient and suggested extending it to at least two weeks.

Research Question 2 - What do nurses think they learned from the intervention?

The study findings revealed that participants' knowledge and skills were developed as they engaged in collaborative activities such as participating in group discussions and demonstrating their newly acquired knowledge and skills to the audience. The study participants reported that they were empowered to confidently provide accurate, child-friendly, and age-appropriate information to children and their caregivers in an engaging, fun, and non-threatening way. This assisted them in providing specialised care.

Research Question 3 - What factors influenced whether and how nurses implemented the QI approach?

The study revealed various factors that influenced how nurses implemented the QI approach. One factor is the lack of supervision by the health facility managers. Another factor is the lack of support from the health facility managers and inadequate mentorship by the course facilitators have contributed negatively to QI intervention implementation. Another contributory factor was the design, project scope, and training model used in the QI training. One last factor was: the shortage of human resources, limited working space, and no privacy, compromising the patients` confidentiality rights.

Research Question 4 - What are the implications of the current QI workshop for future QI interventions targeting nurses?

The findings of this study have several implications for future Quality Improvement (QI) interventions in healthcare. The study revealed that QI interventions to improve healthcare worker skills should be designed to be sustainable and institutionalised within the healthcare system. This can be achieved through ongoing training, mentoring, and support, as well as incorporating QI into routine healthcare activities.

Secondly, the study showed that QI interventions should be context-specific, considering the unique challenges and constraints of the healthcare setting. This means that QI interventions should be tailored to the specific needs of the healthcare workers and patients and the available resources.

Thirdly, the study emphasised the importance of involving healthcare workers in designing and implementing QI interventions. This can be achieved through participatory approaches that engage healthcare workers in problem identification, analysis, and solution generation.

Finally, the study highlighted the need for QI interventions to be evaluated regularly to assess their impact on healthcare outcomes. This evaluation should involve qualitative and quantitative methods to provide a comprehensive understanding of the effectiveness of the QI intervention.

In summary, future QI interventions should be sustainable, context-specific, participatory, and regularly evaluated to ensure their effectiveness in improving healthcare outcomes.

6. 4 Theoretical Implication

In this section, the researcher briefly considers whether the research study findings influenced the understanding or application of knowledge in the subject. As indicated in Chapter 2, Kolb`s Experiential Learning Theory provided a solid theoretical underpinning for the current study. The current study results show that the QI intervention was aligned with Kolb's ELT stages and allowed for experiential learning to take place. Using ELT allowed participants to learn at each stage. Even though it happened differently, they learnt from and about one another and worked together to achieve the programme's goals.

Limitations of the study

This research explores whether the training received benefited the nurses or not with skills to improve quality and health outcomes. The findings cannot be generalised since the situation at other health institutions may differ. In hindsight, since one of the barriers to implementing the QI intervention has been identified as the lack of support by the health facility leadership, it would have been ideal to have identified a healthcare manager who was once trained in the same quality improvement. Their inclusion in the study could have added value toward discerning the perspective from a management viewpoint.

As the researcher was directly involved with the participants as the provider of technical support in the healthcare space and also a coordinator of the QI training, the researcher was conscious of her position and the impact she could have on the research processes. Reflexivity in the form of reflective journals was implemented, and reflective discussions were held throughout the research process. While bias could have crept in during the data analysis of the findings, the reflexivity of the researcher played a crucial role in avoiding biases.

Using the Experiential Learning Theory (ELT) as a theoretical framework facilitated the understanding of learning processes but did not adequately address systemic issues. This limitation pertains to the methodology chosen for the study, specifically regarding the framework's ability to address all aspects of the phenomenon under investigation comprehensively.

Recommendations

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

1. Improving the layout and mentoring processes of Quality Improvement training: The study found that the training structure and mentoring processes did not add much value to the sustainability of the developed skills required to improve paediatric and adolescent's clinical management. Therefore, it is recommended that the KZN-DoH and UB project revise the training structure and mentoring processes to make them more effective.

2. Institutionalisation and sustainability of the QI intervention: The study identified a lack of institutionalisation and sustainability of the QI intervention as one of the significant barriers to providing good clinical management of paediatric and adolescent clients/patients. Therefore, it is recommended that the KZN-DoH and UB project focus on developing sustainable interventions that can be institutionalised and integrated into the existing health systems.

3. Creating a conducive environment: The study revealed that a non-conducive environment hinders good clinical management of paediatric and adolescent clients/patients. Therefore, it is recommended that the KZN-DoH and UB project create a more conducive environment that supports the QI interventions and improves healthcare quality.

4. Feedback and monitoring: To improve learning and facilitate optimal learning, it is recommended that the KZN-DoH and UB project provide feedback on the effectiveness of the nurses' learning efforts and monitor the progress made towards achieving the set targets. This will help identify areas that require improvement and enable healthcare workers to adjust their strategies accordingly.

5. It is recommended that further research be conducted to explore the experiences of other healthcare workers and the effectiveness of other interventions aimed at improving the quality of healthcare for paediatric and adolescent HIV patients. Such research should also include the perspectives of managers at health facilities. This will help in identifying best practices and developing more effective interventions.

6. Further research utilising alternative theoretical frameworks is also recommended to address systematic issues on the implementation of Quality Improvement practices. For example, a framework like the Socio-Ecological Model (SEM). Mahmudiono et al. (2019) could provide future researchers with a more comprehensive understanding of the various factors (individual, interpersonal, organizational, community, and policy) which influence nurses' learning experiences and implementation of QI practices.

Conclusion

In conclusion, the provision of Quality Improvement training to improve the skills of healthcare workers is significant to improve healthcare quality, thus contributing to good health outcomes. Discussions and the findings of this study reflected that the nurses` experiences with the Quality Improvement training proved successful, participants indicated clearly that learning did take place, the quality improvement skills were grasped, and adult learning principles were adhered to. However, the training structure and the mentoring processes did not add much value to the sustainability of the developed skills required to improve paediatric and adolescent clinical management. It was discovered that the significant barriers to providing good clinical management of paediatric and adolescents could be factors like lack of institutionalisation and sustainability of the QI intervention and a non-conducive environment.

According to Viljoen (2014), adults learn by choice as learning is voluntary, and motivation to learn is suppressed when an adult is forced to acquire knowledge, leading to resistance to change. This assertion however does not apply to the current study as participants were preselected by the health facility Operational Managers to attend the QI course and data indicated that they fully participated and gained new knowledge and skills despite the lack of incentives.

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Figures

Tables

Appendices

Appendices.

Appendix A- 1

Provisional Approval by the Humanities and Social Sciences Research Ethics Committee – HSSREC. Protocol Reference Number: HSS/0500/019M

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

11 November 2019

Ms Thandeka Khumalo (204524280)
School of Education
Pietermaritzburg Campus

Dear Ms Khumalo,

Protocol reference number : HSS/0500/019M
Project title: Learning to care: Nurses' experiences of learning in a quality improvement intervention in uMgungundlovu District, KwaZulu-Natal, South Africa

Provisional Approval – Expedited Application

This letter serves to notify you that your application received on 04 June 2019 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and Provisional Approval have been granted subject to the following:

- Gatekeeper permission letters obtained

Kindly forward your letter(s) through to the Ethics Section, Research Office in order to process.

This approval is granted provisionally and the final clearance for this project will be given once the above-mentioned condition(s) has been met. Note that data collection may not proceed until final ethics approval letter has been issued after the remaining conditions have been met and approved by the research ethics committee.

Yours faithfully

[redacted]

Professor Urmilla Bob
University Dean of Research

/ms

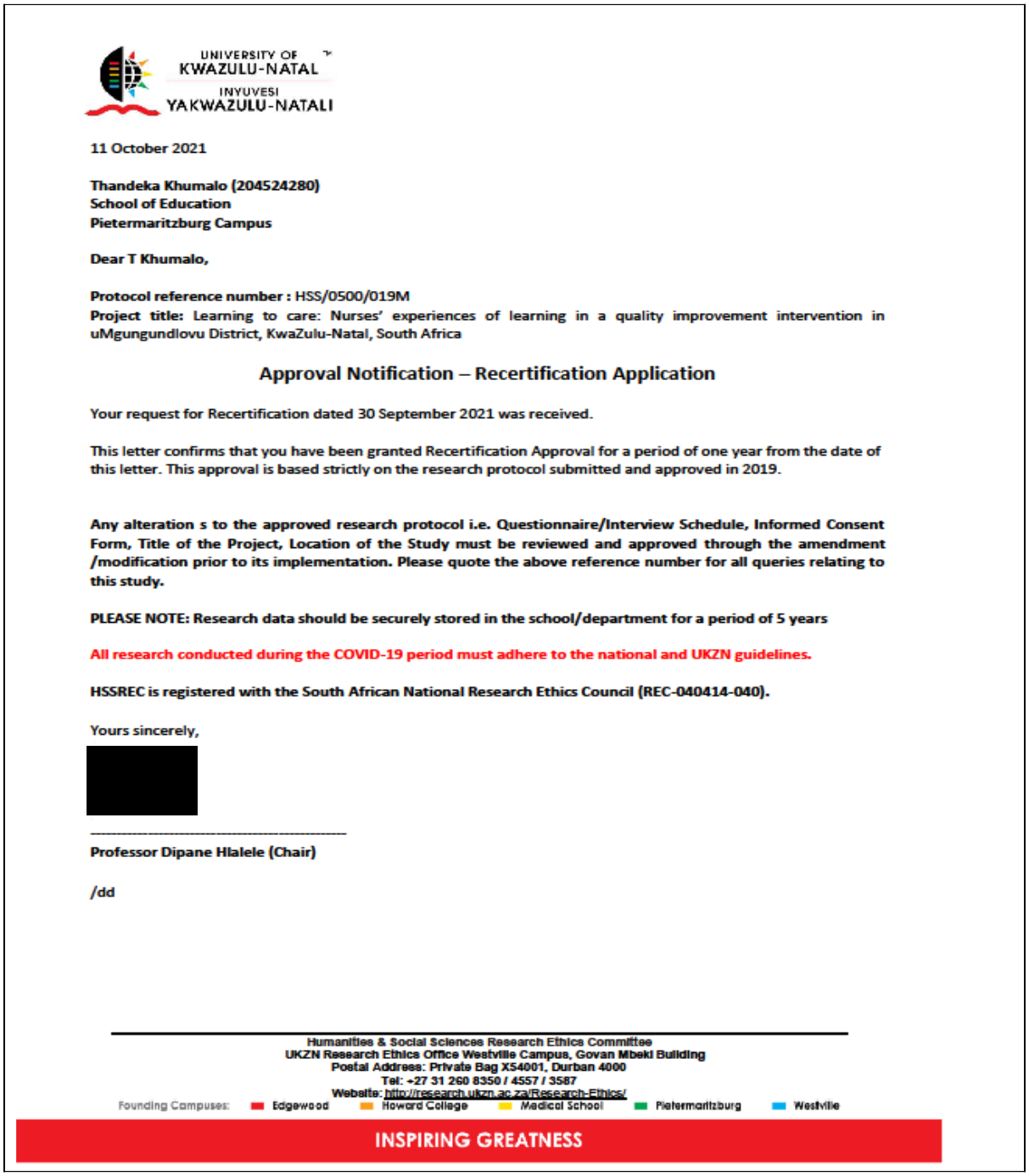
Humanities & Social Sciences Research Ethics Committee
Dr Rosemary Sibanda (Chair)
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Website: http://research.ukzn.ac.za/Research-Ethics/

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

INSPIRING GREATNESS

Appendix A- 2

Approval Notification – Recertification Application Approval by the Humanities and Social Sciences Research Ethics Committee – HSSREC. Protocol Reference Number: HSS/0500/019M



UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

11 October 2021

Thandeka Khumalo (204524280)
School of Education
Pietermaritzburg Campus

Dear T Khumalo,

Protocol reference number : HSS/0500/019M
Project title: Learning to care: Nurses' experiences of learning in a quality improvement intervention in uMgungundlovu District, KwaZulu-Natal, South Africa

Approval Notification – Recertification Application

Your request for Recertification dated 30 September 2021 was received.

This letter confirms that you have been granted Recertification Approval for a period of one year from the date of this letter. This approval is based strictly on the research protocol submitted and approved in 2019.

Any alteration s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study must be reviewed and approved through the amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

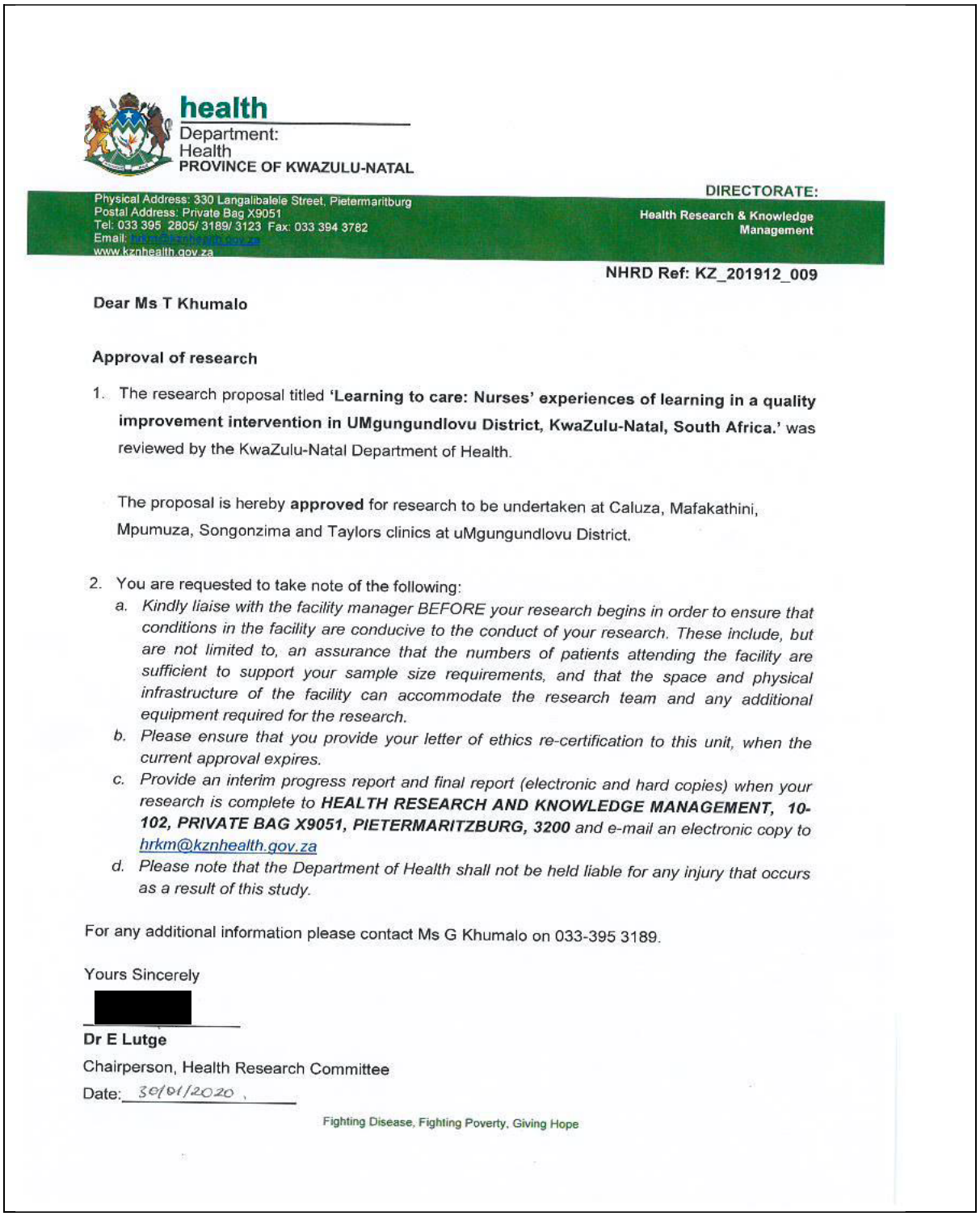
/dd

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Tel: +27 31 260 8350 / 4557 / 3587
Website: http://research.ukzn.ac.za/Research-Ethics/
Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

INSPIRING GREATNESS

Appendix B

Approval Notification – Department of Health, KwaZulu-Natal – Health Research & Knowledge Management. NHRD Ref: KZ_201912_0



health
Department:
Health
PROVINCE OF KWAZULU-NATAL

Physical Address: 330 Langalibalele Street, Pietermaritburg
Postal Address: Private Bag X9051
Tel: 033 395 2805/ 3189/ 3123 Fax: 033 394 3782
Email: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

DIRECTORATE:
Health Research & Knowledge Management

NHRD Ref: KZ_201912_009

Dear Ms T Khumalo

Approval of research

1. The research proposal titled **'Learning to care: Nurses' experiences of learning in a quality improvement intervention in UMgungundlovu District, KwaZulu-Natal, South Africa.'** was reviewed by the KwaZulu-Natal Department of Health.

   The proposal is hereby **approved** for research to be undertaken at Caluza, Mafakathini, Mpumuza, Songonzima and Taylors clinics at uMgungundlovu District.

2. You are requested to take note of the following:
   a. *Kindly liaise with the facility manager BEFORE your research begins in order to ensure that conditions in the facility are conducive to the conduct of your research. These include, but are not limited to, an assurance that the numbers of patients attending the facility are sufficient to support your sample size requirements, and that the space and physical infrastructure of the facility can accommodate the research team and any additional equipment required for the research.*
   b. *Please ensure that you provide your letter of ethics re-certification to this unit, when the current approval expires.*
   c. *Provide an interim progress report and final report (electronic and hard copies) when your research is complete to* ***HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200*** *and e-mail an electronic copy to hrkm@kznhealth.gov.za*
   d. *Please note that the Department of Health shall not be held liable for any injury that occurs as a result of this study.*

For any additional information please contact Ms G Khumalo on 033-395 3189.

Yours Sincerely

[redacted]

Dr E Lutge

Chairperson, Health Research Committee

Date: 30/01/2020

Fighting Disease, Fighting Poverty, Giving Hope

Appendix C

Approval Notification – Department of Health, KwaZulu-Natal – uMgungundlovu Health District Office

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

UMGUNGUNDLOVU DISTRICT OFFICE

DISTRICT MANAGERS OFFICE

Enquiries: Mrs. S.W MBAMBO
25th November 2019

TO: Ms Thandeka Khumalo
01 Surrey Lane
Howick
3290

Dear, Ms T. Khumalo

RE: REQUEST FOR THE PERMISSION TO CONDUCT AN EDUCATIONAL STUDY WITH THE PROFESSIONAL NURSES IN THE HEALTH FACILITIES IN UMGUNGUNDLOVU DISTRICT – MSUNDUZI SUB-DISTRICT

I have pleasure in informing you that permission has been granted to you by UMgungundlovu Health District to conduct an Educational study with the Professional Nurses in the Health facilities in uMgungundlovu District – Msunduzi sub-district

PLEASE NOTE THE FOLLOWING

1. Please ensure that you adhere to all policies, procedures, protocols and guidelines of the Department of Health with regards to this research.
2. This research will only commence once this office has received the full ethics approval and the confirmation from the Provincial Health Research Committee in the KZN Department
3. Please ensure that this office is informed before you commence your research.
4. The District Office will not provide any resources for this research.
5. Please ensure that Service delivery is not interrupted during your research.
6. You will be expected to provide feedback on your findings to the District Office.

Thank you,

[redacted]

MRS S.W MBAMBO
ACTING DISTRICT DIRECTOR
UMGUNGUNDLOVU HEALTH DISTRICT

UMnyango Wezempilo. Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope

Appendix D

Gatekeeper`s consent – Department of Health, KwaZulu-Natal - uMgungundlovu Health Clinic.

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

GATEKEEPER'S INFORMED CONSENT – OPERATIONAL MANAGER

To whom it may concern

Re: Request for the permission to conduct an educational study with the Professional Nurses in the health facilities in Umgungundlovu District – Msunduzi Sub-district.

I am a Masters student at the University of KwaZulu-Natal, Pietermaritzburg campus.
The title of my research is: *Learning to care: Nurses' experiences of learning in a quality improvement intervention in UMgungundlovu District, KwaZulu-Natal*

The purpose of this communication is to request the Operational Manager to grant me permission to conduct an Educational study in the Umgungundlovu District.

Brief explanation of the study:
This study is in the form of a qualitative, interpretive case study of nurses' experience of a Quality Improvement intervention in the uMgungundlovu district. The study is expected to involve five Professional Nurses that attended the QI workshop provided by Health Systems Trust team under the Unfinished Business project (One or two were from your facility).

I will purposefully sample the participants from the health facilities who attended the QI workshop, ensuring a spread across five clinics performing at different levels, and across different ages and years of experience to get rich, varied data concerning their experiences of learning and whether and how they have applied this.

I will not be using their proper names, the name of the clinic where they work, or any of their personal details in the research. The data production process to be used in this research include semi-structured interviews, focus group discussions and the photovoice method.

I will conduct semi-structured interviews with each participant, followed by a focus group of all of them, to allow me to gather data on attitudes, values and opinions of their experience

of the QI intervention, what they learned from it, and whether and how they tried to implement this.

To allow for deeper, richer data, I will use the photovoice method, in which the nurses will be asked (at the end of the interviews) to take photographs on their cell phones showing how they have tried to implement QI in their clinic and/or challenges they have encountered that might have prevented them from doing so.

The photographs will be used as the initial basis for discussion in the focus group, where the participants will share their photographs and what they say, and why they took them. The use of photographs helps to encourage dialogue among participants about their insights into the issues under discussion.

Please note that:

- ✓ All confidentiality is guaranteed as inputs from participants will not be attributed except through the use of pseudonyms would be used to protect the participants' anonymity.
- ✓ No information given by the participants will be used against any of the participants, and the collected data will be used for this research only.
- ✓ The interviews will be recorded, but only with the consent of the participants.
- ✓ Data will be stored in secure storage and destroyed after 5 years.
- ✓ The choice to participate, not participate or stop participating in the research is left to the participant. No one will be penalized for taking such an action.
- ✓ Participants' involvement is purely for academic purposes only, and there are no financial benefits involved.

I can be contacted at: Email: Thandeka31@gmail.com / Thandeka.Khumalo@hst.org.za, Cellular phone number: 074 4958 007.

You may also contact my Research Supervisor, Dr Anne Harley: E-Mail address: HarleyA@ukzn.ac.za and phone number: 033 260 6296.

[For Provincial Department of Health and Health Systems Trust: Please note that ethical clearance to conduct this study has been obtained from the University of KwaZulu-Natal – please see attached].

Thank you for your contribution to this research.
Kind Regards

Ms Thandeka Khumalo

Appendix E

Participant`s Consent Information Sheet to Participate in Research

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

PARTICIPANT`S INFORMED CONSENT

Information Sheet and Consent to Participate in Research

Date:

Dear Participant

My name is Thandeka Khumalo from Health Systems Trust, studying towards my Masters` Degree at UKZN and I can be contacted on 074 4958 007 and my email address is Thandeka31@gmail.com

You are being invited to consider participating in a study that involves how nurses learn to care.

The aim and purpose of this study is to understand the nurses` experience and the changes that took place during the Quality Improvement workshop. The study is expected to enrol five professional Nurses that attended the QI workshop provided by Health Systems Trust team under the Unfinished Business project. The duration of your participation if you choose to enrol and remain in the study is expected to be six months.

If you agree to be part of the research, I would like to interview you on your own and as part of a group with other nurses. I will ask all of you to take photographs on your cellphone and send them to me and I will provide you with airtime/data. The photographs should show what it is like to try to implement the QI approach in your clinics. We will discuss all the photographs together in the group interview.

I would like to record the interview and group discussion and will also take notes. The individual and group interviews will probably take about an hour or possibly a bit more using the language we all understand. Please note the following: -

- ✓ Participation in this research is voluntary and you can withdraw at any time you choose. If you do decide to withdraw, there will be no consequences at all. I will not be using your name, or the name of the clinic where you work, or any of your personal details in the research, so no-one will know that it was you who told them these things.

- ✓ You will not get anything for participating in the research, although I will provide refreshments for the focus group, and will pay for the data/airtime you need to send me the photographs you take. I will do the interview during my normal visits to the clinics as part of my work, so you will not need to pay for any extra transport. However, the Focus Group Discussion (group interview) will be at a central venue away from the clinic and I will pay for your transport to come to the group interview.

- ✓ I will keep the recordings, notes and photographs locked away, and when I am finished the study it will all be destroyed.

I hope that the study will contribute towards knowing how best the nurses learn and improve the quality of nursing care.
This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number: HSS/0500/019M).

If you have any problems or concerns or questions, you can contact me at 074 4958 007/ Thandeka31@gmail.com / Thandeka.Khumalo@hst.org.za and/or my supervisors can be contacted at the university, Dr. L.L Mbatha and Prof. V. John.
Their email addresses are MbathaL5@ukzn.ac.za and JohnV@ukzn.ac.za
Phone number is: 033 260 6296.

DECLARATION BY THE PARTICIPANTS

I…… (Full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I agree to participate in the research project. I understand that I can withdraw from the project at any time.

I GIVE PERMISSION TO
Audio-record my interview YES / NO
Audio-record the group interview I am part of YES / NO
Use the photographs I take for research purposes YES / NO

_____ _____
Signature of Participant Date

_____ _____
Signature of Witness Date
(Where applicable)

Appendix F

Informed consent for the clients` pictures to be taken and utilised.

INFORMED CONSENT – FOR CLIENTS

Date:

Dear client

I am participating in research being conducted by Thandeka Khumalo from Health Systems Trust, as part of her studies towards a Masters' Degree at UKZN. She can be contacted on 074 4958 007.

The study is about how nurses learn to care. The aim and purpose of the study is to understand the experience of nurses who attended a Quality Improvement workshop, and what they did as a result of the workshop. Five professional Nurses that attended the QI workshop are part of the study. I am one of them.

I have been asked to take photographs on my cellphone and send them to Ms Khumalo. The photographs should show what it is like to try to implement the QI approach in my clinics. The photographs will be discussed at a group interview with the other nurses who are part of the research. Ms Khumalo hopes that the photographs will help us to understand better what it is like to try to improve the quality of the care we give to people in the clinic.

I would like to take a photograph of you to send to Ms Khumalo.

Please note the following: -

- ✓ You do not have to agree to be photographed. It is your choice. Even if you agree, after I have taken the photograph, you can change your mind and ask me to delete the photograph. I will not be giving your name, or any personal details about you, to Ms Khumalo or anyone else.

- ✓ You will not get anything for agreeing to be photographed. No one in the research is getting anything.

- ✓ I will send the photograph to Ms Khumalo, and to no-one else. After I have taken the photograph and sent it, I will delete it from my phone. Ms Khumalo will keep all the photographs locked away, and when she is finished with the study, she will delete and destroy all of them.

Ms Khumalo has been given permission by UKZN, Health Systems Trust and the district and the provincial Department of Health to do this research.

If you have any problems or concerns or questions, you can contact Ms Khumalo at 074 4958 007/ Thandeka31@gmail.com / Thandeka.Khumalo@hst.org.za and/or or her supervisors can be contacted at the university, Dr. L.L Mbatha and Prof. V. John.
Their email addresses are MbathaL5@ukzn.ac.za and JohnV@ukzn.ac.za
You can also contact UKZN's Research Office: 033 260 6296.

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Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

Should you agree to participate in this study, please complete the attached declaration.

DECLARATION BY THE CLIENT

I…… (Full names of client) hereby confirm that I understand the contents of this document and the nature of the research project, and I do allow my photograph to be taken as part of the research project. I understand that I can change my mind, and ask that my photograph be deleted.

I GIVE PERMISSION TO

Have my photograph taken and sent to Ms Khumalo, and for the photograph to be used as part of the research YES / NO

_____ _____

Signature of Participant Date

_____ _____

Signature of Witness Date
(Where applicable)

Appendix – G

Individual Interview guide

Individual Interview Guide

Interviewer:
Interviewee:
Age:
Audiotape Name and number:
Date & Time:
Introduction
TK… Good morning, ……. thank you for allowing meet with you today. Before we begin, I would like to review a few ground rules for the discussion. You're invited to consider participating in a study that involves how nurses learn to care focusing on the early recognition of HIV exposure among infants and early diagnosis of HIV as these factors are crucial to enable the early initiation of life-saving care, including Anti-Retroviral Therapy. The aim and purpose of this study is to understand the nurses` experience and the changes that took place during the Quality Improvement workshop. Participation in this research is voluntary and you can withdraw at any time you choose. If you do decide to withdraw, there will be no consequences at all. Note that I will not be using your name, or the name of the clinic where you work, or any of your personal details in the research, so no-one will know that it was you who told them these things. The interview will take about an hour and the schedule is divided into 4 categories/sections viz. administration and expectations; learning experiences; results or skills gained and post training assessment.

The answers to the questions posed during this interview will be recorded by use of limited hand notes and audio-tape to ensure accuracy. The information shared and the comments made will be handled with integrity and will not be used for any other purposes not intended to. If there is any question you do not understand, you are free to ask me to repeat or rephrase. Data will be stored in a secured storage and destroyed after 5 years.

If you choose to be part of this study and participate until the study is completed which might take plus minus six months from now. It doesn't mean that we'll be seeing each other all the time in six months but from today as we are doing this interview and then after few weeks, we will afford each other an opportunity to sit together as a five nurses (participants) discussing the subjects on learning as a phenomenon. I would be actually asking you to discuss in a group using he pictures that you will take in the clinics and or the surroundings using your cellphone. I will provide you with data.

Do you have any questions before we start?

1. Administration and Expectations
1.1 How did you first become aware of the Quality Improvement workshop?
1.2 What motivated you to attend the QI training? What is it that you were hoping to gain in terms of your professional and personal growth?
1.3 What were your expectations of the QI workshop? What were you hoping might happen/you might get from it?
1.4 How did you feel about attending the workshop when you were invited? Were you looking forward to it? What words would you use to describe your feelings and why?
2. Learning experiences (Facilitation, participation, and feedback)
2.1 Can you give an explanation of your experience in terms of your participation and or non-participation in the day`s activities? Tell me about the opportunity afforded to interact with your colleagues and or the facilitator, if any.

2.2 Did the facilitator draw on what you already knew? Probe: Did you feel that you were able to use your pre-existing knowledge and experience in the workshop? Probe: Do you think other people felt the same way?
2.3 Was there anything in the QI workshop that you did not like? Probe: Tell me more about what was difficult about it?
2.4 Please explain how feedback on your participation during the learning process was provided? What mechanisms were used to give you feedback, if any?
2.5 What is your view on how the workshop was facilitated? Probe: Do you have any thoughts on how else could the workshop had been conducted?

3. Results (Skills gained)
3.1 Do you feel your knowledge and skills have improved by attending this workshop? Tell me more about what is it that you learned. If you did not learn anything, why did you not learn anything? Can you explain what practical work or skills were gained during the workshop?
3.2 Were there mentoring sessions provided after the workshop that assisted you in practicing the skills gained in the workshop? Probe: If there were mentoring sessions, tell me how did they assist you? Please provide examples on how you are doing your work differently in terms of clinical management of children after attending the QI workshop?
3.3 Can you share with me the contribution of the QI workshop for you, colleagues and the clinic?

4. Post training assessment
4.1 Have you been able to implement anything related to the QI approach in your clinic? If so, please tell me what have you managed to do? What helped you to do this? If not, what made it harder and what do you think are the reasons for not been able to implement anything?
4.2 Would you recommend the QI workshop to your colleagues? Explain your answer?

4.4 Do you have any final thoughts about the workshop that you would like to share?
Conclusion
Should it happen that I need more information will you allow me to come back for more clarity or any other need … either physically or telephonically?

Appendix – H

Focus Group and Photovoice discussion guide

MASTERS RESEARCH ON HOW NURSES LEARN TO CARE

Focus Group and Photovoice Methods Discussion Guide

1. Welcome	Welcome to you all and I would like to thank you for attending this important session where we will be discussing the photographs that you took in your working environment that helped you to implement or not implement the QI intervention. Are you all still prepared to take part in the study? [check with each participant]
2. Ground Rules (10 minutes)	Before we begin, I would like to review a few ground rules for the discussion. a. Feel free to treat this as a discussion and respond to what others are saying, whether you agree or disagree. We're interested in your opinions and whatever you have to say is fine with us. There are no right or wrong answers. We are just asking for your opinions based on your own personal experience. We are here to learn from you. b. Don't worry about having a different opinion than someone else. But please do respect each other's answers or opinions.

	c. If there is a particular question you don't want to answer; you don't have to. d. We will treat your answers as confidential. We are not going to ask for anything that could identify you and we are only going to use first names during the discussion. We also ask that each of you respect the privacy of everyone in the room and not share or repeat what is said here in any way that could identify anyone in this room. e. We are tape recording the discussion today and also taking notes because we don't want to miss any of your comments. However, once we start the tape recorder we will not use anyone's full name and we ask that you do the same. Is everyone OK with this session being tape recorded? f. We will not include your names or any other information that could identify you in any reports we write. We will destroy the notes and audiotapes after we complete our study and publish the results. h. Finally, this discussion is going to take about one and a half (1 ½) hours and we ask that you stay for the entire meeting. At the end of the discussion we will have tea together to socialize briefly before going back to our work places and to thank you for participating. **Does anyone have any questions before we start?**
Implementing a verbal-elicitation focus group with the information that is gained directly from the photographs, I will provide a non-judgmental environment for the participants to talk about their work environment and I will guide and facilitate the conversation. *Here are the photographs you sent me on the wall where everyone can see and they are ready for discussion. We will go through a process where each person will take us through her photographs. If someone else want to say something about the other's picture, that would be good – but please let them finish talking first.*	
3. Introductions (10 minutes)	[START TAPE RECORDER NOW.] I'd like to go around the circle starting on my right and have each person introduce herself. Please tell us your first name only and tell us what is your main responsibility in the facility you are working at
4. Discussion (25 minutes)	***Topic #1: Individual questioning session*** The first thing that we'd like for you to discuss for each photograph you took: - Please tell us what does this photograph represents about the environment?

	- Why did you take this particular photograph, what did you want to show in relation to the implementation of the QI approach? - Please tell me why did you chose to take this photograph?
5. Group Interaction (25 minutes)	***Topic #2: Group members given an opportunity to ask questions*** - Does anyone have any comments or questions they want to ask anyone else? (Prompting to allow the group to discuss further). - When you look at these photographs and having heard what the presenter has said; What do you see and what is common amongst these photographs to the ones you took? - What do you find as unusual or outliers in these photographs? - Are there any things we do not see in these photographs that we know exist in our environment? - Any other contributions?
6. Clarity seeking discussion / group discussion (25 minutes)	**Topic #3: Reflecting from the preliminary engagement with each person (during the individual interview) there are things that came up which I would like to get clarity for.** - Most of you said the training was good, helpful and assisted in improving service delivery but at the same time there were inputs about the training model that was discovered to be a challenge… - I would like us to discuss that for my understanding since these are contradicting factors. How can the training be successful and making a change in the working environment yet there were expressions that the environment was not supportive; too much workload; facility management and colleagues not supportive; trained person being the only one responsible to implement the QI approach in the facility – "everything becoming my baby?"

Abbreviations

AIDS Acquired Immune Deficiency Syndrome

AGYW Adolescent Girls and Young Women

ART Ante Retroviral Therapy

AYLH Adolescent and Youth Living with HIV

COHSASA Council for Health Service Accreditation of Southern Africa Hospital

CPD Continuing Professional Development

CQI Continuous Quality Improvement

DHIS District Health Information System

ENA Enrolled Nursing Assistant

ELT Experiential Learning Theory

HAART Highly Acting Ante-Retro Viral Therapy

HIV Human Immuno-Deficiency Virus

HSRC Health Sciences Research Council

HTS HIV Testing Services

IMCI Integrated Management of and Childhood Illnesses

JCAHO Joint Commission on Accreditation of Healthcare Organizations

KZN – DoH KwaZulu Natal Department of Health

NCS National Core Standards

NSP National Strategic Plan

OSC Office of The Standard Compliance

PDSA Plan-Do-Study-Act

PN Professional Nurse

PHC Primary Health Care

QI Quality Improvement

SANAC South African National AIDS Council

VL Viral Load

VMMC Voluntary Male Medical Circumcision

UNAIDS Joint United Nations Programme on HIV&AIDS

UNICEF United Nations Children`s Fund

WHO World Health Organization