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KWAZULU-NATAL  
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COMMUNITY-BASED PRIMARY HEALTHCARE  
TRAINING FOR PHYSIOTHERAPY IN KWAZULU-  
NATAL: PERCEPTIONS OF PHYSIOTHERAPY  
ACADEMICS

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University of KwaZulu-Natal, in partial fulfillment of the  
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## **SUPERVISORS' PERMISSION TO SUBMIT FOR EXAMINATION**

**Student Number: 9702154**

### **Thesis Title**

**COMMUNITY-BASED PRIMARY HEALTHCARE TRAINING FOR  
PHYSIOTHERAPY IN KWAZULU-NATAL: PERCEPTIONS OF  
PHYSIOTHERAPY ACADEMICS**

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As the candidate's supervisors, we AGREE to the submission of this thesis in the form of integrative material for examination.

The chapters are written as a manuscript with the research publication, with an overall introduction and final summary.

This is to certify that the contents of this thesis are the original research work of Ms Geneshree Govender.

Supervisors blinded but all agree

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**Date: November 2018**

## DECLARATION

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**I, Geneshree Govender, student number (9702154), declare that**

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Mr Levin Chetty

## ABSTRACT

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**Background:** The healthcare system in South Africa is faced with many challenges. There is an unequal distribution of health services between urban and rural communities, with rural communities having restricted access to healthcare services. Rural areas struggle to sometimes recruit and retain health professionals as a result of poor infrastructure and logistical obstacles. Clinical education is a rudimentary component of the undergraduate physiotherapy curriculum and is the means by which undergraduate students are exposed to a wide range of patients and conditions. It allows for relevant integration between theory and clinical practice. Clinical education has evolved into an educational model, with the aim of generating empirical learning strategies for undergraduate students. Clinical education generally commences in the second year of the degree, with hours of clinical practice escalating until the final, fourth, year of training; allowing undergraduate students to become independent, skilled therapists post-graduation. Community-based education is an efficient way of providing health services to under-resourced communities. The University of KwaZulu-Natal has initiated the community-based primary healthcare training (CBPHCT) platform, also referred to as decentralised clinical training (DCT), in an attempt to provide equal and fair access to health services to under-resourced communities, as well as to provide a holistic learning environment for undergraduate physiotherapy students. Exposure to the challenges experienced within the primary healthcare system allows for students to develop competent skills and core competencies to provide optimal healthcare services. In addition, community-based training in the primary healthcare (CBPHCT) setting reduces the load experienced by on-site clinicians. It is therefore highly beneficial in an overburdened healthcare system. In order to provide optimal service to under-resourced communities, the CBPHCT framework needs to be regularly reviewed to include current evidence-based health trends and new teaching and learning methods.

**Objective:** The study aimed to explore the perceptions of physiotherapy academics about a novel clinical education platform in the primary healthcare setting in the province of KwaZulu-Natal.

**Methods:** A qualitative research method was adopted. All academics at the UKZN physiotherapy department were interviewed, when their perceptions of CBPHCT were explored via open-ended interviews. The data was then transcribed and analysed using thematic analysis.

Results: Four overarching themes were identified, namely curriculum review, constraints to decentralised learning, benefits of community-based clinical education and recommendations for the learning platform.

Conclusion: Participants reported both positive and negative experiences of the novel CBPHCT platform. It facilitated personal growth for both the students and academics. However, the framework was challenged by resource limitations, clinical educator challenges and lack of supervision. The academics felt that effective communication between the Department of Health (DoH) and the university needs to be well established in order to improve the partnership. The academics also recommended improving simple logistics and infrastructure on site in order to make the placements more attractive to students and to retain healthcare professionals. They also suggested the recruitment of local supervisors, even on a part-time basis. Engaging the community as part of the framework was recommended in order to enhance social accountability in the students. The academics concluded that the current curriculum needs to be regularly reviewed to address various challenges, whilst encouraging a cohesive relationship between all stakeholders in order to provide a well-integrated teaching and learning environment.

Keywords: physiotherapy, clinical education, community-based primary healthcare, decentralised training

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## ABBREVIATIONS

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CBTPHC	Community-Based Training in Primary Health Care
DCT	Decentralised Training
DoH	Department of Health
KZN	KwaZulu-Natal
NHI	National Health Insurance
PHC	Primary Health Care
SA	South Africa
UKZN	University of KwaZulu-Natal
WHO	World Health Organisation

## **OPERATIONAL DEFINITIONS**

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Rural: A geographical area that is located outside towns and cities.

Peri-urban: This is the landscape interface between a town and country.

Urban: This refers to a built-up and populated area that includes a municipality and, generally, has a population of 5000 or more.

Decentralised training: This refers to the University of KwaZulu-Natal's (UKZN) training programme whereby students are placed in primary healthcare, or district, facilities away from urban facilities.

Community-based training: This is utilised by health science faculties worldwide to provide a relevant primary healthcare experience for students, and a service to under-served communities, is strongly oriented towards local requirements and hopefully, to affect student career choices.

Primary healthcare: This is the essential healthcare that is based on scientifically sound and socially acceptable methods and technology, which makes universal healthcare accessible to all individuals and families in a community.

### 1.1 Background

Clinical education is a fundamental concept integrating theoretical knowledge into practice, particularly in undergraduate healthcare students. Rodger et al. (2007) refer to clinical education as “the provision of students with practice placements (ranging from acute care to community settings within health, education and human service sectors, including public, private and not-for-profit organisations) and the educational experiences of students while in these practice settings”. Of late, universities have been faced with escalating challenges in allocating students to adequate clinical or practice placements due to the increased number of new student enrollments each year. These placements are necessary to consolidate theory with practical skills in order to produce competent graduates. Clinical education has evolved into an educational model that has been validated through application, with the aim being able to generate empirical learning strategies for undergraduate students (Diab and Flack, 2013). Across the board, all curricula require undergraduate students to attend, for a significant number of hours, at various clinical settings where they are exposed to numerous patient conditions. The number of hours spent at clinical sites is usually increased towards the latter part of the course, prior to graduation (Rodger et al., 2007). The practice of clinical education under supervision allows for competent independent functioning in post graduate professional practice.

Community-based primary healthcare training (CBPHCT) is understood as an aspect of health care that encourages all people to be aware of the level of health that will allow them to live socially and economically productive lives, using evidence-based, ethical, attainable, equitable and affordable health services. CBPHCT provides an efficient framework to service under-resourced communities and to impart pertinent competencies necessary for health science students to practice in primary healthcare settings (Diab and Flack, 2013). The decentralisation of health service administration to rural clinical settings is intended to improve the quality of health services in these hospitals, with a resultant increase in the level of utilisation of health facilities (Diab and Flack, 2013). CBPHCT is a composite framework as it benefits both the undergraduate students by providing opportunities for improved clinical competence, as well as providing the community site with supplementary resources. It should serve as a model to expedite a smooth conversion from theory into practice, enabling factual and circumstantial training (Diab and Flack, 2013). The approach will also facilitate the development of students with enhanced social and technical skills, and with optimal competency to practice autonomously (Chetty et al., 2018). Wilson et al. (2009) identified serious challenges faced by rural communities, including insufficient health care professionals, emphasising that people in rural areas are in greater need of healthcare than their urban counterparts. The shortage of healthcare professionals in rural clinical

settings poses a significant challenge to fair and equal access to health services and equivalent and impartial service delivery (Wilson et al., 2009).

The discrepancies between healthcare delivery in urban and rural areas are significant. Healthcare professionals may favour urban sites due to adequate allocation of resources, better infrastructure and peer support. In an attempt to equalise healthcare delivery and the access to healthcare facilities between urban and rural areas, a collaboration between the Department of Health (DoH) and the University of KwaZulu-Natal (UKZN) was formed in 2017. Undergraduate physiotherapy students were allocated clinical placements in various community settings, with the ultimate long-term goal being to increase the number of healthcare professionals in medically underserved areas. CBPHCT is a possible solution for the current healthcare disparity, thereby becoming the driving force for health sector reform.

However, in order to facilitate unparalleled and excellent service, community-based training needs to include a curriculum that produces socially independent, responsible and competent students who will be able to overcome the various challenges they face in a resource-limited setting. The question is raised, whether or not the existing undergraduate curriculum at UKZN supports students in becoming independently competent, responsible and socially relevant to meet the challenges they face in resource-limited settings. Previous studies exploring the preparedness of physiotherapy students for clinical practice found that graduates felt underprepared for the extensive responsibilities and complicated undertakings associated with the ever-changing healthcare needs in South Africa; identifying the need for a change in the undergraduate curriculum (Ramklass, 2013). Students' undergraduate exposure and experiences in rural or urban settings have been found to influence their preference for employment in either of the settings once qualified.

A study conducted by Wilson et al. (2009) on medical school students in Thailand showed that the majority of graduates continued in rural practice following a compulsory rural internship together with adequate local guidance and supervision. Challenges experienced in rural communities' impact negatively on recruitment and retention of clinicians. Poor infrastructure, limited electricity and water supplies, as well as poor sanitation, all contributed to why healthcare professionals may leave the rural clinic. Poor hospital infrastructure, insufficient locum relief, lack of consultant support and academic isolation has also been cited as reasons for healthcare professionals' preference for urban clinical placements (Wilson et al., 2009). However, personal recognition or appreciation from colleagues, available resources, career development and financial progression, good hospital infrastructure and continuing professional development were found to be factors that motivated health workers to stay in rural settings.

CBPHCT aims to improve health service delivery and access to healthcare, which may in turn lead to improvements in health outcomes such as morbidity, disability and mortality in the general population (De Villiers et al., 2017). However, this model of training can also, negatively, increase health worker workloads, leading to burnout, low morale, mismanagement of capital and poor management of health services (due to new roles and responsibilities especially if local supervisors do not have sufficient capacity and training to take on these roles). CBPHCT allows for contingencies to address these challenges by developing practical guidelines for the implementation of CBPHCT. This includes formulating support systems for the faculty and supervisors, and reassuring staff that student placements should not be an impediment; rather, that they will contribute to the systematic and constructive provision of healthcare services (De Villiers et al., 2017).

The immediate benefits of community-based education include improved service delivery, increased access to services and improved patient care; whereas long term benefits may include the return and retention of healthcare professionals in that area. However, to ensure the sustainability of such benefits, ideally the community should also be involved in the implementation and planning of the decentralisation programmes (Diab and Flack, 2013).

The Department of Health (DoH) has proposed a universal health coverage system, National Health Insurance (NHI), to provide fair and equal access to healthcare. The NHI proposes to serve and provide healthcare to every citizen of South Africa, irrespective of their economic status, and with no restrictions to benefits. Fair and equal access to healthcare is a basic human necessity and it is equally important for individuals with disabilities to empower them to become fully active members of society. The plan for the implementation of the NHI is to reduce the cost of healthcare in both the private and public sectors. Both preventative and curative healthcare is needed, and full co-operation and effective communication between the Provincial Department of Health and the universities are necessary to ensure effective decentralisation, with the patient as the principal beneficiary (Caldwell and Aldous, 2017). Community-based education is vital in addressing the challenges faced by the NHI. Exposure to community-based education can positively improve retention of professionals, which will guarantee that the number of professionals in an area increases, thus realizing one of the objectives of the NHI. Likewise, the goals of The National Development Plan Vision 2030, launched in 2012 which is a detailed blueprint for how the country can eliminate poverty and reduce inequality by the year 2030, can also be identified and fulfilled.

The White Paper on the Integrated National Disability Strategy has proposed the integration, implementation and planning of disability issues across all government sectors. Adequate access to healthcare, public education, rehabilitation, social welfare and community development and training are amongst the key areas that have been identified (Integrated National Disability Strategy, Chapter

One: Situation Analysis, Independent Living Institute, Integrated National disability Strategy; Chapter Two: National and International Context, Independent Living Institute, Integrated National Disability Strategy; Chapter Three: Policy Guidelines, Independent Living Institute and Office of the Deputy President, 1997). The implementation of community-based education will serve to complement the Integrated National Disability Strategy and the NHI, as student placements will increase the number of patients attended to. The therapist/patient ratio will improve, thus allowing more patients equal and fair access to healthcare.

In order to ensure sustainability of CBPHCT, all stakeholders should be involved in programme planning and implementation. A few studies have reported strong endorsement by clinical educators in promoting CBPHCT to improve patient outcomes and access to healthcare. However, the perception of academics at UKZN, regarding the implementation of CBPHCT is yet to be explored.

## **1.2 Problem statement**

Clinical education in the form of CBPHCT plays a key role in addressing the challenges imposed on healthcare systems in South Africa. Low income and rural communities suffer from a lack of resources and limited professional support, thus resulting in unequal access to healthcare services. In the past, CBPHCT was limited, as physiotherapy students were predominantly placed in urban clinics. The recent collaboration between the DoH and UKZN to implement clinical training, with a focus on under-served rural areas, is an attempt to bridge service delivery gaps, as well as to enhance the contextual relevance and competence of health care professionals in South Africa. In its early implementation, CBPHCT has encountered many challenges experienced by the students, academics and the community, hindering optimal implementation of the model. Studies by Williams et al. (2014); Sevenhuysen et al. (2015); White and Humphreys (2014); Lekkas et al. (2007); Taukobong (2004); Ramklass (2013) and Ernstzen et al. (2014), all discuss students' perspectives on clinical-based education. However, a negligible amount of literature has been found on the attitudes and perceptions of the academics about the decentralisation programme.

## **1.3 Aims and objectives of the study**

The aim of this study was to explore the perceptions of physiotherapy academics on a novel community based primary healthcare training approach to clinical education in order to inform the rollout of an integrated model for physiotherapy undergraduate training.

The study objectives were:



- to review the existing literature and current practices in clinical education for physiotherapy students globally and within the South African context;
- to explore the perceptions of academics on the current community-based primary healthcare approach to clinical education at UKZN;
- to explore the perceptions and recommendations of physiotherapy academics on the curriculum reform required to improve the rollout of the CBTPHC approach;
- to explore the perceptions of physiotherapy academics about the UKZN graduate competency framework in the CBPHCT approach at UKZN.

## **1.4. Methodology**

### *1.4.1 Research Design*

A qualitative explorative approach was used to gain insight into the perceptions of the permanent academic staff at a tertiary institution in South Africa, about a community-based primary healthcare training framework for undergraduate physiotherapy students. According to Chetty et al. (2018), real life occurrences experienced by students, newly graduated community service physiotherapists and clinical supervisors, based in a resource-limited environment could add value to the development of an integrated model for clinical education.

The CBPHCT platform is novel and therefore an explorative method was used to understand, in-depth, the perceptions of the academic staff (Cresswell and Miller, 2000). Limited literature could be found on the perceptions' of the academic staff about community-based training in primary healthcare, thus highlighting the gap. The community-based training programme offers clinical placements to undergraduate physiotherapy students into rural areas where there are several challenges, including insufficient access to healthcare services, a large volume of patients and small staff compositions. This approach also facilitated an understanding of the clinical education experience at the university with regards to the clinical placements of the students in resource-limited sectors (Chetty et al., 2018).

### *1.4.2 Study population and location*

The study was conducted at the Physiotherapy Department at UKZN in KwaZulu-Natal province, South Africa, and included all the physiotherapy academic staff. The students were placed at ten clinical training sites. These included four urban hospitals, three rural hospitals and three peri-urban hospitals. The four urban hospitals were based in Ethekwini and included Addington Hospital, Prince Mshiyeni Memorial Hospital, Mahathma Memorial Hospital and Inkosi Albert Luthuli Hospital. The rural hospitals were Murchison Hospital (Port Shepstone), Madadeni Hospital (Newcastle) and Ngwelezana Hospital (Empangeni). The peri-urban sites included Port Shepstone Hospital (Port Shepstone), Newcastle Hospital (Newcastle) and GJ Crookes (Scottburgh).



Figure 1: Map depicting the areas in which the clinical training sites were based

#### 1.4.3 Sampling procedure and technique

A purposive sampling procedure (a non-probability sampling procedure) was adopted, as this was the most suitable, based on the characteristics of the population and the objectives of the study. This particular sampling procedure was chosen to reach a specified target population with a particular set of characteristics (specific experience, knowledge and skills, exposure to particular events). The total population was included as the size of the population with that particular set of characteristics was very small (Cresswell and Poth, 2017).

Table 1: Demographics of the participants

Sex		Age		Ethnicity			
Male	Female	36-40	56-58	African	Indian	White	Coloured
4	4	6	2	2	3	2	1

#### *1.4.4 Data collection*

Semi-structured interviews were conducted with the academics at the end of the first year of implementation of the new community-based training model for physiotherapy students. Informed consent (See Appendix 3) and demographic information were first obtained, and the academics were informed that they could withdraw from the study at any point. The interview schedule (See Appendix 4) included 14 open-ended questions focusing on the academics' work experiences, exposure to student training and supervision, and perceptions of the community-based primary healthcare training framework; as well as their recommendations. The semi-structured interviews were conducted in a conversational manner, allowing participants the chance to discuss issues they felt were important (Longhurst, 2003). Each interview lasted between 45 minutes and an hour, with both the researcher and a moderator experienced in qualitative methods present. The interviews were conducted in English and notes on non-verbal nuances were recorded by the moderator.

#### *1.4.5 Data Management*

The collected data was securely stored on an encrypted USB and an encrypted hard drive to ensure complete confidentiality. The hard copies were kept in a locked cupboard for complete confidentiality and were then shredded following the data analysis. The stored data will be discarded five years after the date of the interviews.

#### *1.4.6 Data Analysis*

The recorded data was transcribed verbatim following the interview process. The audio recordings were listened to several times to eliminate any errors during transcription, and to ensure the reliability of the data recorded. The data was read several times to acquire an in-depth understanding of the captured material and emerging themes. Both researcher and moderator executed data coding using thematic analysis and reached consensus on the overarching themes and subthemes. The most salient quotes were selected to reflect the rich description of narratives (Patton, 1999).

#### *1.4.7 Ethical Considerations*

Ethical approval (See Appendix 2) was granted from The Humanities and Social Sciences Research Ethics Committee at the University of KwaZulu-Natal (reference number HSS/0577/018M). All academics involved in the teaching and clinical supervision on the DCT platform were recruited to participate in the study and privacy and confidentiality were

preserved during the study. Participants were informed that their involvement was voluntary, and they could withdraw at any point of the discussion. Permission was sought for interviews to be recorded using a Dictaphone. Informed consent was obtained through a document read and signed by each participant. Anonymity in the study was maintained by using pseudonyms when reflecting on results and discussing findings.

#### *1.4.8 Trustworthiness*

The participants of the study were chosen as a result of their specific experience with the CBPHCT/DCT programme via a purposive sampling technique, thus contributing to the reliability and dependability of the data collected. The accuracy of the data collected was guaranteed by using a Dictaphone during the interviews, thereby ensuring verbatim transcriptions of the participants' perspectives, as well as member checking (Cresswell and Miller, 2000; Koelsch, 2103)

Reliability was ensured through implementing a clear audit trail, precise data collection and careful analysis thereof, following several readings of the transcriptions (Cresswell and Miller, 2000).

### **1.5 Overview of the manuscript**

The manuscript adheres to the College of Health Sciences guidelines posted on 20 August 2015 (See Appendix 1). The document outlines the rules guiding submission for the Master's degree. The chosen method for submission for this study is 'a thesis by manuscript'. These guidelines state that a candidate must include at least one manuscript that has been submitted for publication to a peer-reviewed journal (with the candidate's named as first author).

This thesis is divided into four chapters:

Chapter 1 serves as an introduction to the study and poses the questions that framed the aim, objectives and the significance, as well as the general methodology, of the study. The chapter also provides insight into the structure of the manuscript in its entirety and describes the flow of the contents.

Chapter 2 is a review of current literature, which seeks to place the study in context.

Chapter 3 is the manuscript presented in its original format as submitted to the Global Journal of Health Science: Community-based primary healthcare training for physiotherapy in KwaZulu-Natal: Perceptions of physiotherapy academics (Govender Geneshree, Chemane Nomzamo, Cobbing Saul, Chetty Verusia, 2018)

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Chapter 4 concludes the manuscript with a summary of the study findings and assesses whether the study objectives were met. This chapter also discusses the limitations and recommendations of the study.

## CHAPTER 2 - LITERATURE REVIEW

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### 2.1 Introduction

The world is faced with new health challenges daily and health systems are battling to keep abreast of the necessary skills and resources needed to overcome the inequalities experienced by rural, compared to urban areas (Frenk et al., 2010). According to Wilson et al. (2009), healthcare discrepancies pose a serious challenge worldwide; and this is exacerbated by an inequity in the placement of healthcare professionals. Currens and Bithell (2000) recognise clinical education as an essential element in physiotherapist education programmes. It contributes to service delivery, and facilitates assessment and evaluation of learning experiences in a practical setting. It may be a significant way of overcoming the disparities experienced by underprivileged communities (Currens and Bithell, 2000). The principal goal of clinical education is to produce competent graduates who have been exposed to comprehensive practical experiences as undergraduates and who can function independently, especially in primary healthcare settings where supervision and colleague support may be minimal (Crosbie et al., 2002).

Community-based training in primary healthcare (CBPHCT) was introduced after collaboration between the Department of Health (DoH) and the University of KwaZulu-Natal (UKZN), to service under-resourced communities, as well to provide optimal training to students to produce socially responsive graduates (Diab and Flack., 2013). Blose (2017) states that undergraduate CBPHCT is imperative in order to produce highly competent graduates with the skills required to cope with the ever-changing needs of the healthcare systems in South Africa.

In 1994, the primary healthcare (PHC) platform was proposed as a means of equalising the disparities experienced during the apartheid regime and as a way of encouraging a democratic South Africa, (Kautzky and Tollman, 2008). According to Ramklass (2013), PHC was sanctioned to provide fair and equitable healthcare services to all citizens of South Africa. However, Ramklass (2013) found that physiotherapy students at UKZN were underprepared to deal with clinical placements in rural areas. This author further proposed that curriculum reform was mandatory to address the challenges experienced by the students, as the traditional

curriculum model did not train for comprehensive care in the different practice environments. Curriculum reform needs to be based on evidence-based practice, due to the escalating and transitional healthcare needs in South Africa. Traditionally, the clinical education sites were predominantly urban based, exacerbating the inequalities experienced in the rural areas (Wilson et al., 2009). To overcome such inequalities and provide fair and equal access to healthcare for every citizen of South Africa, the National Health Insurance (NHI) was formulated to bridge the widening healthcare gap between the privileged and underprivileged areas. The re-engineering of the PHC provided a parallel means to achieve the goals of the NHI (Govender et al., 2018). In addition, the National Development Plan Vision 2030 was launched in 2012 as a detailed blueprint for how the country can eliminate poverty and reduce inequality by the year 2030. It is a plan to unite South Africans, release the energies of the citizens, build on the country's economy and enhance the functionalities and abilities of the leaders, as well as the state, in solving complex issues.

This literature review serves to provide information in the following areas:

- Physiotherapy undergraduate programme including curriculum reform
- Clinical education in PHC
- Reasons for moving to CBPHCT
- International and local experiences of CBPHCT
- Policies that support CBPHCT

## **2.2 The physiotherapy undergraduate programme**

The physiotherapy department at UKZN offers a four-year undergraduate programme with students being awarded a Bachelor of Physiotherapy degree, on completion of the degree programme. All students are required to work for an additional year as a community service officer (CSO) in the South African public healthcare sector, before being fully registered as a physiotherapist. The students are gradually introduced to clinical education with most of clinical placements taking place in the third and fourth years of study. Years one and two consist mainly of theory, which the students apply in practice in the final two years (Blose 2017). Historically, the clinical training sites were predominantly urban facilities (Wilson et al., 2009). In 2017, CBPHCT was introduced as part of the clinical education programme at

the UKZN Department of Physiotherapy to provide services to peri-urban and rural sites (Blose 2017).

Ramklass (2013) explored the students' experience of the physiotherapy clinical education programme at UKZN. Clinical placement sites were selected according to groupings of patients with similar medical conditions and students rotated through these blocks every six weeks in their fourth year, while expanding their expertise and capabilities in association with the medical conditions they encountered. A qualitative research method was used to gauge the perceptions of these students about the clinical education programme. Students cited many challenges in these blocks, as they felt unprepared to work in communities where resources were minimal, and supervision limited. They also recognised the need to develop administrative and supervisory skills; as the new graduates progressed to employment as CSOs, they were potentially responsible for overseeing the physiotherapy department. They regarded themselves as 'under-prepared' for the complicated duties that lay ahead and agreed that in order for it to be a programme that enabled the teaching of core competencies and skills, the physiotherapy education programme needed to follow the fundamental concepts of PHC (Ramklass 2013).

A study conducted in Australia, expressed concerns that new graduates were not adequately prepared for independent clinical practice (Crosbie et al., 2002). It was further found that many new graduates took up positions in clinics where there was minimal colleague support and where they were responsible for making evaluations as independent practitioners. It was suggested that, due to science and health needs constantly changing, the curriculum needs to be adapted to include new and relevant evidence-based practice, including components that allow the new graduates to function optimally in areas where there is minimal professional support (Crosbie et al., 2002).

Frenk et al. (2010) conducted a study consisting of 20 professional and academic leaders from various countries who had formed a commission. This commission stated that unchanging undergraduate curricula were unable to address ever-changing healthcare challenges and as a result had produced poorly equipped and under-qualified graduates. This is exacerbated by curricula that are not currently evidence-based.



A South African study conducted by Mostert-Wentzel et al. (2013) agreed with Frenk et al. (2010) and acknowledged impediments in the undergraduate physiotherapy curricula. These authors advocated the need for undergraduate physiotherapists to be introduced to challenging and complex environments and recommended curriculum reform to support cultural competence and recognition. Teaching methods have been changed from a teacher-centred approach to a student-based approach in order to encourage active participatory learning, teamwork and lateral thinking. In this way students are able to develop competent problem-solving skills, integrate theory and practice, and experience more effective learning techniques; thus preparing them for lifelong learning and skills development.

As stated earlier, formal guidelines intended for training in rural areas need to be implemented and continually updated and upgraded. Couper and Hugo (2005) conducted a qualitative study with managers of well-functioning district hospitals in South Africa, with the aim of evaluating what helped these rural district hospitals to operate well. Teamwork, respectful relationships, regular staff meetings and unity and sharing of information among staff were vital for staff to function optimally and share a common vision. Effectual communication only served to enhance the camaraderie amongst professionals, thus highlighting the need for concrete underlying guidelines to allow for problem solving, improved skills competency and transference of skills. Continual evaluation and feedback also encouraged improvement of skills and capabilities, allowing for CBPHCT to function efficiently to reach its goals (Couper and Hugo, 2005). The development of practical guidelines to increase clinical placements in rural areas, especially in health sciences, is mandatory; including ways of assisting the department, as well as clinical educators. Decentralisation occurred at all nine medical schools listed in South Africa and concluded that all training institutions should work together to develop appropriate decentralisation training frameworks that involve all members of the health-care team (de Villiers et al., 2017).

### **2.3 Clinical education in PHC**

Clinical education is recognised as an essential element of the physiotherapy undergraduate programme. It is a valuable form of service delivery, allowing assessment and evaluation of learning experiences in practical settings. Students are exposed to various conditions and environments, offering unique experience that is very difficult to emulate elsewhere (Currens and Bithell, 2000).

Community-based education exposes students to circumstances in rural areas and tests the relevance of their training and input. They are also exposed to the lack of resources and support experienced by many of the patients in the community. Student placements provide these communities with access to services, especially where there is a lack of health-care professionals; they enable improved patient care due to evidence-based practice taught by the university; and promote continual communication with the university (Diab and Flack, 2013).

Inter-professional learning, combined practice and transference of skills in a multi-diverse cultural context using current evidence-based care, problem solving skills, and critical and reflective thinking with a view to lifelong learning is the essential key to providing optimal patient care (Rodger et al., 2007).

The College of Health Sciences at UKZN has put a programme in place to produce graduates that are proficient within the PHC framework (Govender et al., 2018). Clinical education is an evaluative and expository project, advocating experiential education to develop students' professional and interpersonal skills. The PHC guidelines mandate for an efficient clinical education programme (Ramklass, 2013). The PHC model is an effective strategy to deliver equitable healthcare services, as equal and fair access to healthcare is a basic human need and right (Naledi et al; 2011).

Many challenges have been experienced by university academics in ensuring adequate clinical placements of university students in Australia, Canada, Sweden, the United Kingdom, Hong Kong and New Zealand. A shortage of staff at the clinical sites, increasing student numbers, poor relationships and communication between the universities and clinical educators on site, reduced funding and new models of care have all challenged effective, worthwhile clinical education (Rodger et al., 2007).

A study conducted by Taukobong (2004) highlighted the need for community-based education, as the majority of South Africans still need to gain access to quality health-care services. The perception of students at the Medunsa Physiotherapy Department identified the need for a multi-disciplinary approach, with enhanced supervision, in order to provide an optimal learning experience. They viewed community-based education as a multidimensional experience. Govender et al. (2018) proposed integrating decentralised training (DCT) for health professionals in PHC in order to reduce the disparities between urban and rural settings. Their

aim was to provide enlightened learning experiences for the students, whilst concurrently addressing the challenges faced by the communities.

## **2.4 Reasons for moving to CBPHCT**

Clinics in rural areas tend to require a multiplicity of expertise and skills due to the inadequate resources and minimal support structures. Morbidity and mortality rates are higher in these rural settings due to the limited number of health care professionals and inadequate resources (Paliadelis et al., 2012). According to Wilson et al. (2009), fair and equal access to healthcare services is a pressing matter worldwide. Limited resources, lack of continuing professional development and professional segregation are some of the reasons many health-care professionals choose to leave the rural areas. New graduates in New South Wales, Australia, choose not to remain in rural areas due to the lack of clinical supervision from superiors; heavy workloads due to the limited number of available professionals; and no work progression. These healthcare professionals face many challenges, indicating the need for further exploratory research to assess the perceptions of clinicians and their challenges, and ways of overcoming them. Other professionals cited a lack of support staff and IT services as an additional challenge (Paliadelis et al., 2012). As a result, many of the clinicians available in the rural areas may have to offer treatment across their field (of physiotherapy) and beyond their practical experience; as opposed to being a specialist in the field.

CBPHCT is described by Diab and Flack (2013) as a resourceful model that will benefit both the universities (by exposing students to various medical conditions and by providing a challenging environment in which to work) as well as the communities where students are placed, by providing adequate healthcare resources. Chetty et al. (2018) propose that clinical education be mandatory to provide technical skills and to produce ethical, capable and independent practitioners. However, these same authors found that undergraduate students verbalised feeling under-prepared to work independently, upon graduation. As much as CBPHCT is an exceptional framework for providing additional resources to under-served communities, in order for it to function optimally, the challenges that CBPHCT brings should also be addressed. There needs to be an effective collaborative partnership between government health departments and tertiary institutions in order to provide support to the skilled professionals who will be assisting with the supervision of students.

Healthcare organisations need competent staff to address the needs of the communities; whilst the universities are responsible for ensuring capable graduates. In turn, the clinical educators also have to be recognised by the universities and their employers for their hand in contributing to student learning and competence hence contributing to the future workplace. Incentives such as reduced fees, leave for continuing education courses and additional payment where applicable could, potentially, be a way of showing appreciation. A comprehensive training programme should be introduced to support clinical educators, so they can in turn implement and facilitate effective and competent learning in a clinical setting (Rodger et al., 2007).

The aim of the NHI is to provide equal and fair access to healthcare to all citizens of South Africa, irrespective of their creed or class. Due to the uneven distribution of healthcare professionals between urban and rural areas, the government is under pressure to increase the number of available healthcare professionals, especially in the rural communities, through offering incentives to ensure the retention of these healthcare professionals in the rural areas. Decentralisation of health services will serve to implement the core aims of the NHI by providing equal and fair access to all individuals, especially in the low-income areas, as more healthcare providers will be available to ensure equal access to all members of the community (NHI White Paper 2015). CBPHCT and the NHI share common goals and both complement each other (Caldwell and Aldous, 2017).

The National Development Plan, Vision 2030, launched in 2012, is a detailed blueprint for how the country can eliminate poverty and reduce inequality by the year 2030. The plan proposes to increase employment and growth by supporting small businesses, improving skills training via education and vocational rehabilitation; to increase investment in social and economic infrastructure to lower costs, raise exports and focus on South Africa's primary skills (e.g. mining and construction); and to improve the government's ability to effectively implement economic policy. Improvement in employment levels and improved skills development will multiply the positive effects of decentralisation. This will also cure the problem of staff shortages in the rural areas. Investing in rural communities by training members of the communities who are mentored by qualified professionals will contribute to the success of decentralisation. Individuals will not feel so overwhelmed by the high patient numbers and each patient will have equal access to healthcare. It will also facilitate diversification, increase motivation and encourage better control and supervision, as subordinates at the lowest levels will have the authority to make independent decisions. As a result, they will have thorough

knowledge and will be in a position to make amendments and take corrective action (National Planning Commission: National Development Plan 2030, (2012).

## **2.5 International and local experiences of community-based education**

The James Cook University in Australia offers a six-year medical undergraduate programme. From year four to year six, the majority of the students are deployed to rural clinics. This CBPHCT model was chosen to ensure exposure to a variety of patients and to provide efficient and fair access to rural clinics. This shift in training has further ensured that exposure to rural areas helped in recruiting and retaining professionals post-graduation (Woolley et al., 2016).

A study conducted in Australia by Rodger et al. (2007) showed that many challenges have been experienced by university academics in ensuring adequate clinical placements of university students. A shortage of staff at the clinical sites; increasing student numbers; poor relationships and communication between the universities and clinical educators on site; reduced funding; and new models of care have all challenged effective, worthwhile clinical education. However, clinical education has proven to be an essential component of the undergraduate curriculum as it allows for the integration of theoretical and practical knowledge.

In Sweden, a study conducted by Hallin et al. (2009) showed that clinical education also facilitated inter-professional education, allowing students to really comprehend and perceive their own profession whilst learning about the job of other members of the multidisciplinary team. Kibore et al. (2014) reinforced that clinical education in a PHC setting increased the students' desire to practice as professionals in that area. This pilot study demonstrated the need for early introduction to clinical practice in the community as DCT only increased students' learning in the communities and could possibly increase the students' inclination to service ill-equipped areas.

The World Health Organisation (WHO) called for a paradigm shift in the reorganisation of clinical practice into community-based practice, changing the emphasis from hospitals to communities. This is in order to provide fair and equal access to citizens in the communities (World Health Organisation, 2013). A study conducted by Taukobong (2004) on the community-based clinical programme in the Medunsa physiotherapy department concluded with the realisation that the needs of the community are met through the CBPHCT framework.

Chetty et al. (2018) commented on the professionalism, social capabilities and perspectives that were learnt by undergraduate students through CBPHCT. Diab and Flack (2013) have further stated that CBPHCT allows students to appreciate and recognise the relevance of their undergraduate training.

Ramklass (2013) acknowledged the need for curriculum reform as students felt ill-prepared to practise independently, post-graduation. Some students said that not being taught the theory behind the clinical practice made them feel incompetent and frustrated. Other students found difficulty with integrating theory into practice as no practical interventions were demonstrated. Ramklass (2013) concluded that a curriculum reform was mandatory to include a PHC model, in order to produce knowledgeable, skilled and socially responsive students. To add to these findings, a study by Mostert-Wentzel et al. (2013) concluded that gaps in the undergraduate curricula theory result in departments being unable to produce competent graduates.

## **2.6 Conclusion**

Clinical education is an essential part of the undergraduate physiotherapy training programme and is producing competent graduates. Clinical education especially encourages the integration of theory and practice and results in students developing a diversity of skills and clinical competence, whilst working through the various challenges experienced at the rural sites. CBPHCT encourages inter-professional working relationships and independent graduates. The rural clinics, in turn, benefit by being able to take on additional patient loads, reduce waiting times, and apply current evidence-based practice and care, offer efficient and confident staff supervision; and possibly recruit additional staff and retain existing staff (Rodger et al., 2007). However, due to the lack of resources, little peer support and poor infrastructure, changes to the curriculum need to be made to allow for better placement of the undergraduates in these settings in order to make them more adaptable to their surroundings and further ensure that they become socially responsible practitioners. CBPHCT, together with the NHI and National Development Plan Vision 2030 can bring about significant change in addressing the increasing healthcare needs in South Africa.

## CHAPTER 3 – MANUSCRIPT

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## **Abstract**

Community-based primary healthcare training for health science students is based on the tenets of primary healthcare. The approach seeks to provide clinical education and training for health science students in previously disenfranchised communities. Some South African universities train their physiotherapy students through a community-based primary healthcare approach to undergraduate training. However, there is currently a lack of an integrated model guiding clinical education for physiotherapy clinical education in the country. The aim of this paper was to explore the perceptions of physiotherapy academics about a novel, community-based primary healthcare approach to clinical education for students at a university in South Africa. This study sought to inform the roll-out of an evidence-based model for physiotherapy education. A qualitative explorative approach, using semi-structured interviews with physiotherapy academics at the institution, was used to explore their perceptions of the community-based primary healthcare training approach. Data was analysed using conventional content analysis and was classified into themes and categories. Four overarching themes emerged, namely: curriculum review, constraints to decentralised learning, benefits of community-based clinical education and recommendations for the learning platform. Academics believe that community-based primary healthcare training is an approach that influences students to be socially responsive, while providing access to healthcare services, such as rehabilitation, in resource-poor communities in South Africa.

Keywords: community-based primary healthcare, physiotherapy, clinical education

## **Introduction**

In KwaZulu-Natal, an eastern coastal province in South Africa, many people live in previously disenfranchised rural and resource-poor communities, with poor access to healthcare. Healthcare professionals in South Africa should be prepared to offer care to people living in such conditions. However, healthcare facilities in rural communities experience a shortage of staff, coupled with poor infrastructure. Added challenges exist with regards to recruitment and retention of healthcare staff, linked to inadequate funding (Wilson et al., 2009). A core goal of any healthcare system is to offer seamless care to improve health outcomes through the adequate provision of clinical and public health services (Panda and Thakur, 2016). However,



in South Africa, the public healthcare sector suffers from a lack of resources; while the private healthcare sector is comparatively over-serviced. It is recognised that a shift is needed in the healthcare system to remedy the disparity. The South African government is attempting to address these disparities through the adoption of National Health Insurance (NHI), which seeks to improve access to healthcare through a primary healthcare approach, ensuring care within, and closer to, communities that were previously marginalised (South African Government, 2015).

In an attempt to prepare undergraduate health science students for this shift in healthcare, the University of KwaZulu-Natal (UKZN) in South Africa and the local Department of Health agreed on a community-based primary healthcare approach to the training of undergraduate students. Community-based primary healthcare training, which is based on the tenets of primary healthcare (Kautzky and Tollman, 2008), offers a chance for undergraduate students, such as physiotherapists, to be adequately equipped to serve the communities where they will work. Students are placed in rural and peri-urban communities for clinical and service learning in order to acquire the necessary core competencies and to develop the social responsiveness essential for healthcare practice. This is coupled with traditional clinical education through patient management. Although the community-based primary healthcare approach is sound, there is no model that guides the roll-out of this novel approach. This led to a group of researchers proposing the development of an integrated model for the community-based primary healthcare approach to clinical education for the health sciences at the University of KwaZulu-Natal (Govender et al., 2018). This paper specifically aimed at exploring the perceptions of the academic staff about the community-based primary healthcare training approach adopted by the discipline of physiotherapy, in order to inform the overarching model of clinical education for health science students at a South African university (Govender et al., 2018).

## **Methodology**

A qualitative descriptive explorative approach was used to gain insight into the perceptions of academic staff at a tertiary institution in South Africa, about a community-based primary healthcare training framework for undergraduate physiotherapy students (Elliott and Timulak, 2005). Given the novelty of this approach, an exploration of the real-life experiences of academics involved in the clinical education of undergraduate physiotherapy students in a resource-limited, higher education context was deemed suitable for this study (Creswell and

Poth, 2017). The community-based primary healthcare training framework will be referred to as the decentralised clinical training (DCT) platform from this point on.

### **Participants**

Eight academics from the physiotherapy department at UKZN were purposively selected due to their involvement in the clinical training platform for the undergraduate physiotherapy programme. They were all qualified physiotherapists, registered with the Health Professionals Council of South Africa, and employed on a full-time basis by the university.

### **Data Collection**

Once ethical clearance had been obtained from the Humanities and Social Sciences Research Ethics Committee at the university, and informed consent had been obtained from the participants, semi-structured interviews were conducted (Longhurst, 2003). The interviews were held in the physiotherapy department seminar room at the end of the first year of implementation of the DCT platform. Anonymity was maintained through the use of pseudonyms when reflecting the results or discussing the findings of the study. Each interview was recorded and lasted between 45 minutes and one hour, with both a researcher and moderator experienced in qualitative methods being present. Interviews were conducted in English and non-verbal nuances were noted by the moderator.

### **Data analysis**

Following the interview process, the recorded data was then transcribed verbatim. The audio recordings were listened to several times to eliminate any errors during transcription. The transcribed data was read and re-read for familiarisation and to acquire in-depth understanding of the data and emerging themes. Both the researcher and moderator executed data coding using conventional content analysis, reaching a consensus on the overarching themes and categories. The most salient quotes were selected for this paper, to provide examples of the rich descriptions in the interviews.

### **Results**

Details of the eight academic participants are captured in Table 1, using pseudonyms to protect the identity of faculty members. Three academics had less than 10 years of academic clinical teaching experience; while two had more than 20 years of experience. Six of the staff were aged between 30 and 40 and two were over 50 years of age.

**Table 1: Characteristics of physiotherapy academics**

<b>Participant Pseudonym</b>	<b>Age</b>	<b>Gender</b>	<b>Years of academic clinical experience</b>	<b>Area of expertise</b>
<b>Vani</b>	30-40	F	12 years	Neurology/ Community
<b>Sam</b>	30-40	F	10 years	Cardiopulmonary
<b>Neville</b>	30-40	M	17 years	Neurology/ Community
<b>Zinhle</b>	30-40	F	2 years	Neurology/ Community
<b>Tina</b>	51-60	F	33 years	Neurology/ Community
<b>Selvan</b>	51-60	M	20 years	Orthopaedics
<b>Simon</b>	30-40	M	7 years	Cardiopulmonary
<b>Rod</b>	30-40	M	8 years	Orthopaedics

The interview data yielded four overarching themes, namely: curriculum review, constraints to decentralised learning, benefits of community-based clinical education and recommendations for a learning platform. Table 2 reflects the themes and categories from the interviews with the physiotherapy academics.

**Table 2: Summary of Themes and Categories**

<b>Themes</b>	<b>Categories</b>
<b>Curriculum review</b>	Student-led teaching approach Pre-clinical education Integration of theory into clinical practice Strengths in the programme Gaps in the programme
<b>Constraints to decentralised learning</b>	Resource limitations Partnership parody Lack of supervision
<b>Benefits of community-based clinical education</b>	Personal growth for students Personal growth for academics Community as teachers Pique research interest of clinicians
<b>Recommendations for learning platform</b>	Improved communication and collaboration Local clinical supervisors Improved infrastructure

The theme curriculum review encompassed the categories: student-led teaching approach; pre-clinical education; integration of theory into clinical practice; strengths in the programme; and gaps in the programme. Staff identified strengths in the curriculum with a shift to student-led independent learning.

One academic commented: “I think that maybe if we move away from teacher-directed, towards a more student-led learning, it would be ideal; so I think even for me today, to give you the answer (referring to whether the community-based primary healthcare training works), would mean that it’s coming from a teacher-led approach (Neville).” The academic believed that it was important to shift toward a student-centred teaching approach.

Another academic noted: “Clinical training, for one, will allow them the opportunity to be involved and further supplement the clinical education of the student following the preparation they received at varsity (Sam).” The pre-clinical training that is offered at the university was seen as an adjunct to clinical practice received on the DCT platform.

Many of the academics echoed the sentiments of Zinhle who said, “I think, for me, its exposure and really trying to integrate theory with practice.” The staff felt that the DCT would afford students the opportunity to integrate their theoretical foundation into good clinical practice.

Tina said, “I think there are modules within the undergraduate programme that are equipping students for this training framework from first year up to final year.” Neville felt: “This model definitely facilitates independent learning and that in itself will predispose them to become lifelong learners.”

Staff also felt that the curriculum needed review in some areas. Vani said, “I think we need to look at the UKZN core competency framework,” and continued to allude to the fact that it is not emphasised in the programme. Simon also highlighted that the “improvement of the curriculum to include socially responsible graduates” was important for preparation for the DCT platform. The pre-clinical teaching was believed to be hurried; as Rod said, “We had to speed up all our teaching”.

The theme constraints to decentralised learning included the categories of resource limitations; partnership parody; and lack of supervision.

“You know, in well-resourced countries, there is one-on-one supervision, or one-to-two, but here in South Africa we have large numbers of students with few supervisors.” Vani believed that the shortage of staff and academic supervisors was a challenge facing South African clinical education.

Rod said, “So the point I am trying to make is that patient resources are extremely important. We cannot take them to places where they can’t practise their skills or develop skills.” He believed that the lack of exposure to clinical cases also impacts learning.

The partnership between the clinicians and academics was seen as imperative for optimal clinical education, according to most participants. Neville said, “For success (referring to DCT), we require clinicians and academics that are cohesive, not disagreeing.”

Simon also felt strongly about the value of this partnership and said: “OK, so the irony of it all is that the challenges we had were not at the CBPHCT sites but the urban sites.”

Sam commented: “From former experience with clinicians, they are not the most willing participants in clinical education.”

All the academics believed that the relationship between the clinician at the clinical education sites and the student had an influence on the learning platform.

Vani said, “... the staff (clinicians on site) can make this experience really enriching for our students, or they can really mess up our clinical education platform.”

Neville also said, “The disadvantage is the lack of buy-in from the clinicians.” Simon felt that, “The lack of interest from the leadership of the clinicians influences learning.”

Sam agreed: “We’ve had situations where a physiotherapy department tells you straight up ‘we don’t want your students, they’re a nuisance.’” Rod felt that “the rural guys are very happy because they can delegate the work to the students. They can see other patients or have more time for other things that they need to do.”

Some academic staff were ambivalent about the supervision offered by clinicians, compared to the previous system where predominantly academic clinical supervisors facilitated clinical education. Neville said, “The feelings of quality supervision, I still have a hard time accepting, because towards the end of the block in preparation for the final exam, I had to go in and do tutorials with the students.”

Vani also added, “Whether the students are getting adequate supervision from clinicians with the new platform is still to be explored because we just don’t know as yet.”

The theme benefits of community-based clinical education included the categories: personal growth for students; personal growth for academics; community as teachers; and pique research interest of clinicians.

Most academic participants felt that students showed growth and became independent following exposure to the DCT. This is reflected in Sam’s quote: “I see that they are less needy. They are definitely more mature and more independent with DCT.”

Zinhle also voiced her belief that: "...advantages are that they are getting more than just a physiotherapy curriculum and they are getting the life skills and that kind of stuff, on becoming more rounded professionals."

Neville also said, "In terms of students' maturity, independence and neediness, I found the DCT certainly equipped us all better because we all have different teaching strategies and methods which is now evolving to a more student-centred approach."

Neville's quote reflects the personal growth of the academics as the academics are changing and allowing the students freedom to lead their own learning. Vani also felt like she had to learn to let students develop and become more independent. "I feel like I am too mothering and having students take charge like on this DCT platform, makes me want to change and improve my approach and be more enabling (Vani)."

The exposure to diverse communities as an enabler in clinical-based education is reflected in Selvan's belief: "Their backgrounds are, first of all, so diverse at DCT, which is great for students to develop." Simon felt: "The advantage is that they get out and see what's happening outside the urban setting."

Rod also commented that, "I think, for the first time, the students have proper exposure to communities and they are able to see the needs because they become one with the community and therefore really experience the community."

The academic staff also mentioned that the communities partner with the students as they learn during their clinical training. Neville believed, "We should also get buy-in from the community leaders, to make the experience even more enlightening for the students; where we meet with community leaders and we let them know that our students are in the area."

Zinhle also said: "Where there is a community-based rehabilitation programme, maybe our students can be involved in there so they can gain from the community."

The clinical education also benefited the clinicians who began to show an interest in furthering their studies and research. "I also think that it allows for this engagement with the students and them and it will stimulate areas of research for you as a professional physiotherapist (Neville)."

Zinhle said, "The clinicians, having students around, want to learn more and are showing interest in pursuing research Masters."

The final theme, recommendations for the learning platform, included the categories: improved communication and collaboration; local clinical supervisors; and improved infrastructure.

Improved communication and collaboration encompassed the communication between various stakeholders. Tina felt that, "We need to look at offering a platform in order to improve the partnership between all stakeholders."

Neville alluded to the improved communication between the Department of Health and the university. “I would like to see that dual responsibility between the Department of Health and academia to benefit the students.” Selvan said that, “Having the other professionals on board will help build on the experience.”

Some of the academics felt that engaging local physiotherapists who are based in close proximity to the clinical sites would help with the learning experience. “Employ people to do clinical education from those areas (Simon).” “I’ve said it a few times now, that we should possibly be getting local therapists on board as part-time staff (Zinhle).”

The eight academics all agreed that improved infrastructure would facilitate learning on a DCT platform. “I think it’s just the simple logistics that need to be improved, such as Wi-Fi; such as transport; when they need to do community projects; when they need to do home visits. In addition, the accommodation, the environment where the students are going to be placed. I think the university needs to make sure that there’s enough water, there’s electricity and you know, those small things,” said Simon. “I think it’s the just the simple logistics that need to be improved (Selvan).”

## **Discussion**

The community-based primary healthcare approach to clinical education is vital for physiotherapy undergraduate training programmes as it aides in developing the traditional skills and core competencies required for independent practice (Ernstzen et al., 2014). Clinical learning placements are a platform to ensure that theory is put into practice (Chetty et al., 2018; Currens and Bithell, 2000). The participants in this study advocated for a student-led approach to clinical education. A study conducted by Sevenhuysen et al. (2014) on physiotherapy students in Australia, which aimed to assess the efficiency of peer-assisted learning frameworks, reflected that, even though peer-assisted learning reduced the workload of the clinical educator, the traditional approach of teacher-led learning was believed to be more favourable. This is in contrast to the findings in this paper, where academics believed that a shift to student-centred learning is imperative in the undergraduate curriculum.

Physiotherapy academics also believed that the undergraduate curriculum needed to be reassessed, as gaps were identified, including around the development of core competencies and social responsiveness of students. Chetty et al. (2018) agreed that there is a gap in clinical education for physiotherapists; and in their study in a similar context believed that the university competency framework was not emphasised in the undergraduate curriculum and

that the health science student should demonstrate competence in the key roles as a ‘practitioner, communicator, collaborator, leader, scholar, health advocate and professional’. Hartman et al. (2012) also believed that the curriculum should adopt the principles of primary healthcare, which are inclusiveness, participation and social responsiveness; and it should address the needs and interest of students, academics and the community. Crosbie et al. (2002) recommended that curriculum review should not merely be the addition of content but that irrelevant, stagnant curricula also need to be addressed.

Constraints to decentralised learning included inadequate resources, such as the shortage of staff in the healthcare sector in South Africa. This is echoed in other studies on decentralised learning approaches to clinical education for health science students (Woolleys et al., 2016; Caldwell and Aldous, 2017). A qualitative study carried out in the United Kingdom (Currens and Bithell, 2000) highlighted that supervising clinicians prioritised patient care over their role in clinical education. Clinicians also felt that students were a burden and they were not remunerated for the extra involvement in clinical supervision. Similar frustrations were evident in Talib et al.’s (2017) study, where it was noted that the increased number of medical students placed strain on the teaching hospitals, leading to a negative effect on the student-supervisor relationship.

The poor partnership dynamics on the DCT platform also posed a barrier to learning. Milanese et al. (2013) emphasised that health institutions focus on providing quality care and the clinical education of the student may take a secondary role to patient management. The academics in this study highlighted the importance of team work between the supervising clinicians, students and academic staff from the university. Kibore et al. (2014), who conducted a study on decentralised training at the University of Nairobi in Kenya, mentioned the importance of close clinical mentorship in rural institutions in influencing students’ clinical skills, which enhances the quality of patient care, and could further encourage the retention of health professionals within these healthcare facilities. This is in keeping with studies that emphasise the importance of a working collaboration between stakeholders for the success of clinical learning platforms (Gassner et al., 1999; Lo et al., 2017)

Academics who participated in the interviews in this study felt that the benefits of community-based clinical education included both student and academic personal growth. Physiotherapy students were able to improvise and apply clinical reasoning with less supervised practice.



Academics believed that students developed core competencies and seemed more independent in their approach to learning. Academics were able to shift their personal teaching strategy to a student-led approach. Exposure to diverse communities also enabled learning and equipped students with competencies to address healthcare needs in the South African context. According to Woollard (2014), decentralised clinical education is seen as a strategy to foster social accountability and can facilitate community empowerment. Supervising clinicians also benefitted and the placement of students at their facilities stimulated their interest in research and evidence-based practice. Community-based clinical education opens up avenues for future research ventures that may significantly benefit the community at large (Diab and Flack, 2013). Furthermore, the academics who were interviewed at the university under study emphasised the importance of students learning from the community. The learning from the community enhanced community engagement and expanded knowledge and understanding of the community-based primary healthcare approach. Diab and Flack (2013) recognise that community leaders should also play a collaborative role in the learning platform as the primary focus should be the needs of the community. The students and academics from the University of Nairobi who were involved in a similar decentralised clinical education platform shared the same sentiments, emphasising that this kind of clinical exposure to the community improves confidence in students, and inspires clinical and academic staff to gain from such exposure (Kibore et al., 2014).

In their recommendations for the learning platform, these physiotherapy academics emphasised that improved collaboration through strengthened communication between stakeholders, such as academics and the local Department of Health, would enhance learning. Rodger et al. (2007) reported that a cohesive relationship between tertiary sectors and healthcare would aid in the accomplishment of shared goals that will facilitate improved patient access and care. Partnership is also crucial between the students and communities (Frantz and Smith, 2013), as this will enhance healthcare and healthcare education. Other recommendations included recruiting local clinical supervisors to facilitate learning during DCT placement (Moore et al., 2003). The physiotherapy department in this study is responsible for the process of recruiting part-time clinical supervisors. The recruitment process ensures that physiotherapists who are invested in the clinical learning platform are enlisted and engaged in the training of the undergraduate students. The improvement of resources available to students during DCT placement was also viewed as necessary for improving clinical education. Placing greater

pressure on the university to improve telecommunications and access to online learning will facilitate learning on DCT platforms.

## **Conclusion**

This study sought to understand the perceptions of physiotherapy academics about the decentralised platform for clinical education of undergraduate students at a university in South Africa. The benefits of the community-based primary healthcare approach included the development of core competencies in undergraduate students, preparing them for independent practice; as well as a call for students to be more socially responsive as future healthcare practitioners. This study also suggests that the improved collaboration between stakeholders will curb opposition to the community-based learning platform.

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## CHAPTER 4: CONCLUSION AND FUTURE RECOMMENDATIONS

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This chapter concludes the manuscript by summarising the findings in accordance with the objectives that were identified in the introductory Chapter One. It also discusses the limitations the researcher identified and recommendations for the promotion and future development of the CBPHCT platform. The study advocates that the undergraduate curriculum requires review, both locally and globally to complement the needs of the healthcare systems in South Africa; and to ensure that the health science student is qualified to practise internationally.

### 4.1 General Conclusion

This study has accomplished the primary aim of exploring the perceptions of physiotherapy academics about a novel community-based primary healthcare training approach to clinical education at UKZN. In addition, the objectives of the study have been fulfilled; namely, to review the existing literature and current practices of clinical education for physiotherapy students globally, and within the South African context; to explore the perceptions of academics about the current community-based primary healthcare approach to clinical education at UKZN; to explore the perceptions and recommendations of physiotherapy academics on the curriculum reform required to improve the rollout of the CBPHCT approach; and to explore the perceptions of physiotherapy academics about the UKZN graduate competency framework in the CBPHCT approach at UKZN.

*Objective 1: To review the existing literature and current practices of clinical education for physiotherapy students globally and within the South African context*

Community-based education provides for an enriching experience for undergraduate students. Clinical placements in under-resourced communities involve many challenges. However, the exposure to these challenges and the need to provide optimal services encourages the undergraduate students to become responsible, competent individuals. In addition to producing socially responsive graduates, CBPHCT also helps to alleviate the stress and heavy workloads the encumbered professionals carry in these under-resourced areas. CBPHCT has, therefore, proven to be an invaluable healthcare platform to improve services to under-served areas; as well as providing much, varied practical training for physiotherapy undergraduate students (Ernstzen et al., 2014). CBPHCT is believed to facilitate the equipping of healthcare

professionals with the specific skills and knowledge needed to best deal with the ever-changing healthcare system in South Africa; and to educate students to manage efficiently the needs of the community. Some of the important benefits of CBPHCT include improved communication and interpersonal skills; more professional accountability; and specific, relevant education gained through the practical experience.

Taukobong (2004) highlighted the need for a change in healthcare delivery that endorsed follow through healthcare services subsequent to shorter hospital stays. In 1998, the WHO announced a need for clinical education to change focus from a hospital-based setting to a community-based strategy in order to provide fair and equal access to healthcare to South Africans in underserved areas (Taukobong, 2004). Govender et al. (2018) anticipate that CBPHCT will lead to students having a positive attitude to serving the rural areas and engaging in community needs. Further advantages of CBPHCT - included increased and improved service delivery (under the supervision of a qualified professional), therefore reducing daily patient loads. The collaboration between the universities and staff, where both stakeholders benefitted from additional community placements, with the associated exposure to a multitude of challenges, and current evidence-based education provided to the communities, respectively, was cited as a long-term benefit of CBPHCT (Diab and Flack, 2013). On-site physiotherapy clinicians largely benefitted by supplementing their own continuing professional development and improved personal job satisfaction. CBPHCT also allows for good exposure to the plight of the rural communities, possibly identifying a need for undergraduates to return to these rural communities post-graduation (Sevenhuysen and Haines, 2011). White (2014) agreed with Sevenhuysen and Haines (2011), that clinical education and placements can indeed have a remarkable influence on a health professional's predisposition to a particular practice setting.

Several clinical education frameworks exist currently (the peer-assisted learning model; the 2:1 student instructor education model; 1:1 student educator model), with no particular model being dominant (Triggs Nemshick and Shepard, 1996; Sevenhuysen et al., 2014). However, this study found a need to readdress and explore the current models to address current concerns in a nation where healthcare needs continue to change. The academics also highlighted the need for theory being taught to undergraduate students prior to clinical placements. This was to avoid frustrated, incompetent students who believed their lack of theory made them inadequate to treat patients efficiently. This strongly emphasised the need for the integration of theory and clinical practice. In addition, the academics endorsed clinical placements starting

in the first year, of study with hours increasing as the students approached the final year, so that in their final year, the students are able to independently and confidently assess and treat patients with minimal supervision.

*Objective 2: To explore the perceptions of academics about the current community-based primary healthcare approach to clinical education at UKZN*

The academics at UKZN viewed the CBPHCT framework as a vital platform that provided the students with an enhanced, fulfilling training experience. They found the students to be less needy, more involved and independent, with CBPHCT encouraging them to be more complete professionals. The academics agreed with the current literature which noted that the constraints experienced, namely, healthcare staff shortages and poor infrastructure, do not allow for the perfect execution of CBPHCT. The improvement of simple logistics could bring about a more positive attitude towards CBPHCT. There is a need to improve the provision of simple basic needs such as water and sanitation, electricity and better roads, as poor infrastructure poses as a challenge to retaining medical personnel, which is key to increasing services to under-resourced communities.

The academics also recommended improving partnerships between the university and clinical sites. The lack of buy-in from the clinicians was a serious problem, as this can prevent CBPHCT from being an enriching experience for the students. The CBPHCT framework requires that clinicians and academics share a cohesive relationship and a successful way to improve the partnership included the university offering in-service training workshops for clinicians. Clinicians from the eight health science disciplines at UKZN viewed supervising students as a burden, as the relationship between the students and clinical supervisors was poorly defined, creating difficulties (Govender et al., 2018). The undergraduate students were viewed as a burden as the clinicians did not regard student supervision as one of their core roles. One academic suggested that the employment of part-time staff would be a possible way to offset this overload.

A positive working environment, with specific supervision and tutoring, is essential to keep students abreast of the different conditions to be treated. Ramklass (2013) stressed the importance of aligning CBPHCT with the PHC philosophy in order to produce competent graduates. The PHC platform aims to deliver equitable healthcare services and is regarded as



a philosophy for rendering fair and just services within all levels of care in the health system. The re-engineering of the PHC needs to be partnered with culture change to achieve improved health outcomes (Naledi et al., 2011). CBPHCT allows the students to learn about the communities' culture and become one with the community. The students are also learning life skills that will allow them to become more rounded professionals. Recruitment and retention of health professionals in rural settings is a challenge. CBPHCT facilitates exposure to rural communities and thus may encourage new graduates to return to rural areas, thus increasing social accountability. Chetty et al. (2018) identified the need for a well-integrated collaboration between theory and practice in order to avoid gaps and irrelevant content when students are faced with a patient. Learning the theory prior to clinical placements allows for a thorough assessment and examination of the patient using the essential tools and skills learned to formulate possible diagnoses, thereby allowing the student to treat accordingly. This indeed facilitates independent practice and encourages socially responsive graduates.

*Objective 3: To explore the perceptions and recommendations of physiotherapy academics about the curriculum reform required to improve the rollout of the CBPHCT approach*

Significant recommendations were made by the academics regarding the CBPHCT platform. The academics identified that CBPHCT promoted independent learning, encouraging the students to become lifelong learners. They further identified modules in the current curriculum that equipped the undergraduate students with the necessary skills to facilitate CBPHCT. However, they also acknowledged gaps in the current curriculum and therefore a need for a curriculum review. Blose (2017) also identified the need for curriculum reassessment as undergraduate students had difficulty integrating theory into practice. The academics felt that the curriculum needs to be aligned with clinical placements so undergraduate students have the knowledge prior to effectively treating patients. In order to become efficient community service physiotherapists, the undergraduates need to be exposed to a variety of conditions in different settings, especially in under-served communities; hence the need for the curriculum to be revised to equip students with the necessary skills and capabilities to cope with the demands placed on them.

Ramklass (2013) reported that the current undergraduate curriculum did not adequately prepare students to function efficiently within a PHC setting and concluded that clinical education curricula needed to be systematically evaluated to keep abreast of current practice trends. This also highlighted the need for continuing professional development for academics and on-site

clinicians in order to deliver current evidence-based education. The academics stipulated that the current curriculum may need to be regularly reassessed to introduce new evidence-based practice that could impact on healthcare systems positively. The current curriculum needs reorientation to keep abreast of several issues (for example, ongoing physiotherapy review and alignment and improved collaboration between the stakeholders) that may impede a well-integrated and unified learning environment. Improving the relationship between stakeholders plays a key role in ensuring the adequate success of CBPHCT, as students should not be looked upon as burdens; rather they relieve some of the heavy workload that rural clinicians face daily.

*Objective 4: To explore the perceptions of physiotherapy academics about the UKZN graduate competency framework on the CBPHCT platform*

One of the suggestions put forward by the academics was the need to reexamine the UKZN core competency framework. According to the Health Professions Council of South Africa (HPCSA), the undergraduate curriculum needs to be aligned with ‘core’ graduate capabilities so that proficient graduates, able to efficiently contribute towards ethical and professional healthcare needs, are produced (Knight et al., 2017; Core Competencies for UG students (CHS) Teaching and Learning Programmes UKZN, 2014). A review of the competency framework would address some of the issues that some of the graduates face, thus allowing them to become socially responsive professionals. The academics also stressed the importance of incorporating the UKZN core competency framework from the first year of study, gradually developing the competencies further into the third and fourth years of study. This will also encourage self-reflection in students to see where their competencies lie and where they are deficient in skills thus encouraging the students to focus on the areas of the curriculum that they find challenging. In addition, this will encourage students to appreciate the social determinants of disease; to be exposed to various clinical conditions; and to improve their research abilities. The need to improve their research abilities is vital, due to the changing healthcare systems and needs in a country that is having to deal with numerous challenging illnesses. The academics also advised that on a support system from the university be put in place to help students with skills in which they lack competence. This will also allow learning to take place in a structured manner, with the students benefitting from a better understanding of the PHC, as well as ensuring successful community engagement. The need to support the community physiotherapists in areas where they lack confidence has also been highlighted, enabling them to work efficiently as independent practitioners in communities setting where minimal supervision is available.

## **4.2 Significance**

This study aspires to contribute to the currently developing community-based training platform for undergraduate students at UKZN by exploring the perceptions, experiences and recommendations of the academics. The academics' perceptions and recommendations may assist in enhancing the existing curriculum and training platform, thereby ensuring a successful programme that produces socially responsive and independent graduates. This would also allow for resource-poor areas to be better provided with adequate healthcare services thereby allowing each and every South African citizen an opportunity to access equitable, quality healthcare.

## **4.3 Limitations**

This study was limited to only one tertiary institution and included only eight participants. A greater study sample (including other health science disciplines or other tertiary institutions) could have possibly yielded different results. However, it must be stated that all the permanent academic staff members in the physiotherapy department at UKZN participated in this study. Furthermore, in qualitative research, the method employed in this study, the in-depth examination of fewer participants is of significant value; compared to the requirements in quantitative studies. Other institutions' clinical training practices may vary, highlighting the fact that the results of this study cannot be generalised to all tertiary institutions that train physiotherapy students.

## **4.4 Recommendations**

A number of recommendations can be drawn from the outcomes of the study:

CBPHCT training should be introduced earlier on in the four-year degree, with an incremental increase in the hours of clinical-based education each year; so that by the final year of study, the undergraduate students are well equipped and competent to optimally and independently treat patients and effectively manage other site challenges.

The communication between the universities and the community blocks needs to be improved in order for stakeholders to benefit from clinical placements. This is important to ensure a dual

responsibility between the Department of Health and academic institutions for the training of students. This may also mitigate against clinical educators becoming frustrated with the students and encourage them to take on student supervision as one of their core responsibilities. One of the ways to encourage clinical educator involvement is to provide incentives, such as continuing educational programmes so they can also keep abreast of current evidence-based practice trends.

Another significant recommendation would be to improve site infrastructure, as well as to improve logistics, such as Wi-Fi to make communication easier. The author also recommends employing local supervisors to assist with clinical education, even on a part-time basis. Besides lessening the workload of the permanent staff, the local supervisors would have an in-depth knowledge of the communities' requirements and may be better motivated to strive to meet these needs so that the community may benefit optimally.

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## GUIDELINES FOR PRESENTATION OF MASTERS AND PHD DISSERTATIONS/THESES BY RESEARCH

### 1. Purpose

The purpose of this document is to provide guidance to students and supervisors on how to prepare a dissertation/thesis for Masters by Research and PhD degrees using the manuscript or publication format.

### 2. Introduction

These guidelines must be read together with the College of Health Sciences (CHS) Handbook as well as the Jacobs documents on examination policies and procedures for PhD degrees. The rules on thesis format are based on modification of point 1 of the definition of terms section in the Jacobs document. In this section a thesis is defined as *“the supervised research component of all PhD degrees, whether by supervised research only, or coursework and research, or by papers that are either published or in manuscript form (the supervised research component of the PhD degree by paper(s) comprises the introduction, literature review, account of the methodology, selection of manuscripts, and conclusion).”* A dissertation is defined as *“the supervised research component of all Masters degrees, whether by supervised research only, or coursework and research, or by papers that are either published or in manuscript form (the supervised research component of the Masters degree by paper(s) comprises the introduction, literature review, account of the methodology, selection of manuscripts, and conclusion).”*

#### 2.1 PhD thesis

In the CHS Handbook the rules for a PhD thesis are not in one place; they are stated in DR8 a i & ii, DR9 c and CHS 16. DR8 a i & ii and direct that a thesis be presented in the standard format together with one published paper or an unpublished manuscript that has been submitted to an accredited journal, arising from the doctoral research. CHS16 (thesis by publications states that the thesis may comprise of at least three published papers or in press in accredited journals; such papers must have the student as the prime author. The same CHS16 provides for a thesis by manuscripts that may have at least 3 papers with the student as the prime author that have not yet been published but are in the form of manuscripts; at least two of such papers must constitute original research. In both cases (thesis by publications and manuscripts), there must be introductory and concluding integrative material sections.

The standard type thesis is being phased out in many African countries in favour of the other options that originate from the Scandinavian countries. While this format ensures that all details of the work done for the doctoral degree are captured and thoroughly interrogated, they often remain as grey literature which is mainly useful to other students, usually within the same university, although with digitization of theses, such work may become more accessible beyond the source university. Apart from the risk of losing good work because of it not being on the public domain, as students rarely publish such work after graduating, this approach denies the college additional productivity units (PUs) emanating from publications.

The thesis by publication encourages students to publish key aspects of their doctoral research as they will not graduate if the papers are not published or in press. This approach ensures that the work of the student enters the public domain before the thesis is examined, providing the examiner

with some assurance of prior peer review. The thesis must constitute a full study of the magnitude expected of a PhD with the papers providing a sound thread or storyline. Furthermore, the college maximizes the students' work as PUs are awarded for the papers as well as for graduating. However, this approach may negatively affect throughput and frustrate students as they cannot graduate unless all the papers are published or in press, in addition to the synthesis chapter demonstrating the story line of the thesis.

The option of a thesis by manuscripts ensures that students make efforts to start publishing. The risk of not passing because of failure to publish all papers (as in the thesis by publication) does not exist under this option. However, the PUs emanating from publications from the doctoral work are not guaranteed as the submitted papers may eventually be rejected. Thus there is a possibility of the doctoral work remaining on the university library shelves as is the case for the standard thesis format. The standard thesis does have the advantage that more details of the doctoral work are usually included.

In view of the above, the best option for the college is that of a thesis by publication. However, in the interim, the attractive option is that of thesis by manuscripts, as it provides the possibility of publication without putting the student at risk of delayed graduation when some of the manuscripts are not published/accepted, which also disadvantages the college in terms of PU earnings. The standard thesis option should ultimately be phased out for the stated reasons and students are not encouraged to present their theses in that format. Consequently this document does not describe the standard thesis.

## ***2.2 MSc dissertation***

The rules on presentation of MSc dissertations are presented in CR13 (course work), CHS 14 (course work) and MR9 (research) in the CHS Handbook. CR13 c and MR9 c direct that a dissertation "may comprise one or more papers of which the student is the prime author, published or in press in peer-reviewed journals approved by the relevant college academic affairs board or in manuscripts written in a paper format, accompanied by introductory and concluding integrative material." Such a dissertation should include a detailed description of the student's own distinct contribution to the papers. Both CHS14 and CR13 specify that reviews and other types of papers in addition to original research paper/s may be included, provided they are on the same topic.

## ***3 Length of thesis and dissertation by word count***

Table 1 provides a guide of the length of a thesis or dissertation by word count excluding preliminary pages and annexes.

Table 1: Thesis length by word count

Sections	PhD		Masters	
	Minimum	Maximum	Minimum	Maximum
Introduction	2700	2700	2000	2000
Chapters	10000	25000	6000	11000
Synthesis	2000	2000	1700	1700
Bridging	300	300	300	300

Total	15000	30000	10000	15000
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#### **4. Intention to submit**

A written intention to submit a thesis or dissertation should be submitted to the appropriate postgraduate office with endorsement of the supervisor at least three months before the actual date of submission which should be before November if the student intends to graduate in the following year. The actual submission will under normal circumstances require approval of the supervisor.

#### **5. Format for theses/dissertation**

There is little variation in the actual format of the PhD thesis and Masters dissertation for the various types described above. The box below summarise the outline of a thesis/dissertation for the thesis by manuscripts and thesis by publications.

##### **Box 1: Outline of thesis**

###### **Preliminary pages**

- i. Title page
- ii. Preface and Declaration
- iii. Dedication
- iv. Acknowledgements
- v. Table of contents
- vi. List of figures, tables and acronyms (separately presented)
- vii. Abstract

###### **Main Text**

1. Chapter 1: Introduction  
Introduction including literature review  
Research questions and/or objectives  
Brief overview of general methodology including study design
  2. Chapter 2  
First manuscript/publication
  3. Chapter 3  
Second manuscript/publication
  4. Chapter n  
Final manuscript/publication
  5. Chapter n+1: Synthesis  
Synthesis Conclusions  
Recommendations
  6. References Appendices
- NB. Between the manuscripts or publications there must be a 1 page (maximum) bridging text to demonstrate the link between them

#### **6. Details for thesis/dissertation subheadings**

This section summarizes what is expected under each subheading shown in Boxes 1 and indicates where there might be variations between a Masters Dissertation and PhD Thesis.

### **6.1 Title Page**

The officially approved title that is concise (Fewest words that adequately describe the contents of the thesis/dissertation – usually 15 or fewer words) is presented at the top. This should be followed by the candidate's name in a new line. At the bottom the thesis statement should be presented. The thesis statement may be stated as "*Submitted in fulfillment of the requirements for the degree of in the School of \_\_\_\_\_, University of KwaZulu-Natal*" for a PhD/Masters by Research thesis. In the case of a Masters Dissertation it should be stated as "Submitted as the dissertation component in partial fulfilment (% stated) for the degree of \_\_\_\_\_ in the School of \_\_\_\_\_, University of KwaZulu-Natal". For both Masters and PhD the date of submission must be stated.

### **6.2 Preface (Optional)**

The preface merely states the reason (motivating factors) why the study was conducted without getting into details of what was investigated.

### **6.3 Declaration**

This must be structured as follows:

I, Dr/Mr \_\_\_\_\_, declare as follows:

1. That the work described in this thesis has not been submitted to UKZN or other tertiary institution for purposes of obtaining an academic qualification, whether by myself or any other party.  
*Where a colleague has indeed prepared a thesis based on related work essentially derived from the same project, this must be stated here, accompanied by the name, the degree for which submitted, the University, the year submitted (or in preparation) and a concise description of the work covered by that thesis such that the examiner can be assured that a single body of work is not being used to justify more than one degree.*
2. That my contribution to the project was as follows:  
*This is followed by a concise description of the candidate's personal involvement in and contribution to the project, in sufficient detail that the examiner is in no doubt as to the extent of their contribution.*
3. That the contributions of others to the project were as follows:  
*This is followed by a list of all others who contributed intellectually to the project, each accompanied by a concise description of their contribution. This does not include people who ordinarily would be "acknowledged" as opposed to considered for authorship.*
4. Signed Date \_\_\_\_\_

### **6.4 Dedication**

This is an optional section. Should it be included it must be very brief merely indicating to whom the work is dedicated. Avoid anything too flowery

### **6.5 Acknowledgements**

This section acknowledges all individuals, groups of people or institutions that the candidate feels indebted to for the support they rendered. The funding source for the work should also be acknowledged.

## **6.6 Table of contents**

Table of contents must be inserted after the preliminary sections and must capture all major sections of the thesis at the various levels (primary, secondary, tertiary subheadings). It should be electronically generated and should be able to take the reader to specific headings in the thesis.

## **6.7 Lists of figures, tables and acronyms**

These lists must be presented separately. All titles of figures presented in the thesis/dissertation must be listed indicating on what page they appear. Similarly for tables the titles must be presented indicating on what page they appear. In the case of acronyms, the acronym is stated and all the words describing the acronym are presented. Only key acronyms should be stated. In some cases they may not be listed as long as full text is presented whenever the acronym is used for the first time.

## **6.8 Abstract**

The abstract should summarize the thesis mainly stating the purpose of the study, highlights of chapters and the new knowledge contributed by the thesis. The abstract must be approved by the supervisor of the thesis and should not be more than 350 words in length.

## **6.9 Introduction**

The introductory chapter for both types of thesis is similar. The section should include literature review and have the following information. Headings are used as appropriate and need not correspond exactly to the following.

- i. Background and the context of the study
- ii. Description of the core research problem and its significance
- iii. A comprehensive, critical, coherent overview of the relevant literature leading to clearly defined knowledge gaps
- iv. A coherent problem statement highlighting the nature and magnitude of the problem, the discrepancy, knowledge gaps therein and possible factors influencing the problem.
- v. Clear and SMART research questions, objectives and hypothesis and/or theoretical framework
- vi. A conceptual framework (optional)
- vii. Description of the study area and general methodology (*in a standard thesis this should be a stand-alone section*)
- viii. Layout of the thesis (thesis structure) indicating what chapters are presented in the thesis and how they address the objectives.

## **6.10 Literature review**

This section is subsumed in the introduction within the stipulated word count for a thesis or dissertation.

## **6.11 Methodology**

A standalone section is not needed as the methods are adequately described in each manuscript/publication.

## **6.12 Data chapters/manuscripts/publications**

The full published paper or manuscript submitted for publication should be presented as published or submitted to the journal. The actual published paper should be scanned and inserted



in the chapter. There should be a separator page between chapters that has text linking the previous chapter to the next and providing details of the next manuscript/publication indicating publication status.

### **6.13 General discussion/Synthesis chapter**

This is a general discussion that demonstrates the logical thread that runs across the various manuscripts/publications (synthesis). There should be no doubt that the manuscripts/publications complement each other and address the original objectives stated in the general introduction of the thesis. The general discussion/synthesis chapter should end with a conclusion and recommendations where necessary.

### **6.14 References**

Only references cited in the introduction and synthesis chapters should be listed as all other references should be within the manuscripts presented under data chapters.

### **6.15 Annexes**

All information (questionnaires, diagrams, ethics certificates, etc) considered important but not essential for inclusion in the actual thesis is put in this section as reference material. In addition papers that emanated from the work but not directly contributing to the thesis may be included.

## **7. Thesis formatting**

For standardisation of thesis the following formatting specifications should be followed.

### **7.1 Font**

Times New Roman 11pt should be used throughout the thesis. However, major headings may be made bigger (12pt) but using the same font type

### **7.2 Paper size and margins**

A4 (297 x 210 mm) should be used and in the final thesis both sides of the paper should be used. However, the loose bound copy submitted for examination should be printed on only one side. The recommended margins are 30mm for all the left, right, top and bottom margins.

### **7.3 Line spacing**

The copy submitted for examination should have 1.5 line spacing but the final copy should have single line spacing. Paragraphs should be separated by a blank line. Published or submitted manuscripts should remain in their original format in all aspects as they are inserted in their published format in appropriate places.

### **7.4 Headings**

A consistent numbering system and captions should be maintained with first level being in CAPS and centred, second level being **normal bold** font and third level being *italics bold*. If there is need for 4<sup>th</sup> level it should be *normal italics*.

### **7.7 Pagination**

Page numbers should be centred at the bottom of the page. All preliminary pages should be numbered in lower case Roman numerals and subsequent pages should be numbered as indicated in the Box The title page should not be numbered.

The body of the thesis (chapter 1 onwards) should be numbered consecutively with Arabic numerals. The numbers should continue consecutively from the introduction through the publications or submitted manuscripts and subsequent sections. The published papers will therefore bear two numbers: a set specific to the manuscript (it is recommended to place these in the upper right hand corner) or published paper, as well as the consecutive numbers belonging to the thesis as a whole. Care must be taken to distinguish these in terms of position and font.

### ***7.8 Referencing***

Supervisors have the freedom to decide the type of citation of references but there must be consistency. This is mainly applicable to the standard type of thesis. In the case of thesis by manuscripts or publications, individual papers will maintain the reference system of the journal but the supervisor can decide on the type of referencing for the introductory and synthesis chapters.

### **8. Final thesis submission**

The thesis should be submitted for examination in a loose bound form accompanied by a PDF copy. After the examination process the final version PDF copy of the thesis must be submitted to PG office for onward submission to the library. It is not a requirement to submit a copy fully bound in leather cloth or similar material.



04 June 2018

Ms Geneshree Govender  
School of Health Sciences  
Westville Campus

Dear Ms Govender,

Protocol reference number: HSS/0577/018M (Linked to HSS/0727/017)

Project Title: Community based training in primary health care for undergraduate Physiotherapy students in KwaZulu-Natal: Perceptions of participating academics at the University of KwaZulu-Natal

#### Approval Notification – Expedited Application

In response to your application received 30 May 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

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

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully



Professor Shenuka Singh (Chair)

/ms

Cc Supervisor: Ms N Chemane, Professor Verusia Chetty and S Cobbing  
Cc Academic Leader Research: Professor Pragashnie Govender  
Cc School Administrator: Ms Phindile Nene

Humanities & Social Sciences Research Ethics Committee

Professor Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

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Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)



Funding Centres: Edgewood Howard College Medical School Pietermaritzburg Westville

### **STUDY TITLE: COMMUNITY-BASED PRIMARY HEALTHCARE TRAINING FOR PHYSIOTHERAPY IN KWAZULU-NATAL: PERCEPTIONS OF PHYSIOTHERAPY ACADEMICS**

#### ***INFORMATION DOCUMENT***

#### **INTRODUCTION**

##### **Good Day**

Our names are Geneshree Govender and Nomzamo Chemane and we are conducting a study to determine the attitudes and perceptions that influence the methods of clinical education in clinical practice. Exploring the students perspectives on the on the factors that positively and negatively influence learning on the decentralized service learning platform.

#### **PURPOSE OF THE STUDY**

The aim of this research project is to gain a better understanding of the perceptions of Physiotherapy students regarding the current clinical education framework. We hope that by having a better understanding of these issues, which the study can contribute toward the training of the Physiotherapists at the University of Kwa-Zulu Natal (UKZN).

#### **STUDY PROCEDURES**

If you agree to participate, you will be asked to participate in a focus group and/or an interview, which will be conducted, by the principal researchers or a research assistant. It will be 45 minutes to 60 minutes. The focus groups/interviews will take at an agreed upon venue. The focus groups and interviews will be audio-recorded and additional observations and notes will be recorded by the researcher/and or research assistant.

#### **RISKS**

There are no known risks to you or the other students for taking part in the study.

#### **BENEFITS**

There are no direct benefits for participants. However, this study may provide you with an opportunity to contribute towards improving the undergraduate clinical education program at UKZN.

#### **VOLUNTARY PARTICIPATION**

Participation in the study is completely voluntary. You may refuse to participate or may withdraw from the study at any time.

#### **CONFIDENTIALITY**

The information collected in the study will be used for research purposes only. The study will be completely confidential and your name will not appear anywhere in the study. A pseudonym will be used instead of your name and efforts will be made not to disclose your identity. Your participation and input will be strictly confidential. The audiotapes will be

destroyed at the end of the research. Contact details for researchers are 031-260 8865  
[ChemaneN1@ukzn.ac.za/](mailto:ChemaneN1@ukzn.ac.za) [geneshree@gmail.com](mailto:geneshree@gmail.com)

This study has been ethically reviewed and approved by the UKZN Humanities & Social Science Ethics Committee. (Approval number HSS/0727017)

In the event of any problems or concerns/questions you may contact the researcher at (provide contact details) or the UKZN Humanities & Social Science Ethics Committee, contact details as follows:

**HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION**

Research Office,  
Westville Campus Govan  
Mbeki Building  
Private Bag X54001 Durban  
4000  
KwaZulu-Natal, SOUTH AFRICA  
Tel: 27 31 2604557 - Fax: 27 31 2604609  
Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

**Signature of participant:**\_\_\_\_\_

**Date:** \_\_\_\_\_

**Question 1**

How long have you been working for the University of Kwa-Zulu Natal?

Probe: clinical education?

**Question 2**

How did you feel about the initiation Decentralized Clinical Training Platform (DCT) at UKZN?  
(Explain)

**Question 3**

How do feel now that students have completed all four DCT blocks? (Probe)

**Question 4**

What influence did clinical placements have on your teaching?

**Question 5**

What were the advantages of DCT clinical placement and students in the hospitals?

**Question 6**

What were the disadvantages of clinical placement and students in the hospitals?

Probe: problems/challenges/constraints encountered.

- Management
- Clinical supervisors support

**Question 7**

Which methods of clinical supervision have you experienced of /use/ recommend in practice?

**Question 8**

What are your views on the curriculum in the undergraduate program regarding preparation of students for community based clinical education?

**Question 9**

How can the current curriculum be improved to prepare socially responsive graduates and how can the current teaching method be improved to improve student competence and outcomes in Primary health care setting?

**Question 10**

What are the factors that make a hospital physiotherapy department attractive as a teaching and learning environment?

**Question 11**

How do you think this new method of teaching (DCT) was helpful in improving student clinical competence and skills in Primary Health Care setting?

Probe: community engagement

**Question 12**

How can delivery of education be improved to encourage competency of skills and boost self-confidence and self-reliance in the community physiotherapist?

**Question 13**

Do you think clinical education is a core role of professional physiotherapists? If so, why?

**Question 14**

What recommendations can you make in order to improve the efficiency of the DCT process in the rural sector?

Is there anything else you would like to add?



### UNIVERSITY OF KWAZULU-NATAL

#### 2017 Mid-Year Examination Results

Last Name : **Govender** Campus : **Westville**  
 First Name : **Geneshree** Full/Part : **Part Time**  
 Student Number : **9702154** Faculty : **COLLEGE OF HEALTH SCIENCES**  
 Degree/Diploma : **Master of Health Sciences**  
 Academic Year : **1**

Name of Course	Course Code	Grade	Codes
JUNE EXAMINATIONS			
Chronic Disease Rehabilitation	HLSC802	69 PM	Certificate of Merit
Bioethics	HLSC8H5	79 PM	Certificate of Merit

### UNIVERSITY OF KWAZULU-NATAL

#### 2017 End of Year Examination Results

Last Name : **Govender** Campus : **Westville**  
 First Name : **Geneshree** Full/Part : **Part Time**  
 Student Number : **9702154** Faculty : **COLLEGE OF HEALTH SCIENCES**  
 Degree/Diploma : **Master of Health Sciences**  
 Academic Year : **1**

Name of Course	Course Code	Grade	Codes
NOVEMBER EXAMINATIONS			
Research Methods and Design	HLSC8H3	93 P	Pass
Evidence Based Practice	HLSC8H4	83 P	Pass

### UNIVERSITY OF KWAZULU-NATAL

#### 2018 Mid-Year Examination Results

Last Name : **Govender** Campus : **Westville**  
 First Name : **Geneshree** Full/Part : **Part Time**  
 Student Number : **9702154** Faculty : **COLLEGE OF HEALTH SCIENCES**  
 Degree/Diploma : **Master of Health Sciences**  
 Academic Year : **2**

Name of Course	Course Code	Grade	Codes
JUNE EXAMINATIONS			
Basic Epidemiology	HLSC8H1	84 P	Pass
Introduction to Biostatistical Concepts	HLSC8H2	87 P	Pass
Research Project	HLSC8H6	F/	Continuing