Challenges facing the Cuban-South African medical collaboration for medical capacity building in KwaZulu-Natal

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DECLARATION

I, Valerie Chinniah declare that:

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ACKNOWLEDGMENTS

All praise, honour and glory to my Lord and Saviour, Jesus Christ. “For nothing will be impossible with God” - Luke 1:37.

To my Mom, Joyce, and my late Dad, Krishna Govindsamy, thank you for giving me the gift of education and always pushing me to reach my potential. Your passion for excellence will be a lesson that will live on in me. Thank you for your love, support and prayers.

Thank you to my husband, Shadrach, for always believing in me and encouraging me to finish this journey when I was ready to throw in the towel. You are my strength.

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DEDICATION

This thesis is dedicated to my father, the late Mr Krishna Govindsamy. You had a vision for me and I pray that I have fulfilled your wish to have a PhD against my name. Thank you for your unwavering love and support and for always believing in me.

This is for you, Dad.

ABSTRACT

The South African public healthcare system faces significant disparity between the demand for healthcare services and the availability of skilled medical professionals. To address this, the government collaborated with Cuba to train South African students from disadvantaged backgrounds, with the intention that they would return to serve in underserved areas upon qualification. The aim of the study was to identify challenges at macro, meso, and micro levels of the Cuban-South African medical collaboration. The overarching question was whether the exploration and resolution of the challenges within this collaboration could contribute to optimising the effectiveness of the programme aligned with the WHO's SDGs for UHC and health care reforms, emphasizing primary health care in South Africa. Drawing on theoretical perspectives including Migration Theory, Resource-Based Theory, and Human Capital Theory, a conceptual model was developed to highlight the importance of investing in human resources for competitive advantage. An exploratory, qualitative study was conducted by reviewing relevant human resources for health policy documents, and through interviews with University of KwaZulu-Natal programme administrators, programme managers and South African students in Cuban cohorts, providing a holistic investigation into the challenges facing the collaboration. Document analysis and purposive snowball sampling methods were utilised to choose pertinent policies, records, and participants for this study. This combined approach aimed to gather comprehensive insights by examining documented policies and capturing the first-hand experiences and perspectives of individuals actively engaged in the Cuban-South African medical collaboration. Thematic analysis of relevant policies revealed misalignment with South Africa's healthcare objectives. Interviews highlighted challenges such as adapting to the institutional and cultural differences, technical, social and psychological hurdles. Despite training in Cuba, students' primary healthcare skills are often under-utilised upon their return, emphasizing the need to recognize and preserve these skills for use in underserved areas. Therefore, a model was developed from these findings to guide stakeholders in enhancing the programme experience. The study recommends acknowledging and utilising primary healthcare skills acquired in Cuba to improve healthcare delivery in rural and underserved areas. This could lead to sustained quality healthcare for marginalized communities and contribute to a transformation in healthcare culture.

Keywords: *Cuban-South African Medical Collaboration, Culture of Health, Global Strategy on Human Resources for Health: Workforce 2030, Healthcare Reforms, Human Resources for Health, Medical Doctor Scarcity, National Development Plan 2030, National Health Insurance, Primary Health Care, Rural Recruitment, Universal Health Coverage*

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LIST OF ACRONYMS

Bachelor of Medicine and Bachelor of Surgery	MBCHB
Decentralised Clinical Training Programme	DCTP
Department of Higher Education and Training	DHET
Health Professions Council of South Africa	HPCSA
Human Resource Development	HRD
Human Resources for Health	HRH
Human Resource Management	HRM
National Department of Health	NDoH
National Development Plan 2030	NDP2030
National Health Insurance	NHI
National Planning Commission	NPC
Nelson Mandela-Fidel Castro Medical Collaboration	NMFCMC
Primary Health Care	PHC
South African Medical Association	SAMA
Strengths, Weaknesses, Opportunities and Threats	SWOT
Sustainable Development Goals	SDGs
Universal Health Coverage	UHC
University of KwaZulu-Natal	UKZN
Value, Rarity, Imitability and Organisation	VRIO
World Health Organisation	WHO

CLARIFICATION OF CONCEPTS

Cuban-South African Medical Collaboration: A programme initiated in 1996, by Fidel Castro and Nelson Mandela to train underprivileged black medical students of African origin in Cuba to address the needs of underserved urban and rural areas (Sui et al., 2019).

Human Resources for Health: Also known as the health workforce – is defined as "all people engaged in actions whose primary intent is to enhance health" (National Department of Health, 2020a, p. xiv)

Macro-level: The macro-level is the social, political and economic systems. It involves the social processes, social patterns and trends that exist in society (Serpa & Ferreira, 2019).

MBCHB: Bachelor of Medicine and Bachelor of Surgery degrees, which are awarded in the U.K. and other countries (such as New Zealand and South Africa) after 5 years of what is equivalent to a combined undergraduate-postgraduate course of study. The first two years of the programme in the MBChB are designed to provide students with the foundation knowledge and skills that are required prior to their hospital experience which occupy years 3 to 5 of study (Conrad Stöppler, 2023).

Medical Doctor: A physician who has earned a degree in medicine and specifically allopathic medicine (Merriam-Webster Dictionary, 2016).

Medical Education: Medical education comprises both the initial training required to become a physician and additional training that follows. It is defined as education pertaining to the practice of medicine (Stevens & van der Vleuten, 2015)

Meso-Level: The focus of meso-level shifts to communities, social groups, organisations and institutions and their impact on society and the individual. This mid-range level is also referred to as 'network analysis' because it studies the internal and interdependent function of society (Serpa & Ferreira, 2019)

Micro-level: The micro-level analysis involves the individual and the one-on-one interaction within society (Serpa & Ferreira, 2019).

Migration: the process of a person or people travelling to a new place or country, usually to find work and live there temporarily or permanently (Cambridge Dictionary, 2023)

Primary Health Care: Primary health care is a holistic approach to health that seeks to achieve optimal health and well-being for the entire community by offering a broad range of easily accessible services, such as palliative care, illness prevention, treatment, and rehabilitation, and health promotion. It is crucial for integrated personal health care, public health functions, and continuing referrals to hospital services because it is the initial point of contact between the general public and the health care system (Chotchoungchatchai et al., 2020).

Programme Administrator: Performs a range of tasks related to the daily administration and planning of programmes, such as informational timetabling, committee support, seminar group organisation and assignment, event planning (including field trips, clinical placements, and industrial placements), assessment management (including marking and mark entry), and attendance tracking.

Programme Manager: Oversees all teaching personnel, scheduling, academic calendar delivery, and assessment procedures to ensure academic integrity and regulatory compliance of the programmes provided on campus.

Public Health Sector: "All public, private, and voluntary entities that contribute to the delivery of essential public health services within a jurisdiction" (Malakoane, Heunis, Chikobvu, Kigozi, Kruger, 2020, p. 2).

Universal Health Coverage: All people have access to a full range of quality health services that they may need, when and where they need them, without financial hardship. It covers the full spectrum of essential health services, from health promotion to prevention, treatment, rehabilitation and palliative care (World Health Organisation, 2023).

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Chapter 1

Introduction to the Study

1.1 Introduction

Due to a shortage of doctors in the country, South Africa's health care system is unable to meet the needs of its ever-expanding population. This shortage of doctors has existed for some time, and the South African government has implemented various measures, such as task-shifting between doctors and nurses, community service requirements for recently graduated medical students, and financial incentives for students to study public health in rural areas, which have all unfortunately proved unsuccessful in addressing the problem (Bateman, 2013; Kirk, 2015). Another such measure was the Nelson Mandela-Fidel Castro Medical Collaboration (NMFCMC) programme, which began in 1996 when former President Nelson Mandela partnered with then President Fidel Castro to train South African medical students in Cuba (Donda, Hift & Singaram, 2016). In this study the programme will be referred to as the Cuban-South African Medical Collaboration as it involves more than just the programme. It also entails the recruitment of Black, underprivileged high school graduates from rural provinces in South Africa to be trained in medicine in Cuba (Squires, Colville, Chalkidou & Ebrahim, 2020).

Despite modest beginnings and opposition from several stakeholders and political groups, the Cuban-South African medical collaboration provides a platform for students from rural communities to study a medical degree in Cuba, and then to return to their home in South Africa and qualify as medical doctors (Motala & van Wyk, 2019). The effectiveness of this programme is based on recruiting students from under-served, mainly rural areas with the understanding that these students return to work in these same communities once they have qualified (Motala, 2014). In contrast to other attempts to address the issue, the programme was considered the most plausible strategy by the South African government, using the resources at its disposal to address the critical shortage of a much-needed skill in the country (Sui, Reddy, Nyembezi, Naidoo, Chalkidou, Squires & Ebrahim, 2019).

The significance of the training of South African medical students in Cuba aligns with the health-related aims of the National Development Plan 2030 (NDP 2030) (National Department of Health [NDoH], 2022). The National Planning Commission (NPC) created the NDP2030 in consultation with regular South Africans from all diverse backgrounds (Chigova, 2021). The overall goal of the plan is to end poverty and minimize inequality by the year 2030 (National Planning Commission, 2012). According to the plan, the country can attain these objectives by tapping into the energy of its people, developing their capabilities, growing an inclusive and open economy, promoting leadership, strengthening the

state's capacity, and establishing partnerships throughout society (National Planning Commission, 2012).

Chapter Ten of the NDP2030 focuses on health promotion and outlines the vision of the National Health Insurance (NHI) Act to enhance the quality of health care in the public sector and increase the number of medical professionals, in addition to the many other objectives covered (National Department of Health, 2020b). Both the NDP 2030 and the NHI Act are guided by the principles of the World Health Organisation (WHO) for universal health coverage (UHC) which, as the name implies, concentrates on equitable access to health care (Odoch, Senkubuge & Hongoro, 2021). Access to quality health care for all citizens of South Africa can only be achieved through health reforms and the transformation of the current health care approach in order for it to be more inclusive of primary health care (PHC) (Michel, Tediosi, Egger, Barnighausen, McIntyre, Tanner & Evans, 2020). Investment in the health workforce is acknowledged as a factor in global policy that promotes economic expansion (Squires et al., 2020).

Primary health care is a community-based approach to medicine that focuses on the needs of people, disease prevention and health promotion (World Health Organisation, 2021). Cuba's medical model is one based on preventative primary health care and is known as one of the best health care systems in the world (Pineo, 2019). Therefore, a modality of training based largely on preventative primary health care makes sense to be applied in the South African health care context as the Cuban medical model ties into the concept of universal health coverage prescribed by the WHO (Michel et al., 2020). This will be more fully elaborated upon in later chapters when the two models of health care (primary health care and curative medicine) are compared.

1.2 Universal Health Coverage and Primary Health Care – A Global Perspective

Access to and equity in access to health care are still major issues worldwide, in addition to the severe shortages of medical professionals throughout the world, especially in middle-class and lower-class income nations (World Health Organisation, 2019). To address this situation, the WHO developed seventeen SDGs which strive to transform the world by protecting the planet, eliminating inequality and poverty, and ensuring that all people enjoy health, justice and prosperity (World Health Organisation, 2017). While the deadline to achieve these goals by the year 2030 is fast approaching, Binagwaho and Ghebreyesus (2019) contend that primary health care is an essential component to achieving universal health coverage because it is an affordable and inclusive means of health service delivery. In fact, a strong primary health care system prevents or delays the onset of the majority of common diseases and ailments by promoting health and well-being (Islam, 2021). PHC allows health care systems to be shaped according to the needs of each country's population (Binagwaho & Ghebreyesus, 2019). In order to provide equitable health care to the majority of South Africa's

population living in poverty, the government has called for the restructuring and re-engineering of primary health care to drive the transformation of the culture and approach to health. In order to understand how the current health care system came to be and why a primary health care model is so important in South Africa, the historical background of South African health will be examined in the section that follows.

1.3 Historical Background to the Health Care Situation in South Africa

A seminal review of the literature reveals that there has always been a shortage of medical doctors in South Africa and the causes of this situation have been attributed to a number of factors, starting with the limited placement of medical students at universities as well as the limited number of medical universities in South Africa (Mayosi & Benatar, 2014). The enrollment of medical students is highly controlled by the Health Professions Council of South Africa (HPCSA) and this creates a finite output of qualified doctors each year (Academy of Science of South Africa, 2018). In addition to this, a large number of students graduating from South African medical universities leave the country to practice medicine abroad (Bateman, 2013). The results of a more recent study on future medical students' practice intentions by Clithero-Eridon, Crandall and Ross (2020) showed that graduating students have a noticeable lack of interest in family medicine or primary care in general. Thus, the problem of retaining skilled medical graduates to contribute to the human resources for health in South Africa persists and has actually become more perturbing over time (Clithero-Eridon et al., 2020).

In the early nineties, the Government of National Unity in South Africa proposed a plausible solution to address the shortage of doctors in the country, namely the training of medical students as part of Cuban cohorts, which they envisaged would help to increase the numbers of medical doctors graduating the country . Special attention would be directed to the most neglected and compromised health care institutions in the rural, peri-urban and poor urban communities (Motala & Van Wyk, 2016). During Apartheid, South Africa's health system was segregated based on race and the public health sector, which was used by the majority of the non-White population of the country, was under-resourced and poorly facilitated (Hammet, 2014). Hence, the government suggested that recruiting students from these disadvantaged communities, on the understanding that they would train in Cuba, qualify as medical doctors and return to serve in under-served clinics, hospitals and community health care establishments, would assist in addressing this problem (Motala & van Wyk, 2016).

A post-Apartheid alliance between Cuba and South Africa forged the beginnings of a collaborative relationship signed off by the countries' respective leaders, Fidel Castro and Nelson Mandela (Kirk, 2015). Cuba, known to have the best health care system in the world, would offer medical training to South African students in exchange for compensation and an opportunity for returning cohorts to

establish a primary health care preventative medicine approach in South Africa (Squires et al., 2020). In 1996, the first cohort of South African students was sent to Cuba to be trained as medical doctors (Motala, 2014). Twenty years later, a review of the programme revealed many shortcomings and inefficiencies in producing the desired results (Motala & van Wyk, 2019). Based on the brief outline of the issue of the scarcity of doctors in South Africa presented above, this study aims to look beyond the failings of the Cuban-South African medical collaboration and to provide an understanding of the challenges faced at macro, meso and micro-levels in order to suggest recommendations that could strengthen the training to build medical capacity and benefit the health care needs of the country.

1.4 Current Context of Health Care in South Africa

The Ministry of Health, the main organisation controlling the supply and coordination of health care systems in the country, governs the current structure of health care in South Africa (Mayosi & Benatar, 2014). This structure divides the provision of health care into the public and private sectors (Mahlathi & Dlamini, 2015). A large majority of the South African population only have access to the public sector for their health care needs. Lack of government funding, limited resources and technology, and long waiting times for patients are but a few of the challenges encountered at public health care facilities (Mukwena & Manyisa, 2022). The largest issue facing South Africa, according to Rensburg (2021), is that the demand for health care exceeds capacity. This was especially evident during the global COVID-19 pandemic. In the poorer South African health care facilities, staff shortages, high risk factors and comorbidities contributed to high mortality rates (Rensburg, 2021).

The scarcity of doctors in South Africa can be attributed to a variety of factors. Low output of medical graduates, from a limited number of medical universities in South Africa appears to be a primary cause (George, Blaauw, Thompson & Green-Thompson, 2019). Accreditation of training hospitals and facilities with the Health Professions council of South Africa, the statutory body tasked with regulating the practice of medical professionals, limits the number of students that can be enrolled at medical universities (Tiwari, Mash, Karangwa & Chikte, 2021). In addition, the migration of qualified doctors to other countries adds to the paucity of medical professionals (Dohlman, DiMeglio, Hajj & Laudanski, 2019).

Provincial departments around the country are responsible for recruiting a competent and skilled health workforce; however, budget cuts and poor conditions of service are inadequate to allow for the recruitment and retention of staff in the public sector (Ngobeni, Breitenbach & Aye, 2020). There has also been an attempt by South African medical schools to introduce compulsory community service in rural communities as a requirement for doctors to qualify, but this has proven unsuccessful in retaining doctors in these under-served areas (Reid, Peacocke, Kornik & Wolvaardt, 2018).

With a present population of approximately sixty million people in South Africa, the training and output of doctors and other health care professionals from medical education institutions is insufficient to fulfill the ever-increasing demands of the South African population (Kirk, 2015). Hence, the decision by the government to intervene in the situation and to train South African students in Cuba in the early 1990's was an attempt to supplement the anticipated shortage of doctors in the subsequent decades. Despite the government's efforts, the initial cohort enrolled in the Cuban-South African medical collaboration provided low numbers of qualified doctors and there was criticism that medical skills were unfortunately misaligned and could not fulfil the country's public sector needs (Bateman, 2013). According to Motala (2014), there was a significant difference between the skills learned in the Cuban cohort and the core competencies related to 75 particular skills required by the end of the fourth year of the South African MBCHB programme. In addition, the Cuban-trained medical students were not exposed to the fundamental clinical skills essential for curative medicine (Motala, 2014). Despite the unfavourable narrative around the Cuban-South African medical collaboration, the government continues to maintain that this collaboration holds the key to health reforms in South Africa by focusing on the re-engineering and strengthening of primary health care in the country.

1.5 Research Problem and Statement

The shortage of doctors has been a key area of concern for South Africans at several levels of society, including various economic levels and political affiliations. This concern is evident in the large volume research that has been conducted to date in this area. Ideally, the medical universities in South Africa should be supplying the increasing demand for doctors in the country. However, the number of doctors enrolled at each medical university is determined by the Health Professions Council of South Africa, which restricts the numbers of medical students enrolled each year. The restriction on the numbers of enrolled students is due to limited clinical practice facilities available for doctors in training and therefore the placement of doctors in hospitals and other medical facilities is highly regulated. A review of the current medical training and education of health care professionals, especially doctors, is thus imperative. The World Health Organisation recommends a shift from individual-centred health care to a more community-focused health environment (Academy of Science of South Africa, 2018).

The solution to the shortage of doctors presented by the South African government was to establish a collaboration between South Africa and Cuba to train students from rural, underprivileged backgrounds to qualify as medical doctors, who would then return to South Africa to serve in the communities they originated from (Motala & Van Wyk, 2016). The Cuban cohorts should be supplementing the numbers and adding to the skills of doctors that the South African health care system lacks. The issue, however,

is that the training of cohorts in Cuba does not sufficiently supplement the lack of medical doctors and provide primary health care skills where they are needed in South Africa.

Guided by the introduction of the NHI Act and the SDGs outlined in the NDP2030, the South African health care system needs to implement measures to move toward a primary health care preventative medicine model. This is crucial to making health care accessible to people in the rural, peri-urban and urban poor communities. The Cuban-South African medical collaboration, according to ex-MEC of Health, Dr. Sibongiseni Dhlomo, is costly but the training is significant for the changes required in the South African health care system (KwaZulu-Natal Department of Health, 2017). This study seeks to identify the challenges encountered in the current Cuban-South African medical collaboration, with the aim of making recommendations towards strengthening the existing programme for the benefit of achieving the aim of increasing the number of doctors in rural areas and building the capacity for primary health care preventative medicine in South Africa.

Previous research on the Cuban-South African medical collaboration has focused on the comparison of competencies developed by students from the Cuban cohorts with those of locally trained medical students (Motala & Van Wyk, 2016) and the overall financial viability of the programme (Mqadi, 2015). After a review of literature focusing on these areas of research, it is evident that the programme on its own lacks' sustainability and effectiveness, and compromises the quality of the South African health workforce. The under-utlisation of the primary health care skills acquired in Cuba makes the programme futile in its effort to transform the culture of health and adopt a more accessible approach to medicine.

The focus of this thesis is thus to identify the challenges facing the Cuban-South African medical collaboration at three levels, that is, at the macro-level, meso-level and the micro-level. The main macro-level challenge facing the Cuban-South African medical collaboration lies in aligning the programme with health-related policy goals outlined in NDP203, the NHI Act, and the SDGs set by the WHO. The envisioned shift towards a primary health care preventive medicine model in South Africa's health care system, has not been fully realised despite the fact that the training of the collaboration students remains under-utilised and dormant in implementing this crucial transformation. This will assist stakeholders and the South African government to suggest and develop an approach to enhancing the programme to be effective and sustainable. Enhancing the skills and competencies of the Cuban-trained medical student cohort through effective mentorship will add value to the programme and will contribute to positive health outcomes and the promotion of preventative medicine through a focus on primary health care. Preventative medicine involves both clinical and non-clinical aspects of medicine, and is an approach which promotes disease prevention and patient well-being, through early diagnosis and treatment (Wang, 2018).

Meso-level challenges in the Cuban-South African medical collaboration include issues related to the organisational and institutional structures involved in administering and managing the programme. The challenges include the administration, coordination, communication, logistics, connectivity and regulatory constraints from the HPCSA. Whilst being intermediary in the process of the training of the medical students, the meso-phase posed great challenges and yet has received little or no attention in previous research. Linked to the micro-level challenges experienced by South African medical students in the Cuban cohort, a detailed exploration of these interconnected levels could substantially improve programme administration and management. This, in turn, has the potential to enhance the effectiveness and sustainability of these students when they qualify and enter the labour market. The development of a conceptual model which allows for the identification of challenges in the training of students enrolled in the Cuban-South African medical collaboration and for the adoption of principles of preventative medicine and primary health care will also help policymakers to improve and enhance the medical training of students for the future benefit of all South Africans. This is one of the intended outcomes of conducting this study.

1.6 Research Aims and Objectives

The main overall aim of the study is to identify the challenges facing the Cuban-South African medical collaboration for medical capacity-building in the province of KwaZulu-Natal, South Africa. These challenges are related to whether the policy addressing the shortage of medical doctors is in accordance with the principles guiding the 2030 Human Resources for Health (HRH) Strategy at the programme level involving the University of KwaZulu-Natal (UKZN) and the HPCSA and the Cuban cohort. Three research aims, related to each of the levels focused on in the study, and nine research objectives are presented below. The macro-level is the first level and relates to stakeholders and policy. The meso-level is programme level and includes programme administrators and managers involved with the Cuban cohort. The micro-level focuses on the training of South African students in Cuban cohorts. The rationale behind exploring these macro-level challenges lies in the critical assessment of whether the policy aimed at addressing the shortage of medical doctors aligns with the principles outlined in the 2030 HRH Strategy, NDP2030 and the health goals of the Global Strategy for Human Resources for Health: Workforce 2030. The aim of investigating the meso-level was to specifically focus on the challenges at programme level, administrators and managers at the UKZN and the HPCSA to highlight significant obstacle in running and administering the programme when the cohort returns to South Africa. The rationale for addressing meso-level aims and objectives at programme-level at the UKZN and the HPCSA is to spotlight substantial obstacles in the administration and management of the programme when the cohort returns to South Africa. The focus of the meso-level is on identifying and understanding systemic challenges that may impede the smooth operation and effectiveness of the programme. This examination aims to provide insights that can inform strategic interventions, enhance

programme administration, and contribute to the overall success and sustainability of the initiative once the Cuban cohort integrates into the South African healthcare system. At micro-level the aims and objective of the study is to assess and understand the social, academic, cultural and technical challenges impact the overall success of the students.

As shown in Figure 1.1 below, at macro-level, the challenges of training sufficient numbers of doctors with the requisite skills to support the implementation of the objectives of the NDP2030 will be investigated by reviewing UKZN student records, relevant policies and previous research. The meso-level investigation will focus on the administrative and programme management challenges of the Cuban cohort at the UKZN and in dealing with the HPCSA. Challenges at the micro-level will be examined through an exploration of the psychological, social and cultural experiences of the South African students that have been trained through the Cuban-South African medical collaboration programme cohorts.

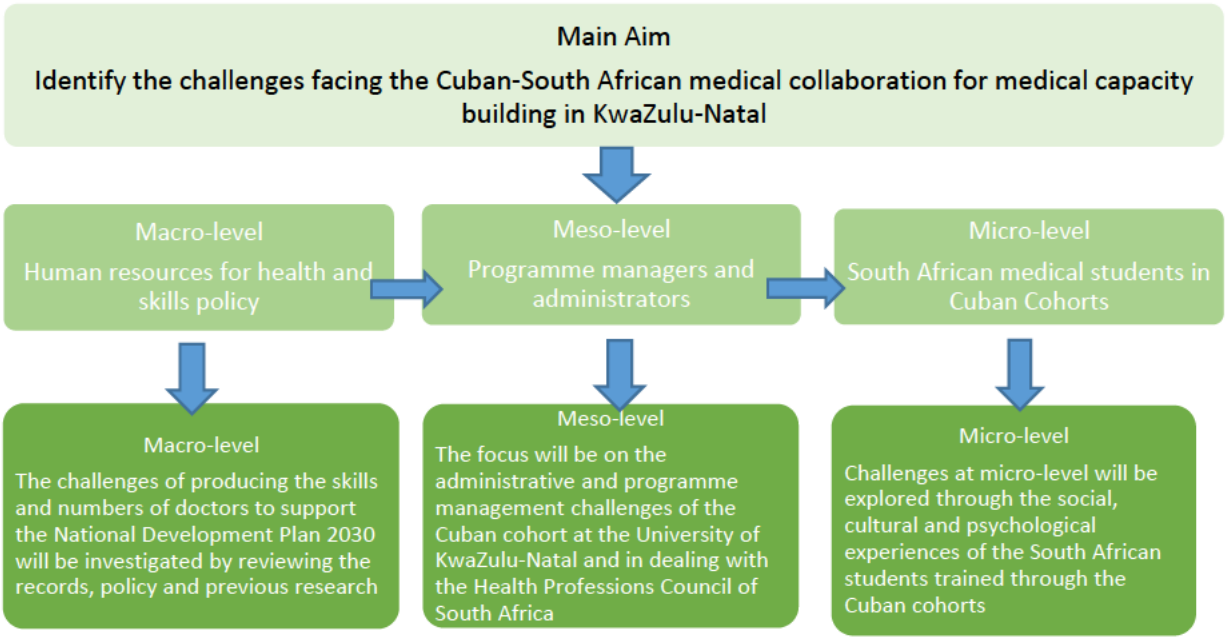

Figure 1.1: Macro, meso and micro-level challenges

1.6.1. Aim 1: Macro-level

To analyse the challenges facing the Cuban-South African medical collaboration in terms of increasing the numbers of trained doctors and producing the relevant skills required for an efficient health workforce, in keeping with the demands of the National Development Plan 2030.

1.6.1.1. Research objectives

1. To identify the challenges facing the Cuban-South African medical collaboration in producing the desired number of doctors to build and sustain a skilled health care workforce.
2. To assess whether the current Cuban-South medical collaboration programme is meeting the demand for the relevant quality of skills for the South African human resources for health.
3. To evaluate whether the Cuban-South African medical collaboration programme is aligned in developing a skilled health care workforce in line with National Development Plan 2030.

1.6.2. Aim 2: Meso-level

To analyse the challenges facing the Cuban-South African medical collaboration programme in terms of administrative challenges with professional and regulatory bodies, viz. the Health Professions Council of South Africa and University of KwaZulu-Natal, in terms of institutional culture and compatibility of the programme.

1.6.2.1. Research objectives

1. To identify the administrative challenges facing the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine when dealing with the Cuban-South African medical collaboration students.
2. To identify the programme management challenges facing theUniversity of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine when dealing with the Cuban-South African medical collaboration students.
3. To identify the challenges in terms of the compatibility of the Cuban-South African medical collaboration programme to the institutional culture at the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine and Health Professions Council of South Africa.

1.6.3. Aim 3: Micro-level

To analyse the challenges facing South African medical students trained in the Cuban cohort in terms of social, cultural and psychological adjustment.

1.6.3.1. Research objectives

1. To identify the social challenges facing the South African students trained in Cuba in terms of stereotypes, social alienation and academic/institutional culture of Cuban universities.
2. To identify the cultural challenges facing the South African medical students trained in Cuba in terms of race, gender, language and culture.

3. To identify the psychological challenges facing the South African medical students trained in Cuba in terms of language, trust and performance.

1.7 Purpose of the Study

As outlined above, previous studies have focused on the negative aspects of the Cuban-South African medical collaboration programme concentrating on compatibility, fit for purpose and the cost of the programme (Motala & van Wyk, 2016; Mqadi, 2015) all in comparison to the current curative model of medicine. Squires et al. (2020) reported that while doctors play a crucial leadership role in achieving universal health coverage, the training they receive is focused on curative, high-tech sub-specialisation in medicine and surgery. The purpose of this study is to identify the challenges and to determine how the programme can be strengthened to build medical capacity, preserve primary health care skills and promote the sustainability of doctors produced through the Cuban cohorts. This will be explored through a consideration of the data collected that addresses the macro, meso and micro-level research objectives. The analysis of the data collected in the study will be used to propose viable solutions to help to develop a conceptual model to enhance the Cuban-South African medical collaboration programme. This model, which will aid in identifying the challenges and proposing solutions, may be beneficial to policy-makers, medical universities and the regulatory bodies to better support students who enroll in the Cuban cohorts, and to adapt medical education to the shifting health needs of populations. This should in turn have an impact on the output and sustainability of the South African doctors produced through the Cuban medical training.

By strengthening the Cuban-South African medical collaboration for the re-engineering of primary health care, the study aims to make a significant contribution to the recruitment, training and retention of human capital in the public health care sector. It is essential to work through the difficulties of the Cuban medical training in order to identify barriers and to improve the Cuban-South African medical collaboration for medical capacity building. This in turn will impact on enhancing the level of training of Cuban-trained graduates and will contribute to increasing the number of doctors in South Africa. This is significant because the health-related goals of the NDP2030 rely partly on the long-term viability of the doctors from the Cuban cohort.

1.8 Conceptual Framework

The focus of this study centers on the challenges facing the Cuban-South African medical collaboration as a skills development and training programme for human resources for health. Several factors impacting the programme at macro, meso and micro-level inhibit the true potential of this initiative. Hence, the overall aim of this study is to identify these challenges in order to strengthen the programme

to build medical capacity for health care reforms in South Africa. The study is informed by three theories: Human Capital Theory (Becker, 1962); Lee's Push-Pull Theory of Migration (Lee, 1966); and the Resource-Based Theory of Human Resource Management (HRM) (Barney, 1991). In reviewing theories for this study, it was difficult to locate the research in one particular theory. Due to the fact that the study is multi-dimensional and overlaps the disciplines of medicine, human resources, recruitment, training and retention, a combination of three theories was used to develop the conceptual framework.

The conceptual framework of this study is shaped by South Africa's historical colonial past structured along an inherently racist social and economic system that has resulted in a gap in skills between different racial groupings. During the transition from Apartheid to democracy, medicine and health care in particular were negatively impacted. At the beginning of the democratic era in the early 1990's, the majority of the population of South Africa was still dependent on the public health care system, but there was a lack of staff who were sufficiently qualified to provide care in these facilities. The Push-Pull Theory of Migration, proposed by Lee in 1966, explains why people migrate for a variety of reasons. The movement of people from South Africa to other countries during and after the abolition of Apartheid is relevant to this study. Much of Rasool and Botha's earlier research (Rasool & Botha, 2011; Rasool & Botha, 2014) on the skills shortage in South Africa attributes the 'brain drain' of highly skilled individuals to the introduction of affirmative action measures in South Africa, which has resulted in a vast majority of unskilled and semi-skilled labour having to fill the gap.

However, while there was a lack of qualified medical practitioners in the early parts of the post-Apartheid period, there was a large pool of unskilled labour that could be trained and developed accordingly into skilled, qualified professionals. The concept of Barney's (1991) Resource-Based Theory was revolutionised by the late former President Nelson Mandela's plan to work with Cuban president Fidel Castro to train South African students in medicine. This was the catalyst for a partnership that saw students from underprivileged communities in South Africa being sent to Cuba to study medicine on the agreement that they would return to work in these same communities. The concept of training South African medical students in Cuba had many benefits. Aside from political affiliation between South Africa and Cuba, both countries shared many similarities that could be incorporated into the transformation agenda for health. Firstly, a large majority of South Africa's population live in rural outlying areas, with limited or no resources. The district and public health system is their only source of accessible, affordable medical care. There is thus much room for improvement to remedy issues such as staffing shortages, a lack of medical resources and technology, and the long distances that people must travel to some of these facilities.

South Africa's goal to increase the supply of health care workers to provide equitable and accessible health care was prompted by the introduction of the NDP2030 policy and the vision for the

establishment of NHI, which both seek to align health-related objectives with the SDGs developed by the WHO. This called for greater changes, particularly in the medical approach that needs to be adopted in the country. The shift to the re-engineering of the primary health care approach aligns with the Cuban medical model since this model is community-centered and based at district level to drive disease prevention and health promotion.

According to the Human Capital Theory put forth by Becker in 1993, all knowledge and skills that humans possess, whether they are innate or learned, should be viewed as a type of capital that should be invested in (Acemoglu & Autor, 2011). Cuban medical training is valuable for South African health care reforms, especially those involving the public sector. Therefore, funding the training of South African students in Cuban medical schools so they can return and contribute their knowledge and expertise to the redesign of primary health care is a wise investment. Human capital is increasingly acknowledged as a significant driver of corporate sustainability and competitiveness.

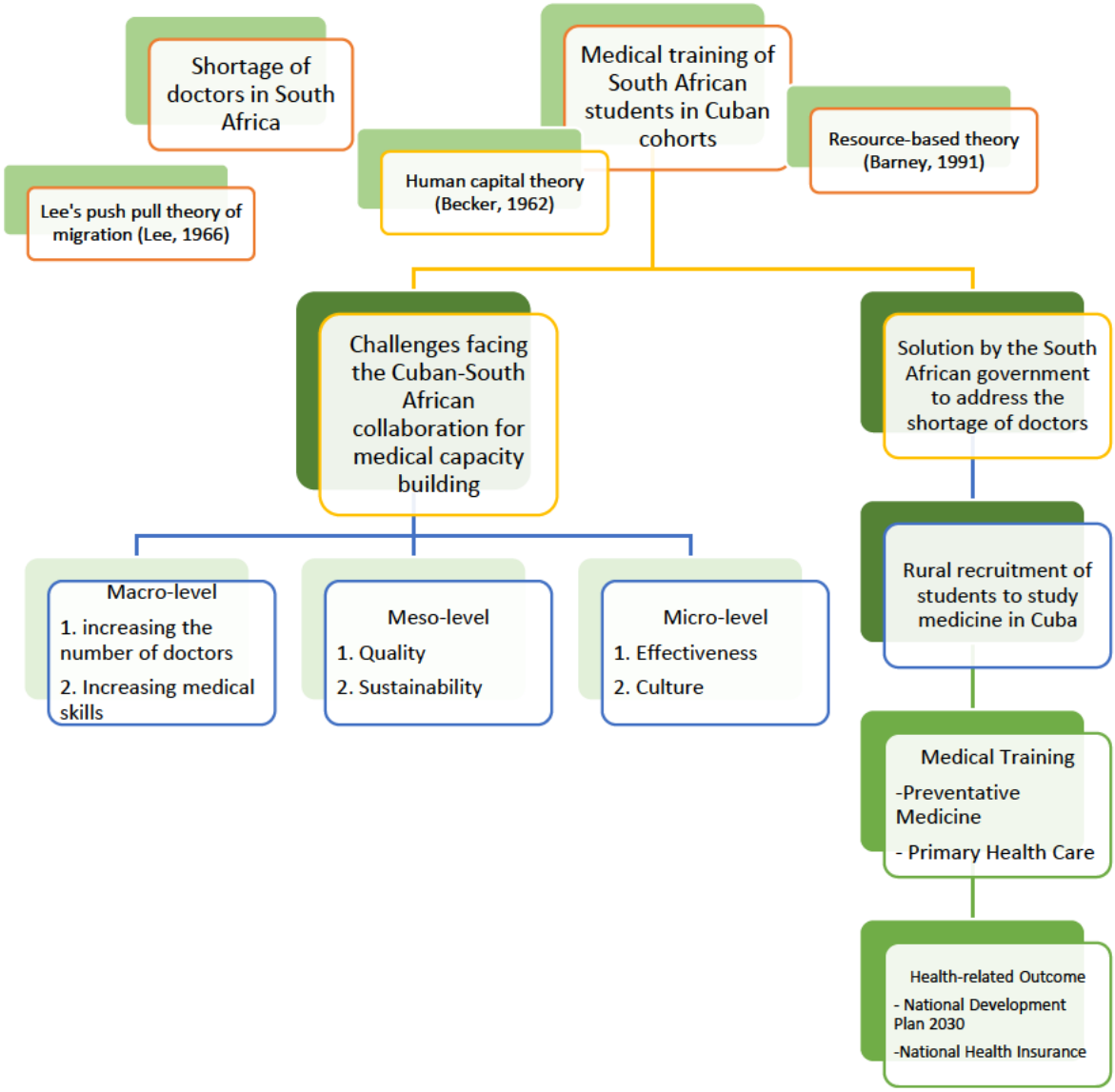

Figure 1.2: Developed conceptual framework *(Compiled by researcher)*

1.9 Research Paradigm, Design and Methodology

Since the discourse in the study focuses on understanding the challenges and exploring the deeper implications of the experiences of programme managers, programme administrators, and the students in the Cuban cohort, the Interpretivist research paradigm was adopted for this study. Language, culture, and shared meaning are social constructs that interpretivism emphasises, and are some of the aspects essential to the study's goals. Considering the researcher's background in psychology and interest in culture, diversity, and human resources, the Interpretivist research paradigm was determined to be the most appropriate for this study. Based on the aforementioned, it was determined that a qualitative, exploratory research design would be the most effective way to gather the information needed to address

the study's goals. An exploratory study's main goal is to gather information and insights in order to better understand a problem (Makri & Neely, 2021). Exploratory research, according to Sheppard (2021), is frequently used to ascertain the viability of conducting a more in-depth study, to satisfy the researcher's interest and demand for more information, and to establish the procedures that will be used in future research projects. In terms of the methodology used in an exploratory study, interviews, focus groups, and case studies are all data collection methods that can be employed (Sekaran & Bougie, 2010). In this study, semi-structured interviews were conducted with participants at the meso and micro-levels of the study to gather the required in-depth data that allowed the researcher to address the aims and objectives at these levels. The data was then analysed using the method of thematic analysis. Table 1.1 below summarises the process that was followed in conducting the study.

Table 1.1: Overview of the research levels of the study

	Aim1 **Macro-Level**	**Aim2** **Meso-Level**	**Aim3** **Micro-Level**
	Phase 1	Phase 2	Phase 3
Research Objectives	1,2,3	1,2,3,	1,2,3
Source of Information	Secondary Data Policy frameworks of WHO, NDP2030, Department of Health 2030 Human Resources for Health strategy Enrollment, graduation UKZN, HPCSA registration and completion records	UKZN programme managers and administrators involved with Cuban Cohort	Returning South African Medical students trained in Cuban Cohort
Data Collection Method	Review of above-mentioned policy documents Qualitative profiling and reporting of UKZN and HPCSA records	Semi-structured interviews with 5 programme Administrators and 4 programme managers at UKZN	Semi-structured interviews with 15 South African students trained in Cuban medical cohorts
Data Analysis	Thematic document analysis	Thematic analysis	Thematic analysis

PHASE 1: Secondary data (covering Aim 1)

Review of policy documents related to the NDP2030, the WHO's Global Strategy on Human Resources for Health: Workforce 2030 (World Health Organisation, 2016a), and the National Department of Health's 2030 Human Resources for Health Strategy (National Department of Health, 2020a), as well as the analysis of student records for the years 2015-2019 from UKZN Institutional Planning and HPCSA database records for the years 2015-2019.

PHASE 2: Qualitative data (covering Aim 2)
Semi-structured interviews with the programme administrators and programme managers at the UKZN. This was the meso-phase to collect data related to challenges at programme level at the UKZN and with the HPCSA.

PHASE 3: Qualitative study (covering Aim 3)
Semi-structured interviews with South African students studying medicine in Cuba to provide a perspective on the challenges facing the students in applying to the programme, commuting and settling in Cuba, adjusting to institutional requirements as well as psycho-social adjustment, and finally challenges when assimilating with UKZN when they return to South Africa.

1.10 Contribution of the Study

This study is multi-disciplinary in terms of its ties to the fields of health, medical education and training, human resources for health, recruitment and retention, migration and cultural studies. As the study spans a host of academic disciplines, there is much that can be learned from the findings of the study especially in terms of curriculum reforms to strengthen primary health care in South Africa.

While many researchers have studied the Cuban-South African medical collaboration from various points of view, this study presents a holistic overview of the programme, as well as the policies that govern it and the experiences of the Cuban cohort. Hence, this study sheds new light on several aspects that are often overlooked or looked at from a singular focus, or from a clinical collaboration focus.

1.11 Limitations of the Study

The focus of this study was on the Cuban-South African medical collaboration as a supplementary programme to address the shortage of doctors in South Africa. This was the only programme considered for the study because of its value in achieving long-term health-related goals, especially in line with the NDP2030 and the re-engineering of primary health care. Other initiatives like task-shifting (Bateman, 2013), the Rural Pipeline Project (Kolié, Van De Pas, Codjia & Zurn, 2023), and other rural health programmes were not included in this study. Within the study itself, the meso-phase dealt specifically with the administration and management of the programme at the UKZN. Due to financial and time constraints the study was limited to the Cuban-South African collaboration programme at the Nelson Rohihlahla Mandela Medical School at the UKZN.

Second, due to time and financial constraints only Cuban trained students who were based in the province of KwaZulu-Natal between the years 2015 to 2019 were considered for inclusion in the study.

The reasons for the inclusion of these years were based on the researcher's ability to access the available records from the UKZN's Institutional Planning department and the response to the request for statistics from the HPCSA. The COVID-19 pandemic-related lockdown also hindered data collection and placed limitations on how interviews could be conducted. The researcher's access to the students at the UKZN Nelson Rohihlahla Mandela School of Medicine was the basis for this study. The difficulties that students in other provinces may face are likely to be distinct from those faced by the KwaZulu-Natal cohort, and additional national research may yield results that are comparable.

The third limitation was related to the methodology employed in the study. Snowball sampling at meso-level was limited and dependent on the referrals of participants who suggested further participants for the researcher to interview. The challenge was that referral-based participant nomination did not always result in a positive response from these suggested potential participants, as many of them declined to participate in the study for both personal and professional reasons. Based on this, the sample size at meso-level is small and may have limited the researcher's ability to obtain necessary information to address the objectives relating to this level of the study, especially pertaining to the matter that staff who may have experienced issues with the programme have left or refused to participate. In terms of methodology, a qualitative approach was utilised to collect data. This limited the study to a smaller sample size to be interviewed.

Finally, the study was conceptualised prior to the onset of the Covid-19 pandemic but the collection of data only commenced in the midst of the lockdown that was implemented as a result. Therefore, based on the recommendations of the Research Office at the University of KwaZulu-Natal, the process of collecting data was limited to online or telephonic means only, and no face to face interviews were conducted. This was to ensure the safety of the researcher and participants.

1.12 Overview and Summary of the Chapters

Overview and summary of chapters	
Chapter1: Introduction	Introductory chapter highlighting the background of the health care situation in South Africa, the need for more medical doctors, and the government's response to the crisis. This chapter covers the research problem, aims and objectives, the purpose of the study and briefly outlines the conceptual significance underpinning the study. The research paradigm, design and methodology are explained and the limitations of the study are articulated.
Chapter 2: An Overview of the Scarcity of Skilled Medical Doctors in South Africa	Provides a background to the problem of the shortage of doctors in South Africa and presents the current challenges faced in health care provision in the country. The various policy reforms for transformative health in South Africa are explained through a review of the three policy documents that form the focus of the study. Finally, the themes emanating from this review of policy documents are explored in some depth in the chapter.
Chapter 3: Theoretical Foundation and Conceptual Framework Development	This chapter begins with an overview of the concepts of medical training and medical capacity building. Thereafter, the discussion outlined in the chapter highlights the three main theories that shape the conceptual framework; Lee's Push-Pull Theory of Migration (Lee, 1966), Becker's Human Capital Theory (Becker, 1962) and Barney's Resource-Based Theory Of Human Resource Management (Barney, 1991).
Chapter 4: Medical Capacity Building: Medical Education, Medical Training and Medical Internationalism	Deals with medical training, medical culture and internationalism. These are the key components of the evolving nature of medical education and training that South Africa requires to align with the re-engineering of primary health care. This chapter looks at the values and culture of UKZN and the HPCSA, and the culture of the students in the Cuban cohort.
Chapter 5: Research Methodology	The research paradigm, research design and methodology are outlined in this chapter. The study site and sampling techniques used in the study are identified. Thereafter, the qualitative data collection methods, data analysis techniques and the ethical considerations are discussed. Finally, the measures used to ensure the trustworthiness of the study are explored.

Chapter 6: Presentation of Findings	This chapter focuses on the findings of the study presented as: Phase 1: Macro-level: Document Analysis Phase 2: Meso-level: Semi-structured interviews with administration and management of the Cuban-South African medical collaboration programme Phase 3: Micro-level: Social, Cultural and Psychological Challenges
Chapter 7: Discussion of Findings	This chapter will integrate the findings of all three phases of the study with the existing literature to provide meaningful discourse.
Chapter 8: Conclusions and Recommendations	This final chapter presents the recommendations and conclusions to key aspects for reform in terms of policy and future planning in human resources for health. It will also present the conceptual model that was developed through the course of conducting the study and the review of relevant literature.

1.13 Conclusion

This chapter provided a background to the health care crisis faced in South Africa in terms of the critical shortage of doctors which has arisen from a number of factors. These factors were briefly highlighted in this chapter but will be discussed in greater detail in the review of the literature. The research problem, aims and objectives, and purpose of the study followed in the chapter, which provided the main focus of the research. The significance and justification of the study indicate the importance and rationale for the research that was conducted, while the conceptual framework draws on the key concepts emerging from three theories: Lee's Push-Pull Theory of Migration (Lee, 1966), Human Capital Theory (Becker, 1962) and the Resource-Based Theory of Human Resource Management (Barney, 1991). The Interpretivist research paradigm following an exploratory design which uses semi-structured interviews was briefly outlined and will be explored more fully in the methodology chapter. Finally the limitations were discussed and an overview of the chapters that follow in the study was presented. The next chapter presents a review of the literature that was considered in the research which relates to the topic of the scarcity of skilled medical doctors in South Africa.

Chapter 2

An Overview of the Scarcity of Skilled Medical Doctors in South Africa

2.1 Introduction

In this chapter, a foundation for understanding the background to the problem of the shortage of doctors in South Africa is presented. The shortage of skills in any country negatively affects the economic standing and potential for growth and development in society (Rasool & Botha, 2014) and affects a country's ability to compete globally (Balwanz & Ngcwangu, 2016). Addressing the shortage of skills in the South African labour market is fundamental to achieving the goals of the NDP2030 (Balwanz & Ngcwangu, 2016). Medical practitioners and health professionals appear on the Department of Higher Education and Training's critical skills list and the impact of COVID-19 indicates a high demand for occupations in medical and health sciences (Department of Higher Education and Training [DHET], 2020). Rasool and Botha (2014) revealed that South Africa is lacking much needed scarce skills and instead a large portion of its population is engaged in semi- and unskilled work. This vast supply of unskilled and semi-skilled labour can largely be attributed to South Africa's historical background. This chapter discusses the factors that contribute to the shortage of doctors in the country, the role of regulatory bodies as well as the various policy changes, such as the NDP2030 and the NHI Act that will affect how medicine will be transformed in the future and why there is an urgent need to address doctor shortages. The themes emanating from the three policy documents reviewed in the study will also be explored in some depth in the chapter.

2.2 A Historical Context to the Shortage of Skills in South Africa

Apartheid laws in South Africa created a deficient supply of skilled labour, by limiting the education and training opportunities afforded to the Black majority (Gore & Walker, 2020). As a result, there was an abundance of unskilled and semi-skilled labour and a dearth of critical skills, a large portion of which were lost to emigration during the transition to democracy (Fredriksson & Moritz, 2019). According to Thornton (2023), the disparities in the labour market, particularly for women and the Black population, are a reflection of the high levels of poverty and income inequality. Although there have been improvements in access to education, African women in particular still continue to face difficulties in the workplace (Posel & Casale, 2019). Nearly thirty years after the advent of democracy, Apartheid's effects on the social, economic, and political climate of the country are still evident. Another consequence of Apartheid was labour migration, both between rural and urban areas as well as out of the country (Thornton, 2023). Increased migration in South Africa was a result of people moving within and outside of the country's borders in search of employment and better opportunities (Fredriksson & Mortiz, 2019).

The impact of Apartheid in creating a divide in access to and opportunity for education and skills training cannot be denied. Therefore, the South African government's initiative to recruit students from rural, underprivileged backgrounds into the Cuban-South African medical collaboration was a part of redressing the disparities and restrictions on access to education and training of Black people that occurred during Apartheid. This strategy asserts itself in training people in an area experiencing a lack in order for them to be qualified and to serve in under-served communities and this aligns with the principles and concepts of Barney's (1991) Resource-Based Theory. The Cuban-South African medical collaboration was developed as a means of achieving the SDGs for universal health coverage prescribed by the WHO. This study emphasises two very important components for the achievement of health reforms for universal health coverage, namely medical training and medical capacity building that form the basis of the enquiry into the challenges facing the Cuban-South African medical collaboration.

There is overwhelming evidence that the shortage of health care professionals has a negative impact on the quality of care (Maphumulo & Bhengu, 2019). Although doctors are only one part of the health care system in South Africa, their high caliber of clinical care is crucial to the efficiency of the entire health care system and to the well-being of society as a whole (Fusheini & Eyles, 2016). In South Africa, it is crucial to address the severe doctor shortage because the majority of the population lives in rural areas with little to no access to medical facilities. Numerous studies have been done on the lack of medical doctors in South Africa and around the world, but many countries still struggle to meet the demands of their populations with an adequate supply of health care workers. The United Nations' call for universal health coverage is the primary justification for why nations around the globe need to concentrate on the severe shortages of health care professionals (World Health Organisation, 2019). Universal health coverage represents the principles of equity, quality and reduced financial burden by providing accessible health care to all (World Health Organisation, 2016a).

2.3 Shortage of Medical Doctors in South Africa

Based on five criteria, Econex (2015) indicated the scenario for doctor shortages in South Africa's public health sector. Firstly, one of the main causes of South Africa's overall low doctor output is the fact that the country only has ten medical universities and, secondly, these medical schools are regulated by the HPCSA in terms of the number of students enrolled to study medicine (Econex, 2015). Choosing to work in the private sector, where they are more likely to be near their homes and families, is the third factor that influences this choice made by medical school graduates from South Africa (Neely & Ponshunmugam, 2019). Budhathoki, Zwanikken, Pokharel and Scherpbier (2017) argue that given the bad working conditions and insufficient resources in the public sector, only a small number of doctors choose to work in the sector.

Migration of medical doctors is the fourth factor impacting the shortage of doctors in the country. Some medical professionals decide to practice outside of their country of residence in order to increase their income and opportunities for advancement (Rasool & Botha, 2011). Bastia and Skeldon (2020) call this 'skilled migration'. Former Minister of Health in South Africa, Dr Zweli Mkhize, said that the impending NHI scheme may, unfortunately, also be a contributing factor to medical doctors leaving South Africa in the near future (BusinessTech, 2019). The fifth and final driver is based on inadequate succession planning. An aging medical workforce and a lack of a clear succession plan to replace retiring medical professionals are additional factors contributing to gaps in a number of medical specialties (Econex, 2015). In summary, all these factors have contributed to the shortage of medical doctors in South Africa and prompted government to develop a plan to train South African students in Cuba on condition that they return to serve in the rural communities that they emanate from (Motala & van Wyk, 2016). Ideally, the supply of doctors in the country should be met by the output of qualified medical students from the ten medical universities (Donda et al., 2016). Mayosi and Benatar (2014) highlight that the number of students who can enroll in South African medical schools is restricted by stringent rules, which has a negative impact on the number of doctors trained each year.

The South African government's intention to increase the overall number of doctors in the country by training students in Cuba compromises the necessary qualities of medical capacity building. Previously, capacity building was equated to formal training but over the years medical capacity has evolved, especially in line with health promotion, to include qualities of culture, effectiveness, sustainability and quality (World Health Organisation, 2016b). The cohort students return to South Africa and are integrated into the dominant curative medical model in spite of receiving preventative medical training and being exposed to the primary health care approach in Cuba. This undermines the goal and method of their training in Cuba, and the skills that they have developed are not effectively used to bring about the necessary changes in South African health care.

While there are numerous benefits to training South African students in Cuba, earlier research (Bateman, 2013) has concentrated extensively on the negative narrative of the medical training collaboration. In her earlier work, Motala (2014) compared the competencies of the Cuban cohort to those of the MBCHB students at the University of KwaZulu-Natal and said that there was a mismatch of skills and competencies as per the focus and scope of clinical training at UKZN. The difference in the health care approach of Cuba's medical model, which is a community-based, primary health model which focuses on preventative medicine, and South Africa's individualistic curative model, which is reactive instead of proactive, was emphasised in later studies (Motala & Van Wyk, 2019). Motala and van Wyk (2016) focused on the fact that South African students studying in Cuba spend their first year learning the Spanish language since the curriculum is facilitated in Spanish. According to Bateman (2013), the disease profile in Cuba differs from that of South Africa and other African nations where

HIV, tuberculosis and malaria are common, and thus their training does not appropriately prepare the cohort to treat patients with these serious conditions.

The NDP2030 and the NHI Act are driving forces in South Africa's efforts to expand medical capacity for a qualified and competent health care staff (van Staden, 2021). Capacity building, as defined by the WHO, refers to actions to improve health at three levels: the advancement of skills and knowledge amongst practitioners; the expansion of infrastructure and support for health promotions in organisations; and the development of partnerships and cohesiveness for improved health in communities (DeCorby-Watson et al., 2018). This definition highlights the tenets of the Cuban-South African medical collaboration in developing knowledge, skills and commitment, specifically for community and primary health care promotion. The factors influencing South Africa's shortage of doctors can be tracked using the diagram shown in Figure 2.1 below. Each factor contributing to the lack of medical doctors will be discussed in more detail in the sections that follow.

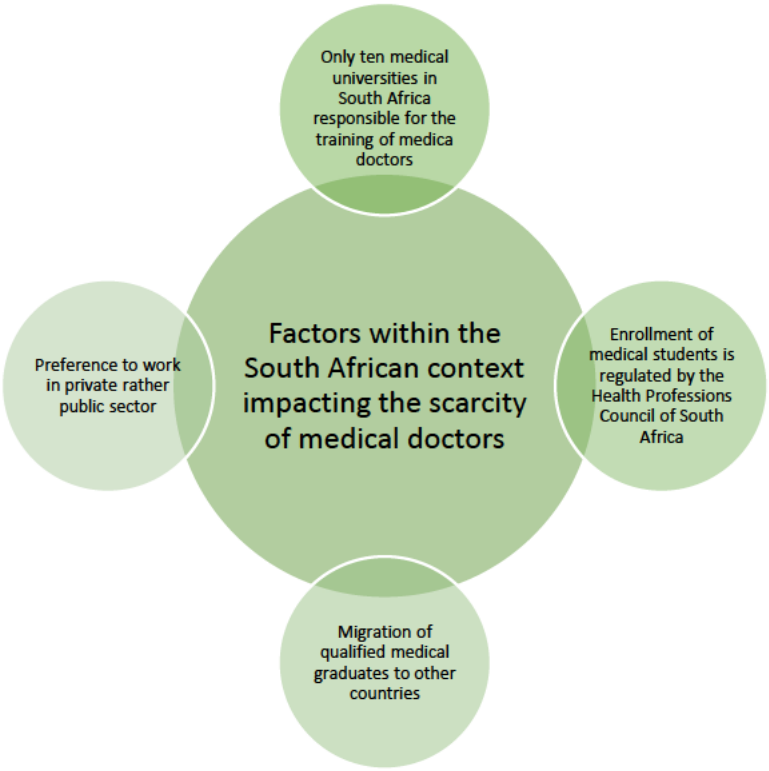

Figure 2.1: Factors affecting the scarcity of medical doctors

2.3.1 Shortage of medical schools in South Africa

There are a number of factors that impact medical skills scarcity in the country. Previous studies (e.g. Mahlathi & Dlamini, 2017; Motala & van Wyk, 2016) have highlighted the finite number of medical schools as a major issue in training adequate numbers of doctors. Because the institution serves as the platform for training, providing adequate medical schools to teach medical practitioners is the

first step toward addressing the country's physician shortage. However, South Africa only has ten medical universities, each producing an average of 200 qualified medical doctors per year. This is hardly enough doctors to support the health care needs of a country with a population of approximately 60 million people, the majority of whom are living in rural settings. Table 2.1 below provides a list of the ten medical universities in South Africa.

Table 2.1: List of ten medical schools in South Africa *(Source: CollegeList, 2020, online)*

Name of Medical School in South Africa	Location of University
Sefako Makgatho Health Science University	Ga-Rankuwa
University of Cape Town Faculty of Health Science	Cape Town
University of Free State Faculty of Health Science	Bloemfontein
Nelson Rohihlahla Mandela School of Clinical Medicine University of KwaZulu-Natal	Durban
University of Pretoria School of Medicine	Pretoria
University of Limpopo	Limpopo
University of Stellenbosch Faculty of Health Science	Stellenbosch
University of Witwatersrand Faculty of Health Sciences	Johannesburg, Gauteng Province
Walter Sisulu University Faculty of Health Sciences	Mthatha, Eastern Cape
Nelson Mandela University Medical School	Port Elizabeth

Research in this field by Ayo-Yusuf (2015) indicates that the curb on the number of medical students is related to clinical training that takes place at hospitals and clinical settings. Currently student intake at medical universities is at capacity and increasing the numbers of students enrolled at the existing clinical training facilities will compromise the quality of training (Qukula, 2019). Despite this, Professor Martin Veller from the Department of Surgery at the University of Witwatersrand quoted by Qukula (2019) stressed that it was an undeniable fact that South Africa needed more medical schools.

2.3.2 Limited intake of medical students at South African medical universities

Mahlathi and Dlamini (2017) argue that, in addition to the low number of medical universities, the limited intake of medical students is also a reason that South Africa faces a shortage of medical doctors.

The combined number of medical graduates produced by the ten medical campuses is between 1200 and 1300 per year (Mahlathi & Dlamini, 2017). The supply of medical doctors therefore does not meet the demand for health care in South Africa. The greater part of these graduates seek employment in the private sector or leave the country after qualifying. The prescribed number of students allowed to enroll at medical schools is determined by the teaching facilities, student-lecturer ratio, laboratories and equipment, supervision and mentors and clinical placement (Malale, 2012). These requirements set out by the HPCSA are essential for the accreditation of medical degrees and to ensure the competent and effective professional practice of qualifying doctors. In later sections of this chapter, a discussion of the role and importance of the HPCSA will highlight the purpose for these restrictions. However, as things stand, the low enrollment of medical students in South African universities puts the nation in a difficult predicament where supply cannot keep up with demand. However, there is a sizeable pool of candidates who are interested in becoming health care professionals, and the South African government has drawn from this source for its medical collaboration with Cuba.

2.3.3 Private sector versus public sector challenges

The Ministry of Health regulates health care in South Africa, and is divided into the private and the public sector. The majority of South Africans access health care via the public sector and the provincial departments in each of the nine provinces of the country are responsible for recruiting and employing a skilled health workforce. The district health care system, which is based on the primary health care model, is the preferred mechanism for health promotion in South Africa (Mahlathi & Dlamini, 2015). However, South Africa still experiences a vast shortage of medical professionals in rural health care facilities due to the fact that most qualifying doctors and health care professionals choose to practice in urban hospitals. According to Professor Ayo-Yusuf of the National Research Foundation, increasing the number of doctors in South Africa does not necessarily address the skewed distribution of urban and rural of skilled staff (Ayo-Yusuf, 2015).

2.3.4 Migration of doctors

George et al. (2019) reported that the movement of doctors from low and middle-income countries to countries offering better prospects and opportunities has greatly impacted service delivery of health care across the globe. The declining numbers of doctors in South Africa in the public sector is a result of poor working conditions, lack of resources and understaffing (Hajian, Yazdani, Jadidfard, Khoshnevisan, 2020). Van Rensburg's (2021) review of health care in South Africa demonstrated a strong critique of its unequal health care system that divides access to medical care into two tiers, the private and public sector. It has not only affected the population's access to health care, but has also played a role in the country's large-scale mobilisation of doctors seeking better working conditions and opportunity abroad (Hajian et al., 2020).

With the introduction of the NDP2030 and plans for the upcoming NHI Act in South Africa, maintaining a sustainable health care workforce is crucial to its success. Therefore, preventing further migration will only strengthen the nation's capacity to deliver equitable, high-quality health care in the future by retaining the crucial medical expertise that the nation has devoted resources to developing through education and training. Rasool and Botha (2011) add that factors like employment equity and affirmative action have also driven medical professionals to leave South Africa. Pull factors for doctors leaving South Africa include better salaries, professional opportunities, better working conditions and security and opportunities for family members (Hammet, 2014). Migration has a negative effect on the country of origin and decreases the number of health care professionals, which has an impact on the quality of care (Hajian et al., 2020). In study conducted by Squires et al. (2020) it was revealed that primary health care and serving under-served communities were the main career goals of students who received their education in Cuba, in contrast to students who received their education in South Africa who had a more positive outlook on hospital careers and the prospect of emigrating from the country.

Mobility of medical doctors does not only occur where doctors move out of the country but also involves movement from public to private sector, causing a skewed distribution of skills in South Africa (George et al., 2019). Massey and Gunter (2020) argue that cities are the engine of economic growth and activity and are better established for a sustainable future, hence marginalising rural and remote regions. Literature reveals that medical practitioners have a preference to work close to their homes (Budhathoki et al., 2017). In a study tracking the movement of medical graduates over the period 2007 to 2011 at the University of Witwatersrand by George et al. (2019), the trends revealed that at least thirty percent of qualified health practitioners will leave the country. Figure 2.2 on the next page, taken from the study conducted by George et al. (2019), shows the retention and distribution of doctors in South Africa in the post-Apartheid era.

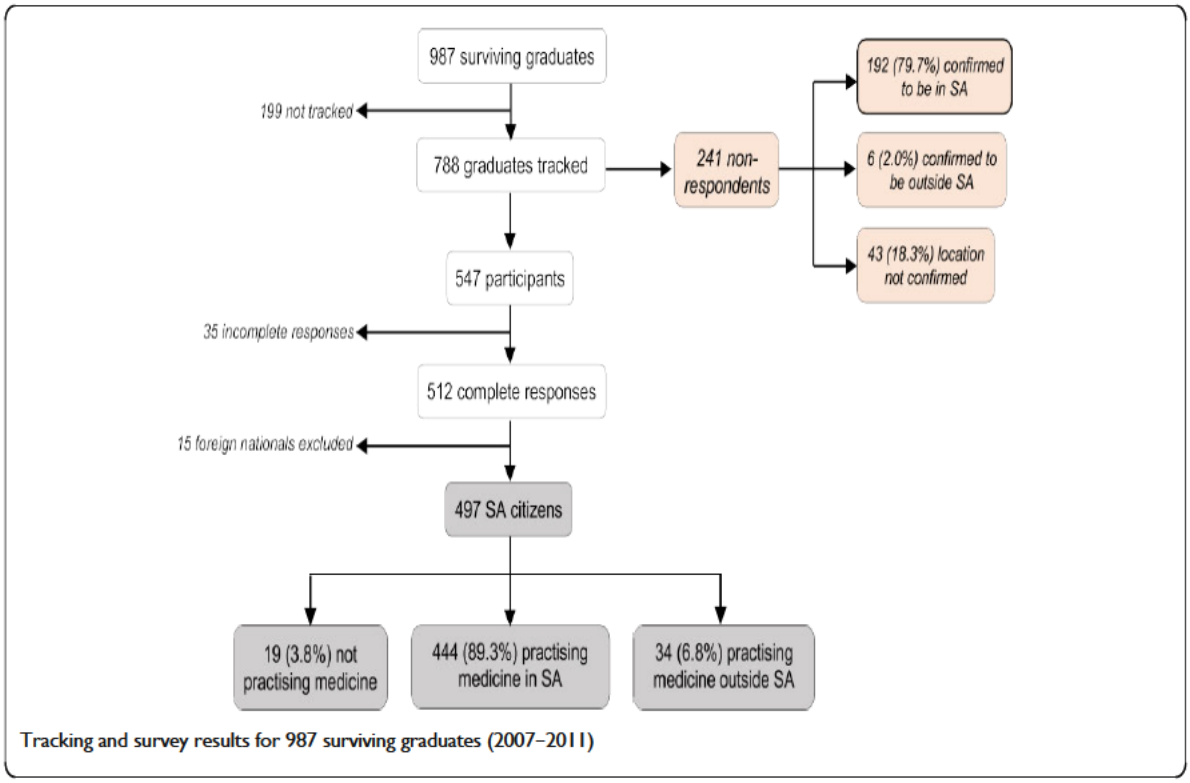

Figure 2.2: Doctor retention and distribution in post-Apartheid South Africa *(Source: George et al., 2019, p.4)*

2.3.4.1 Migration and sustainable development

Although the migration of medical professionals has been the subject of unfavourable narratives, some literature, for example a study by Hunter, Brandi, Connel, Hermans, Newig and Smith (2019), contends that it should not be viewed solely as a challenge. When viewed in the context of sustainable development, migration can play a significant role in reducing inequality and poverty, two issues that contribute to the personal reasons why people migrate (Aniche, 2020). The United Nations recognises the value of migration in fostering global connections, providing services, and supporting families and communities in their countries of origin by sending money home, which contributes to reducing poverty in those areas (Wilmoth, Bas, Mukherjee & Hanif, 2023). Migration, if managed effectively, can contribute to the aims of NDP2030 related to the quest to end poverty and to reduce inequality. This policy states that in order to achieve the end of poverty, South Africa must develop an inclusive economy, mobilise the forces of its people, build their capabilities, strengthen the state's capacity, and encourage better leadership and partnerships across society (Aniche, 2020). Controlled migration can indeed enhance the development of skills and the improvement of health, and can positively benefit society and the economy if implemented effectively (Hunter et al., 2019).

2.3.4.2 Migration and National Development Plan 2030

The National Development Plan 2030 (National Planning Commission, 2020) states that South Africa's internal migration patterns require two policy responses. Firstly, a strong rural policy is required to ensure that people who remain on rural land are not locked into poverty and that their life opportunities are improved. Secondly, a strong urban development policy is needed, one which caters for increasing numbers by guaranteeing that the necessary infrastructure is put in place for a growing population. The movement of medical doctors from South Africa to other countries presents a major challenge in terms of maintaining a sustainable health care workforce (Maphumulo & Bhengu, 2019). As highlighted in the literature, studies have cited migration as one of the main causes of the shortage of doctors in South Africa (Dohlman et al., 2019). During the country's transition from Apartheid to democracy, a significant number of doctors and other professionals left the country (George et al., 2019). The impact of not having a full complement of medical doctors and the effects on the quality of treatment has led to extensive research into the migration of health care workers.

Brain drain is expensive for countries that invest in the education and training of health care professionals only to lose them to other nations (George et al., 2019). Results in a Kenyan study by the International Organisation of Migration (2011) associated migration as a social determinant of health. Here it is believed that individual characteristics like gender, language, immigration status, culture, and the context in which migration occurs, have a substantial impact on health-related issues (International Organisation of Migration, 2011). According to the research in this area, more needs to be done to develop the capacity for training health care professionals, and to boost local recruitment and retention strategies, considering that little is being done to control the migration of medical doctors from the country. Making every attempt to reduce and stop the continuing migration of doctors is a necessary component of solving the issue of the shortage of doctors in South Africa. The goal of the International Organisation of Migration's (2011) analysis of migration was to understand ways in which the mobility of physicians could be curtailed and restricted as a retention tactic.

According to Lee's migration theory (1966), knowing the push and pull factors and the intervening obstacles, as discussed earlier in the chapter, is important. Although in this study Apartheid is highlighted as a significant factor influencing migration, South Africa is currently facing new challenges due to the loss of doctors to other nations. While factors like higher salaries have been thought to have a bigger impact on physician migration than the lack of doctors in the destination country, new challenges have an impact on the mobility of medical doctors in South Africa (Adovor, Czaika, Docquier, Moullan, 2021). Adovor et al. (2021) cite the ease of migrating and getting residency in destination countries as a luring factor in the migration of medical doctors from South Africa.

2.4 Training of the Health Care Workforce in South Africa

In a study conducted by Sui et al. (2019), there were a number of factors identified that influence the training of medical doctors in South Africa. Firstly, there are only twenty-three universities in South Africa with only ten of them having medical schools. This indicates the average number of doctors produced in the country on an annual basis is around two thousand per year (Sui et al., 2019). This is not nearly enough to address the shortage in the country. The number of doctors being trained in the Cuban-South African medical cohort is relatively low in comparison to the MBCHB programmes offered at medical universities in South Africa. This is partly due to the many challenges in the programme which this study aims to identify and address. To demonstrate this point, Tables 2.2 and 2.3 below show the number of doctors graduating through the MBCHB and the number of doctors graduating in the Cuban medical training at UKZN over a five-year period.

Table 2.2: University of KwaZulu-Natal MBCHB student data 2015-2021

YEAR	ENROLMENT	GRADUATES	EXCLUSION	DROPOUT	CONTINUING STUDENTS	CHANGED QUALIFICATIONS
2015	1367	160	3	23	1180	1
2016	1453	207	2	30	1213	1
2017	1500	189	5	40	1265	1
2018	1538	202	4	39	1292	1
2019	1667	193	5	95	1374	0

(Source: University of KwaZulu-Natal Institutional Planning)

Table 2.3: Cuban Enrolments at University of KwaZulu-Natal 2018-2021

	2018	2019	2020	2021
Cuban Enrolments	94	128	211	142

(Source: University of KwaZulu-Natal Institutional Planning)

In addition, the number of qualified health care workers is regulated by their respective professional bodies, but in line with the Health Professions Act No. 53 of 1974. The Act prescribes the number of

students enrolled at any institution to be in accordance with clinical training staff and facilitators at hospitals and clinical sites (Sui et al., 2019). Finally, the College of Medicine of South Africa, which offers specialty exams in addition to university degrees, regulates the total certification of medical practitioners.

Previous research by Donda et al. (2016) was more concerned with a comparative review of the Cuban-South African medical collaboration to the existing curative model of medicine in South Africa. Squires et al. (2020), on the other hand, claim that the preventative medical skills learned in Cuba are significantly more cost effective, and better suited to a developing country like South Africa. Considering the quadruple burden of disease in South Africa, the necessity to improve the quantity and capabilities of doctors becomes even more pressing. The paucity of oncologists and urologists in KwaZulu-Natal alone has put the province in a state of despair (Wicks, 2017). In 2016, KwaZulu-Natal MEC for Health, Sibongiseni Dhlomo, emphasised the value of the Cuban-South African medical collaboration programme by saying that the training received from Cuba was second to none and could be considered the most viable solution to the medical skills shortage crisis in South Africa (KwaZulu-Natal Department of Health, 2017). He did however admit that the training of cohorts in Cuba is a costly exercise and that there is no evidence to indicate where these students ultimately end up (KwaZulu-Natal Department of Health, 2017).

Like most organisations in the corporate world, the motivation for the South African government's determination in pursuing the training of medical students in Cuba was to enhance capacity and human resources in an area that is seriously lacking (Motala & Van Wyk, 2019). The NDP2030 and the NHI Act are the motivating influences to build a competent and skilled health care workforce in South Africa (Essack, 2013). Chapter Ten of the NDP2030 addresses the promotion of health in South Africa and is aimed at re-engineering the primary health and district health care systems. In this strategy, the plan sets out to eradicate poverty and provide competent human capacity to provide universal health coverage by the year 2030.

The Cuban-South African medical collaboration programme meets the accreditation requirements of the HPCSA and is focused on the future health-related goals outlined in the policy for Human Resources for Health. Therefore, every effort should be made to analyse the problems encountered and come up with long-term solutions to strengthen the programme and incorporate the participation of medical professionals who have graduated from this programme in the policy-required health care reforms. Despite the negative narrative of past research, the Cuban-South African medical collaboration has a lot to offer in terms of human resources strategy for recruitment and retention as well as in terms of changing the culture of health in South Africa.

2.5 Transformation of the Medical Education Curriculum

The future role and responsibilities of the medical school should reflect the anticipated fundamental components of the future health system as well as the abilities of the aspiring doctors, who should be inspired by the curricula and encouraged to use their natural resources and energy (Densen, 2021). A total reinvention of the medical curriculum towards a primary health care focus needs to be considered with reduced time taken to complete the degree in order to increase the output of medical doctors (Dzau & Udaykumar 2015). In the United Stated of America, Dentzer (2019) highlighted that a shift in the paradigm of health care needs to take place proposing a health-induced system. She calls it 'Health Care Without Walls' a system that 'comes to people', "meeting them where they are, in their homes, workplaces, or elsewhere in their communities, as opposed to expecting people to always go to it" (Dentzer, 2019, p.6).

2.6 Professional Body Regulation Accreditation

Having a regulatory body for health professions is paramount to achieving quality in health care. A state's duty is to protect the public interest by requiring medical professionals to be licenced to practice (Tulchinsky, Varavikova & Cohen, 2023). Human resources for health is central to creating an efficient workforce to achieve universal health coverage. The function of professional regulatory bodies is to monitor and control the scope of practice and the conduct of health care workers (Leslie et al, 2021). Professional regulatory bodies are also important in the accreditation of health education programmes because the knowledge and skills acquired are important factors in determining the quality of health care (Burdick & Dhillon, 2020). The regulatory body for medical and health sciences in South Africa, excluding nursing, is the HPCSA, founded in 1997. The role of this council is to endorse the legitimacy of the qualification by ensuring the fulfilment of certain criteria.

2.6.1 Statutory health council – Health Professions Council of South Africa

The Health Professions Council of South Africa is a statutory and regulatory body governed by the Health Professions Act No. 56 of 1974. In South Africa, the HPCSA is the main council to oversee that all tertiary health sciences and medical programmes fulfil the requirements of effective health care and align to the goals of the WHO's global strategy (Burdick & Dhillon, 2020). All South African medical and health science universities have to be accredited by the HPCSA and the training of medical doctors must be aligned to specific criteria set out by the council (Ayo-Yusuf, 2015). It is a requirement by law that every student in health science is registered with one of the 12 regulatory councils that fall under the banner of the HPCSA (World Health Organisation, 2015).

2.6.2 Responsibilities of the Health Professions Council of South Africa

In order to practice as a health science professional in South Africa, it is essential to be registered with the HPCSA. The reasons for this are not only rooted in validating the quality of doctors and health professionals but also in establishing guidelines to monitor and control medical competence and practice. Unlike other degrees, medical and health sciences qualifications necessitate clinical experience learning before students can complete their training and graduate. The number of students enrolled in these programs is restricted, and as mentioned previously, this has an impact on the number of medical graduates produced by medical universities.

The involvement of the HPCSA is to ensure the accreditation of academic programmes and training institutions to ensure the professional competence of medical professionals and other health care workers. As a result, only those students who have registered with the HPCSA are allowed to practice. The HPCSA prescribes early clinical contact with patients which means that it determines the ratio of students to professional facilitators in clinical environments (Zweigenthal, London & Pick, 2016). However, these exacting but necessary procedures present a challenge for students both in the MBCHB programme and those qualifying through the Cuban-South African medical collaboration.

2.7 Impact of Policy and Regulation in South Africa

Even though policy reforms are in place to redress inequities and unify systems, the roll out plan and implementation of these policies is not efficiently executed. Policy makers need to consider the social determinants of health when planning and forecasting improvements in the current structure for human resources for health. Personal, social, economic and environmental factors play a significant role in the health of the nation. This suggests that there should be an increase in the placement of South African medical students from the Cuban cohort in the public sector, as they have the required training to be able to take these factors into account. Hammet (2013, p. 47) aptly outlines the situation and proposed solution by drawing on the skills of the health professionals emerging from the Cuban cohort, which is important for policy makers and stakeholders to consider:

> *A key policy challenge remains in ensuring the effective utilization of these trained health professionals in the longer term, namely ensuring the provision of adequate support and incentives for professional and personal/family development in rural areas. This concern reflects the need to integrate the outcomes and practices of the bilateral agreement into broader health care policy decisions.*

Whist every effort is being made by the government to address the shortage of doctors in South Africa, additional work is required to ensure the sustainability and effectiveness of the doctors from the Cuban cohort. Immense investment into the programme should translate to greater output in terms of the skills

and numbers of doctors graduating from the cohort. The 2030 Human Resources for Health Strategy must compare the cost-benefit ratio of supporting the expansion of the MBCHB programme in South African medical schools versus supporting the expansion of foreign qualified doctors paid for by the South African government, for example, those who attend medical schools in Cuba, Turkey, Russia and so forth (Zweigenthal et al., 2016). Increasing institutional capacity to address future staffing needs to be prioritised. There has been considerable research and policy recommendations for workforce planning in the health sector but the 2030 Human Resources for Health Strategy concedes that the final document needs to be a 'living strategy' (National Department of Health, 2020a). The proposed primary health care strategy will necessitate a review of key health professionals' 'scopes of practice', detailed referral patterns, and new training and career routes. The challenge, however is in improving efficiency and the delivery of accessible, appropriate, and high-quality care while working with limited human and financial resources (National Department of Health, 2020a).

2.7.1 Global Strategy on Human Resources for Health: Workforce 2030

The transformation of medical education over the years has prompted the WHO to shift away from science-based education to an all-encompassing approach that takes into consideration inequities in access to health care, and environmental, behavioural and social determinants as contributing factors to health of the populations (World Health Organisation, 2018). Hence, universal health coverage is now the predominant goal of health care systems worldwide. The overall theme of the WHO's Global Strategy on Human Resources for Health is health equity through universal health coverage.

The meeting of member states of the WHO in developing the Global Strategy on Human Resources for Health focused on the creation of a health labour market framework for universal health coverage (World Health Organisation, 2016a). The initiation of the strategy was based on the projected shortfall of 18 million health care workers by the year 2030 (Agla, Campbell & McIssac, 2021). This anticipated shortfall was identified predominantly in the middle and low income countries that are at risk of not being able to supply the demands of the health care needs of their populations. The final document on the Global Strategy on Human Resources for Health: Workforce 2030 covers all aspects of human resources ranging from planning, education, management, retention, incentives and social aspects (World Health Organisation, 2018).

The reading of the WHO's Global Strategy on Human Resources for Health 2030 (World Health Organisation, 2016) serves as the overarching framework for health workforce planning. Applied to South Africa, this strategy sets out the ideal workforce for health care in the global context. The policy was developed in 2016 by the WHO as a commitment to universal health coverage goals and as a guideline for member states' progressive health workforce agenda. The purpose of a comprehensive

review is to examine existing policies and to determine whether the overall purpose and goals of the policy are still being met and whether changes may be required to improve the clarity or effectiveness of the policy. The WHO strives to build the high-quality workforce that is acceptable, available and accessible, and is needed to improve health outcomes and advance universal health coverage.

2.7.2 Department of Health 2030 Human Resources for Health Strategy

Guided by the WHO's Global Strategy on Human Resources for Health: Workforce 2030, South Africa's 2030 Human Resources for Health Strategy is based on building capacity in the domains of human resources. Figure 2.3 on the following page shows that the main theme of the Department of Health's 2030 Human Resources for Health Strategy is in investing in the health workforce. The WHO's SDGs contain a key target (3.8) on universal health coverage. The specific target 3c in the SDGs recommends an increase in the financing available for health, and in the recruitment, training and development, and retention of the health workforce, especially in middle and low income countries.

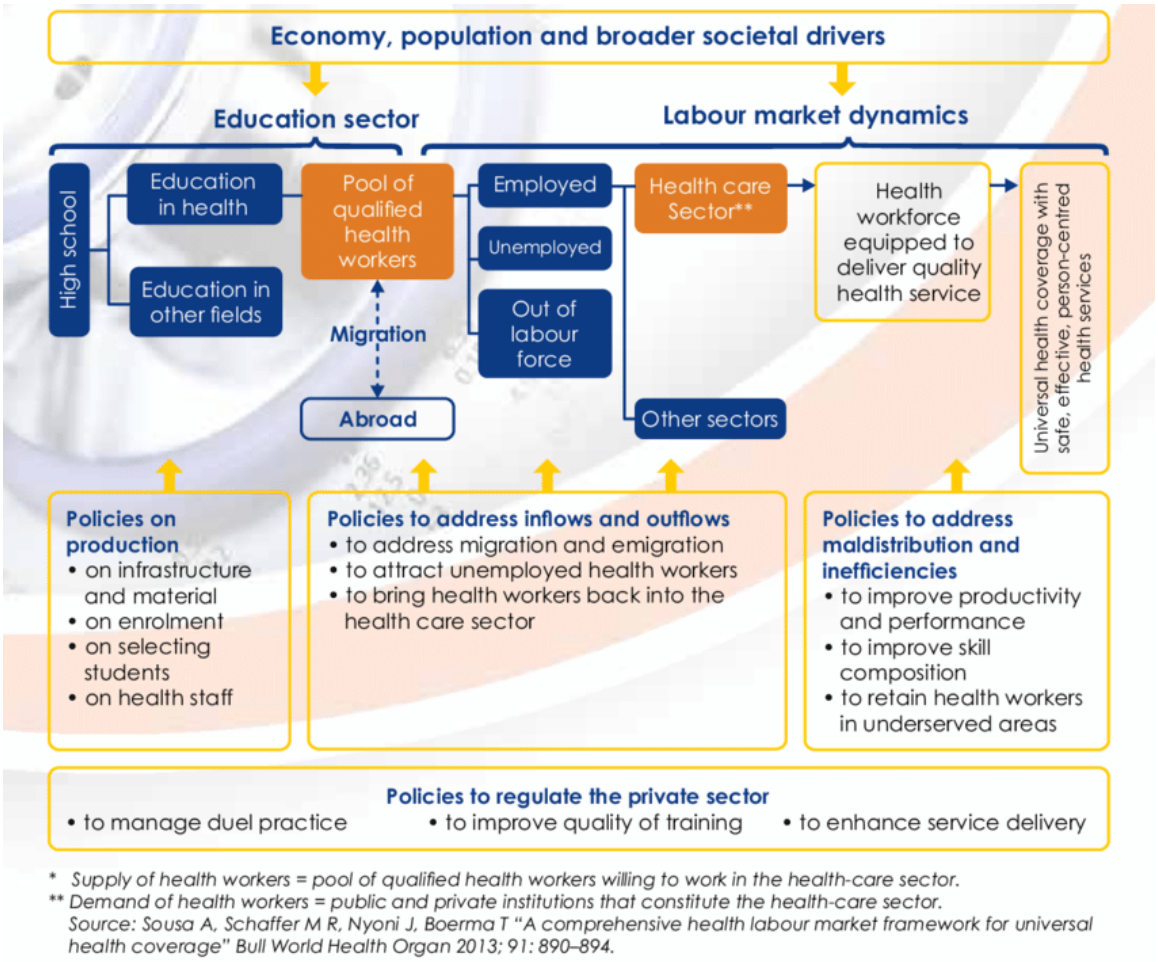

Figure 2.3: Department of Health's 2030 Human Resources for Health Strategy *(Source: Academy of Science of South Africa, 2018, p. 41)*

A summary of the five goals and objectives of the Department of Health's 2030 Human Resource for Health Strategy (National Department of Health, 2020a) is presented below:

1. The vision is that South Africa invests in the health workforce to ensure quality universal health coverage and a long and healthy life for all people (National Department of Health, 2020a).

2. In order to achieve the vision, there are five strategic goals:

    a. Goal 1: Effective health workforce planning to ensure human resources for health is aligned with current and future needs (National Department of Health, 2020a).

    b. Goal 2: Institutionalise data-driven and research-informed health workforce policy, planning, management and investment (National Department of Health, 2020a).

    c. Goal 3: Produce a competent and caring multi-disciplinary health workforce through an equity-oriented, socially accountable education and training system (National Department of Health, 2020a).

    d. Goal 4: Ensure optimal governance; build capable and accountable strategic leadership and management in the health system (National Department of Health, 2020a).

    e. Goal 5: Build an enabled, productive, motivated and empowered health workforce (National Department of Health, 2020a).

3. The goals, objectives and strategies underscore the importance of:

    a. A capable state, able to plan human resources for health for the country and ensure a comprehensive human resources for health information system that covers the entire health system (National Department of Health, 2020a).

    b. Government taking decisive action to improve equity in the distribution of health care providers, between the public and private health sectors, and between urban and rural areas (National Department of Health, 2020a).

    c. Transforming and aligning health workforce education and training with health and health system needs, using a combination of legislation, and incentives (National Department of Health, 2020a).

    d. Improving the performance of the health workforce (National Department of Health, 2020a).

    e. Taking care of human resources for health through inclusivity, positive practice environments, and gender transformative practices (National Department of Health, 2020a).

2.7.3 National Development Plan 2030

The NDP2030 starts off by 'writing a new story for South Africa.' Based on South Africa's political history and laws of Apartheid, there is need to transform systems spanning the last few decades to improve the lives and create opportunities to disenfranchised communities. Despite an aging democracy, there are several aspects of change that need to be implemented. Health care is one such entity. The South African health system, which is based on the British paradigm entrenched under colonisalism, is unfit for third-world populations (Bust, Whyle & Olivier, 2023). This model, which has been in use for decades, only served to divide access to health care based on privilege.

The diagnostic report released in 2011 by the National Planning Commission identified that the public health system could not meet demand or sustain quality (National Planning Commission, 2011). The only way to attain the goals of the NDP2030 is through skill development and effective education plans to meet the demands of the South Africa's labour market (Balwanz & Ngcwangu, 2016). The focus, therefore, is to acquire key capabilities in the form of skills and competencies to transform the economy and society (National Planning Commission, 2011).

The NDP2030 relates to this study on two levels. Firstly, the acquiring of skills through education and training to add value to employment opportunities and, secondly, the provision of a quality public health care system that will meet the demands of the nation. This policy is key to the study because of the focus on primary health care and health system reforms in order to achieve universal health coverage, which is one of the SDGs of the WHO's Global Strategy on Human Resources for Health 2030 and South Africa's 2030 Human Resources for Health Strategy. The plan calls on the different sectors of society to support the achievement of its objectives. Chapter Ten of the NDP2030 deals with health promotion and the social determinants of health in South Africa. The NDP2030 has nine goals related to health, as shown in Table 2.4 below, but only goals 6 through 9 will be examined as secondary data for this study. While the overall goals of the NDP2030 relate to improving the health and well-being of the population, the objectives for the study relate to health systems strengthening.

Table 2.4: Chapter Ten of the National Development Plan 2030

1. Raise the life expectancy of South Africans to at least 70 years
2. Progressively improve TB prevention and cure
3. Reduce maternal, infant and child mortality
4. Significantly reduce prevalence of non-communicable diseases
5. Reduce injury, accidents and violence by 50 percent from 2010 levels
6. Complete health system reforms
7. Primary health care teams provide care to families and communities
8. Universal health care coverage
9. Fill posts with skilled, committed and competent individuals

(Source: Extracted from the National Development Plan 2030)

One of the main challenges that impacts the success of the NDP2030 is poor implementation of policy, followed by the values of primary health care not being realised. However, if a key hindrance to the realisation of the vision outlined in the NDP2030 could be isolated, it relates to the structure and resources of medical facilities in remote areas being based on curative services rather than a preventative approach. The key points emanating from the NDP2030 that are critical for health care transformation are presented in the diagram shown in Figure 2.4 below. This representation of essential indicators is important for health reforms towards primary health care. Considering aspects such as demographics, African development, globalisation, reversing the spatial effects of Apartheid, creating an inclusive and integrated rural economy and improving quality in education, training and innovation will enable human resources for health to build a presence and improve access to health care for previously deprived and disadvantaged communities.

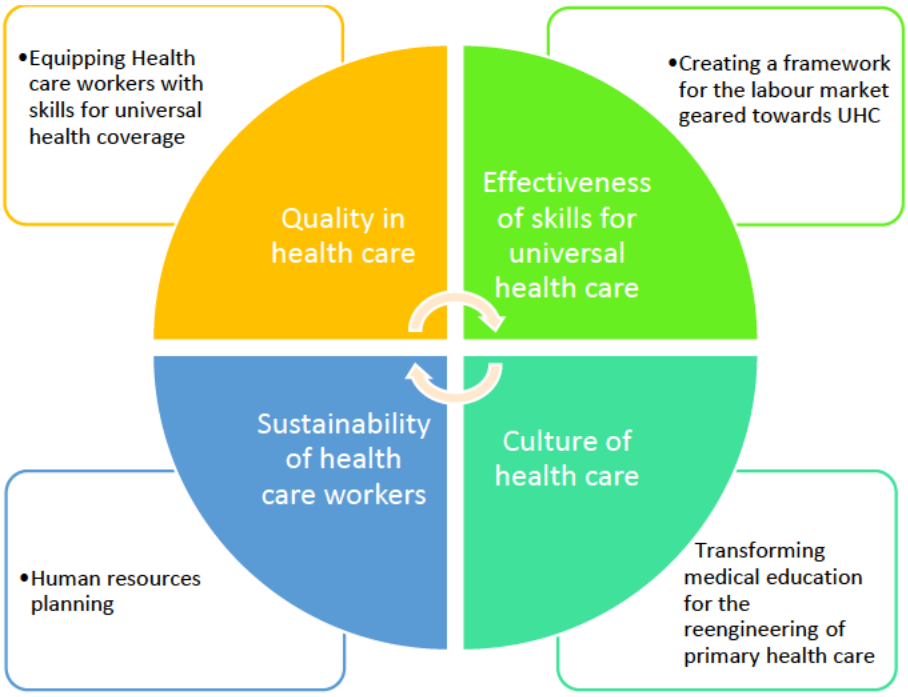

Figure 2.4: Themes emerging from policy documents related to human resources for health for universal health coverage *(Source: Compiled by the researcher)*

2.7.4 National Health Insurance

National Health Insurance is a proposed plan that ties in with the goals of UHC. It is a health financing system that pools funds to provide all South Africans with access to quality, affordable personal health care depending on their health requirements and their health needs, irrespective of their socio-economic status (National Department of Health, 2020b). The Green Paper for the development of NHI was introduced in August 2011 and the timeline for the implementation is projected to be in 2026. The plan seeks to provide equitable access to health care to all South Africans at facilities closest to where they live and work (National Department of Health, 2020b).

The NHI scheme aims to redress inequities of Apartheid that promulgated two separate health systems that invested resources into the private sector while neglecting the health care needs of the majority of South Africans utilizing public health facilities (Sithole, 2015). These inequities of the past left the public sector with major challenges like lack of funding and poor infrastructure but the sector was especially impacted in terms of inadequate human resources (Sithole, 2015). Human resource planning is central to addressing the shortage of doctors and sustaining the health care workforce (Smith, Wishnia, Strugnell & Ranchod, 2018). The Cuban medical training of South African doctors may feature as a prominent contribution to meeting the needs of human resources for health especially in

rural areas. Hence planning, forecasting and strengthening the existing Cuban medical training programme is crucial to the health care objectives of the NHI. This is pertinent to the policy discussion on medical brain drain due to the financial implications of training expenditures for sending countries (Adovor et al., 2021).

Access to and the cost of health care has a huge impact on the promotion of preventative medicine. The NHI Act recognises the need for one system in addressing the health care needs of the population. Hence all South Africans will be able to access health care (public or private), closest to where they live and work. The NHI system will be funded through a combination of required pre-payment sources, but will rely largely on general taxes of the public (Michel, Tediosi *et al.*, 2020). The need for qualified doctors to provide universal access to health care to all communities is crucial (Motala & Van Wyk, 2019).

2.8 Themes Emanating from Policy Documents and Literature

The initial themes prevalent in the policies considered in the research were discovered deductively from the review of the literature and were based on supporting the solution to the critical shortage of medical doctors in South Africa. The themes of culture, effectiveness, quality and sustainability are critical to creating a sustainable health workforce. These themes also create a foundation for improving the experience of the Cuban cohort students and in turn translate to creating a culture of effective, sustainable, quality human resources for health. The four themes are described in Figure 2.5 on the next page.

Figure 2.5: Critical themes for creating an effective workforce *(Source: Compiled by the researcher)*

Several definitions of effectiveness point to achieving goals and objectives of planned events and initiatives (Burches & Burches, 2020) but DeCorby-Watson et al. (2018) aptly highlight that effective health promotion comes from the advancement of knowledge and skills. In addition, the WHO adds that a quality, effective and sustainable health workforce is a prerequisite for achieving UHC (World Health Organisation, 2019), while the concept of culture in the workplace applies to the attitudes and perceptions of employees in relation to the policies and principles of the organisation (Bayot, Tadi & Vaqar, 2023). Quality and effectiveness are concepts that relate to the primary objective of health stakeholders, which is to competently train medical professionals in accordance with the pertinent skills required to meet the health care demands of the country's population (Maphumulo & Bhengu, 2019). Sustainability is the desired outcome of retaining doctors in South Africa to address the vast deficiencies in health care professionals (George et al., 2019). Defining these elements in the conceptual framework guides the process of collecting data in response to the aims and objectives of the study. The macro-level setting of the conceptual framework is influenced by the context at the global, international, national and social levels. Overall, the research problem exists in the wider social context and influences the aims and objectives of study. The four themes will be more fully outlined in the sections below.

2.8.1. Effectiveness

Effectiveness of the global strategy in achieving UHC relies not only on having sufficient numbers of health care workers but also on equitable distribution and the right skills and competencies to meet the demands and needs of the population. Figure 2.6 on the next page highlights the key points in the Global Strategy for Human Resources for Health: Workforce 2030 which will be discussed in detail later in this chapter.

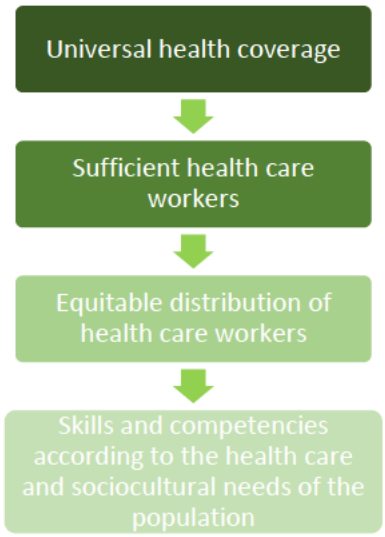

Figure 2.6 Key points in the Global Strategy for Human Resources for Health: Workforce 2030
(Source: World Health Organisation, 2016)

2.8.2 Culture

The WHO's Global Strategy on Human Resources for Health: Workforce 2030 and the National Department of Health's 2030 Human Resources for Health Strategy also speak to the transformative advances of conventional medicine to 'inclusive models of care' focusing on preventative medicine, primary health care, changing clinical practice and increasing qualified employment opportunities for women and youth. In Figure 2.7 below, these advances are indicated in terms of the re-engineering of primary health care and the inclusivity of women and youth.

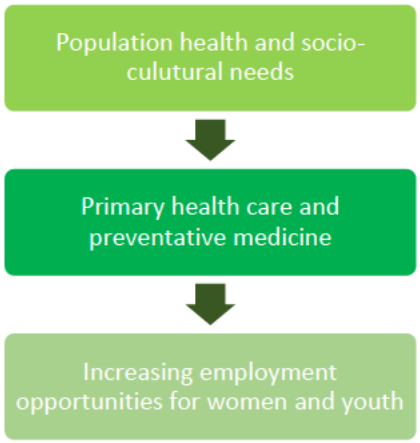

Figure 2.7: Advances of conventional medicine to 'inclusive models of care' *(Source: World Health Organization, 2016)*

2.8.3 Sustainability

Human resources for health policy documents highlight the under-investment in recruitment, training and development and the difficulties in deploying health care workers to rural or under-served areas as the main cause for the shortages of doctors. However, further investigation reveals that the shortage of doctors is not the only issue with human resources for health. Skill-mix imbalances, misdistribution and the mobility of doctors from low-income countries to countries offering better benefits and opportunities are also challenges experienced in the health sector (World Health Organisation, 2016).

2.8.4 Quality

Considering that the policy in human resources calls for health systems to draw on the capacities of the health care workers, the concept of quality, which is mentioned about thirty times in two of the policy documents under consideration in this study, needs to be emphasised. Quality in human resources for health can be achieved through effective recruitment practices, quality training and development programmes, embracing transformative changes and improving retention strategies (World Health Organisation, 2016). It also requires aligning human resources for health with the current and future

needs of the population. Figure 2.8 below illustrates the key aspects identified by the WHO to ensure quality in health.

Figure 2.8: Key aspects to ensure quality in health *(Source: World Health Organisation, 2016)*

The World Health Organisation is the overarching body that prescribes the requirements for human resources for health worldwide, which filters down to South Africa's own strategy to meet these requirements in line with the NDP2030. UKZN and HPCSA are the academic institution and professional body respectively that facilitate the training and registration of medical doctors to complete their training and practice medicine in South Africa.

2.9 Conclusion

The first literature chapter provided an overview of the historical context to the scarcity of medical doctors in South Africa, followed by a consideration of the various factors affecting these shortages. These factors include the shortage of medical schools and the limited intake of students into these schools, the challenges affecting the disparity between the private and public sectors, as well as the fact that many doctors choose to migrate to other countries. Thereafter the differences in the training of doctors between Cuba and South Africa were outlined and the need for the transformation of South Africa's medical education was highlighted. The role of the HPCSA is to monitor and control the scope of practice and the conduct of healthcare workers in order to achieving quality in healthcare. The chapter also explored the policies related to human resources for health in terms of the WHO's Global Strategy on Human Resources for Health: Workforce 2030, South Africa's 2030 Human Resources for Health Strategy and the NDP2030. The latter part of the chapter provided a brief overview of the four main themes that emanated from the review of these policies, namely effectiveness, culture, sustainability

and quality. Chapter Three to follow presents the theoretical foundation of the study and explains the development of the conceptual framework that underpins the research.

Chapter 3

Theoretical Foundation and Conceptual Framework Development

3.1 Introduction

The introduction of concepts and presentation of the conceptual framework is undertaken to introduce the ideas and theories that underpin the research while providing a framework that directs the investigation and the gathering of data later in the study. Drawing from these theories, the concepts for the framework are defined and explained and in later chapters will synthesise with the findings of this study and empirical literature to address the aims and objectives of the research. Concepts are abstract ideas that arise out of perception and experience and are used to label phenomena, events or processes (Varpio, Paradis, Uijtdehaage & Young, 2020). This chapter begins with a consideration of the difference between medical training and medical capacity building and makes the case that despite their differences, both approaches should be incorporated in medical education to endow students with the requisite skills and capacities needed for the provision of effective health care. Thereafter, the three theories underpinning the conceptual framework proposed in this study will be explored in some depth. These are: Lee's Push-Pull Theory of Migration (Lee, 1966); Human Capital Theory (Becker, 1962); and the Resource-Based Theory of Human Resource Management (Barney, 1991). The chapter concludes with a discussion of how the elements of each of these theories were incorporated into the conceptual model developed in the course of the study.

3.2 Medical Training and Medical Capacity Building

Medical training and medical capacity building are the two central components of this study that were investigated in order to determine the crucial elements to be included in the proposed framework and to construct a conceptual model. Medical training goes beyond the scope of medical education, which provides the foundation of quality health care services and extends to specialty training regulated by the national authority or a professional body (Tulchinsky et al., 2023). While the traditional focus of medical training was on treating disease and preventing illness, modern medicine encompasses much more than that (Bârsu, 2017). Every medical student and resident undergoing training should be taught holistic emotive skills like teamwork, empathy and compassion in addition to subject-specific knowledge (Liang, Ooi & Wang, 2020). The foundation of medical training is gaining knowledge and skills in the field of medicine (Singh, Gupta & Singh, 2020). Medical capacity building, on the other hand, can be described as systemic. The WHO defines medical capacity building as integrating the individual, organisation and community in terms of the development of knowledge, skills, commitment, structures, systems, and leadership to enable effective health promotion (DeCorby-Watson et al., 2018).

This study primarily focuses on these two main components: medical training and medical capacity building. Table 3.1 below highlights the distinctions between medical training and medical capacity building and lists some of the ideas related to the main themes underpinning the study. Medical capacity building, according to Bernardini (2015), is a dynamic process that involves changing people's attitudes and behaviours as well as providing them with resources and technology that are more effective. Medical training is a broad concept focusing on the medical education required to prepare and develop the knowledge and skills of a medical practitioner (Squires et al., 2020)

Table 3.1: A comparison of concepts for the conceptual framework *(Source: Compiled by the researcher)*

Medical Training	Medical Capacity Building
Increasing the numbers of doctors	Increasing the skill level of doctors
Quantity	Quality
Effectiveness	Sustainability
Learning culture	Development culture
Train	Attract and retain
Increasing knowledge	Developing skills
Once-off	Ongoing

Table 3.1 illustrates how medical training and capacity building focus on different aspects of developing skills in medical doctors, even though both are essential. Frequently, the emphasis on training overshadows the necessity of capacity building. By encouraging students to make a commitment to return and work in under-served areas after they graduate, the medical education provided in Cuba contributes to the increase in the number of doctors in South Africa, the ultimate aim of which is to address the shortage and sustainability of health care workers in the nation. Medical capacity building aims to increase the level of abilities and skills required for medical doctors in South Africa by placing a strong emphasis on the primary health care approach. However, Motala (2016) argued that there is so much focus to increase the number of doctors trained in the Cuban cohort that medical capacity building is frequently disregarded. This calls into question whether training South African medical students in Cuba is sufficient to meet the country's health care needs in terms of both the quantity and quality of doctors required. Later chapters of this study will show how the South African students' integration into local medical schools once they return from Cuba negates a significant portion of the primary health care skills they learned during their medical training in Cuba.

While the primary goal of South African students studying medicine in Cuba is to address the severe shortage of medical doctors in the health sector, it is impossible to ignore the larger goal of achieving UHC by coordinating the training of doctors needed in rural areas with WHO and NDP2030 health care goals. Training South African medical students in Cuba has proven to have two benefits: it increases the number of doctors and, more importantly, it gives them the knowledge and abilities necessary for the primary health care approach. The partnership established between South Africa and Cuba to train students in primary health care to augment the medical workforce has encountered several challenges, and covered in the work of Bateman (2013), Motala and Van Wyk (2016) and Mqadi (2015).

Despite the unfavourable findings of previous research (Bateman, 2013; Motala, 2014) the Cuban-South African medical collaboration programme should not be discarded as a means by which the medical skills gap can be addressed, particularly in light of the primary health care model adopted by the Department of Health for UHC. The essence of this study is to identify the challenges encountered in the programme in an effort to improve the support offered to and experience of the students who will become key human resource players in the South African health workforce. The framework presented in this chapter introduces and defines the theory used to explain why the research problem exists and informs the conceptual model developed and proposed in the study to address the challenges. Due to the multifaceted nature of the research problem, it was difficult to rely on a single theoretical framework. Instead, three theoretical perspectives were drawn upon, and some aspects of the theories underpinning the research were adapted for the study.

In addition to the theories, four main themes emerged from the review of the literature and relevant documents. These four themes form part of the constructs of the conceptual framework and determine how the research will be explored. These themes, namely quality, sustainability, effectiveness and culture, are of great importance to this study because the medical training and medical capacity building is pointless if not directed to achieving these concepts. The conceptual framework will show how all these components relate to medical training and medical capacity building.

3.3 Defining Factors of the Conceptual Framework

A conceptual framework is a collection of concepts, presumptions, beliefs, and theories that serve as a roadmap for and source of information for research (Van der Waldt, 2020). It differs from a theoretical framework by emphasising relationships between ideas and concepts rather than just theory. It is commonly employed in qualitative research, and draws on a combination of theories to address the phenomenon under investigation (Aspers & Corte, 2019). The conceptual framework informs the methodology and directs the researcher in the formulation of aims and objectives of the study (Adom, Adu-Agyem & Hussein, 2018). It also aligns the researcher's goals, expectations and ideas from the

start and throughout the process of the research (Miles, Huberman & Saldana, 2014). Three theories were investigated as the basis for the conceptual framework used in this study: Lee's (1966) Push-Pull Theory of Migration, Becker's (1993) Human Capital Theory, and Barney's (1991) Resource-Based Theory.

When developing the conceptual framework, it was important to consider the researcher's perspective, a review of the literature, the relevant supporting theories, and the concepts pertinent to the study. In this particular case, the core concept of medical training transforms medical culture in South Africa, producing a new emerging culture of health and opportunity for the development of medical capacity building. This is connected to a shift away from the traditional curative model of medicine toward a primary health care strategy that supports UHC. Building medical capacity in South Africa is largely dependent on a variety of factors, including training and education, the standard of work, and the sustainability of important skills and professions to boost human resource capacity (Cometto, Buchan & Dussault, 2020).

Although the focus of the study is on the development of human resources skills and training, the researcher's background in psychology has a significant impact on how the study is set up. The South African students' training in Cuba not only seeks to address the medical doctor shortage but also to broaden their perspectives on health care by exposing them to a different culture of health. The psychological issues the Cuban cohort encounters account for a sizeable portion of the micro-level challenges they face.

Figure 3.1 on the following page illustrates the three levels of the research that will be investigated and how these relate to the transition from a colonial medical paradigm to a new culture of health that is inclusive and available to the vast majority of people who require it. In the diagram, the process starts off with South African medical students having an existing mindset on the medical culture when entering the training cohort, one which involves two separate health care systems providing different degrees of quality of care along a curative medical model. On the other hand, the new culture of medicine in Cuba focuses on disease prevention, community involvement and health promotion. These are the principles that should be incorporated into the instruction provided to South African medical students in the medical curriculum.

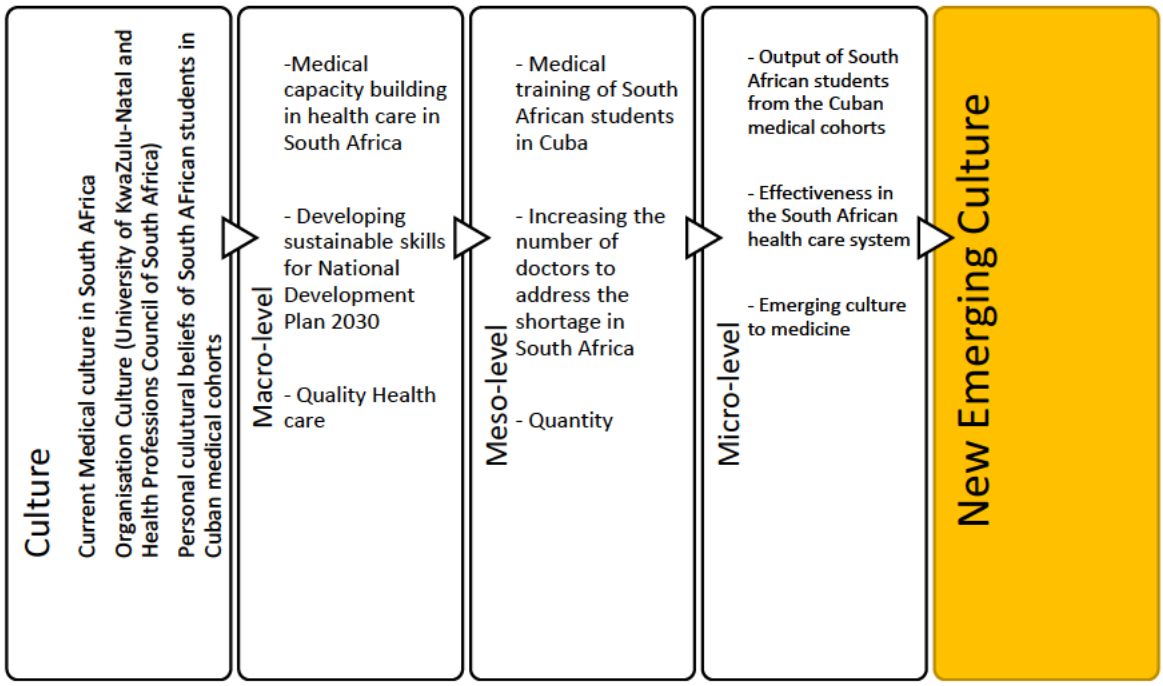

Figure 3.1: Concepts and themes in the construction of the conceptual framework *(Source: Compiled by the researcher)*

3.4 Theories Underpinning the Conceptual Framework

The theory in a conceptual framework offers a methodological and philosophical context for data collection and analysis, and has been described as a lens through which a problem is viewed (Ozuem, Willis & Howell, 2022). Although the phenomena of a research problem can be explained, predicted, and understood using existing theories, it was challenging to place this particular study in one specific human resource theory. As mentioned above, the conceptual framework was developed using a variety of theories because of the study's multi-dimensional focus. In this next section, the Human Capital Theory (Becker, 1962), the Push-Pull Theory of Migration (Lee, 1966), and the Resource-Based Theory of Human Resource Management (Barney, 1991) are discussed. Elements from each of these theories have been used to build the conceptual framework developed in this study.

3.4.1 Theory of Migration

Human beings have engaged in migration over many centuries, with international mobility gaining popularity post World War II (Brettell & Holifield, 2022). It is the nature of humans to migrate, and people have a proclivity to seek out better education, opportunities for work, and living conditions. Early studies in the field of migration include the Lee's work on the Push-Pull Migration Theory, published in 1966, Mabogunje's migratory system theory from 1970, Zelinsky's theory of mobility

transitions from 1971, Skeldon's 1990 migratory transition research, Harris and Todaro's 1970 neoclassical migration theory, Piore's 1979 dual labor-market theory (de Haas, 2021).

With globalisation, increasingly diverse cultures and greater desire to improve and progress, migration has become even more evident across professions. Hence, the reasons for considering Lee's Push-Pull Theory of Migration (Lee, 1966) for this study were twofold. Firstly, migration theory is a factor impacting the current shortage of medical doctors in South Africa and secondly, migration theory can prove to be part of the solution in the retention of doctors, which is central to the concept of sustainability in this study. According to push-pull theory, migration is a result of the pull and push forces produced by a growing global economy (Lee, 1966). While the migration of medical professionals is a contributing factor to the shortage of doctors in the country, careful consideration of all possible motivating factors of migration is essential in the retention of doctors from the Cuban cohort. This contributes to the long-term viability of South Africa's health care workforce. This will be expanded on later in this chapter.

3.4.1.1. Understanding Lee's Push-Pull Theory of Migration (Lee, 1966)

The push factors of Everett Lee's Push-Pull Theory of Migration (Lee, 1966) relates to the factors influencing people to move out from their current location. The four main factors that influence the decision to migrate is based on the area of origin (push), the area of destination (pull), intervening obstacles and personal factors (Segal, 2019). It promotes the theory that push and pull factors can encourage migration out of an old area and into a new one while intervening barriers can prevent migration to specific areas (Kanayo, Anjofui & Stiegler, 2019). The push factors can range from political climate, job security and poverty, to the lack of professional opportunities for growth and development and many more (Mlambo & Adetiba, 2019). The pull factors, on the other hand, are the factors that influence people to move to a new location. These reasons usually mirror that of the push factors and may include career opportunities, better paying jobs and stability (Segal, 2019). The determining elements of migration include the political, economic and social aspects influencing the decision of people to leave their place of origin for another destination (Mlambo, 2019).

There are positive and negative elements that impact people's decision to migrate and the determining factors are based on intervening obstacles and personal reasons. While Lee's theory of migration has been criticised for being excessively individualistic and limited to migration's causes (de Haas, 2021), these intervening obstacles and personal factors are fundamental in the development of the conceptual framework in this study. Lee's migration theory indicates the human element of migration that drives people's decisions to move. The model illustrated in Figure 3.2 on the following page illustrates the positive and negative factors in the intervening obstacles that urge people to move from their country

of origin to another destination. These are shown as plus and minus symbols in the origin and destination circles. Lee describes the relationship between the migration procedure where the 'plus' denotes elements that support the migration process while the 'minus' factors hamper the migration and 'zero' refers to situations in which the migrant is unconcerned (Kanayo et al., 2019).

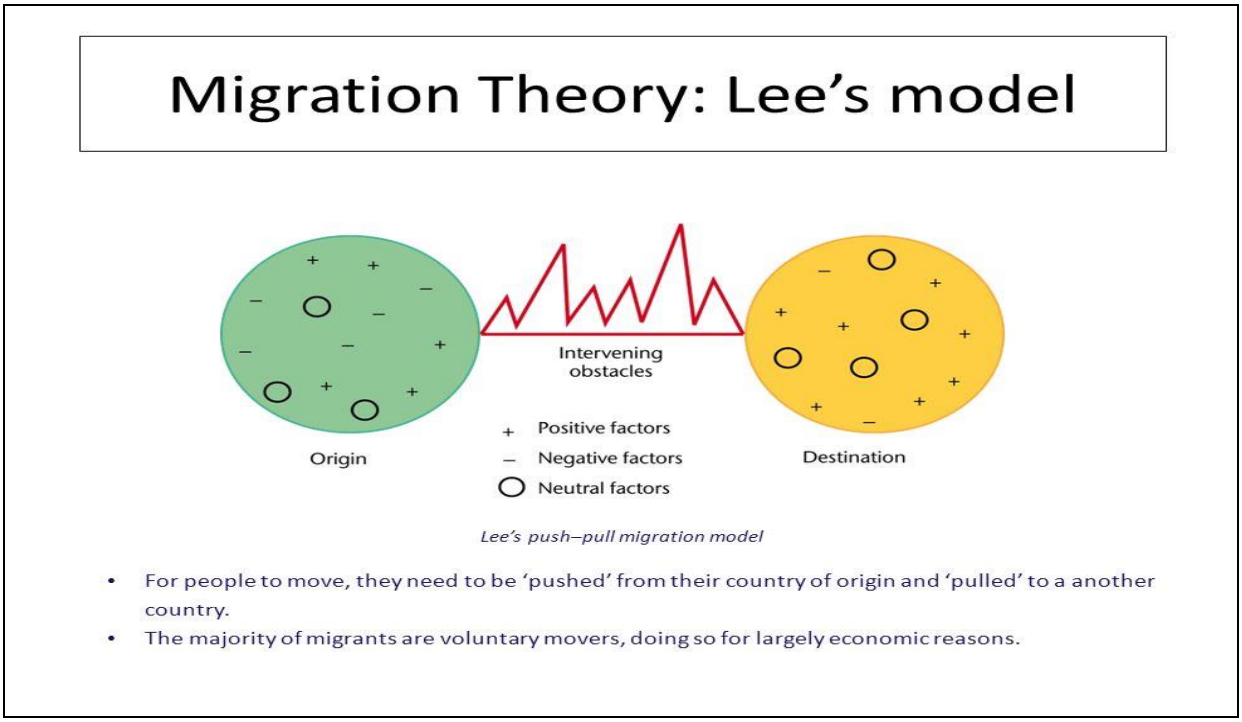

Figure 3.2: Lee's push-pull model *(Source: Krishnakumar & Indumathi, 2014, p.11).*

3.4.1.2 Adapting elements of Lee's Push-Pull Theory of Migration to the study

Migration is a global phenomenon that has affected nations for a variety of reasons. In South Africa, key knowledge, skills and abilities were lost both in the Apartheid era and during the country's transition to democracy. De Haas (2021) believes that migration should not be separated from the larger process of social change. South Africa, like many other African countries, experienced migration because of the political, economic and social climate (Kanayo et al., 2019). Conceptualising the intervening obstacles and the personal factors from Lee's migration theory (1966) will form part of the framework put forth in this study. The personal push factors related to the migration of doctors from South Africa to other countries include poor working conditions, under-staffing, lack of resources and technology, limited career development opportunities, as well as financial reasons, and fall into the personal factor and intervening obstacle category (Kanayo et al., 2019).

While studying medicine has been considered a prestigious profession, the working conditions of medical doctors in South Africa, especially in the rural and public sector, leaves a lot to be desired. For doctors who are based in urban areas, seemingly uncomplicated issues like traveling to rural health facilities and district hospitals become significant barriers. One method of resolving this issue was the government's decision of choosing medical candidates who resided in rural areas. The South African government's strategy was a step toward preventing future migration of medical professionals. Literature suggests that more needs to be done on a global scale to develop the capacity for training health care professionals, boost local recruitment and retention, and limit the movement of health care professionals across borders (Bludau, 2021). The Human Capital Theory (Becker, 1962), which builds on this notion, emphasises the importance of investing in employees' key skills and abilities to advance the economy and society at large. A fuller discussion of Human Capital Theory will be continued below.

3.4.2 Human Capital Theory (Becker, 1962)

Human capital is a word used in human resource management practice to define the abilities and traits that an employee offers to an organisation's service or output (World Bank, 2019). It refers to an employee's intangible economic worth in the workplace (Gerhart & Feng, 2021). Human capital theory (Becker, 1962) is rooted in labour economics and it is widely used in human resource development (HRD) because of its association with training and education. It is the belief of the Human Capital Project of the World Bank that investing in people is the key to eradicating poverty and creating more inclusive societies (World Bank, 2019). Developing countries may benefit from the tenets of this theory if policy makers recognise that investing in education and training increases quality and effectiveness and helps to meet the skill demands of the economy (Mohamed, Ari, Al-Sada & Koc, 2021).

Human capital theory is defined as the human factor in organisations and their collective knowledge, abilities, and experience that give an organisation its unique personality (Ekemam & Okpara, 2020). The theory of human capital recognises that the skills, knowledge and competencies of people (Figure 3.3) are a valuable resource that will increase the productivity of an organisation and improve its economic value (Winterton & Cafferkey, 2019). A growing investment in education and training benefits the employer, employees and the organisation, claim proponents of Human Capital Theory (Dachner, Ellingson, Noe & Saxton, 2021). Although understanding the economic perspective of Human Capital Theory requires an understanding of Becker's (1962) vision to calculate the rate of return on education, the performance of individuals should not be discounted.

Figure 3.3: Components of human capital *(Source: Market Business News, 2023, no page)*

The foundation of Human Capital Theory is financial investment in formal education, the creation of motivating environments, and the growth of human capital (Ekemam & Okpara, 2020). When properly motivated, an organisation's human resources can ensure its long-term survival because they are able to learn, adapt, innovate, and provide the creative drive (Karman, 2019). However, because human capital is owned by an individual, this has the drawback of making it possible for an employee to quit at any time and take their skills, knowledge and expertise with them (Dachner et al., 2021).

The Human Capital Theory has been criticised for its linear approach, which is based on the neoclassical school of economic thought (Şerifoğlu, 2020). It is also the assumption of human capital theorists that only an educated population is a productive population (Chankseliani & McCowan, 2021). These shortcomings of the theory, however, do not outweigh its benefits in terms of allocating significant educational resources to develop the relevant skills to increase labour quality and effectiveness (Xu & Fletcher, 2017). Figure 3.4 on the next page illustrates that the importance of the human capital element in creating the conceptual framework proposed in this study is to recognise and retain the human capital of the recently returned or newly qualified doctors from the Cuban medical cohort.

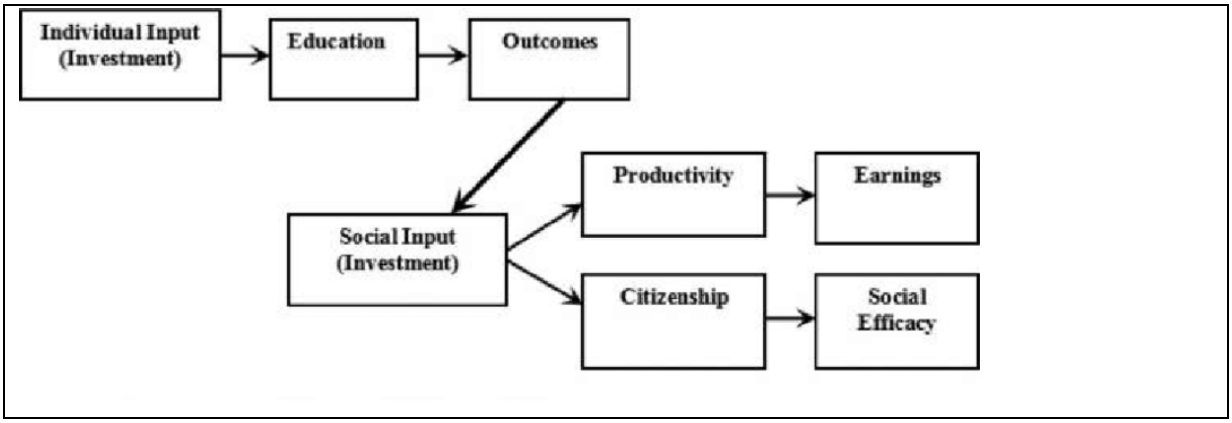

Figure 3.4: Human capital theory *(Source: Swanson & Holton, 2011, p. 110)*

In adapting Human Capital Theory, the elements of skills and abilities acquired through education and training emanate from the students enrolled in the Cuban medical cohort. This translates to the individual input in Swanson and Holton's (2011) model represented in Figure 3.4 above. Social input is the South African government's collaboration with Cuba to train an overflow of South African medical students. Human Capital Theory acknowledges the social, cultural and intellectual benefits of education and training and Chankseliani and McCowan (2021) highlight that this further profits social efficacy by reducing unemployment and poverty. The elements shown in Figure 3.5 below are adapted from Becker's (1962) Human Capital Theory and have been incorporated into the conceptual framework of the study.

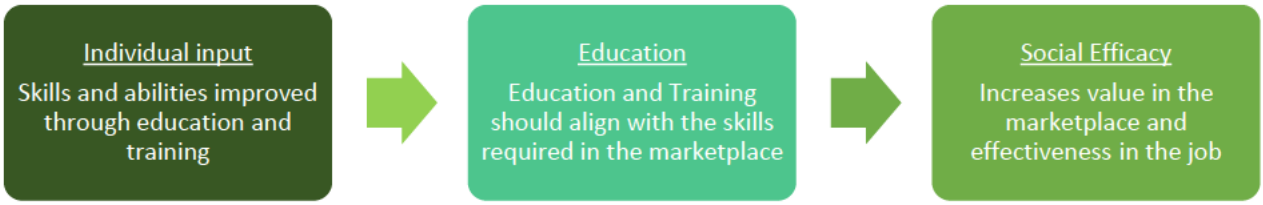

Figure 3.5: Adaptation of human capital theory (Becker, 1962) - model for the conceptual framework *(Source: Compiled by the researcher)*

3.4.3 Resource-based theory (Barney, 1991)

Traditionally, the focus of human resources was rooted in the individual but Barney's (1991) work on sustaining a competitive advantage in the workplace was keystone to the development of the resource-based view (Gerhart & Feng, 2021). The Resource-Based Theory was initiated by Penrose (1959) but later developed by Barney (1991) and speaks to how an organisation utilises the capabilities and competences of its resources (physical, human and organisational).

The Resource-Based Theory (Barney, 1991) is a well-known theory in the field of strategic management, with a strong emphasis on organisations achieving a competitive advantage through the use of assets, capabilities, organisational processes and information and knowledge (Gerhart & Feng, 2021). The success of an organisation is determined through its resources and capabilities and these resources are defined by its value, rarity, imitability and organisation (VRIO) framework, as outlined more fully in Table 3.2 on the following page. This is beyond a strengths, weaknesses, opportunities and threats (SWOT) analysis and focuses on protecting resources that give organisations a competitive advantage. An example of this is Google's application of the VRIO framework in recruiting and

retaining employees based on valuable skills, systems difficult to imitate, databases that no other company possesses (rarity) and organisation in terms of their ability to manage data to hire, promote and improve overall performance of employees and their organisation (Zahra, 2021).

Table 3.2: VRIO framework *(Source: Barney, 1991)*

Value	Are you able to exploit an opportunity or neutralise competition with an internal capability? (Barney, 1991)
Rarity	Do you control scarce resources or capabilities? Do you own something that is hard to find yet in demand? (Barney, 1991)?
Imitability	Is it difficult to find an equivalent substitute to compete with your offerings? (Barney, 1991)?
Organisation	Does your company have organised management systems, processes, structures, and culture to capitalise on resources and capabilities (Barney, 1991)?

By applying the VRIO framework to this study, the four characteristics of a resource that increase an organisation's efficiency and effectiveness highlight how valuable, uncommon, expensive to duplicate, and well-organised a resource is. When it comes to the Cuban cohort, using the abilities developed there to bring about change and transformation is extremely valuable for enhancing health care in South Africa. Improved efficiency and effectiveness in health care is imperative to the well-being of society (World Health Organisation, 2021). In terms of the VRIO framework, the value, rarity of skills and imitability of the doctors produced through the Cuban cohort offer a tailor-made solution to the shortage of doctors in the rural areas. The competencies of preventative medicine adopt a holistic approach to health care and focus, not only on the patient, but also the family, community and the environment. The diagram in Figure 3.6 on the next page shows a traditional depiction of Barney's (1991) resource-based model.

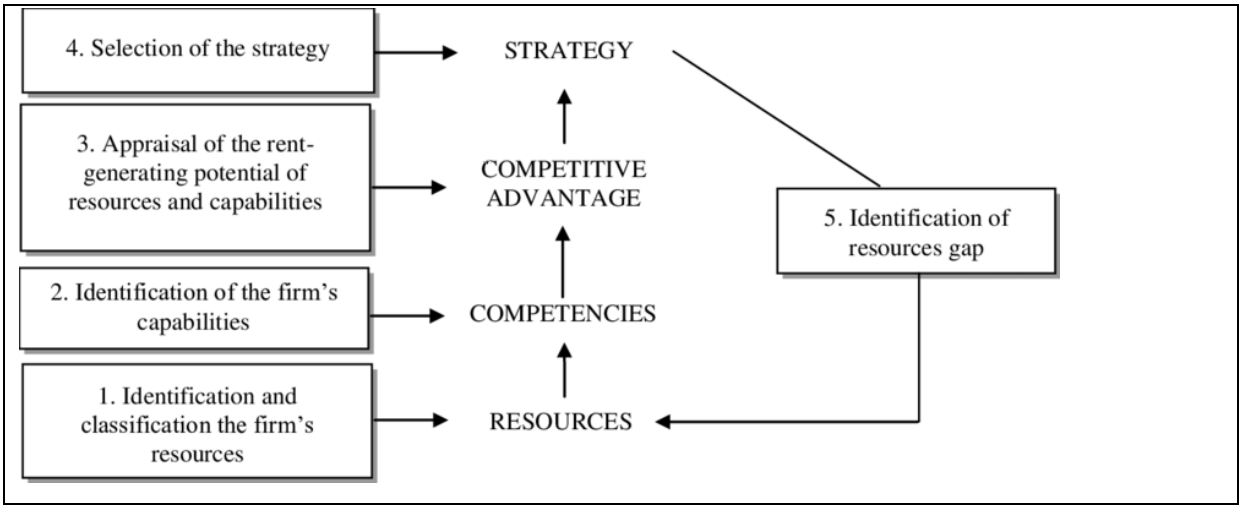

Figure 3.6: Resource-based model *(Source: Adapted from Figurska, 2011, p. 29)*

For the construction of the conceptual framework in this study, the resources and competencies aspect of the resource-based model will be adapted to indicate the impact of these elements to the concept of sustainability. This will give insight into human resources planning by focusing on existing resources and relevant skills and competencies to address shortfalls in human resources for health. Messineo (2023) says that the VRIO framework is about protecting the resources and capabilities that give an organisation a long-term competitive advantage. However, few organisations invest the time necessary to examine their core competencies and determine what makes them distinct.

The resource for this study is the South African medical students who are carefully chosen from regions where there is a severe lack of medical professionals and health care facilities. The primary health care medical model is the foundation for the medical education offered in Cuba, which contributes to the new paradigm of preventative medicine and ensuring equitable access to health care for all. In this way, by addressing this very specific health care need, the knowledge acquired through the Cuban-South African medical collaboration helps to create the conditions for a change in the culture of health. The VRIO framework, which primarily focuses on how a company can be competitive, was modified for the study by using each of these components, as shown in Figure 3.7 on the following page.

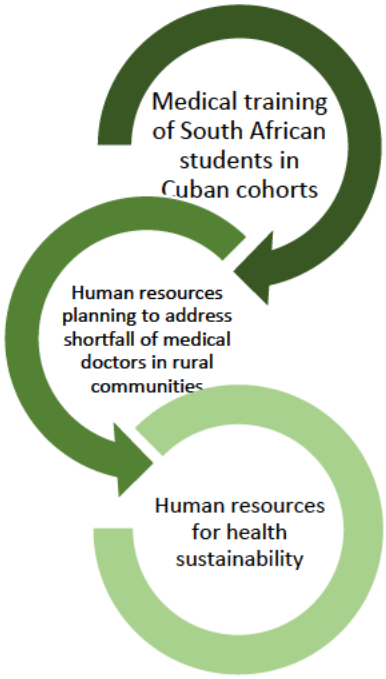

Figure 3.7: Concepts adapted from Barney's (1991) resource-based theory *(Source: Compiled by the researcher)*

3.5 Developing the Conceptual Framework of the Study

The three theories considered above in isolation from each other are insufficient in apprising this multidisciplinary inquiry. The conceptual framework adopted in a study, according to Leedy and Ormrod (2023), helps in the unification of concepts and the explanation of how they relate to one another. All researchers conducting qualitative research should connect the theories and literature that justify the need for their study. In addition to revealing the relationship of the concepts, the conceptual framework is effective in shaping the research approach, determining the study's parameters and clearly communicating the relevance of the intended study, by means of an appropriate framework (Luft, Jeong, Idsardi & Gardner, 2022). Research on the Cuban-South African medical collaboration has typically focused on a single area of study, but this research looks at the recruitment, training, development, and retention processes in relation to the needs of South Africa's human resources for health. This framework to be proposed based on the findings of this study will integrate theory and concepts to create a model for the efficient hiring, training, and retention of qualified medical doctors and ultimately help in the transformation in the culture of health. This is done in the interest of furthering the discipline of human resource management for health.

Drawing from the three existing theories namely Lee's Push Pull Theory of Migration (Lee, 1966), Human Capital Theory (Becker, 1962) and Resource Based Theory (Barney, 1991), a conceptual

framework was developed by adopting aspects from each theory and adapting the concepts to the study. This is critical for situating the study within the context of previous research and existing theory to highlight the significance of the findings. All of the theories discussed thus far are concerned with how human resources' skills and capabilities adapt to changing needs of the population of a country. In the case of this study, these theories were applied to the health care situation in South Africa by combining literature with the findings to develop a framework to understand how to overcome the shortage of doctors.

The framework of the study utilises the Push-Pull Theory of Migration, focusing on the factors influencing medical professionals to leave South Africa. Even though Lee's Push-Pull Theory of Migration is often described as oversimplified and unrealistic, it is important to note the cultural, economic and environmental factors that impact the decision of skilled labour to leave or stay in a country (de Haas, 2021). The Resource-Based Theory speaks about discerning the needs of an organisation using existing resources to develop and create competencies and capabilities (Gibson, Gibson & Webster, 2021). This is the value element from the VRIO framework. The Human Capital Theory focuses on the economic value of people's knowledge, skills and competencies (Becker, 1962). The theory recognises that investment into education and training will improve quality and productivity. The concept of the Cuban trained doctors as an exclusive resource to South African health care is valuable to health-related objectives of the NDP2030. The skills and knowledge that these doctors possess are different to those produced through the MBCHB degree and local universities. The Human Capital Theory has been adapted for the conceptual framework of this study to illustrate that the training in Cuba provides a valuable resource in the extension of the preventative medicine and primary health care model, creating a new culture of medical practitioners.

The agreement between the National Department of Health and the students enrolled in the Cuban cohorts guarantees that these students serve in the rural communities when they qualify. This minimises the intentions of the qualified students to migrate to other countries or leave their districts. Ideally, the Cuban cohort should sufficiently supplement the shortfall of doctors in the country. However, the challenges facing the programme impede the success of the Cuban cohort to increase the number and skills of doctors in South Africa. The purpose of this study is to identify these challenges and develop a framework to strengthen the training provided in Cuba to build medical capacity and assist in the retention of qualified doctors from the cohort. Elements have been adapted from each of the three existing theories to develop a comprehensive model. The intervening and personal factors that lead to the migration of professionals affects the skills shortages that the country is facing. This forms the source of the problem that has seen the need for the proposed solution by the South African government to recruit students from rural areas to train them in Cuba on agreement that they return to their communities once they qualify.

This solution can be interpreted by the resource-based model as a means of employing available resources in an area most impacted by the shortage of skilled professional human capital. The notion of rural recruitment is emphasised in a different light as opposed to the traditional recruitment of rural residents to work in the urban labour markets or vice versa. This approach to recruiting from 'within' the community with the expectation that the qualified doctors return to work in these areas is an angle that needs to be explored further. The knowledge, skills and competencies that the Cuban trained doctors bring are in line with the health-related objectives of the NDP2030 and NHI to promote preventative medicine and accentuate the primary health care model. This creates a new culture of South African doctors that emanate from the Cuban medical training programme with a new approach to serving the health care needs of the population. An overview of the concepts surrounding the medical doctor shortage, training of medical doctors in Cuba, and how the theories guide the research and emphasise the major themes is presented in Figure 3.8 below.

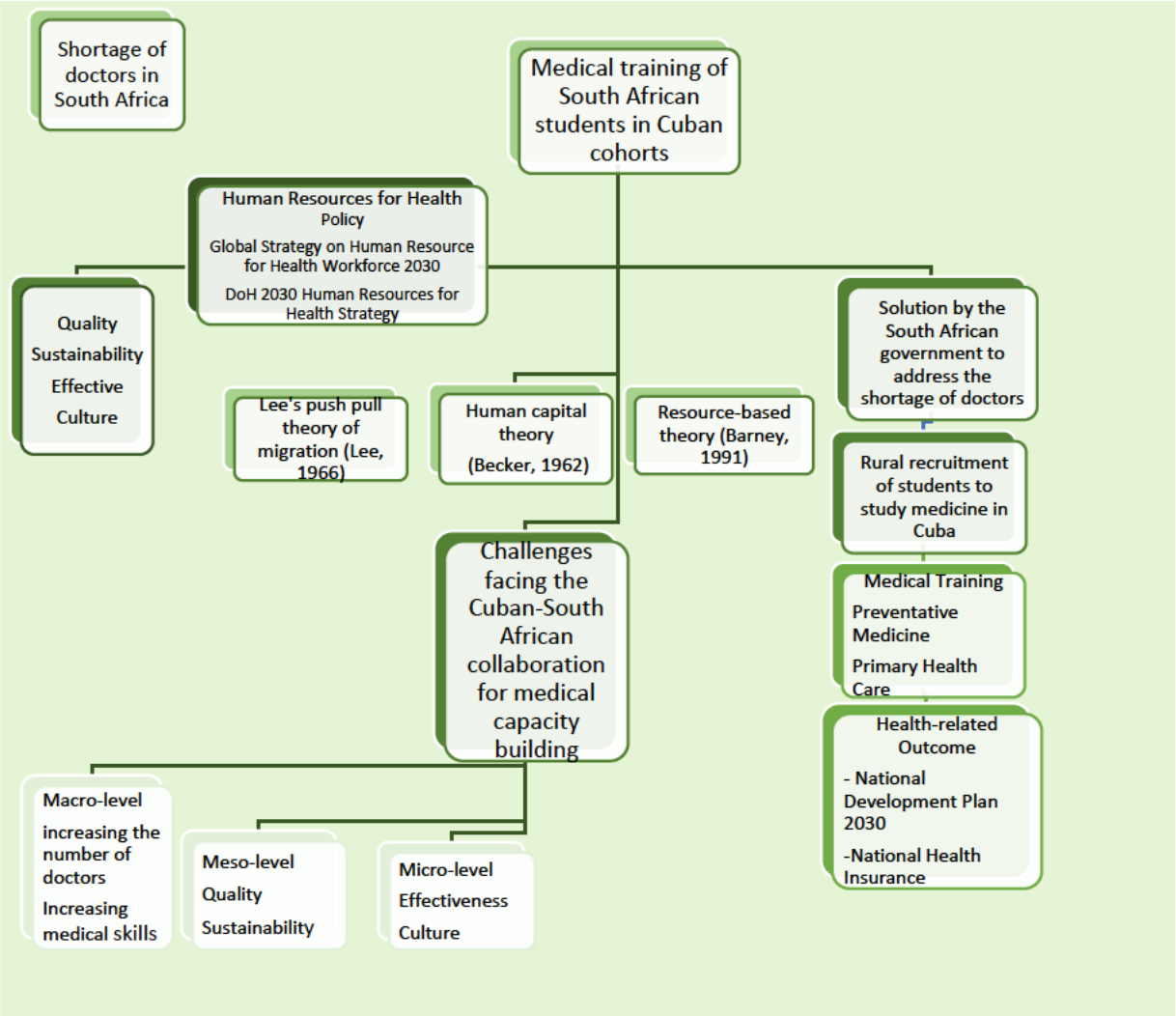

Figure 3.8: Final developed conceptual framework *(Source: Compiled by the researcher)*

3.6 Conclusion

Building medical capacity is a crucial component of achieving positive health outcomes because it increases the effectiveness and efficiency of the health system, making a policy or strategy more likely to be maintained and incorporated into existing national, and district levels of health structures (Bernadini, 2015). Chapter Three concentrated on a comprehensive overview of how concepts from three theories, Lee's (1966) Push-Pull Theory of Migration, Becker's (1993) Human Capital Theory, and Barney's (1991) Resource-Based Theory, have been adapted to inform the conceptual model developed for and underpinning this study. This study plays a dominant role in suggesting a conceptual model that will address the challenges facing the Cuban-South African medical collaboration in KwaZulu-Natal. The programme is geared towards building the health workforce in South Africa and supporting the vision of the NDP2030. With the evolving strains of viruses and disease and the global shortage of health care professionals, the effort by the South African Government to help increase the quantity and quality of future doctors should not be in vain. Therefore, there is a need for a model to strengthen and support the current programme in order to enhance output of doctors with the relevant capacity and skills required and to build an efficient, sustainable South African human resources for health. Chapter Four to follow is a continuation of the literature review presented in Chapter Two, and provides a more in-depth perspective on the history of and current situation faced in medical education in South Africa, and the need to draw on the skills of Cuban-trained doctors to improve health care provision for all in the country.

Chapter 4

Medical Capacity Building - Medical Education, Medical Training and Medical Internationalism

4.1 Introduction

This chapter focuses on the role of the Cuban-South African medical collaboration in the development of medical capacity in KwaZulu-Natal. The history of medical education in South Africa provides a foundation for understanding the current scenario of doctor shortages and the mismatch between rural and urban health care facilities. This is important in order to provide context to understanding the relevance of the Cuban-South African medical collaboration in achieving the desired health related outcomes for UHC. As this chapter will demonstrate, building medical capacity depends on more than having public policy in place. It is clear that South Africa is not doing enough to drive system transformation and the development of adequate medical capacity, and while the COVID-19 outbreak in 2019 hampered progress toward Vision 2030 goals, the focus of this study is primarily on pre-pandemic challenges.

The phrase 'capacity building' has gained popularity in the field of health promotion over the years and even though it is widely used, different people and organisations often have different meanings for the term. A capacity is the ability that exists at present and is different to a capability or competence (Darby & Dickerson, 2017). In order for capacity building to be effective, there needs to be an increase in knowledge, skills and self-efficacy, support in terms of changes in practice and policy, as well as application at a system-level (DeCorby-Watson *et al*., 2018). Early research studying increasing medical capacity for health promotion in South Africa through international partnership focusing on health education and training programmes was conducted by Van Den Broucke et al. (2010). In recent years, the emphasis on health promotion has shifted to empowering people to take greater responsibility over their health, which includes social and environmental interventions (World Health Organisation, 2023).

As stated in Chapter One, the WHO's definition serves as the foundation for the concept of capacity building in this study. This definition specifies three degrees of medical capacity development for effective health promotion: the advancement of knowledge and skills among practitioners; the expansion of support and infrastructure for health promotion in organisations; and the development of cohesiveness and partnerships for health in communities (DeCorby-Watson *et al*., 2018, p. 2). Other academic literature on capacity building has identified additional elements for health promotion, such as increased quality, sustainability, building health structures, and strengthening competence, as well as empowering individuals, communities and organisations to take ownership of the health outcomes

in their environments (Sauter, Lindacher, Rueter, Curbach & Loss, 2020). This is accomplished by building healthy public policies, creating supportive environments, and strengthening community action and personal skills (World Health Organisation, 2023). Figure 4.1 below taken from VicHealth (2012) summarises the desired outcomes of capacity building initiatives for health.

The outcomes of capacity building may relate to:	
Individual	participation levels, skills (leadership, problem-solving, negotiation), knowledge, values, empowerment, increased engagement with (or connection to) the community, and desired behaviour changes (VicHealth, 2012)
Community	changes in membership, technical abilities, and interpersonal skills (confidence, communication) of individuals, collective knowledge, planning and evaluation skills, and resource management (financial or non-financial) (VicHealth, 2012)
Organisational	changes in decision-making, organisational policies, resource allocation, partnerships, collective attitudes and values (VicHealth, 2012)
Systemic	changes in inter-organisational planning and/or collaboration, new legislation, resource allocation, values, cultural norms, societal values (VicHealth, 2012)

Figure 4.1: Outcomes of capacity building initiatives *(Source: Adapted from VicHealth, 2012)*

The Victorian Health Promotion Foundation based in Australia indicated that capacity building initiatives start with existing capacities at individual level (VicHealth, 2012). In the preceding chapter, Barney's (1991) thoughts on the importance of individual employee's skills and capacities in his resource-based approach were discussed. A later study by Gibson et al. (2021) emphasised that the community is valuable not just from an economic point of view but also as a resource to build competitive advantage in organisations. While there is much discussion on the transformation of health structures in order to achieve UHC, there is little guidance on how to implement the changes at the ground level. Michel et al. (2020) contend that the current health care system as it stands is impeding the attainment of UHC. This study will connect the essential components of the Cuban-South African medical collaboration in terms of programme and policy in order to create a transformation in health culture, and this will begin with a consideration of human resources for health.

4.2 Human Resources for Health in South Africa

The WHO recognises that the challenges facing human resources for health is a global concern (Academy of Science of South Africa, 2018). The shortage of health care workers in South Africa is a growing concern and affects the country at various levels. As mentioned earlier, the health system in

South Africa deals with a quadruple burden of disease, including maternal, newborn and child health, non-communicable diseases, trauma brought on by injury and violence, and infectious diseases like HIV/AIDS and tuberculosis (Boden et al., 2023). Apart from all other deadly diseases and potential viruses, HIV, malaria and tuberculosis claim the lives of thousands of people in most low and middle-income countries around the world. The burden of disease in itself is a challenge for South Africa (de Villiers, 2021). The dilemma of a quadruple burden of disease in South Africa, coupled with the dearth of medical practitioners, has greatly increased the demand for medical doctors and health care workers (Waggie & Arends, 2021).

Government has a social responsibility to improve health outcomes and to ensure the well-being of the people in the country. Part of achieving this is increasing the number of health care workers, which is a key component to achieving the SDGs for UHC. Sustainable Development Goal Three of the WHO is the provision and distribution of health workers according to the needs of the population (Szabo et al., 2020). In South Africa, high levels of poverty and inequality in health systems have placed an additional strain on the public health care system, which is already understaffed and under-resourced (de Villiers, 2021). Investment into human resources for health is therefore vital to achieving Sustainable Development Goal Three and increasing economic growth in the country (Squires et al., 2020). According to de Villiers (2021), there is a chronic scarcity of medical professionals in South Africa, with 70% preferring to work in the private sector and only 30% preferring to work in the public, remote and rural sectors. Therefore, investment in medical capacity building is critical to changes aimed at improving the country's health. Human resource capacity building as a concept is widely acknowledged to be strongly tied to education, training and HRD (Yamoah, 2014).

4.3 Medical Education in South Africa

Quality health care starts with quality medical education and training. Clinical education is an important part of medical training and practice. The main focus of clinical education is how doctors engage with and treat patients. It is the practical application of theoretical knowledge (Sharifi et al., 2022). The internship period is intended to ensure that doctors successfully transition from more theoretical knowledge and skills acquired during their tertiary education to the practical experience required to function as safe and competent medical practitioners during their community service (Boden et al., 2023). Tun (2019) adds that medical education should aspire to provide sustainable health care because high-quality health care now will only help the future output of medical personnel.

4.3.1 The history of medical education in South Africa

A divided education system that resulted from Apartheid laws, limited access to quality training and resources and poor results in mathematics and science have created a national crisis for Black learners

starting and completing tertiary education (Rasool & Botha, 2011). The impact of the lack of training and education in the sciences has left a void in the labour market that has yet to be filled. Medical universities controlled the access to students of colour enrolling into the health sciences programmes. Today the challenges in medical education are directly related to the social inequities of the past (Academy of Science of South Africa, 2018). Radical reform in the nineties, had a major impact on health care and medical education in South Africa (Burch, 2007). According to de Villiers (2021), the South African government implemented projects and initiatives to reduce poverty and inequality. One such initiative was increasing the number of Black medical students enrolling at historically White universities (Burch, 2007). This was implemented through Black Economic Empowerment initiatives with the purpose of improving the retention and graduation rates of Black students to complete their degrees and qualify as medical doctors (de Villiers, 2021). Adonis and Silinda (2021) call it the 'reshaping of unjust discriminatory practice'.

4.3.2 The future of medical education in South Africa

Medical education in South Africa is centred on problem-based learning. Wood (2003) describes problem-based learning as a means of understanding and acquiring knowledge about a problem which does not necessarily involve solving the problem. A shift towards primary health care is essential in achieving the SDGs set out by the WHO (Squires et al., 2020). Sharifi et al. (2022) illustrate how there is a clear relationship between the appropriateness and quality of medical education and the performance of qualified doctors. In a study conducted by Trullàs, Blay, Sarri and Pujol (2022), problem-based learning was found to be more effective than traditional techniques (which primarily rely on lectures) at improving social and communication skills, problem-solving abilities, and self-learning abilities. This proves that the right set of skills and competencies are required to achieve the goal of working according to the needs of populations. Social accountability, or the expectation of medical graduates to satisfy the health needs of the communities they serve, is a critical skill set for doctors in rural areas (Clithero-Eridon et al., 2020). According to previous research, a key issue with health care professional training and medical education as it stands is a mismatch of competencies of doctors' skills to patients' and populations' requirements (Academy of Science of South Africa, 2018). The following section of this chapter covers the topic of medical training in Cuba, with a focus on the socioeconomic position of the majority of people who live in remote, rural areas and who use public health facilities.

4.3.3 Medical training - Why Cuba?

The global approach to health care is changing and involves a shift from traditional professionalism to greater interaction between patients and communities (Academy of Science of South Africa, 2018). With this shift comes changes in the training and medical education of future health care professionals.

The primary health care model offered by the Cuban medical training has the potential to enhance the approach of health education and training in South African rural communities. The value of this model is that it allows patients to be treated holistically and to take early measures to prevent illness, rather than just curing them. Grooming the future health care professional with this mind set aligns with the SDGs and UHC objectives proposed by the WHO. The medical education provided in Cuba offers medical students a unique skill set, ranging from care giver, decision maker, communicator, manager, community leader and teacher (Sui et al., 2019). An analysis of Cuba's health care system will demonstrate the efficiency of preventative measures in this regard.

4.4 The Structure of the Cuban Health Care System

Cuban health care is a socialist system of health care that is managed by the government with the goal of providing primary care that is accessible, affordable and based in the community. The emphasis on disease prevention helps reduce the need for 'costly cures' (O'Hanlon & Harvey, 2017). On a list of the world's healthiest nations, Cuba was ranked 30th, and the Save the Children Foundation deemed Cuban health care to be the best in the world, outranking even the United States of America (Lage, 2019). Lage (2019) argues that Cuban socialism has placed public health as a priority and government funding and policy has supported all health care programmes. As a result, the Cuban public health system's fundamental pillars are centred on a strong primary care strategy, effective human resource training, increased illness prevention and improved health promotion (Lage, 2019).

Mortality and life expectancy indicators in Cuba are universally acknowledged as measures of the effectiveness and impact of health interventions (Lage, 2019). Primary health care in Cuba is provided by 449 multi-specialty community polyclinics, with doctor-nurse teams in charge of providing preventative care, health promotion, patient care and rehabilitation to up to 1200 people (300 families) within their geographic catchment area (Aguilar-Guerra & Reed, 2022). Primary health care, which was the universal subsystem at work in communities across the nation, was destined to become the health system's front-line barrier and first line of assault against the novel coronavirus (Aguilar-Guerra & Reed, 2022). The customised CARE model and the community health assessment are two crucial components of primary health care in Cuba. The first employs a medical education that combines clinical medicine and public health by having family doctors and then the polyclinic annually analysing a neighbourhood's general health, taking into account social concerns and environmental factors (Aguilar-Guerra & Reed, 2022). The many degrees of interventions make it possible for curative treatment to be the final resort. This is illustrated in the diagram shown in Figure 4.2 below. In addition to these degrees of medical care, there are also third-level hospitals that handle severe illnesses and extreme medical situations. Only 5% of medical cases are referred to these hospitals, which have a curative focus and are run on a national scale (O'Hanlon & Harvey, 2017).

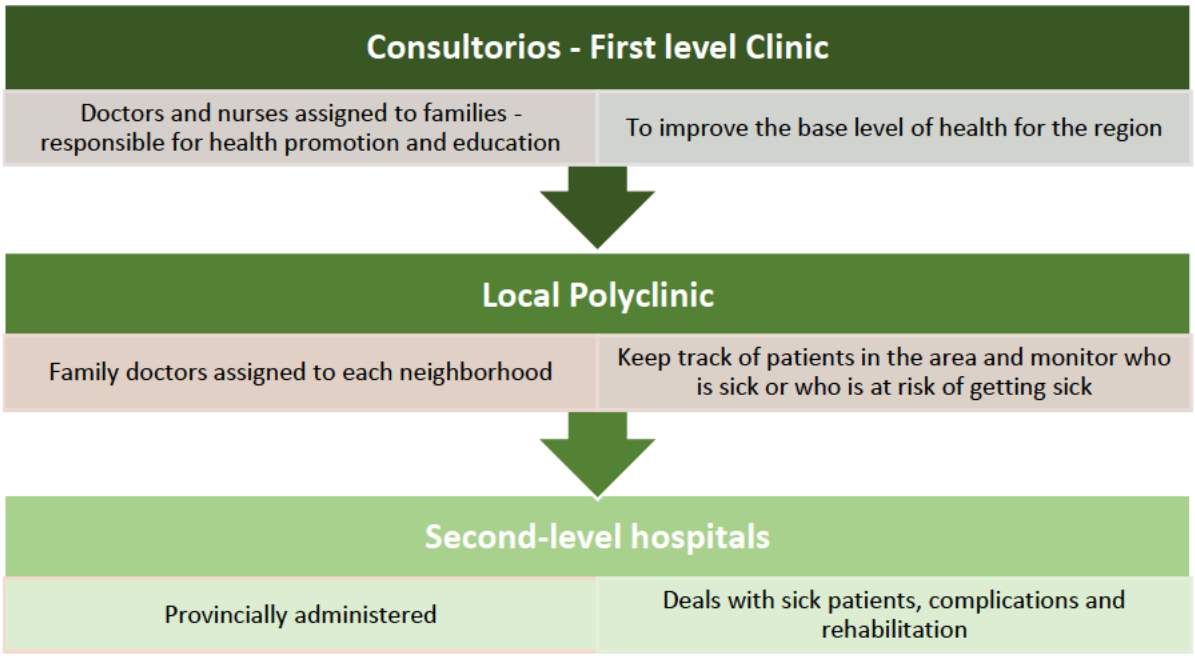

Figure 4.2: Cuban health care model *(Source: O'Hanlon & Harvey, 2017).*

Motala and van Wyk's (2019) study found that South Africa's collaboration with Cuba was beneficial in the transformation of health care in terms of adopting the primary health care model. In view of the Cuban health care structure presented in the figure above, moving to a similar model in South Africa would assist in the provision of health care services to communities who cannot afford or have no access to health care. In fact, Maphumulo and Bhengu (2019) found that people who do not have health insurance are less likely to seek medical care. This is detrimental to long term health issues leading to increased costs and the need for more specialised care. In the Cuban medical model, where medical doctors are based among the members of the community, access does not present a challenge. As much as changes are required for this model to be adapted to the South African context, the approach needs to be recognised by main stakeholders at the macro-level. Policy has already been established and whilst this is still a paper exercise, the execution of these changes needs to occur from programme level and to filter into the district, regional, provincial and national levels. The shift requires a move from the individualistic, curative approach to a more community-based, preventative system, which will make health care more accessible to the rural and peri-urban communities (Motala & van Wyk, 2019). Adjustments to the medical syllabus needs to unify the South African curriculum to encompass the needs of the primary health care model. To summarise, Table 4.1 below highlights the difference in approach between South African and Cuban medical training.

Table 4.1: Comparison between the Cuban and South African medical training approaches

South African Medical Training	Cuban Medical Training
• Problem based model	• Primary health care model
• Curative medicine	• Preventative Medicine
• Individualistic	• Community based
• Curriculum: Problem based	• Curriculum: Didactic – lecture based and then community based
• Hospital or clinical setting	• Community and environmental setting

One of the most significant differences in the medical training of doctors in South Africa and Cuba is the approach to patient care and outcomes. While the curriculum and training of doctors in South Africa is reactive and problem-based, the Cuban health care model seeks out the ailments and health conditions of communities and attempts to prevent or remedy the situation before it is exacerbated. This involves doctors going into the communities, examining and treating people, exploring possible threats in the environment and living conditions and addressing these issues before ailments becomes serious and untreatable (Lamrani, 2019). South Africa's training model, on the other hand, positions its doctors in clinics and hospitals to avail themselves when patients chose to seek medical advice or attention. Vandeyar (2020) refers to this approach as the way of the western world introduced to South Africa in the 1600's under colonialism. This classist attitude is incompatible with South Africa's socioeconomic situation, particularly given that the majority of the country's population lives in poverty and is dependent on the public health system. The data presented in Figure 4.3 on the next page, derived from the WHO Global Health Observatory, shows the significant discrepancy between Cuba and South Africa in terms of doctors per 10,000 patients, and contextualises the necessity to change the South African health systems along the same lines as the Cuban Health Care model.

Medical doctors (per 10,000)

FILTERS

Last updated: 2022-01-24

Location	Medical doctors (per 10,000)	Medical doctors (number)
Cuba		
2018	84.2	95 466
2017	82.95	94 059
2016	79.54	90 161
2015	77.69	87 982
South Africa		
2019	7.92	46 393
2018	7.53	43 503
2017	7.83	44 653
2016	7.68	43 141

Figure 4.3: Medical doctors per 10 000 people – Cuba vs South Africa *(Source: Global Health Observatory, 2023, online)*

4.5 Medical Internationalism and Culture

4.5.1 Medical internationalism

"The life of a single human being is worth a million times more than all the property of the richest man of the earth…Far more important than a good remuneration is the pride of serving one's neighbor. Much more definitive and much more lasting than all the gold one can accumulate is the gratitude of a people." - Che Guevara, 1960, On Revolutionary Medicine (Kirk & Erisman, 2009, p. 1).

Medical internationalism began in 1959 in Cuba as emergency medical relief to countries experiencing disaster or armed conflict (Kirk, 2015). Faced with sanctions imposed by the United States of America in the early sixties, Cuba found themselves in a health crisis forcing them into a decision to prioritize the creation of a public, universal, and free health system at the national level (Lamrani, 2021). Cuba was cut off from global trade and the supply of fossil fuels in 1990 as a result of the fall of the Soviet Union, on which it was largely dependent. The nation was able to quickly impose lifestyle changes, prioritising investments in community-based care and primary care professional education. Cuba created a condensed yet incredibly efficient UHC system by implementing stringent public health measures. This strategy guaranteed that rates of infant and child mortality, and maternal mortality remained the same, and life expectancy increased even during a crisis (Hensher & Zywert, 2020). During the COVID-19 pandemic, Cuba answered the call for help across the world. This is not however a new endeavor, as over the years Cuba has come to the aid of several countries in the midst of disasters

like hurricanes, earthquakes, tsunamis and Ebola outbreaks. South Africa was also fortunate to have the support and assistance of Cuban doctors during the COVID-19 pandemic.

Cuba's international medical assistance programme is one of the island's largest exports (Lamrani, 2021). It can be viewed as a strategy that has aimed to break the United States' attempts to isolate the country internationally (Kirk & Erisman, 2009). The strategy is based on Fidel Castro's ideology that investing in health should be recognised and given priority (Squires et al., 2020). Cuba's medical internationalism is based on an ideological and moral commitment to helping the developing world by providing medical brigades to vulnerable populations and countries in need (Hammet, 2014). Kirk and Erisman (2009) describe Cuban medical internationalism as a 'world medical power'. The contribution of Cuba's medical internationalism to South Africa's medical training salvaged the desperate plight of the health care situation in the late nineties. In essence, Cuba's model has provided the basis of South Africa's new primary health care approach that resides in the formulation of the NDP2030 and the NHI for equitable health care for all. The evolution of South Africa's current model to a primary health care approach no doubt requires and must be accompanied by a new culture of health care and health care workers.

Despite limited resources and a large exodus of doctors to seek better professional opportunities, Lamrani (2021) adds that Cuba is now a global benchmark for developing nations and even some first world countries that cannot compare. Utilising existing human resources and investing into human capital are two key lessons learned from the Cuban experience. Implementing this in organisations to gain a competitive advantage is discussed by Barney (1991) in his Resource-Based Theory and is also incorporated in Becker's (1962) Human Capital Theory.

4.5.2 Medical culture

While it is difficult to date the exact origin of medical schools involved in formal medical education, it is common knowledge that healers and practitioners have been around since the beginning of time. Medical training in the early days had strong ties to a culture's philosophical view of life, in understanding the causes of illness and how it affected each person's health (Boyer, 2008). Culture is a broad term that encompasses facets of everyday life, people, organisations, politics, and many other expressions, too many to mention. Schein (2012, p. 313) defines culture as "shared common learning output". It can be individualistic or it can be collective. Culture has an impact on identity, values, norms, roles and even on sustainable development (Demartini, Marchegiani, Marchiori, Schiuma, 2021).

The concept of culture has been considered for this study as an important contributor to the HRD goals for human resources for health in South Africa. Culture in medicine is a traditional anthropological

concept that is rooted in the belief that people are products of their cultures and that culture determines how people respond (Stein, 2019). Culture not only impacts the way in which medical institutions function but also the health care that is provided to patients. According to Good, James, Good and Becker (2005), cultural competence should be part of every medical curriculum. This includes language skills and cultural knowledge (Good et al., 2005). In studying the social context of health care, Stein (2019) argues that the way in which a problem may treated is an extension of how the problem is understood in a particular culture.

Medical education and training do not place enough emphasis on medical culture, and students are not taught how to critically analyse the profession and institutions of care to investigate how treatment decisions, quality of care, and research methods are shaped. (Good et al., 2005). Medical student behaviour is modeled by interaction with other students, interns, residents and attending physicians. They learn appropriate professional behaviour and competencies (Good et al., 2005) but how this learned behaviour translates across cultures must also be interrogated. According to Hensher and Zywer (2020), the achievement of Cuba in terms of population-level health outcomes was perceived as ‘a time of exceptional hardship’ in which structural and cultural reforms to health care occurred only ‘as a matter of despair’. The values entrenched medical education in Cuba are based on the willingness to work in difficult circumstances, to engage in community participation and to show solidarity with the poor (Squires et al., 2020). The culture of medicine is changing throughout the world. Instead of person-centred health care, the trends are moving towards a focus on communities and society (Academy of Science of South Africa, 2018). In South Africa, the 2030 Human Resources for Health Strategy recognises that a change in the character and culture of future health care professionals is essential in the country (National Department of Health, 2020a).

4.5.3 Gender as a construct of culture

Gender is defined as "the psychological, cultural, or behavioral characteristics typically associated with one sex" (Johnson, 2021, p. 1). These roles and norms that distinguish men and women in society are constantly changing and recreating the concept of gender (Shinbrot, Wilkins, Gretzel & Bowser, 2019). Gender inequality has had a major impact on the roles of men and women in the workplace as well as in terms of life choices (Espi, Francis & Valodia, 2019). An example of this is evident in decisions and behaviour patterns of doctors to migrate to other countries for work (Bjerén, 2021). Ellemers (2018) indicates that gender stereotypes arise in assigning importance to task performance among men and women. Gender as a construct of culture has been included as an important concept to consider in this study to examine the stereotypes and inequalities that may exist in the historically male-dominated career of medicine. The health industry must take serious steps toward gender-transformative

approaches and policies to combat gender prejudice and disparities in education and health care and inequities health labour market (Szabo et al., 2020).

Even in the twenty first century, gender inequalities and gender biases still exist and the imbalance in the recognition of female doctors and health care professionals in the workplace and communities greatly impacts retention (Espi et al., 2019). The challenges facing the Cuban-South African medical collaboration is impacted further by the challenges experienced by the female students during their training and after completing their studies. One cannot abstract gender from culture as culture plays a major part in the beliefs regarding gender roles when it comes to age, education, career and employment, and these are still issues of contention. These traditional mindsets filter back into how well female doctors are accepted and received both by male colleagues as well as by their male patients. The shortage of female doctors, especially in the rural areas, may be attributed to reasons related to personal safety, child-bearing, child care and profession acceptance in traditional cultural communities (Maimela et al., 2015).There have been vast changes in the gender and ethnic profile of medical students over the years (Good et al., 2005). Fortunately, there has been an increase in the numbers of female students enrolling into health sciences programmes. Continued support and education to shift mindsets is necessary to assist in efforts to retain qualified female doctors and health professionals.

4.5.4 Language as a construct of culture

Language is part of everyday life, learnt as children, developed as one grows, but is often taken for granted. However, people never use language in the same way. Language can be cultural, political or technical. It is a powerful tool to communicate, it influences thought and it varies according to age, gender and ethnicity (Mooney & Evans, 2018). Language has been included in this study for two reasons. Firstly, language barriers between patients and doctors have been an ongoing challenge. Studies have shown that doctors completing community service in rural areas have struggled to effectively communicate with patients because of their lack or limited knowledge of the language that may be spoken in an area (Fields, Abraham, Gaughan, Haines & Hoehn, 2016).

The second reason is that South African students have to learn Spanish in order to complete their medical training in Cuba. Al Shamsi, Almutairi, Al Mashrafi and Al Kalbani (2020) claim that health care costs and quality are significantly impacted by language barriers. In their study, these costs were related to having interpreters in the clinical context. Van den Berg (2016) highlighted the importance of language proficiency in communicating with patients. Learning a new language as a requirement for studying medicine through the Cuban-South African medical collaboration has undoubtedly put the cohort students to the test. The concept of language for the purpose of this study is regarded in terms of its ability to build trust and to influence notions around identity.

4.5.5 Institutional culture

Institutional or organisational culture can be defined as "the deeply embedded patterns of organisational behaviour and the shared values, assumptions, beliefs, or ideologies that members have about their organisation or its work" (Peterson & Spencer, 1991, p. 142). It influences the members of the institution in terms of their values, attitudes and behaviour patterns and is strongly linked to the ways of working and ability to resolve conflict. In health care, culture influences patterns of care and this affects performance and quality of health care (Mannion & Davies, 2018). According to Heinz (2019), organisational culture is important because it increases employee engagement, reduces turnover, improves recruitment and increases productivity and performance.

This study considers that an institution's culture has a major impact on the students that are produced in its environment. The institutional culture of the Cuban medical training differs from the training offered at UKZN and the culture of the regulatory body, the HPCSA. The culture of Cuban medical training rests largely on seeking out and serving the community in all health-related matters. This is not confined to health care but also extends to assessing the environment for potential risks and helping the community assume responsibility for preventing illness where possible. According to Sui et al. (2019), the Cuban medical training prepares doctors to work in difficult, under-resourced situations. This study intends to highlight these differences evident in the students from the Cuban cohort and to compare this against the institutional culture of UKZN and HPCSA to indicate the possible effects on retention. Human resources plays an important role in the culture of the organisation as it is the gel that holds an organisation together.

A review of the institutional culture of UKZN and the HPCSA in the following sections will highlight the key values that these organisations stand for. Considering that the desired outcome of the Cuban-South African medical collaboration is a paradigm shift in the culture of health, this section contextualises the culture of UKZN and the HPCSA in line with policy and health reforms for long-term planning and sustainability of human resources for health, which will result in future recruitment and retention.

4.5.6 Institutional culture of the University of KwaZulu-Natal

The University of KwaZulu-Natal aspires to be the premier university of African scholarship. The culture and values of the organisation rests largely on its transformation. The transformation agenda of higher education is mandatory not only for equity and redress but also for development, effectiveness and efficiency, academic freedom, public accountability and quality (Keet & Swartz, 2015). The values of UKZN are espoused in the REACH^{T} values. The acronym REACH^{T} stands for Respect, Excellence, Accountability, Client-orientation, Honesty and Trust. In 2015 Vice Chancellor and principal, Dr Albert

Van Jaarsveld, stated that the REACH^{T} values should create a climate of a 'community of people working together' (Captain-Hasthibeer, 2015). The University adopts a people culture and understands that everyone needs to work together in achieving the goals of the institution (Captain-Hasthibeer, 2015).

4.5.7 Institutional culture of Health Professions Council of South Africa

Even though the HPCSA is not involved in the development of the curriculum and the actual training of medical students both in South Africa and with the students from the Cuban cohort, their role is important to the 'fit for purpose' and suitability of medical doctors for health care in the country. In saying this, the roles of doctors graduating from South African universities and those from the Cuban cohort are vastly different in a number of ways. These include the clinical context, the medical approach in terms of the curative and primary health care model and exposure to disease profiles and trauma that were not common in Cuba.

The HPCSA as the regulatory body has to maintain the standard of accountability to the public in the service delivery of quality health care. Their vision is to be "A progressive regulator of health professions aspiring to quality, equitable and accessible health care" (Health Professions Council of South Africa, 2023a, no page). Therefore, it is interesting to position the values and norms of students from the Cuban cohort against those of the Council to see how they align or diverge in the context of the council's institutional culture. The Cuban cohort certainly adds a new dimension to the future culture of health care in South Africa by bringing in the skills of preventative medicine and health promotion. The role of the HPCSA is to unify all doctors towards a common goal and to make sure that they are represented and accounted for (Heinz, 2019). The values of the HPCSA, taken from their webpage, are presented in Figure 4.4 on the following page.

Values

In fulfilling its roles of regulator, guide and advocate as well as administrator, the Health Professions Council of South Africa holds the following values central to its functioning.

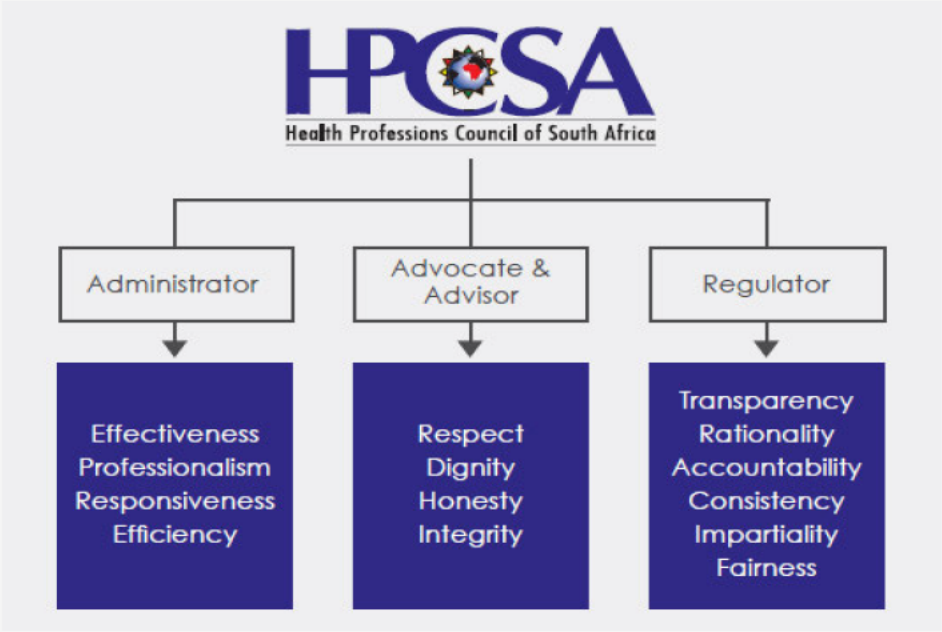

Figure 4.4: Health Professions Council of South Africa values *(Source: Health Professions Council of South Africa, 2023b, no page)*

4.6 Cuban-South African Medical Collaboration: A Medical Capacity Building Initiative

The Cuban- South African alliance began in the early 1990's as part of a South-South co-operative relationship between the two countries. Despite all of South Africa's post-Apartheid challenges (political, economic and social), the Government of National Unity made a commitment to provide health care to all citizens as a basic human right (Hammet, 2007). In 1995, the historic collaboration between Cuban leader Fidel Castro and South Africa's first Black president Nelson Mandela was signed. Termed the Mandela-Castro collaboration, the aim of this programme was to target capable Black students from poor backgrounds to train to become medical doctors in Cuba, with the obligation to return and serve in their communities (Squire et al., 2020).

The Minister of Health and the Chief Executive Officers of key health care organisations announced the Public Health Enhancement Fund in November 2012 as a social compact to promote the increased production of medical graduates (Academy of Science of South Africa, 2018). Since the inception of the Cuban-South African collaboration there has been substantial progress in the presentation and

acceptance of the programme. In the absence of local capacity to significantly enhance medical training supply, the Department of Health's Human Resources for Health policy included an interim step of expanding an existing Mandela-Castro medical programme (Academy of Science of South Africa, 2018).

4.7 Challenges of the Cuban Medical Training

Despite all efforts to incorporate the Cuban medical training into the South African health care system, a number of challenges have been delineated by the doctors from the Cuban cohort. These have been listed in Table 4.2 below.

Table 4.2: Challenges facing the South African medical students in Cuba

Challenges facing the South African students trained in Cuba
1. Professional development
2. Educational opportunities
3. Family life
4. Cuban trained doctors eventually leave rural communities to move to urban hospitals (Hammet, 2014).
5. Ill-equipped to handle the scope of disease in rural hospitals
6. Lack the skills and experience for optimum service delivery
7. Cuban doctors are under-utilised
8. They are not trained for some of the more procedural and hospital-based care that is expected in South Africa

4.8 Appropriateness of the Training

All medical students need to understand the diverse needs of the rural and urban-based communities (Good et al., 2005). The purpose of the Cuban-South African medical collaboration was to provide medical training to rural-origin South African students to supplement the shortage of doctors in the country (Motala & Van Wyk, 2019). The programme is built around giving priority to students from underprivileged and rural backgrounds and is integral to the Cuban-South African medical training agreement (Squires et al., 2020). According to Hammet (2014), evidence shows that physicians from rural areas are more likely to stay in their communities to practice in the public sector than those from urban areas.

The students from the Cuban cohort understand the needs of the communities they come from and have the benefit of the Cuban medical training in similar contextual situations. The social circumstances of

the South African population influences their health and predisposition to disease and illness (Benatar, 2013). People living in squalor and unhygienic conditions, with no access to proper sanitation, no running water, and in overcrowded dwellings are more likely to get sick due to their environment and circumstances. These conditions are similar to the Cuban context in which these students are trained.

The focus of medicine at South African medical universities is based on the bio-medical approach and fails to consider the impact of social determinants on the health of individuals and communities (Benatar, 2013). The Cuban medical training aims at seeking out the communities and helping them to treat and prevent sickness and disease. The environment and lifestyle are addressed as part of the therapeutic care. This includes educating communities on how to prevent the spread of disease and illness. The primary health care model that forms part of the NHI and the NDP2030 will encompass these characteristics in treating and teaching rural communities. South Africa, like Cuba, experiences an extreme lack of resources, technology and staffing in the public sector and rural health establishments. The doctors qualifying from the Cuban cohort are trained to be effective and efficient in under-resourced circumstances. Speaking the language of the community also assists with more effective communication between patients and family members.

4.9 Conclusion

The public health sector and rural health facilities have always struggled to recruit and retain health care practitioners. However, the South African government's plan to recruit students from rural areas to study medicine in Cuba and return to serve in their communities is a strategy implemented to address this challenge. This chapter has outlined the crucial need for effective management of human resources for health (HRH) in South Africa in order to widen access to health services in under-served communities. The history of medical education in South Africa was discussed and the case was made for the necessity of a transformation of the health care approach to adopt a primary health model, such as that employed in Cuba. The literature has shown that the primary health model in conjunction with medical internationalism entrenched in the Cuban health care system has set a high benchmark for developing as well as developed countries in health care provision. The values and medical culture that students are socialised into in Cuban medical training, namely a willingness to work in difficult circumstances and to foster community participation in solidarity with the poor, are ones that can be beneficial to transforming health care in South Africa. The adoption of the primary health model in South Africa will align the health care systems with policies that aim to transform health care to create a more equitable, accessible health care approach and provide manpower equipped with skills and knowledge for disease prevention and health promotion. This approach should be strengthened to drive

the process of health care reforms and to create a new culture of health that is inclusive, equitable and accessible.

Chapter 5

Research Methodology

5.1 Introduction

This chapter outlines the research methodology that was used in this study. The previous chapters covered the conceptualisation and theoretical aspects of the study, as well as the review of relevant literature that was undertaken during the course of the study. Chapter Five begins with an overview of the Interpretivist research paradigm and exploratory design that guided the data collection and analysis in the study. The qualitative research methodology that was employed in the study which allowed the researcher to gather rich data that would address the aims and objectives of the study during the three phases of data collection is outlined. Thereafter the study site is described, the study population is identified and the method used to draw the sample from the population will be explained. The procedures followed in the pilot study and in the subsequent data collection phases is considered before the thematic analysis method to analyse the data is discussed. Finally, the chapter concludes with a consideration of how the trustworthiness of the study was guaranteed, and the measures adhered to, to ensure that all ethical protocols were observed.

5.2 Research Problem

Little or no research has focused on the challenges of medical capacity building in relation to rural recruitment, and strengthening the Cuban-South African medical training programme in terms of the retention of HRH. The purpose of the current research is to *identify and analyse these challenges and to provide recommendations and suggestions on how to strengthen the programme*. The study then focuses on generating recommendations for how to improve the experience of the students in training at the micro-level, thereby enhancing the overall objectives of increasing the number of doctors and contributing to the appropriate skills required for attaining the goals of the NDP2030 and NHI in South Africa.

5.3 Focus of the Research

The main focus of the study is to examine the challenges that the Cuban-South African medical collaboration faces in terms of capacity building of medical doctors in KwaZulu-Natal. The aim is divided into three levels of questioning, namely macro, meso, and micro-levels, in order to properly understand the scope of this programme from the perspective of the programme managers, administrators and the South African medical students in the Cuban cohorts.

5.3.1 Research aims

This study has three research aims, one for each of the levels of analysis. Each aim is further divided into research objectives. The aims of the study are highlighted below, followed by the objectives for each level.

5.3.1.1 Aim 1: Macro-level

To analyse the challenges facing the Cuban-South African medical collaboration in terms of increasing the numbers of trained doctors and producing the relevant skills required for an efficient health workforce, in keeping with the demands of the National Development Plan 2030.

5.3.1.2 Aim 2: Meso-level

To analyse the challenges facing the Cuban-South African medical collaboration programme in terms of administrative challenges with professional and regulatory bodies, viz. the Health Professions Council of South Africa and University of KwaZulu-Natal, in terms of institutional culture and compatibility of the programme.

5.3.1.3 Aim 3: Micro-level

To analyse the challenges facing South African medical students trained in the Cuban cohort in terms of social, cultural and psychological adjustment.

5.3.2 Research objectives

In each level of analysis, there are three corresponding research objectives for this study. These are arranged in accordance with the respective macro, meso, and micro-level aims.

5.3.2.1 Macro-level

1. To identify the challenges facing the Cuban-South African medical collaboration in producing the desired number of doctors to build and sustain a skilled health care workforce.
2. To assess whether the current Cuban-South medical collaboration programme is meeting the demand for the relevant quality of skills for the South African human resources for health.
3. To evaluate whether the Cuban-South African medical collaboration programme is aligned in developing a skilled health care workforce in line with National Development Plan 2030.

5.3.2.2 Meso-level

1. To identify the administrative challenges facing the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine when dealing with the Cuban-South African medical collaboration students.
2. To identify the programme management challenges facing theUniversity of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine when dealing with the Cuban-South African medical collaboration students.
3. To identify the challenges in terms of the compatibility of the Cuban-South African medical collaboration programme to the institutional culture at the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine and Health Professions Council of South Africa.

5.3.2.3 Micro-level

1. To identify the social challenges facing the South African students trained in Cuba in terms of stereotypes, social alienation and academic/institutional culture of Cuban universities.
2. To identify the cultural challenges facing the South African medical students trained in Cuba in terms of race, gender, language and culture.
3. To identify the psychological challenges facing the South African medical students trained in Cuba in terms of language, trust and performance.

For ease of reference, the aims and objectives of the research are represented in Figure 5.1 below.

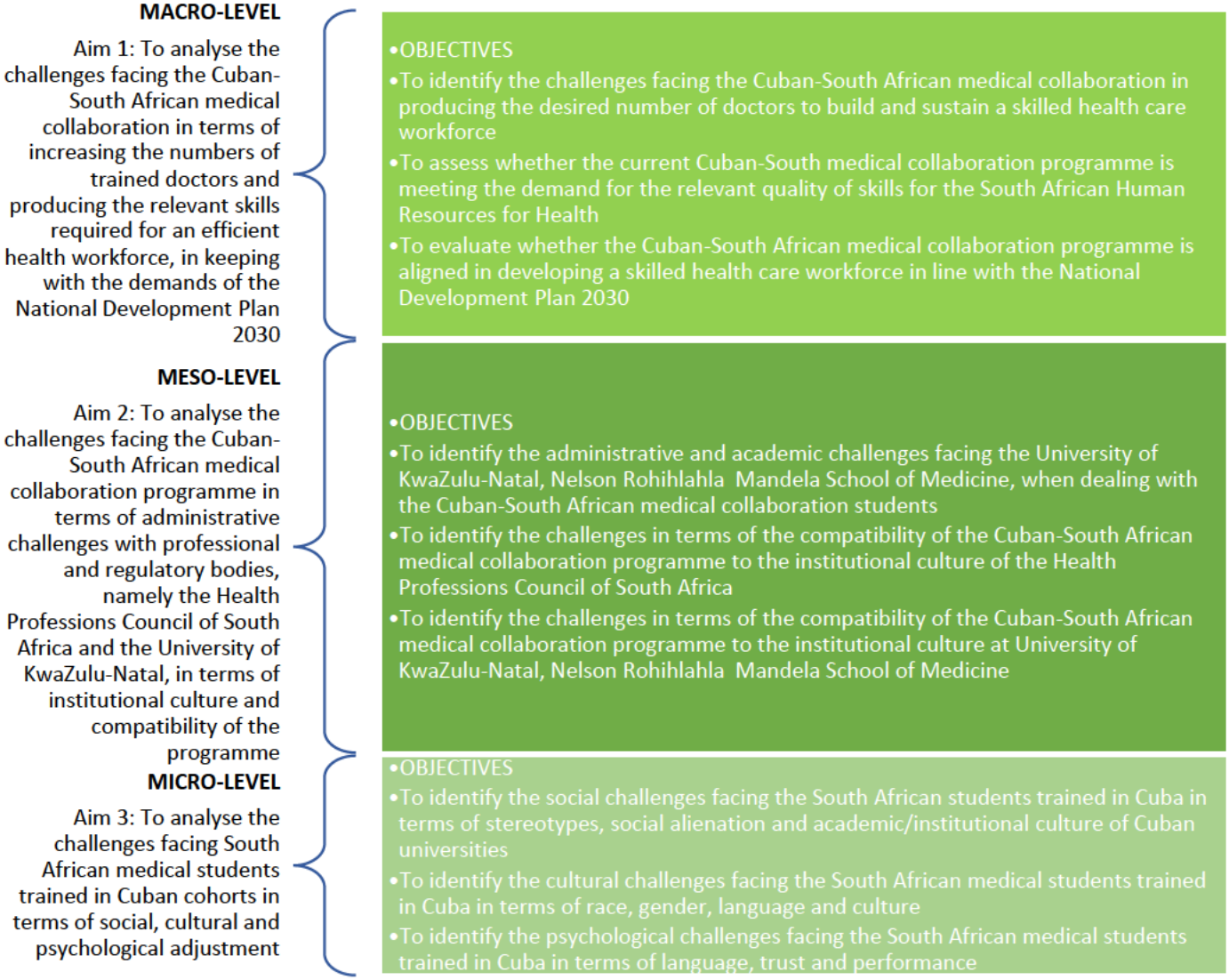

Figure 5.1: Overview of research aims and objectives of the study

5.4 Research Paradigm

Kuhn (1970, cited in Orman, 2016, p. 47) defines a research paradigm as "the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed". A paradigm is useful in illustrating patterns of the world in terms of ideologies and cultural themes, as well as the mindsets of individuals and societies (Scotland, 2012), and is a key component of this study. According to DeCarlo (2018), a paradigm is an analytic lens to a way of viewing the world and understanding human experience. It is a way of looking at the world and comprehending human experience.

There are three major paradigms in social science research, each with its own ontology, epistemology and axiology, as illustrated in Figure 5.2 on the next page. Understanding these paradigms is crucial as the beliefs and assumptions of the researchers influence the way the research is framed and conducted (DeCarlo, 2018). Ontology looks at the 'nature of reality' and in business and management studies, this could apply to organisations, individuals and management, and processes of work (Saunders, Lewis & Thornhill, 2019). Epistemology deals with understanding what is real. Epistemology is the study of knowledge with the focus on the nature of knowledge and the extent of knowledge (Hannon, 2021). The nature of knowledge deals with an inquiry into certain concepts of the study and will decide the methodology that is most suitable for the study (Žukauskas, Vveinhardt & Andriukaitienė, 2018).

Axiology highlights ethics and morality in research (Dudovskiy, 2016). The values of the researcher can impact the research and an illustration of this is in, for example, how religious beliefs may translate into the design and purpose of a research study. The research paradigm therefore, according to Saunders et al. (2019) determines what is valued in the results of the research. While ontology questions the nature of reality, and epistemology looks at the relationship between the knower and the known, axiology focuses on ethics (Orman, 2016). Figure 5.2 below describes the main philosophies espoused by the major research paradigms, in terms of their suggested ontology, epistemology and axiology.

Ontology (nature of reality or being)	**Epistemology** (what constitutes acceptable knowledge)	**Axiology** (role of values)	**Typical methods**
	Positivism		
Real, external, independent One true reality (universalism) Granular (things) Ordered	Scientific method Observable and measurable facts Law-like generalisations Numbers Causal explanation and prediction as contribution	Value-free research Researcher is detached, neutral and independent of what is researched Researcher maintains objective stance	Typically deductive, highly structured, large samples, measurement, typically quantitative methods of analysis, but a range of data can be analysed
	Critical realism		
Stratified/layered (the empirical, the actual and the real) External, independent Intransient Objective structures Causal mechanisms	Epistemological relativism Knowledge historically situated and transient Facts are social constructions Historical causal explanation as contribution	Value-laden research Researcher acknowledges bias by world views, cultural experience and upbringing Researcher tries to minimise bias and errors Researcher is as objective as possible	Retroductive, in-depth historically situated analysis of pre-existing structures and emerging agency. Range of methods and data types to fit subject matter
	Interpretivism		
Complex, rich Socially constructed through culture and language Multiple meanings, interpretations, realities Flux of processes, experiences, practices	Theories and concepts too simplistic Focus on narratives, stories, perceptions and interpretations New understandings and worldviews as contribution	Value-bound research Researchers are part of what is researched, subjective Researcher interpretations key to contribution Researcher reflexive	Typically inductive. Small samples, in-depth investigations, qualitative methods of analysis, but a range of data can be interpreted

Figure 5.2: Understanding research paradigms and underlying philosophies *(Source: Saunders et al., 2019, p.135)*

The research paradigm used in this study was selected according to the aims and objectives of the study. In this study, the Interpretivist research paradigm was considered to be most appropriate because it reflects the researcher's background in psychology and interest in culture, diversity and human resources. Understanding the challenges facing the South African medical students in the Cuban cohorts is a significant component of this study and the data collected through the interviews was considered crucial as it could be used to provide recommendations that address the challenges and strengthen the programme for future students. The Interpretivist paradigm employed in this study is used to justify the knowledge created in the field of medical training and capacity building in health promotion and to rationalise the findings of the study (O'Hara & Taylor, 2022).

The Interpretivist research paradigm was most appropriate for this study since the discourse is rooted in understanding the challenges and investigating deeper meanings of the experiences of the programme managers, administrators and students in the Cuban cohort. The interpretations of the participants' responses are more important to the study than the quantification or measurement of their responses. This interpretation was critical to comprehending the participants' challenges at the meso- and micro-levels as this study focuses on the subjective experiences of students and personnel involved in the Cuban medical training programme. Identifying these experiences offers a better understanding of the programme, in order for recommendations to be made to mitigate the challenges that may be faced, and even to identify the positive aspects in order to strengthen and support this medical training initiative.

5.5 Research Design

The research design sets the stage for how the data is to be collected, the research instrument to be used for data collection and measurement, and the analysis of the data to achieve the research objectives (Sekaran & Bougie, 2016). The three main types of research designs are experimental design, exploratory design and explanatory design. The experimental and explanatory research designs were deemed unsuitable for this study since they are scientific and causal respectively. The experimental design involves testing the sample to determine whether it can respond to the research questions. It is used in quantitative methodology to determine the causal relationship between two variables (Rogers & Revesz, 2020). The explanatory design is used when the research problem is not well researched but the researcher knows exactly what to look for (Toyon, 2023). The purpose of this design is to explain concepts, to generate operational definitions and to show causal relationships. It is commonly used in qualitative research methodology.

When there is a lack of knowledge about a phenomenon and a greater understanding is desired, exploratory research is most suitable. It is used when exploring a new topic or a new angle in research. Exploratory research is the investigation of an issue that has not previously been studied or completely

investigated (Toyon, 2023). “Exploratory studies are undertaken to better comprehend the nature of the problem since very few studies might have been conducted in that area” (Sekaran & Bougie, 2009, p. 96). This design was considered most suitable for this study because it offers a new perspective on the topic. Prior research has neglected an exploration of the programme level of the Cuban-South African medical collaboration and, combined with policy and the findings emanating from the students in the cohort, this area of research requires significant attention.

The focus of an exploratory study is to gain ideas and insight when investigating a problem. Case studies, focus groups and interviews are data collection techniques associated with exploratory research design. The benefit of exploratory research design is that it enables a researcher to lay a solid foundation for investigating his or her ideas, selecting the most appropriate research design, and identifying variables that are genuinely relevant to the analysis (Sekaran & Bougie, 2009). Therefore, this design ensures that the research is relevant and cost-effective. The methodology employed in this study involved gathering and analysing both primary and secondary data to better understand the phenomenon. This was accomplished through interviews with participants involved with the Cuban cohort at programme level, as well as with the South African students who were sent to Cuba to study medicine. The subsequent interviews were supported by the preliminary analysis of policy documents that argued for the need for HRH, particularly in rural areas. An analytical component to discuss the findings in terms of gender and language also formed part of the exploratory design for the findings. This methodological approach is versatile, adaptable, and offers a foundation for additional study in a subject area that has not been thoroughly investigated.

5.6 Research Methodology

Research methodology is the basic path or plan to investigate, in a scientific way, an area of interest (Sekaran & Bougie, 2016). There are three main methodological approaches that can be applied in research and each adds significant value to the way data is collected, analysed and utilised (Alam, 2021). The qualitative, quantitative and mixed methods approaches all offer research techniques and strategies that can be considered to conduct a study. However, based on the nature of this study, the research aims and objectives, and how the research is positioned in the larger context, the qualitative approach proved to be most suitable for this study.

The research methodology that was therefore selected in conducting this study was qualitative methodology. Qualitative research can be defined, in Aspers and Corte’s (2019, p. 139) thinking “as an iterative process in which improved understanding to the scientific community is achieved by making new significant distinctions resulting from getting closer to the phenomenon studied”. Qualitative methodology is commonly used in social science to understand participants and their perspectives.

However, this method is also widely used in multidisciplinary studies as a means of yielding data on subjective perceptions and experiences. Qualitative data comes from 'words' obtained from interviews, focus groups and observations of participants (Sekaran & Bougie, 2016). Immersion of oneself in a scene and trying to make sense of it are key components of qualitative methodology (Tracy, 2019). Qualitative research in health deals with understanding human health, health services and health behaviours and practices (Green & Thorogood, 2018). Based on the nature of the research, and the problem statement, aim and objectives, qualitative methodology was considered most appropriate for this study in order for the researcher to acquire a full understanding of the meanings attributed to the social concepts raised by the participants.

The benefit of a qualitative approach to this study is the rich expanse of knowledge it yields in order to understand the subjective experiences of the South African students trained in Cuba and the administrators and programme managers of the Cuban cohort. This would not be possible through statistical methodology. Qualitative methodology allows for a deeper understanding of the participants' feelings and attitudes, and wider interpretation of a phenomenon or situation (Mohajan, 2018). This ties in with the aims and objectives of the study and what it seeks to achieve. Table 5.1 below presents an outline of the aims, objectives, sources of information, data collection and data analysis methods that were used at each level of this study.

Table 5.1: Data sources, data collection and analysis methods for levels of the research

	Aim1 Macro-Level	Aim2 Meso-Level	Aim3 Micro-Level
Research Objectives	1,2,3	1,2,3,	1,2,3
Source of Information	Secondary Data Policy Frameworks of WHO, NDP2030, Department of Health 2030 Human Resources for Health Strategy Enrollment, graduation UKZN, HPCSA registration and completion records	UKZN Programme managers and administrators involved with Cuban Cohort	Returning South African medical students trained in Cuban Cohort
Data Collection Method	Review of policy documents Qualitative profiling and reporting of UKZN and HPCSA records	Semi-structured interviews with 5 Programme Administrators and 4 Programme Managers at UKZN	Semi-structured interviews with 15 South African students trained in Cuban medical cohorts
Data Analysis	Thematic document analysis	Thematic Analysis	Thematic Analysis

5.7 Triangulation

Triangulation is a methodological strategy that increases the validity of the findings when various research methodologies, sources, ideas or investigators are used (Natow, 2020). In contrast to mixed methods, which combine quantitative and qualitative data collection, triangulation collects data from various samples and sources while using a variety of data collection and analysis techniques (Steenkamp & Tekelas, 2021). Triangulation in medical research aids in a deeper comprehension of complex health-related issues (Moon, 2019). The diagram shown in Figure 5.3 on the following page illustrates the different types of triangulation used in qualitative research.

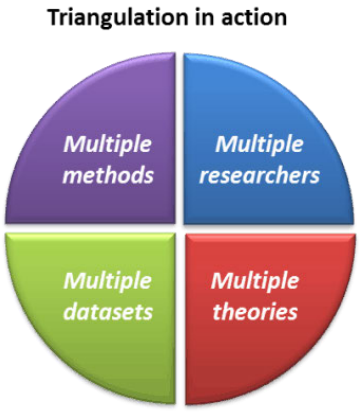

Figure 5.3: Triangulation in action *(Source: Lang, 2013, online)*

5.7.1 Theory triangulation

Theory triangulation is a method of using more than one theory to validate and compare the findings of a study with work that has been done by other professionals in the field. Because this is an interdisciplinary study, theories from several fields were employed to develop a model for the conceptual framework used to underpin and guide the research, as shown in Figure 5.4 below. The application of triangulation strengthens the results chapter by allowing for the production of in-depth and unbiased findings (Noble & Heale, 2019). Theory triangulation adds to the validity of the results of the data collected (Moon, 2019).

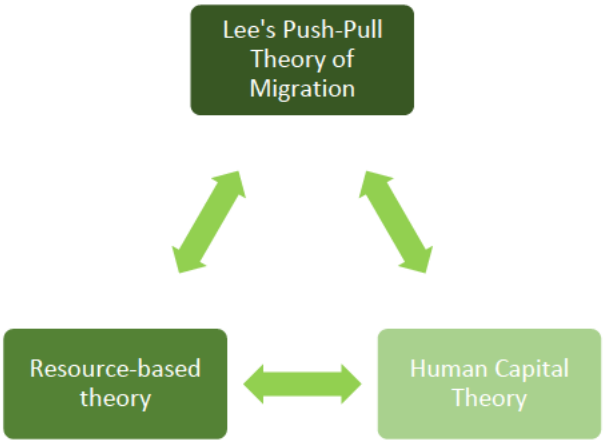

Figure 5.4: An example of three theory triangulation used in the study *(Source: Compiled by the researcher)*

5.7.2 Data triangulation

The most popular type of triangulation is data triangulation (Dzwigol, 2020). Triangulation enhances the validity, reliability and legitimacy of research findings and improves credibility, dependability, confirmability and transferability (Moon, 2019). In this study, data from three sources was gathered to provide a fuller understanding of the challenges facing the Cuban-South African medical collaboration.

Semi-structured interviews were conducted in three data sets: at micro-level with the South African students in the Cuban medical cohorts (n=15); at meso-level with administrators of the programme (n=5) and managers of the programme (n=4); and at macro-level the records of student admissions, completion, registration and graduation details were examined and taken into consideration. The diagram below (Figure 5.5) indicates the triangulation of the data sources of the study.

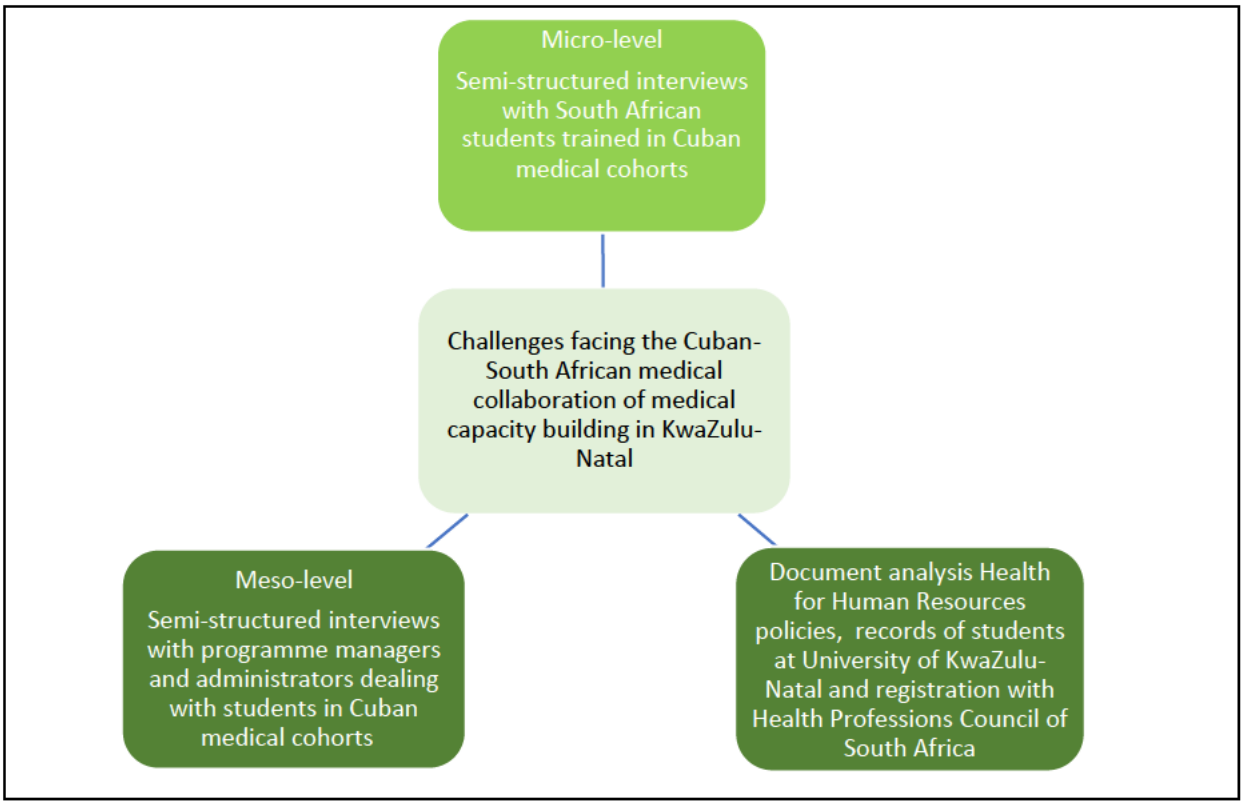

Figure 5.5: Data triangulation in the study *(Source: Compiled by researcher)*

5.8 Research Site

The University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine, is the main research site for the study. It is the only medical university located in KwaZulu-Natal and partners with the Department of Health to train returning students from the Cuban cohort and to prepare them for examination and graduation. The Nelson Rohihlahla Mandela School of Medicine's main campus is located at 719 Umbilo Road in Umbilo, Durban, and is home to administrative, academic, and medical staff and students. However, the training of medical students takes place at various Decentralised Clinical Training Programme (DCTP) sites located in various districts throughout KwaZulu-Natal. These districts are shown in Figure 5.6 on the next page. The actual training sites include Ngwelazane, Lower Umfolozi, Stanger, Newcastle and Port Shepstone, and students from the Cuban cohort are required to train at one of these sites as a mandatory requirement from the Department of Health to support the principles of NHI and the primary health care approach.

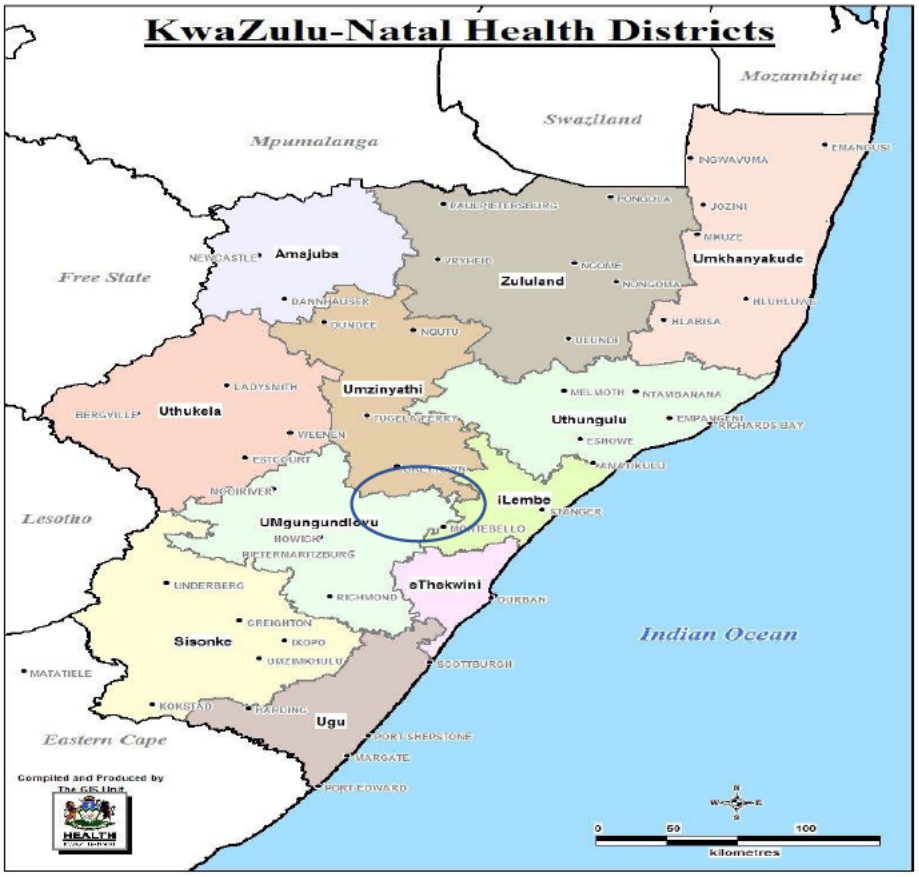

Figure 5.6: Map showing health districts in KwaZulu-Natal *(Source: KwaZulu-Natal Department of Health, 2007, p. 7)*

Medical training in Cuba is offered to all South African students through their local provincial Ministries of Health. The Cuban-South African programme was designed to recruit students from rural communities throughout South Africa and for each cohort to return to the provinces they come from to integrate with their local universities and complete their final year of study, including the necessary examinations and subsequent internship. The cohort returning to UKZN was most accessible for this research as the researcher is based in Durban. These students started their training between the years 2015 and 2019.

All participants interviewed for the study were located in the province of KwaZulu-Natal. The academic and administrative participants at meso-level were situated at the Nelson Rohihlahla Mandela School of Medicine, Umbilo, in Durban. The current Cuban cohort students are based at various Decentralised Clinical Training Programme sites but were interviewed via telephone and online via Zoom as the main micro-level participants of the study.

5.9 Study Population

The population of a study, according to Sekaran and Bougie (2016), refers to the total group of individuals, events, or things of interest that the researcher seeks to investigate. It is generally acknowledged that time and resource limitations make it impossible to thoroughly examine every member of a population (Sekaran & Bougie, 2019). In order to define the parameters of the target population for this study, the population was grouped according to the micro and meso-levels of analysis. Interviews were conducted at both these levels.

The participants for this research at meso-level consisted of programme managers and administrators from UKZN. These were UKZN personnel actively involved with the Cuban-South African medical collaboration and they were interviewed in order to address the meso-level research objectives. These participants are unique to this study because they deal with the teaching or administration of South African students returning from the Cuban cohorts in their fifth year of study. The second set of participants included the returning South African medical students who had been trained in Cuba. These participants were the key contributors to the micro-level research objectives and data gathered from them provided insight into the challenges facing the South African students in the course of their studies in Cuba.

It was difficult to determine the total population of programme managers working with the Cuban cohort at UKZN as there is quite a sizeable number of teaching staff that have dealt with the cohort in some way. However, only nineteen staff actively involved with the current group of students were invited via the programme coordinator to participate in the interviews conducted in this study. The meso-level research objectives also included the administrators who currently deal with the HPCSA. The information related to the challenges experienced by these participants was obtained from previously documented research data and interviews with UKZN programme staff as permission to interview the HPCSA staff was, unfortunately, not granted.

The full complement of students trained between the years 2015 and 2019 was included in the population for micro-level data collection and analysis. This was a total of five hundred and seventy five students returning to the Nelson Rohihlahla Mandela School of Clinical Medicine at UKZN. The number of students enrolled in the current Cuban cohort was in 2018 a total of 94 students. The sample that was ultimately included in the study was sourced from this group. Table 5.2 on the next page, sourced from the UKZN's Institutional Planning department, indicates the number of South African medical students returning from the Cuban cohorts between 2018 to 2021.

Table 5.2: Cuban students 2018-2021 *(Source: University of KwaZulu-Natal Institutional Planning student information)*

	2018	2019	2020	2021
Cuban Enrolments	94	128	211	142

5.10 Sampling Technique

Sampling is a crucial part of a study because it is not always practical and cost effective to research an entire population as this may amount to exorbitant costs being outlaid by a researcher (Sekaran & Bougie, 2016). Instead, choosing a sample that is representative of the wider target population aids a researcher to provide accurate results and to draw meaningful conclusions (Sekaran & Bougie, 2019). This is paramount to the success of the study. There are two types of sampling techniques that can be used in research, namely probability and non-probability sampling. Probability sampling is often used where subjects have a known or equal chance of being selected (Sekaran & Bougie, 2019). This method offers the least bias and allows for generalisability of the study findings but it is also costly and difficult to manage. Non-probability sampling, on the other hand, refers to a method of sampling where the units of the population have no equal probability of being chosen and is used when the research seeks specific data and is not too concerned about generalisability. This form of sampling is also cost effective and saves time (Sekaran & Bougie, 2019).

Based on the aims and objectives of this study, the non-probability sampling strategy was most appropriate in selecting a sample for inclusion as it allowed the researcher a greater chance to obtain the relevant information from the participants. For the micro-level, students that were recruited from KwaZulu-Natal to train in Cuban medical universities and return to their province to affiliate with their local medical university to complete their studies and graduate as doctors were selected. These students share characteristics in terms of how they were chosen for the programme, their age, race and social background, as well as in terms of their experiences during their stay in Cuba. The non-probability purposive sampling method was thus most suitable for this group of participants. The purpose of the policy documents and student records used in the document analysis was to contextual the challenges of the Cuban-South African medical collaboration in terms of the programme aligns to the goals of policy. The method in selecting policy was purposive as the policy used in the study was specific and relevant to the Human Resource for Health and skills required to achieve healthcare outcomes set out by the WHO.

5.11 Sample Size

The size of a sample is determined by the research objectives, the population's variability, the degree of precision, the cost, the amount of time in which the study is to be completed, and the population's size (Sekaran & Bougie, 2019). In qualitative research methodology, the sample size is determined by the heterogeneity of the population and the point of data saturation (Sekaran & Bougie, 2016). This means that once a certain level of saturation is reached, the size of the sample can be controlled by participant responses and the diversity of the population can determine how big the sample should be (Moser & Korstjens, 2018).

The programme managers and administrators from UKZN are central to the meso-level aims and objectives of the study. They have the requisite knowledge of how the students are accommodated, affiliated with the UKZN medical curriculum, and examined. Their firsthand knowledge of the problems and difficulties related to the students' assimilation, graduation and registration with the HPCSA allowed for further insight to be obtained from these managers and administrators into the challenges faced in the programme. As per Table 5.3 below, the meso-level target population comprised of all sixty eight administrators and nineteen programme managers involved with the Cuban cohort in the entire country. This is the full complement of the professional services and programme managers who administer and provide support to the returning South African students and also prepare them for examination, graduation and registration with the HPCSA.

Table 5.3: Population, sample size and participants interviewed

Levels	Population	Sample size	Number of participants interviewed
Meso-level Administrators	68	5	5
Meso-level Programme managers	19	5	4
Micro-level Cuban cohort	94	20	15

The final sample, however, consisted exclusively of administrators and programme managers based at UKZN, and not at other medical universities in the country. At the meso-level, interviews were conducted with four of the five identified programme managers who deal with the Cuban-South African medical collaboration at UKZN, as well as with five administrators (see Table 5.4 on the next page). The information pertaining to the challenges faced in working with the HPCSA was accessed through

the interviews with these staff from the College of Health Sciences at UKZN, as well as through documented data. Relevant personnel from the HPCSA and the UKZN were contacted via email to assist with the documentation required for the macro-level analysis undertaken in the study.

Through the process of snowball sampling, once the first meso-level participants were interviewed, other administrators and programme managers were introduced to the researcher as potential candidates to participate in the study. To begin with, administrators were interviewed and referrals then increased the number of participants interviewed as the study progressed. The final number of participants at the meso-level was determined at the point of saturation when no new data emerged.

Table 5.4: Comprehensive table of meso (9) and micro-level (15) participants of the study

No	Alias	Programme Manager/Admin
1	PA_CP	Administrator
2	PA_DP	Administrator
3	PA_MM	Administrator
4	PA_SS	Administrator
5	PA_SM	Administrator
6	PM_SR	Manager
7	PM_BD	Manager
8	PM_FB	Manager
9	PM_LM	Manager

No	Alias	Gender	Home Language
10	CC_NM	male	Zulu
11	CC_MM	male	Zulu
12	CC_NC	female	Xhosa/Zulu/Sotho
13	CC_QS	male	Xhosa
14	CC_VM	male	Zulu
15	CC_ND	male	Zulu
16	CC_KR	female	Zulu
17	CC_JM	male	Tswana
18	CC_AN	male	Zulu
19	CC_MG	male	Zulu
20	CC_NX	male	Zulu
21	Dr Ntuli	male	Zulu
22	CC_RM	female	Sepedi
23	CC_DM	male	Zulu
24	CC_ST	female	Zulu

From the group of ninety four students based in KwaZulu-Natal, an initial sample of twenty students was selected to be interviewed to gather data that addresses the micro-level research aims and objectives. Access to these students to request them to participate in the study was facilitated through the discipline administrators and coordinators and referrals were established thereafter, until the target number of students was achieved. The sample size of twenty students from the Cuban cohort was considered a suitable number based on the methodological approach, research paradigm and the context of the study. However, it was decided that the recruitment of participants would cease once data saturation or redundancy was attained and this was largely due to the homogenous population characteristics of the student group at micro-level. The level of saturation was reached at a sample size of fifteen participants at micro-level (Table 5.4 above). This number was considered as representative of the population being studied since all students selected for the Cuban medical training have to meet strict selection criteria before being accepted onto the programme and have shared similar characteristics. These include the area they reside in, age, race and qualifying criteria to enter the programme. The sample size proved to be cost-effective, economical and achievable in the restricted timeframe.

5.12 Pilot Study

A pilot study can be described as a small version of the study and its purpose is to help in the design of the interview schedule and to identify potential problems that may arise (Green & Thorogood, 2018). According to Aspers and Corte (2019), a pilot study may be utilised in the research process to get a first look at, for example, the field, how to approach it, and what methodologies can be employed, following which the method and theory are chosen or refined before the major study begins. A pilot study to test the reliability and validity of the interview schedule was conducted with one student from the Pietermaritzburg-based Cuban cohort group. Due to the students' clinical rotations and other obligations, the researcher’s original plan to conduct a focus group interview did not materialise as intended.

The pilot study was undertaken to test the suitability of the interview schedule and to determine the duration of the subsequent interviews that were to be conducted during the course of the rest of the main study. The pilot interview was conducted with one student from the previous Cuban cohort currently working at Edendale Hospital as an intern. Ideally, a pilot study should consist of ten percent of the research sample, but one student was considered to be adequate for the pilot study because the sample was homogenous in terms of race, age, background and the students all being part of the Cuban medical cohort. Minor adjustments were made to the language and wording used in the interview questions, and a thirty minute time frame was determined to be appropriate for each interview. Modifications to the interview schedule included removing redundant questions and simplifying the language to focus on

the relevant areas of investigation. Methodological transparency refers to the clarity and openness in describing the methods and procedures used in a study, making it easier for others to understand, replicate, and evaluate the research (Sekaran & Bougie, 2019).

Students were approached by the Pietermaritzburg site manager and asked if they were interested in participating in the research study. An email was sent to a potential pilot study participant on the 10th of March 2021. Details regarding the nature and purpose of the study were forwarded to the student and the informed consent, ethical clearance and gatekeeper's permission letters were attached to an email for the student to review and to provide signed consent to participate in the study. However, after many attempts to contact the participant telephonically and via WhatsApp, there was no further response from this initial intended pilot participant or agreement to participate in the study. A second student was recommended and on 11th May 2021 an email was sent by the researcher, again detailing the nature and purpose of the study and including the required documents to obtain informed consent. This student agreed to participate but only after mid-year examinations were concluded. The pilot interview was therefore only conducted on the 22nd June 2021 and the results of the pilot study proved the study to be feasible and determined that the qualitative methodology was indeed appropriate. This initial interview with the student also helped in deciding the time allocation for the interview which had not been considered by the researcher prior to conducting the pilot study.

For the meso-level consisting of five administrators and four programme managers, the interview schedule was reviewed by a member of staff who served as a committee member dealing with the Cuban-South African medical collaboration programme at UKZN. This person has been involved in meetings with the Department of Health to repatriate the South African students from the Cuban cohorts to local medical schools. While this member of staff agreed to evaluate the research instrument, she did however decline the request to be interviewed as part of the study due to a conflict of interest. Her recommendation for the meso-level interview schedule was to rearrange the sequence of the questions for the administrators and programme managers. There were no additional changes required, for instance in terms of the language and wording of the questions, for the meso-level interview schedule for the Cuban cohort programme managers and administrators.

5.13 Data Collection

In adopting an Interpretivist research paradigm, interviews were viewed as the most appropriate data collection tool for the study. Interviews allow the researcher to engage in a depth of discussion that is important for understanding a variety of groups, cultures, languages and human experiences (Sekaran & Bougie, 2019). The information to be discussed in this section is crucial to understanding how the research problem was addressed and the study's goals were achieved through the careful selection of

appropriate data collection methods. It is essential for qualitative research to develop a robust data collection protocol (Braaten, Kramer, Henderson, Kajfez & Dringenberg, 2020). Primary and secondary data collection methods were used for this study. Phase One, as depicted in Figure 5.7 on the next page, involved the collection and review of policy documents related to the macro-level aims and objectives. This phase provided context for the study and created the need for the second and third phases to understand and address the research problem at large. The foundation for the study was laid through the process of the document analysis, providing a framework on which the researcher could understand the information gathered from the semi-structured interviews.

The meso and micro-level primary data was collected and analysed in Phases Two and Three respectively. This was achieved by means of semi-structured interviews with the programme managers and administrators at meso-level, and the South African students in Cuban medical cohorts at micro-level.

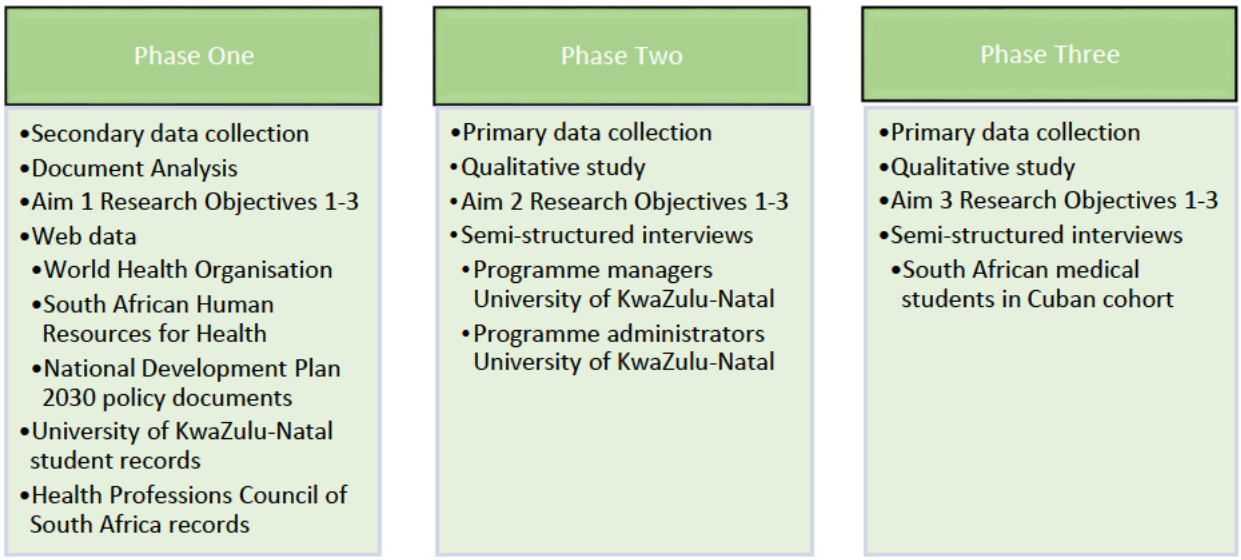

Figure 5.7: Three phases of data collection adopted for the study

5.13.1 Phase One: Secondary data collection - The READ approach for analysing policy documents

Figure 5.7 above summarises the data collection plan that was implemented during the course of the study. Phase One, which involved secondary data gathering, included a review of relevant literature and policy documents for the NDP2030, the 2030 South African Human Resources for Health Strategy, the WHO Global Strategy for Human Resources for Health: Workforce 2030, as well as the UKZN and Health Professions Council profile and reports of medical students and doctors respectively.

Secondary sources are documents that already exist and include policy, records, histories, minutes of meetings, letters, photographs and any other documented material (Tight, 2019). They are a valuable source of information and provide insight into data that has already been captured and stored. In conducting document analysis of secondary data, it is important to consider the authors of the documents, why the documents were prepared, what they are used for and the target audience (Kayesa & Shung-King, 2021). Clearly, it is important for the document to be credible and authentic in order to be used in the study. Fortunately, the documents examined in this study are policies and records, so the researcher was confident of their integrity.

The reason for reviewing policy documents is to understand the nature and purpose of the policy in relation to the research problem (Cardno, 2018). Policy documents take years to formulate and develop but this process is an important part of legitimising official processes in organisations (Kayesa & Shung-King, 2021). A comprehensive review allows the researcher to examine existing policies in some depth in order to determine whether the policy's purpose and goals are still being met or whether changes are needed to improve the policy's effectiveness or clarity (Dalglish, Khalid & McMahon, 2020). It is also important to understand why a document was compiled, who it represents, the intended target audience and the author or authors involved in writing it up (Cardno, 2018). The READ approach, developed by Dalglish et al. (2020), follows a systematic method to analyse policy documents. The four steps involved in the READ approach are represented in Figure 5.8 below.

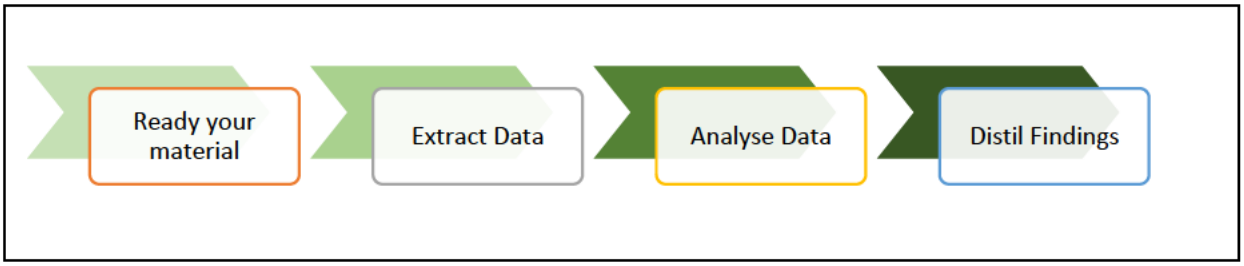

Figure 5.8: READ diagram outlining steps to review policy documents

5.13.2 Phases Two and Three: Interviews overview

Based on previous research and the literature that was reviewed by the researcher, a series of questions related to the aims and objectives of the study were formulated to collect data from participants at meso and micro-levels. At the micro-level, the demographic details required from participants consisted only of their language, race and gender. This information is crucial to the outcomes of the study. The process of developing the interview schedule for the students at the micro-level was based on a logical sequence of questions beginning with questions related to the application process to join the Cuban-South African medical collaboration programme, the arrival of the South African students in Cuba, adapting to the

environment, language, gender, race and cultural adaptability and their return to South Africa. This design and development of specific questions to be asked allowed for the questions to link to the aims and objectives of the study. The schedule was reviewed several times to ascertain that the order of the questions allowed for a flow and rapport to be established with participants and the questions were revised and adjusted until the interview schedule was deemed to be adequate to collect information to address the aims and objectives of the study. In addition, the schedule was piloted by conducting a preliminary interview with a student from the previous Cuban cohort in order to test the appropriateness and suitability of the questions. The same approach was adopted for the guiding questions for the programme managers and administrators.

5.13.2.1 Phase 2.1: Meso-level interviews with University of KwaZulu-Natal programme managers

Interviews were conducted with four identified academics dealing with the Cuban-South African medical collaboration at UKZN. These are the programme managers that co-ordinate and manage all aspects of the programme related to UKZN's involvement with the Cuban cohort. Their role is to help assimilate students that join the mainstream fifth year medical students at UKZN and to assist the Cuban cohort through the completion of the curriculum. The programme managers work closely with the administrators at UKZN to ensure that details of the Cuban cohort are captured on the UKZN database and that information for completion, registration and graduation is handled efficiently. The interviews with UKZN programme managers helped the researcher to understand the problems and difficulties from the perspective of the institution with regard to the academic programme. The challenges that were identified through these interviews provide a platform to address the concerns of the programme managers and for suggestions to be made to improve the experience of the students in the Cuban cohorts and those managing the programme. Figure 5.9 below is a sample of the questions that were asked in the interviews with programme managers.

1. What are the main challenges of the Cuban South African medical collaboration?
2. How does the University of KwaZulu-Natal address or resolve these challenges?
3. How would you compare the compatibility of the Cuban curriculum to the University of KwaZulu-Natal medical curriculum?
4. Is there assistance provided for the students from the Cuban cohort to align with the academic expectations, when you assimilate with University of KwaZulu-Natal Medical School?
5. What are the challenges of the Cuban curriculum being taught in Spanish? Does it affect the teaching at the University of KwaZulu-Natal medical school?
6. In view of the National Development Plan 2030, the Cuban medical training programme can be beneficial to creating a new cultural approach to health care in South Africa. How can the University of KwaZulu-Natal reinforce the training and strengthen these skills?

7. Do you think it is necessary to re-examine the curriculum that the Cuban trained students follow when they return or is the current curriculum sufficient and necessary for these students to qualify as doctors?

Figure 5.9: Interview schedule for University of KwaZulu-Natal programme managers

5.13.2.2 Phase 2.2: Meso-level interviews with University of KwaZulu-Natal programme administrators

UKZN administrators were interviewed and requested to refer their colleagues involved with the Cuban cohort. This snowball sampling technique assisted in increasing the number of participants interviewed as the study progressed. UKZN administrators are those personnel based in the College of Health Sciences at the institution that handle the administration, logistics, accommodation, clinical placement, completion certificates, registration with the HPCSA and graduation details of the Cuban cohort. Interviews with the UKZN administrators helped to identify the challenges experienced in their administrative duties, in an effort to explore ways in which these processes could be made more efficient. These administrators were also interviewed to elicit information related to their experiences with the HPCSA in dealing with the Cuban cohort. An extract of the questions from the interview schedule used in the semi-structured interviews with administrators is presented in Figure 5.10 below.

1. Can you tell how many Cuban cohort students you work with? Which disciplines are they from?
2. Can you go through the documentation that is required when the Cuban cohort students arrive at the University of KwaZulu-Natal?
3. Can you describe the challenges you experience in terms of timetables, clinical placements, completion documents, graduation?
4. What are the challenges with the Health Professions Council of South Africa?
5. How are the Cuban cohort assisted with transport, accommodation, meals? What are the challenges related to these?
6. Can you compare your experience with the Cuban cohort to University of KwaZulu-Natal medical students?
7. Does the University of KwaZulu-Natal provide any support or counselling for the students from the Cuban cohort for their repatriation and assimilation with the University of KwaZulu-Natal Medical School? Is there an induction programme for these students?

Figure 5.10: Interview schedule for University of KwaZulu-Natal programme administrators

5.13.3 Phase Three: Micro-level interviews - Cuban cohort

A sample size of fifteen students from the Cuban cohort was interviewed during the course of the study. These are the returning fifth year students that join with the mainstream UKZN medical students to complete their degrees. The interview process allowed the researcher to determine the challenges the students from the Cuban cohort experience, both in Cuba and upon their return to the UKZN. The final interview schedule used in the interviews with the Cuban cohort students is presented in Figure 5.11 below.

1. Please can you tell me how you heard about the Cuban medical training and what you had to do to apply? How did you feel to travel to a foreign country? How was your flight and experience like when you arrived in Cuba? Was there someone to guide you and show you around? What was the first thing that you did when you arrived in Cuba?
2. Can you describe your experience when you arrived at the Cuban university? Which university were you based at? What were the institutional requirements (rules, timetable etc.). What did you find challenging about the people and process?
3. Tell me about your experience making friends with other South African students.
4. Tell me about your experience making friends with the local students of Cuba.
5. Were you able to communicate with the locals? What were the challenges you experienced?
6. Were there people who stereotyped you for being South African?
7. I would like to talk about your year of learning Spanish. Did you find it difficult or easy?
8. Are there any incidents that you can share where you were unable to communicate?
9. Did the language affect your participation in class? Do you feel you would have participated more if the curriculum was in English?
10. Did you ever feel left out of a conversation in Spanish because of the colloquial or slang like manner of speaking among the locals?
11. Did this raise issues of distrust or suspicion among the local students and academic staff?
12. Do you feel that learning a new language and studying medicine in Spanish had an impact on your academic performance?
13. Did you ever feel isolated or lonely during your stay in Cuba? So you were able to adapt to social life. Internet connectivity with family, friends and the South African embassy?
14. Were you ever in a situation where your identity as a male or female was undermined? I am talking about patriarchal stereotypes or assumptions about males and females in your profession.
15. Were you ever in a situation where your identity as a Black South African was interrogated or diminished? So, the local staff and students made you feel part of their community?
16. How did you adjust to the culture of Cuba? Describe the differences you noticed between Cuban culture and your own?
17. How did you maintain your own cultural identity while being away from home e.g. religious practices, rituals and common practices?
18. Upon returning to South Africa to join the University of KwaZulu-Natal Medical School, can you describe the differences between the academic institutions?

Figure 5.11: Interview schedule for South African students in Cuban medical cohort

The interview schedule questions provided a platform for the students to share their challenges and outline how they attempted to overcome their struggles. Once the interview schedule and protocol had been piloted with a Cuban trained student and modifications had been made, it did not require any further adjustments. The data collected from these interviews with the Cuban cohort students should assist policy and decision makers in reviewing the structure of the programme to improve the experiences and outcomes of the Cuban-South African medical training collaboration.

5.14 Data Analysis

Data analysis is the art of studying the research data and drawing conclusions to influence decision-making about the research problem that is being investigated in a study. Qualitative researchers often organise their data into abstract units of knowledge in order to create patterns, categories and themes (Toyon, 2023). This inductive procedure shows that the researcher has to alternate between the themes and the data until a complete set of themes is established for the study (Creswell & Creswell, 2018). In the macro-level of the study, document analysis was used to identify the main themes that emerged in the policy documents that were reviewed, namely the WHO Global Strategy on Human Resources for Health 2030, the Department of Health 2030 Human Resources for Health Strategy, and the NDP2030. Thematic analysis was used to analyse the data that was collected from the interviews with the meso and micr-level participants in this study. These methods of analysis will be discussed in the sections to follow.

5.14.1 Document analysis

Documents from organisations and institutions are frequently used in research and these include any written material related to a specific topic (Green & Thorogood, 2018). Documents form a key component of data sources that can be drawn upon, particularly in qualitative research. Like any records, documents give an indication of the details of people, places or phenomena in relation to processes and context (Bowen, 2009). As much as documents may exist, they should be understood in the social context in which they are produced (Dalglish et al., 2020). The advantages of using the method of document analysis is that documents are accessible, are on public record and are relatively cost-effective to access (Cardno, 2018). The main disadvantage is selective bias as the researcher may be influenced by preconceived beliefs, values and ideas. Reading, understanding, highlighting and appraising the information contained in the documents considered in this study was the primary step in creating a foundation for the later phases of data analysis.

The rationale for incorporating document analysis in this study is that it provided the researcher with a method of triangulating the research findings by using many sources of evidence. The review of the

policy documents, which was the initial phase of the research, was an important contributing factor to informing the meso and micro-levels of the study. This initial phase created the need to delve deeper into the subsequent phases and to more fully investigate the challenges facing programme administration, programme management and the students in the Cuban cohort. Most authors agree that data in documents is organised in themes and categories and therefore analysing the information contained in the three policy documents reviewed formed the basis of this structure. Thematic analysis was used to identify the key themes that emerged from the policy documents after the assessment of the documents.

5.14.2 Thematic analysis

Thematic analysis is a popular method of analysis that is frequently used in qualitative research. It is a technique for locating, analysing and deciphering meaningful patterns in qualitative data (Kiger & Varpio, 2020). Thematic analysis is an approach to coding and the development of themes that may emerge in the data collected in a study (Clarke, Braun & Hayfield, 2015). The first step in the process is becoming familiar with the data, followed by labelling it, creating codes, and finally, developing themes (Braun & Clarke, 2019). The diagram represented below in Figure 5.12 below summarises Braun and Clarke's (2019) steps of reflexive thematic analysis.

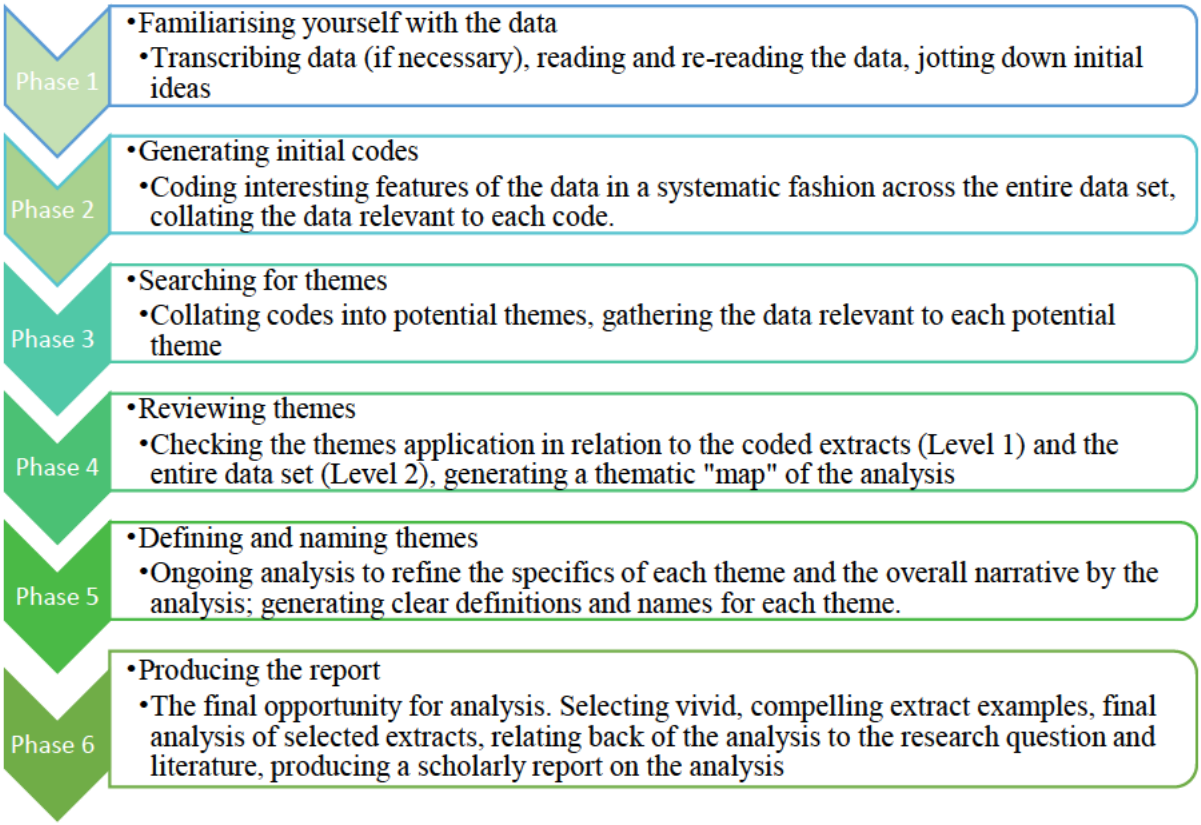

Figure 5.12: Braun and Clarke's thematic analysis *(Source: Adapted from de Wet, Koekemoer & Nel, 2016, p.270)*

5.14.3 Interview analysis in the context of the study

There are six general steps as well as several sub-steps that can be used in analysing themes that may emerge from the data collected in a study (Braun & Clarke, 2019). In this research, all interviews were recorded using a digital recorder and then immediately transcribed in order to capture the essence of the interview and to ensure that all relevant details were noted. This included taking supplemental notes about observations made during the interview process. The first step in the preparation of the raw data was to read and record information. A dashboard of participants was created to organise and sort the responses into different categories based on the source of information. For ease of reference, details like language and gender were recorded for all micro-level participants. The dashboard shown in Table 5.5 below lists all fifteen participants at micro-level and indicates their home language and gender. Race was constant amongst all micro-level participants as all students were Black South Africans.

Table 5.5: Aliases and demographic profile for micro-level participants

No	Name	Gender	Home Language	Informed consent	Recording	Transcript
1	CC_NM	male	Zulu	yes	yes	yes
2	CC_MM	male	Zulu	yes	yes	yes
3	CC_NC	female	Xhosa/Zulu/Sotho	yes	yes	yes
4	CC_QS	male	Xhosa	yes	yes	yes
5	CC_VM	male	Zulu	yes	yes	yes
6	CC_ND	male	Zulu	yes	yes	yes
7	CC_KR	female	Zulu	yes	yes	yes
8	CC_JM	male	Tswana	yes	yes	yes
9	CC_AN	male	Zulu	yes	yes	yes
10	CC_MG	male	Zulu	yes	yes	yes
11	CC_NX	male	Zulu	yes	yes	yes
12	CC_ZN	male	Zulu	yes	yes	yes
13	CC_RM	female	Sepedi	No	yes	yes
14	CC_DM	male	Zulu	yes	yes	yes
15	CC_ST	female	Zulu	Yes	Yes	yes

A similar dashboard was also kept for the meso-level participants, the Cuban-South African medical collaboration managers and administrators, as shown in Table 5.6 on the next page.

Table 5.6: Aliases and programme position occupied by meso-level participants

No	Alias	Programme Manager/Admin	Informed consent	Recording	Transcript
1	PA_CP	Administrator	yes	yes	yes
2	PA_DP	Administrator	yes	yes	yes
3	PA_MM	Administrator	yes	yes	yes
4	PA_SS	Administrator	yes	yes	yes
5	PA_SM	Administrator	yes	yes	yes
6	PM_SR	Manager	yes	yes	yes
7	PM_BD	Manager	yes	yes	yes
8	PM_FB	Manager	yes	yes	yes
9	PM_LM	Manager	yes	yes	yes

The next step in the thematic analysis process is reflection, which entails reading the information and considering its significance. The information must reflect the opinions and voice of the participants (Braun & Clark, 2019). Every effort was made to ensure that the tone and viewpoints of the participants was accurately reflected in the transcriptions of the interview recordings. Making notes assisted the researcher in organising the data and assessing the reliability of the information obtained from participants. Cross-checking the transcript with the recording and calling participants to verify information that was unclear also helped to ensure the integrity of the data.

The third step of thematic analysis is coding. Coding is the process of categorising data by highlighting text and allocating a word in the margins to signify a category (Adu, 2019). Labelling the categories or images of the data with a term is referred to as an *in vivo* term. The use of the computer assisted data analysis programme called NVivo will be discussed in the section to follow. Generating a description and themes to represent the major findings of the data collected is the next step in thematic analysis, followed by the creation of a format for the representation and description of the themes identified. Braun and Clark suggest reviewing themes as a final step to ensure that only the relevant and important themes are utilised (Vaughn & Turner, 2016).

While thematic analysis is simple to use and allows qualitative researchers to be more flexible in their approach, it has also been criticised for these very same reasons. Inconsistency and incoherence stemming from an overly flexible analysis can create doubt about the credibility of this method of analysis (Nowell, Norris, White & Moules, 2017). To avoid this problem, a formal framework was developed by the researcher to ensure the application of consistency and coherence in this study.

5.14.4 NVivo

NVivo Release 1.6.1 is a software package used for qualitative data analysis. The transition from statistical research to gaining an understanding of the world and how things operate through observations, interviews and participant responses has led to a greater emergence of qualitative research in the health sector (Dhakal, 2022). Although not commonly used in health research, computer assisted qualitative data analysis software appears to be gaining popularity as a tool for data analysis (Jackson & Bazeley, 2019).

Originally, thematic analysis was considered to be the most appropriate method of data analysis for the study. After considering the aims and objectives, it was decided that using NVivo as an additional feature to enhance the thematic analysis would add value to the outcomes of the study. According to Jackson & Bazeley (2019), the use of NVivo as a means of analysing qualitative data is related to the research purposes of the study. There are many benefits to using computer assisted data analysis software. Firstly, using this software provides a universal platform with high compatibility to research designs (Zamawe, 2015). It is also efficient and helps to improve accuracy in qualitative data analysis (Jackson & Bazeley, 2019). In addition, the use of data analysis software is flexible, adaptable and it allows the researcher to be more creative by focusing on the outcomes of the analysis (Jackson & Bazeley, 2019).

In this study the data was transcribed and coded manually by applying the principles of thematic analysis. Thematic analysis allowed the researcher to make sense of participants' responses by highlighting the main points, looking at differences and similarity of responses and focusing on the perceptions of the participants. Using Nvivo as a tool to organize the data collected during the interviews, information from the interviews according to the themes derived through the manual coding, was entered into NVivo. This programme organised and arranged the data with the relevant quotes for interviews into themes and sub-themes and these themes that emerged from the data will be explained in detail in the discussion chapter. NVivo provided automated functionality for deeper analysis, word frequencies, commonalities and comparisons, which can be depicted in word clouds and word trees. This enhanced the findings chapter by making it visually appealing and easier to understand. The following diagram illustrated in Figure 5.13 highlights the process followed in generating themes and using Nvivo to organise the data that was collected in the study.

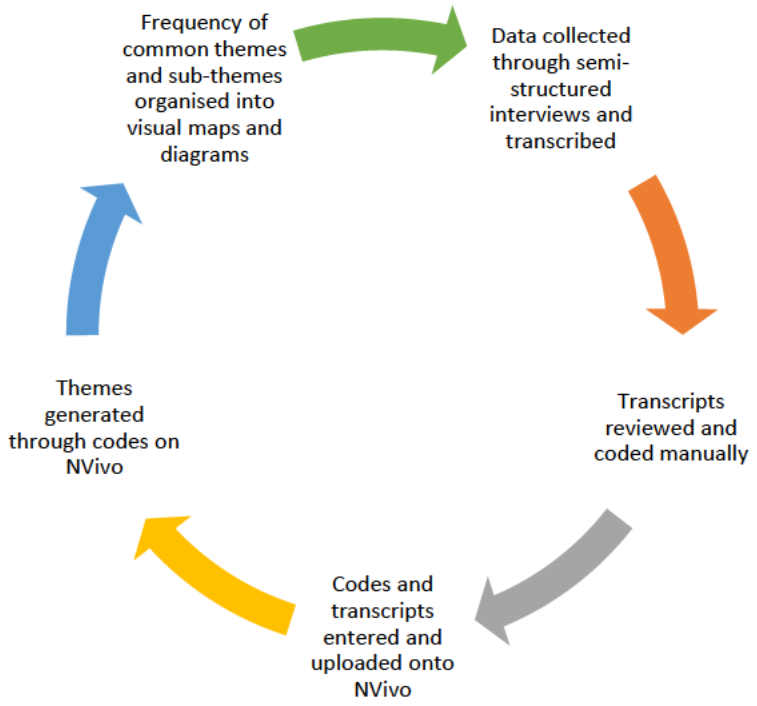

Figure 5.13: Process of generating themes and organising data on NVivo *(Source: Adapted from Silver & Lewins, 2020)*

5.15 Data Saturation and Redundancy

According to Creswell and Creswell (2018), when a researcher ceases data collection at the point when categories or themes have reached saturation, and when the collection of new data no longer yields novel insights or discloses novel properties, then an adequate sample has been reached. All data collected for this study ceased at the point of saturation. This was to ensure that there was no duplication of information and to prevent redundancy of the data collected. The participants at micro-level may have in fact shared similar experiences in terms of the challenges they faced. Therefore, it was essential to monitor the responses to prevent repetition and to ensure that focus was maintained on meaningful data collected. Although twenty students from the Cuban cohort were initially sampled, data saturation was reached after fifteen interviews as no new information was being obtained from the participants. Therefore, only fifteen students were included in the final sample at the micro-level.

5.16 Trustworthiness of the Study

The early work of Lincoln and Guba (1985) highlights credibility, transferability, dependability, and confirmability as the top four methods for establishing the trustworthiness of a study. These elements determine the integrity of the research and establish the value and authenticity of the data collected. The following sections discuss how each of these four aspects were ensured in this study. In addition, the

study's validity and reliability will be outlined, and the reflexive actions that the researcher took to guarantee its success will be explored.

5.16.1 Credibility

Whether inadvertently or unacknowledged, researchers demonstrate a commitment to philosophical beliefs which impacts their research and may affect how credible the research can be deemed (Gagani, 2019). The question of whether the researcher has established and articulated a specific level of confidence in the findings based on the phenomenon under examination underlies the concept of credibility (Lemon & Hayes, 2020). In this study, participant review and cross-checking of the data by the researcher helped to reduce individual biases while the accuracy of the data was maintained through the use of field notes. In addition, triangulation, independent coding, and verifying the true significance of the results from matching field notes enhanced the credibility of the study.

5.16.2 Transferability

The term ‘transferability’ describes how well the findings of qualitative research can be applied to different situations or contexts (Moser & Korstjens, 2018). By comparing sufficient data with the data description, the applicability and generalisation of the findings was ensured.

5.16.3 Dependability

Dependability entails participants' assessment of the study's conclusions, interpretation, and recommendations, all of which must be backed by the information they provided about the study (Moser & Korstjens, 2018). In this study, dependability of the findings was achieved by auditing the data, preserving raw material, and allowing the participants to review the data. There was also a process of manual coding and then the use of Nvivo to assign codes according to the data.

5.16.4 Confirmability

Confirmability of qualitative data is ensured by repeated data checks throughout data collection and analysis to make sure findings are likely to be replicable by other researchers (Chowdhury, 2015). Maintaining meticulous records throughout the study and keeping organised details and field notes in a research journal allowed the researcher to check and recheck data, even in the analysis phase. The use of triangulation here again contributed to the confirmability of the data.

5.16.5 Validity

Validity in qualitative research means that the researcher checks for the accuracy of the findings by employing certain procedures (FitzPatrick, 2019). The validity of a study is related to the appropriateness of the research instrument to enhance the study’s rigour. Multiple triangulation within the study is a method to ensure validity of the research (Coleman, 2022). The triangulation of the data

sources discussed in the earlier sections of this chapter attests to the validity of the information that was considered for this study. Using data from the three different data source levels allowed the researcher to gain insight into the perspectives of the students, programme managers and administrators, in light of the overarching themes that emerged from the review of the policy documents.

The document analysis of secondary documents fulfilled the goal of ensuring trustworthiness in that internal auditors have confirmed the results and outcomes of the policies that were reviewed. In Phases Two and Three of the study, the interview schedule was piloted to test the interview questions and to identify possible areas of concern, as Green and Thorogood (2018) suggest should be done. Considering the intended sample size of twenty participants in the micro-level, it was determined that piloting the study on one student from the previous Cuban cohort was adequate to test the reliability and validity of the research tool. A pilot study was not required for the meso-level, which consisted of a sample size of four programme managers and five administrators.

5.16.6 Reliability

Reliability refers to the usefulness, propriety and dependability of the procedures used in a study, as well as the accuracy of the results obtained (Coleman, 2022). The integrity of the data collected in a study is crucial to research. Firstly, ethical issues related to other qualitative methodologies was reduced to some extent in Phase One, by conducting a document analysis, a method suggested by Morgan (2022). Secondly, the interview schedule for Phase Two was reviewed and piloted in Phase Three.

The accuracy of the information used in the study was tested in a pilot study prior to the official interviews being conducted. A pilot study can be described as a small version of the study and its purpose is to help in the design of the interview schedule and to identify potential problems (Green & Thorogood, 2018). This was done by interviewing one student from the previous Cuban cohort in order to test the consistency of the interview questions that were to be used for the micro-level analysis. For the meso-level, the interview schedule was reviewed by an academic in the Cuban-South African medical collaboration programme to confirm the suitability of the questions in addressing the research aims and objectives. The transcripts of the recorded interviews were also examined and confirmed by an impartial colleague to make sure that all responses from the participants were accurately recorded. In addition, participant member checking was performed to confirm the veracity of the information in the actual transcripts. A digital recorder was utilised to ensure that all information was logged precisely, ensuring the data's reliability and dependability.

5.16.7 Reflexivity

Unconscious bias on the part of the researcher may also result in inaccurate interpretations of the findings. Hence, the researcher needs to be aware of and must take measures to prevent these socially

embedded biases (Gerson & Damaske, 2020). Adopting a detached, emotion-free perspective on the subject of the study was crucial for this investigation. To elicit a genuine, uninfluenced response, questions were asked and participants were given time to respond in their own way. The researcher's responsibility was to listen, pay attention and make notes relevant to the study. The use of Zoom and WhatsApp calls for interviews was advantageous since it allowed participants to feel at ease and unafraid when responding to questions. Finally, reflexivity, which is the researcher's self-awareness and sensitivity, and their constant monitoring of the influence of their biases, beliefs and personal experiences on their research, is crucial to the outcomes of the study (Dodgson, 2019). The diagram presented in Figure 5.14 below summarises and highlights aspect of data integrity in research procedures.

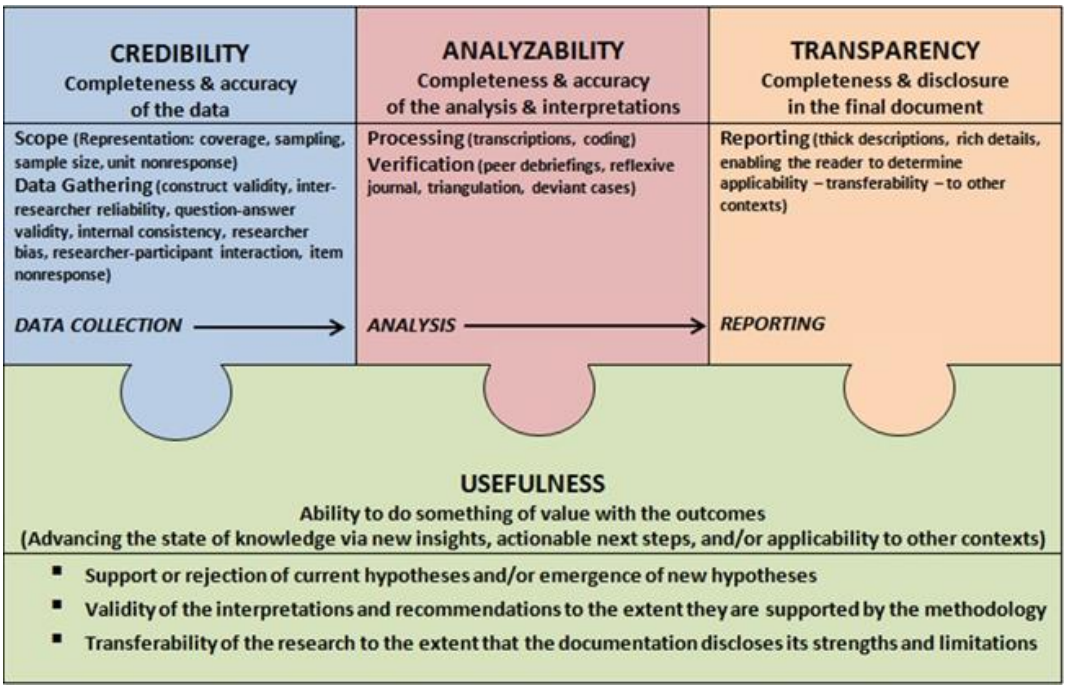

Figure 5.14: Total quality framework *(Source: Roller & Lavrakas, 2015, p.23)*

5.17 Ethical Considerations

Issues that necessitate sound ethical judgments arise during the data collection, analysis and interpretation processes in any study. The concept of research ethics involves more than just a focus on the well-being of research participants. It extends into areas like the prevention of scientific misconduct and plagiarism (Jowett, 2020) and therefore it was important to maintain ethical thought and consideration throughout this study. The consideration of ethical issues was of paramount importance to the research.

5.17.1 Ethical principles

The philosophical principles that uphold ethical research were at all times respected and upheld during the research processes involved in this study. These are:

 Autonomy and respect for the dignity of persons

Ethical clearance had to be granted by the UKZN's Research Ethics Committee before any data could be collected. The protocol reference number for this study is HSSREC/00002464 (Appendix A). Through the use of aliases instead of real names, the participants' anonymity was protected. An informed consent form that stated that all responses will be treated in a confidential and anonymous manner was presented to all participants (Appendix C) for them to sign in agreement to participate in the study, and they were also advised that their participation in the study was voluntary, and that they could withdraw at any time.

 Nonmaleficence.

According to this rule, researchers must 'do no harm' to the research participants and must consider any potential risks (physical, emotional and social) that the study may inflict upon them (Jowett, 2020). This was maintained in this study through the use of an informed consent form (Appendix C). When describing the findings of the study in subsequent chapters, the participants' identities will be protected by omitting their names and instead using aliases. The confidentiality of all respondents was strictly upheld, and only the researcher and her supervisor had access to the transcripts of the interviews.

 Beneficence.

Designing a study with the participants and society at large in mind is necessary for beneficence (Jowett, 2020). This study fulfils this principle as the findings of the study are to be used to produce recommendations regarding how support for the Cuban-South African medical collaboration at programme and cohort level can be implemented and how the programme can thus be improved.

5.17.2 Ethical measures observed in the study

Interviews could only be conducted after ethical clearance was obtained. The procedure was initiated with an email to the Deputy Vice Chancellor of the College of Health Sciences at UKZN explaining the nature and purpose of the study and the involvement of staff and students in the college. A gatekeeper's permission letter (Appendix B) was obtained from the UKZN's Registrar's office. Ethical clearance for the research was applied for through the UKZN Research Information Gateway system and approval was granted by the Research Ethics Committee prior to the commencement of data collection. The reference number of the ethics approval is HSSREC/00002464 (Appendix A).

There are five main principles of ethics to consider when conducting a qualitative research study, which aim to protect the rights of participants and to enhance the validity and integrity of the research (Saunders *et al*., 2019). These principles are:

- *Voluntary participation*: This was maintained throughout the process of recruiting and interviewing participants for this study. The purpose of the study was explained and subjects were advised that their participation was voluntary and that they could withdraw at any stage of the research.
- *Informed consent*: Consent to participate in the study was obtained as a pre-requisite to the interview process. This was achieved in the form of an informed consent letter detailing the intended purpose and outcomes of the study and advising participants that their interview would be recorded.
- *Confidentiality and anonymity of participants*: The privacy, anonymity and confidentiality of participants was considered at all times to ensure the protection of the interests of those who participated in the study which, according to Jowett (2020), is essential in research. All interview schedules were coded with aliases and did not refer to the participants' real names. The interviews were recorded and the interview process was conducted with the participants' consent, respect and dignity in mind at all times. Participants were not misled, coerced or harmed in any way (Goodwin, Mays & Pope, 2020).
- *Prevention of potential harm*: Potential for harm refers to the social, psychological and physical harm that a participant could endure in participating in the research study (Arifin, 2018). This was an important consideration in terms of the questions included in the interview schedule and participants were reassured that they did not have to answer any question that they were not comfortable with. The researcher also ensured that the language used in the interview schedule was not offensive**.**
- *Transparency and integrity*: Communication of results for transparency and integrity of the data collected and to prevent falsifying information and miscommunicating responses is crucial in qualitative research. Participants were given the opportunity to review the transcription and have also been offered a copy of the thesis on completion of the write up of the study.

The study's goals and objectives were all clearly stated, and the research was carried out using an honest and open system. To prevent plagiarism, any information used from institutional platforms and published sources is acknowledged and presented in an objective, authentic manner.

5.18 Conclusion

The study's research philosophy, paradigm, methodology, and research design were all outlined in this chapter. The focus of the chapter was on the methodology used to collect data and techniques used to

analyse the responses of the participants, which are important in addressing the aims and objectives of the research. Guided by the theoretical underpinnings used to create the conceptual framework, the methodology chapter explored how the credibility of data collected was ensured in the qualitative research design while contributing to the body of academic knowledge. The most appropriate methodological design and strategies were chosen based on the study's aims and objectives. Thematic analysis was used to analyse both policy document data and the semi-structured interviews at meso and micro-level. A rich source of data was yielded in order to address the aims and objectives of the study. Ameliorating the situation of an inadequate supply of doctors in South Africa is crucial to the fundamentals of health care in the country and therefore identifying and understanding the challenges of the Cuban medical training programme justified the need for this research. The chapter to follow presents the key themes and findings that emerged in the data analysis process.

Chapter 6

Presentation of Findings

6.1 Introduction

This chapter presents the findings from the data collection phase, which focused on gathering relevant data to address the study's aims and research objectives. The data collection process to gather data that would allow the compilation of the findings of the study was divided into three phases, the macro, meso and micro-levels, and the data retrieved in each of these phases was further divided into the themes that emanated through the data collection endeavour. Considering that the data collected during the course of the study was rather extensive, each phase is presented as a separate sub-section of this chapter.

The first phase of the research involved analysing and comprehending the policies that form the basis of human resource management for health and student training in Cuba. A review of secondary data policy documents related to human resources management for health and student records from the UKZN and the HPCSA at macro-level highlighted key themes that influenced the collection of data at subsequent levels. Table 6.1 on the next page provides a recap of the aims and objectives of the study.

Table 6.1: Research aims and objectives of the study

Research Phase	Research Aims and Objectives	Data Collection Method	Data Analysis
Phase 1	Aim 1 RO1	WHO Global Strategy on Human Resources for Health Workforce 2030 (World Health Organisation, 2016)	Thematic analysis
	Aim 1 RO2	Document analysis – institutional planning MBCHB student records and HPCSA registration data	Thematic analysis
		Department of Health 2030 Human Resource for Health Strategy	
	Aim 1 RO3	National Development Plan 2030	Thematic analysis
Phase 2	Aim 2 RO1	Semi-structured interviews with programme administrators at the Nelson R Mandela School of Clinical Medicine, UKZN	Thematic Analysis
	Aim 2 RO2	Semi-structured interviews with the programme managers at the Nelson R Mandela School of Clinical Medicine, UKZN	Thematic analysis
	Aim 3 RO3	Document analysis – UKZN and HPCSA values and principles	Thematic analysis
Phase 3	Aim 3 RO1, 2, 3	Semi-structured interviews with South African students studying medicine in Cuba	Thematic analysis

6.2 Phase 1 Macro-level: Document Analysis

This section deals exclusively with the documents that were reviewed in response to the macro-level aims and objectives of the study. The macro-level aims and objectives are presented in Table 6.2 on the next page.

Table 6.2: Macro-level aim and objectives of the study

AIM1 : MACRO-LEVEL	•OBJECTIVES
To analyse the challenges facing the Cuban-South African medical collaboration in terms of increasing the numbers of trained doctors and producing the relevant skills required for an efficient health workforce, in keeping with the demands of the National Development Plan 2030.	•To identify the challenges facing the Cuban-South African medical collaboration programme in producing the desired number of doctors to build and sustain a skilled health care workforce. •To assess whether the current Cuban-South medical collaboration programme is meeting the demand for the relevant quality of skills for the South African Human Resources for Health. •To evaluate whether the Cuban-South African medical collaboration programme is aligned in developing a skilled health care workforce in line with the National Development Plan 2030.

Addressing the aims and objectives at macro-level involved a 'funnel' approach to reviewing policy documents, starting with the WHO's Global Strategy on Human Resource for Health Workforce 2030, the Department of Health of the Republic of South Africa's Human Resources for Health Strategy and the NDP2030, and finally studying the student records at UKZN and the statistics presented by the HPCSA for a five-year period from 2015 to 2019. This information was sourced through the department of Institutional Planning at UKZN in order to highlight the discrepancy between policy and practice that was revealed by the review of HRH documents and the records of the UKZN medical students.

Only policies relating to HRH were included in the pool of documents analysed for the study. The rationale for selecting these particular documents was based on the need to understand and address South Africa's current crisis relating to the shortage of medical doctors which has been exacerbated in the post-Apartheid era. These policies were introduced as part of South Africa's strategy to address skills shortage with the aim of health promotion in under-served areas and of keeping the country's provision of health care in line with the SDGs and UHC espoused by the WHO. The diagram presented in Figure 6.1 illustrates the layers of HRH policy documents globally and nationally, the NDP2030, and student records and data obtained from UKZN and the HPCSA, respectively. The policy documents all delineate goals towards a common purpose of developing skills and increasing human capacity in the health workforce and explain how these relate to the idea of UHC.

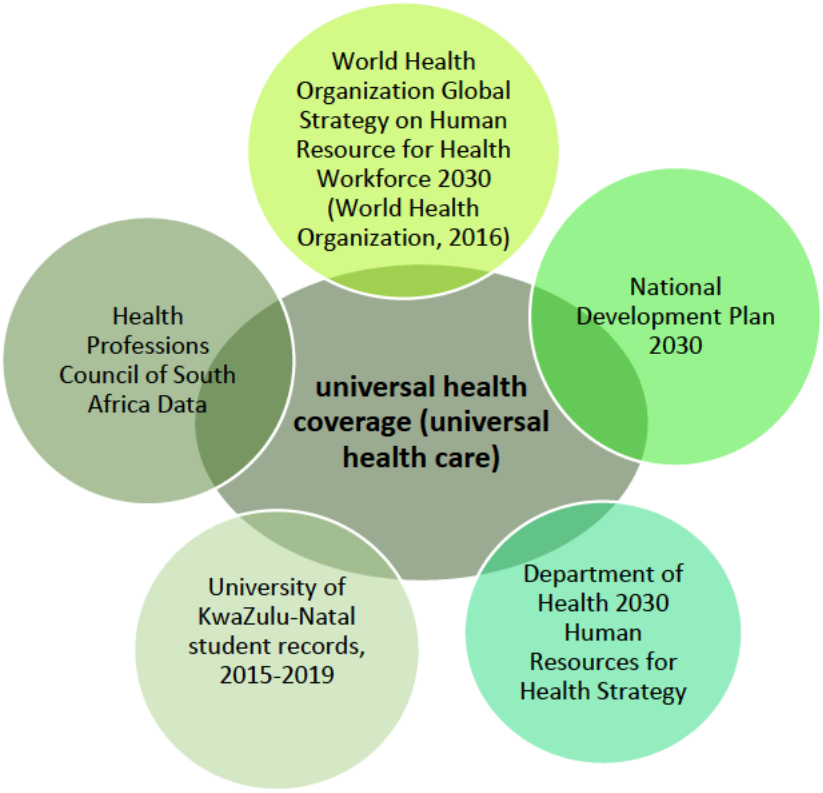

Figure 6.1: Macro-level analysis of policy and student records

Figure 6.2 on the following page presents data taken from the Global Economy website (*https://www.theglobaleconomy. com/compare-countries/)* which indicates the trends in the doctor to patient ratio in South Africa from the year 2015 to 2019. For the years 2015 and 2017 there was a ratio of 0.78 doctors per 1000 patients, with a decrease to 0.77 in 2016 and 0.75 in 2018 respectively. The maximum number of doctors per 1000 people within this period was seen in the year 2019, at 0.79 doctors per 1000 people. The average ratio of doctors to patients in South Africa for the period 2015-2019 was 0.74 doctors per 1000 people.

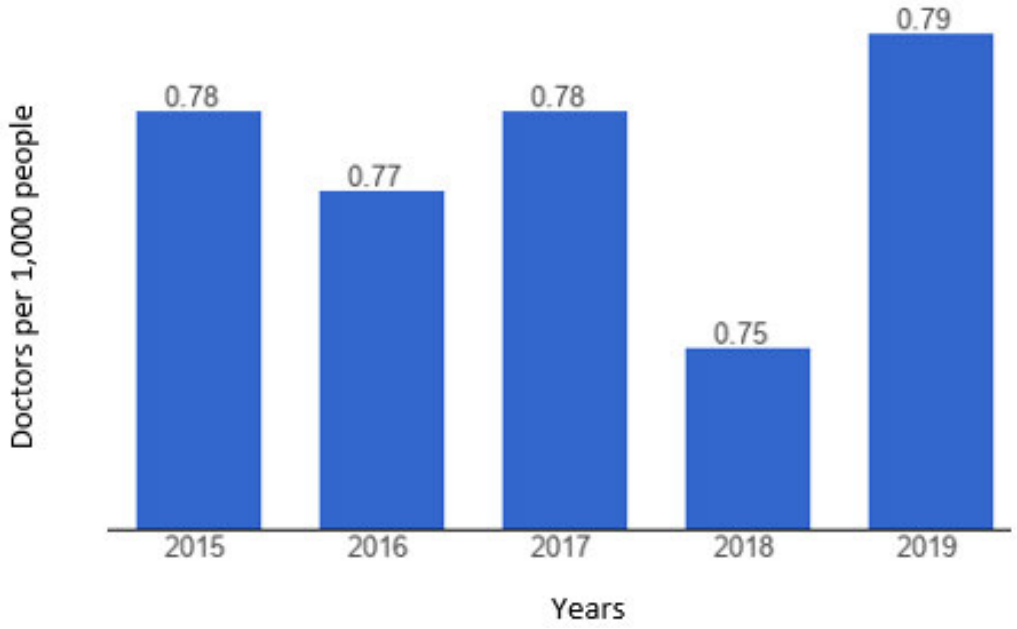

Figure 6.2: Doctor-patient ratio in South Africa for the period 2015-2019 *(Source: https://www.theglobaleconomy.com/South-Africa/doctors_per_1000_people/)*

Figure 6.3 on the next page presents a comparison of doctors per capita for the BRICS member states, namely Brazil, Russia, India, China and South Africa, for the years 2015 to 2019, as compiled by Global Economy. If the ratio of doctors to patients for the five BRICS nations is compared, it is clear that Brazil and China follow Russia in having the highest doctor-to-patient ratios, with India and South Africa trailing behind. The graph shows that from 2015 to 2019, the doctor-to-patient ratio in South Africa remained relatively stable. This is evident in the threshold of figures that is constant in the region of 0.75 to 0.79 over this period. In South Africa, the actual ratio of doctors to patients is shown above in Figure 6.2. According to the data extracted from the Global Economy website, the ratio was 0.78 for 2015 and 2017, 0.77 for 2016, 0.75 for 2018, and 0.79 for 2019, with a dip in 2018 to 0.75 per 1000 people and a subsequent rise in 2019.

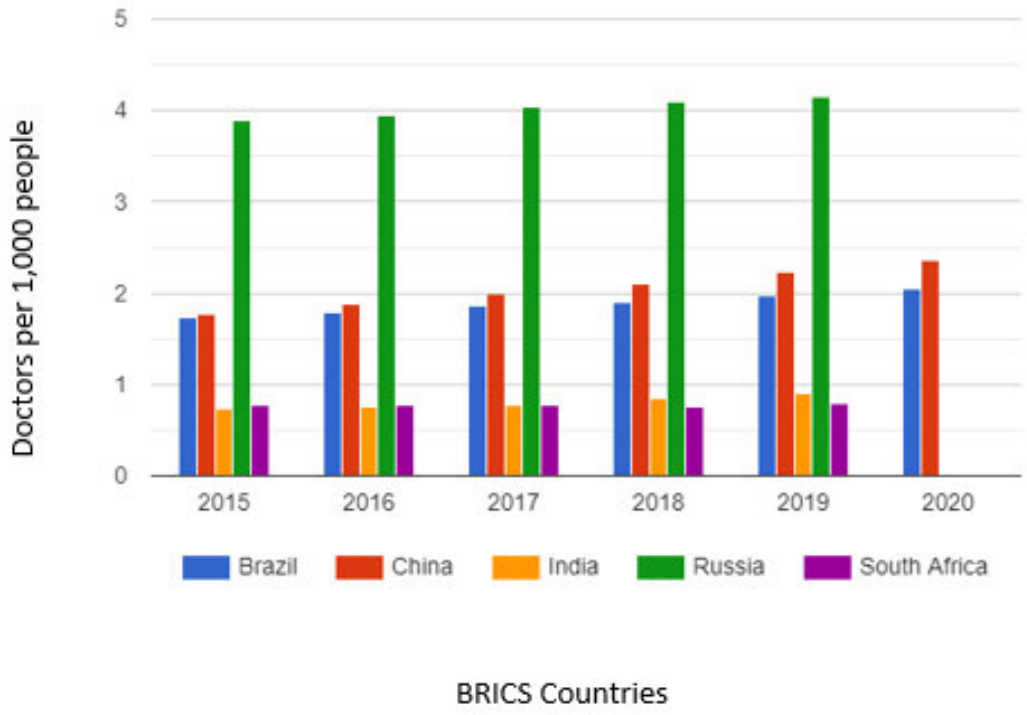

Figure 6.3: Comparison of BRICS doctor-patient ratio *(Source: https://www.theglobaleconomy.com/compare-countries/)*

6.2.1 World Health Organisation Global Strategy on Human Resources for Health: Workforce 2030

The central objective of the WHO's Global Strategy on Human Resources for Health: Workforce 2030 is to increase the effectiveness, impact and efficiency of the health workforce through the implementation of policies on HRH, for effective UHC and strengthened health systems at all levels. The WHO has suggested a number of strategies that may be rolled out by countries in an effort to improve the attraction and recruitment of health workers to the field, as well as to foster their professional development and to encourage their retention in rural and remote areas (Kolié *et al*., 2023). These strategies include: targeted admissions policies to enrol students from rural backgrounds into education programmes; the placement of health education facilities closer to rural areas; exposure of students from a wide range of Health Sciences disciplines to rural and remote communities and rural clinical practices; and the inclusion of rural health topics in health education (Kolié *et al*., 2023). The four major themes that emerged when reviewing the WHO's Global Strategy on Human Resources for Health: Workforce 2030 policy are highlighted below.

Major Theme 1: Quality

The health workforce is critical in order to optimise the quality of service delivery provision to rural, remote and under-served areas. The Global Strategy on Human Resources for Health: Workforce 2030 weaves a significant thread on the theme of quality throughout the policy. The first of the four objectives of the WHO's Global Strategy is to:

> *"Optimize performance, quality and impact of the health workforce through evidence-informed policies on human resources for health, contributing to healthy lives and well-being, effective universal health coverage, resilience and strengthened health systems at all levels"* (World Health Organisation, 2016, p. 15).

The policy also speaks to the quality of training institutions and the accreditation of qualifications of health care workers by advocating for:

> *"Strengthening the capacity and quality of educational institutions and their faculty through accreditation of training schools and certification of diplomas awarded to health workers"* (World Health Organisation, 2016, p. 21).

Major Theme 2: Effectiveness

The WHO's Global Strategy on Human Resources for Health: Workforce 2030 outlines the international policy agenda to guarantee a health workforce that is qualified to meet the goals of UHC and the SDGs. In order to achieve this, there needs to be investment in health worker recruitment, education, training, deployment and retention, and a concerted effort to hire locally trained health workers to fill national and international needs (Boniol et al., 2022). The extract below from the Global Strategy highlights this by urging countries to:

> *"Build the capacity of institutions at subnational, national, regional and global levels for effective public policy stewardship, leadership and governance of actions on human resources for health"* (World Health Organisation, 2016, p. 29).

Major Theme 3: Sustainability of Human Resources for Health

The WHO's Global Strategy on Human Resources for Health: Workforce 2030 further motivates for the need for countries to strengthen the data extracted on HRH to allow for better monitoring and accountability of national and regional strategies. It also calls for the development of capacity for planning in order to create or enhance HRH policies and plans that account for the supply, demand and needs of the health workforce. This is evident in the following statement which prompts countries to:

> *"Strengthen data on human resources for health for monitoring and accountability of national and regional strategies, and the Global Strategy"* (World Health Organisation, 2016, p. 33).

Major Theme 4: Culture of Health

A major component of health-related reforms and the realisation of UHC is the cultural element and the transformation of the health culture. Objective Two of the WHO's Global Strategy on Human Resources for Health: Workforce 2030 indicates that countries should:

> *"Align investment in human resources for health with the current and future needs of the population and health systems, taking account of labour market dynamics and education policies, to address shortages and improve distribution of health workers"* (World Health Organisation , 2016, p. 23).

6.2.2 Department of Health 2030 Human Resource for Health Strategy

The basis of the South African Department of Health's 2030 Human Resources for Health Strategy is to serve as the foundation for the planning and forecasting of the HRH policy to be implemented in South Africa, especially in terms of the health workforce required to ensure effective primary health care provision. The policy highlights the limitations of previous models and emphasises the strengthening of primary health care, since only a small portion of medical visits necessitate extremely specialised care in South Africa. Von Pressentin (2021) asserts that the South African government must act decisively to improve equity in the distribution of health care providers between the public and private health sectors, as well as between urban and rural areas. The four main themes that emerge in the Department of Health's 2030 Human Resources for Health Strategy are outlined below.

Major Theme 1: Effectiveness

One of the key points of the Department of Health's 2030 Human Resource for Health Strategy is that:

> *"There can be no delivery of universal health coverage and National Health Insurance without a skilled, enabled and supported health workforce"* (Department of Health 2030 Human Resources for Health Strategy, 2020, p. 2).

The focus of this policy is contextual and addresses the specific health worker requirements for South Africa. Like the WHO's Global Strategy, the Department of Health's 2030 Human Resources for Health strategy is geared towards planning, transformation and health reforms. In terms of effectiveness the following extracts were highlighted:

> *"Strengthen strategic health workforce planning capability, methodologies and processes at national, provincial, district and facility levels" - Goal 1, Objective 1* (Department of Health 2030 Human Resources for Health Strategy, 2020, p. 46).

> "*Ensure transformed and modernised curricula and training platforms to imbue the health workforce with the requisite values, knowledge and population-centred competencies so that they are able address the quadruple burden of disease and meet current and future health system needs" - Goal 3, Objective 3* (Department of Health 2030 Human Resources for Health Strategy, 2020, p. 59).

Major Theme 2: Quality

The emphasis on quality was a common theme in the Department of Health 2030 Human Resources for Health Strategy, speaking to the competence and capacity of HRH through role clarity and function. The following extracts from the policy were used to highlight this theme:

> *"Institutionalise a critical mass of empowered, competent, accountable and capacitated Human Resource for Health leaders and managers at national, provincial and district levels" - Goal 4, Objective* 3 (Department of Health 2030 Human Resources for Health Strategy, 2020, p. 65).

> *"Ensure role clarity and improved competence and capacity of HR Managers and line managers in HR functions" - Goal 4, Objective 5 (*Department of Health 2030 Human Resource for Health Strategy, 2020, p. 65).

Major Theme 3: Sustainability

Sustainability is the key aspect of the long-term goals of all policies related to HRH. The Department of Health 2030 Human Resources for Health Strategy focuses on revolutionising the recruitment and selection of the health professional from student level to address inequities between urban and rural health sectors. The extract below speaks to this:

> *"Revolutionise selection and recruitment of health professional students to overcome health workforce inequities, between urban and rural areas, and between the public and private health sectors" - Goal 3, Objective 2* (Department of Health 2030 Human Resources for Health Strategy, 2020, p. 59).

To maintain ongoing sustainability, health worker recognition and investment into development is also addressed:

> *"Optimise health worker recognition, supervision, performance management and development" - Goal 5, Objective 3* (Department of Health 2030 Human Resources for Health Strategy, 2020, p. 72).

Major Theme 4: Culture

The final theme of this policy highlights culture in terms of health-related reform. The Department of Health 2030 Human Resources for Health Strategy motivates for a developmental and innovation expansion of education, taking into account the values of equity and rights for all in order to provide effective, respectful care. The three quotes below taken from the policy emphasise this:

> *"Facilitate the development and innovative expansion of educators (faculty) to ensure the production of a socially accountable health workforce" - Goal 3, Objective 4* (Department of Health 2030 Human Resources for Health Strategy, 2020, p. 59).

> *"Embed a positive practice environment and culture, which is based on the values of equity, gender transformation, decent work and respect for rights" - Goal 5, Objective 1 (*Department of Health 2030 Human Resources for Health Strategy, 2020, p. 72).

> *"Establish, promote and maintain infrastructure and conditions of service that ensure effective and respectful care" - Goal 5, Objective 2* (Department of Health 2030 Human Resources for Health Strategy, 2020, p. 72).

6.2.3 National Development Plan 2030

The NDP2030 calls for an effective and efficient South African health system, financed through the proposed NHI system, and emphasises the pressing need to strengthen primary health care, with a focus on health service delivery in rural areas for improved access and equity (National Department of Health, 2022). In Chapter Ten of the NDP2030, several themes were identified in the goals listed in Table 6.3 on the following page.

Table 6.3: Goals and themes of National Development Plan 2030 *(Source: National Department of Health, 2022)*

Goals of Chapter 10 National Development Plan 2030	Deductive themes of the study
• **complete health system reforms**	Culture
• **primary health care teams that provide quality care to families and communities**	Quality
• **universal health coverage coverage**	Sustainability
• **filled posts with skilled, committed and competent individuals**	Effectiveness

The objectives outlined in Chapter Ten of the NDP2030 are aligned with the themes of this study's deductive analysis listed in the table above, which highlights the objectives that pertain to building a more robust health system and improved standards of care for the HRH. The policy highlights the main challenge as "the capacity to implement policy, enforce legislation, and deliver services" (National Department of Health, 2022, p. 298). The process of continuously enhancing all citizens' capabilities, especially those who were previously underprivileged, was defined by the National Planning Commission's development framework as a process to enhance national capabilities by focusing on human capital through education, health, skills and work experience (National Department of Health, 2022). While the goals of the NDP2030 seem unattainable by the proposed year, the Cuban-South African medical collaboration's development of skills in primary health care aligns with the goals of health-related outcomes and the SDGs for UHC. However, in order to accomplish these goals, the government of South Africa needs to increase the programme's visibility.

6.3 Comprehensive Analysis of all Three Policy Documents

Considering that the WHO's Global Strategy on Human Resources for Health: Workforce 2030 calls for health systems to draw on the capacities of the health care workers, the concept of quality will be discussed and emphasised, as it is mentioned approximately thirty times in two of the policy documents considered in this study. Quality in HRH can be achieved through effective recruitment practices, quality training and development programmes, embracing transformative changes and improving retention strategies (World Health Organisation, 2016). It also requires aligning HRH with the current and future needs of the population. Table 6.4 on the next page presents a comprehensive analysis of all three policy documents reviewed in the study and highlights the main themes arising from these.

Table 6.4: Comprehensive analysis of policy documents and themes

Reviewed Documents	Deductive Themes			
	Effectiveness	**Quality**	**Sustainability**	**Culture**
WHO Global Strategy on Human Resources for Health Workforce 2030 (World Health Organisation, 2016)	Build the capacity of institutions at subnational, national, regional and global levels for effective public policy stewardship, leadership and governance of actions on human resources for health	Optimize performance, quality and impact of the health workforce through evidence-informed policies on human resources for health, contributing to healthy lives and well-being, effective universal health coverage, resilience and strengthened health systems at all levels	Strengthen data on human resources for health for monitoring and accountability of national and regional strategies, and the Global Strategy	Align investment in human resources for health with the current and future needs of the population and health systems, taking account of labour market dynamics and education policies, to address shortages and improve distribution of health workers
Department of Health 2030 Human Resources for Health Strategy (National Department of Health, 2020a)	Strengthen strategic health workforce planning capability, methodologies and processes at national, provincial, district and facility levels Goal 1, Objective 1 Ensure transformed and modernised curricula and training platforms to imbue the health workforce with the requisite values, knowledge and population-centred competencies so that they are able address the quadruple burden of disease and meet current and future health system needs Goal 3, Objective 3	Institutionalise a critical mass of empowered, competent, accountable and capacitated Human Resource for Health leaders and managers at national, provincial and district levels Goal 4, Objective 3 Ensure role clarity and improved competence and capacity of human resource managers and line managers in human resource functions. Goal 4, Objective 5	Revolutionise selection and recruitment of health professional students to overcome health workforce inequities, between urban and rural areas, and between the public and private health sectors Goal 3, Objective 2 Optimise health worker recognition, supervision, performance management and development. Goal 5, Objective 3	Facilitate the development and innovative expansion of educators (faculty) to ensure the production of a socially accountable health workforce. Goal 3, Objective4 Embed a positive practice environment and culture, which is based on the values of equity, gender transformation, decent work and respect for rights. Goal 5, Objective1 Establish, promote and maintain infrastructure and conditions of service that ensure effective and respectful care. Goal 5, Objective2
NDP2030 (National Planning Commission, 2012)	filled posts with skilled, committed and competent individuals	primary health care teams that provide quality care to families and communities	universal health coverage	complete health system reforms

Figure 6.4 below presents the frequency of themes arising from the three policy documents reviewed. The themes are depicted on the graph, not as a comparison, but to demonstrate their presence in policy. The discussion chapter will expand in greater detail about these themes identified in the policies.

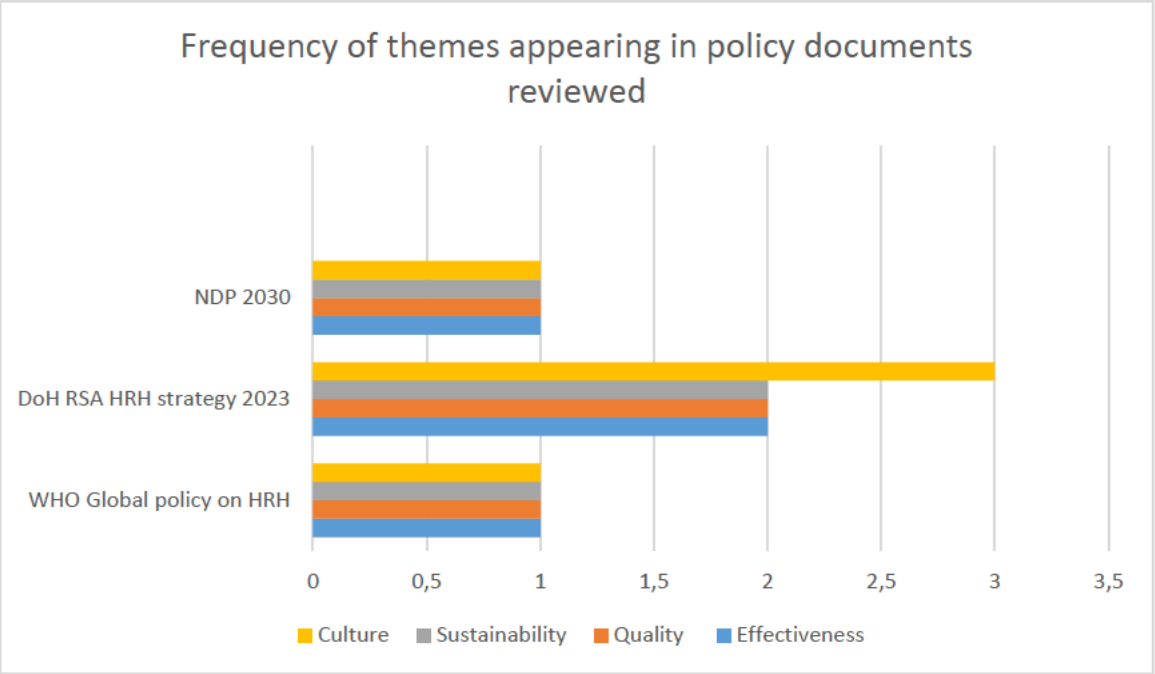

Figure 6.4: Presence of deductive themes in policy documents reviewed

6.4 University of KwaZulu-Natal Student Records 2015-2019

In addition to the policy documents considered above, UKZN and HPCSA student enrolment and completion statistics records were reviewed to serve as evidence of the low output of medical graduates from UKZN School of Medicine. Both these documents spanned a five-year period from 2015 to 2019 in order to maintain consistency for the study objectives. The student records for enrolments over these years at the University if KwaZulu-Natal's Nelson Rohihlahla Mandela School of Clinical Medicine have been presented in Table 6.5 on the following page in order to support the premise upon which the Cuban cohort programme is based, namely that the output of medical students is significantly lagging behind the demand for critical medical and clinical skills in South Africa.

Table 6.5: MBCHB student enrolment at University of KwaZulu-Natal, 2015-2019

YEAR	ENROLMENTS	GRADUATES	EXCLUSIONS	DROPOUTS	CONTINUING STUDENTS	CHANGED QUALIFICATIONS
2015	1367	160	3	23	1180	1
2016	1453	207	2	30	1213	1
2017	1500	189	5	40	1265	1
2018	1538	202	4	39	1292	1
2019	1667	193	5	95	1374	0

(Source: University of KwaZulu-Natal Institutional Planning student information)

The total number of students enrolled in the MBCHB programme at UKZN from 2015 to 2019 ranged between 1300 and 1667. However, the annual output of graduating students ranged between 160 and 207 over the years 2015-2019. This figure does not account for the students who changed their qualifications, those who were excluded from the programme, or others who discontinued their studies in the MBCHB programme.

The UKZN Institutional Planning department registers the Cuban cohort enrolments separately from the MBCHB programme on their database of records. In Table 6.6 below, it can be seen that the numbers of students enrolled in the Cuban-South African medical collaboration ranged from 94 in 2018 to 142 in 2021. These figures represent only students returning to the Nelson Rohihlahla Mandela School of Clinical Medicine at UKZN and does not indicate the total numbers of South African students sent to train in Cuba. The data below demonstrates that although Cuban medical training is a supplemental programme, the output is notably low. There was no available data on the numbers of graduated students from the Cuban cohort. This is probably due to the fact that the graduation of the Cuban cohort is coordinated by the Department of Health, and not by UKZN.

Table 6.6: Cuban cohort student enrolment at University of KwaZulu-Natal, 2018-2021

	2018	2019	2020	2021
Cuban Enrolments	94	128	211	142

(Source: University of KwaZulu-Natal Institutional Planning student information)

Total no of new Qualifications registered per Year (2015 – 2020)

REG_CODE	QUALIFICATION	QUAL_REG_YEAR	Total
MP	Nat Exam - Cuba	2015	45
		2016	25
		2017	56
		2018	20
		2019	2
	Nat Exam - Cuba Total		148

Figure 6.5: Registration of medical doctors from the Cuban cohort, 2015-2019 *(Source: Health Professions Council of South Africa database of records)*

Although they are not involved in the actual training of the MBCHB students and the Cuban-South African medical collaboration, the HPCSA is essential to the completion of medical training for all health sciences professionals. All medical doctors, including those trained in the Cuban cohort, have to be registered with the HPCSA in order to practice medicine in South Africa. Figure 6.5 above reflects registration of medical doctors from the Cuban cohort for the period 2015 to 2019. The statistics indicate that during this period a total of 148 students from the Cuban cohort were registered with the HPCSA to practice as medical doctors, with 45 registering for 2015, 25 for 2016, 56 for 2017, 20 for 2018 and only 2 for the year 2019. Unfortunately, the HPCSA was not able to provide statistics for the year 2020 as there were no completions available. The registration of doctors per year is extremely low and notably concerning as a supplementary solution to the shortage of doctors in South Africa.

6.5 Phase 2 Meso-level: Semi-structured interviews with administration and management of the Cuban-South African medical collaboration programme

This phase of analysis is the intermediary phase which links the macro and micro levels of the study. Arising from the policies and requirements prescribed by stakeholders, government, professional and academic institutions, the meso phase deals specifically with the administration and management of the Cuban-South African medical collaboration programme. The second aim of the study with the accompanying objectives are outlined in Table 6.7 on the next page. The inductive analysis was grounded on the themes that emerged from the interviews at meso and micro-levels. This section begins with a breakdown of the characteristics of the participants included in the meso-phase, focusing on their demographic information. The frequency of themes and the presentation of the findings relating to each of the themes will follow thereafter.

Table 6.7: Meso-level aim and objectives of the study

AIM 2: MESO-LEVEL	•OBJECTIVES:
To analyse the challenges facing the Cuban-South African medical collaboration programme in terms of administrative challenges with professional and regulatory bodies viz., Health Professions Council of South Africa and the University of KwaZulu – Natal in terms of institutional culture and compatibility of the programme	•To identify the administrative challenges facing the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine, when dealing with the Cuban-South African medical collaboration students. •To identify the programme management challenges facing the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine, when dealing with the Cuban-South African medical collaboration students •To identify the challenges in terms of the compatibility of the Cuban-South African medical collaboration programme to the institutional culture at the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine and Health Professions Council of South Africa

6.6 Participant Characteristics

The findings of the nine semi-structured interviews that were conducted at two levels in the meso phase of the study are presented in the sections to follow. Table 6.8 below indicates the demographic details of the meso-level participants of the study highlighting their position in the Cuban-South African medical collaboration programme, as well as their race, gender and years of tenure at UKZN.

Table 6.8: Demographic information of meso-level participants

No	Alias	Programme Manager/Admin	Gender	Race	Tenure at University of KwaZulu-Natal
1	PA_CP	Administrator	Female	Indian	> 10 years
2	PA_DP	Administrator	Male	Indian	> 10 years
3	PA_MM	Administrator	Female	Indian	> 10 years
4	PA_SS	Administrator	Female	White	> 10 years
5	PA_SM	Administrator	Female	Black	> 10 years
6	PM_SR	Manager	Female	Indian	> 10 years
7	PM_BD	Manager	Female	Black	> 10 years
8	PM_FB	Manager	Male	White	> 10 years
9	PM_LM	Manager	Female	Indian	> 10 years

Table 6.8 illustrates that out of the five programme administrators (PA 1-5) interviewed, three were Indian, one was White and one participant was Black. Four of the five programme administrators were female and one was male. The programme managers (PM 6-9 in Table 6.8) consisted of three females and one male, with two participants being Indian, one White and one Black. Eight of the nine participants in this phase have been working at UKZN for more than ten years and only one person has worked at the university for less than ten years. While length of tenure was not a prerequisite for the interviewees to participate in the study, it was acknowledged as an important criterion based on the participants' greater knowledge of and interaction with the Cuban cohort at UKZN.

6.7 Themes that Emerged from the Meso-Level: Programme Administrators

Table 6.9 below presents a summary of the themes that emerged from the interviews with the programme administrators at the meso-level. These themes stemmed from the challenges facing the UKZN administrators in assisting students at programme level and ranged from difficulties with completion of documents for registration, processing of stipends, book and meal allowances, to problems with accommodation, transport and logistics, as well as matters related to the distribution of medical equipment and personal protective equipment, lack of social support and connectivity issues. These challenges usually have a ripple effect and impact the smooth transitioning of the Cuban cohort into the UKZN system.

Table 6.9: Meso-level programme administrator themes and sub-themes

Themes and sub-themes arising from University of KwaZulu-Natal programme administrator interviews		
Main themes and sub-themes	**Frequency**	**Percentage**
Theme 1: Administrative challenges	5	100%
Sub-Theme 1: Documentation **Sub-Theme 2: Administration of the programme**	4 4	80% 80%
Theme 2: Operational challenges	5	100%
Sub-Theme1: Distribution of equipment **Sub-Theme 2: Logistics**	4 4	80% 80%
Theme 3: Social Challenges	5	100%
Sub-Theme 1: Communication **Sub-Theme 2: Psycho-social Support**	4 4	80% 80%
Theme 4: Technical Challenges	4	80%
Sub-theme 1: Connectivity	4	80%

6.7.1 Major theme 1: Administrative challenges

The main theme of administrative challenges can be divided into: the processing of students' documentation; and the actual administration of the programme. This theme relating to administrative challenges highlights the starting point of the administrative process when the students from the Cuban cohort return to South Africa and assimilate with the University of KwaZulu-Natal to complete their training. The filling in of forms and online documentation, as well as the actual administration involved in capturing details of the cohort students to register them and align them with the records of UKZN, present numerous challenges. These challenges will be discussed in the sections to follow, and will be supported by excerpts taken from the interviews with the programme administrators.

6.7.1.1 Sub-theme 1: Documentation challenges

The inability of students to complete the necessary documentation while still residing in Cuba meant that programme administrators have to wait for students to return to South Africa in order to complete their registration at UKZN. The response below from one administrator indicated that she thought that, ideally, the students should be registered on the system before they arrive in South Africa:

> *"That was causing them a major hassle and undergrad office assisted there because the students that couldn't get it (paperwork) done in Cuba and had to come to South Africa to do it at the undergrad office and they helped cos some of them didn't have access to the electronic systems that we have" - PA_MM*

The major challenges encountered by students whilst they were in Cuba was limited, or a complete lack of, access to the necessary technological infrastructure such as computers, scanners or printers. As such, they were unable to complete their registration. For the university database to be updated with student information, both manual and electronic forms must be filled out. Processing documents is the first step in all administrative processes, but the Cuban cohort students found this to be very challenging. The students' inability to correctly complete the paperwork without assistance from the undergraduate office presented administrators with difficulties in that delays were caused, resulting in students having to return to South Africa in order to process their paperwork. An administrator, PA_SM, said:

> *"We have tried, err, but again, I mean, academic managers, services manager have tried to send documents to them while they in Cuba to avoid the delay in, in getting their registration, I mean, finalised but, I mean, that did not work, you know. There were issues, err, err, about them, err, them having to return the completed forms. The forms were not completed correctly, you know. So, those forms could not be used. So as a result now we wait for them to get here and then we give them, but the fact that you have to wait for them to get here and do the forms, it causes a delay on their registration" - PA_SM*

6.7.1.2 Sub- theme 2: Administration of the programme

Administrators were consequently unable to process the required stipends in a timely manner because Cuban cohort students were unable to register early as UKZN students. This had a significant impact on their ability to purchase the essential staples. Participant PA_SM explained:

> *"Once registration is delayed, it delays the whole, a lot of other things like, errr, the, the, the release of their stipends. You know from the moment they get here they are hungry, they need money, you know, but, but, they, but those refunds can't be processed, I mean, before they are active on the system. So those are the challenges that are, that pertains to completion of documents" - PA_SM*

The delays in processing of exam results by the Department of Health through the Cuban Council's central coordinator's offices both at provincial and national level adds to the backlog in the registration of students at UKZN. The students are bound by the HPCSA's rules and as such there is specific documentation that needs to be completed and processed in their final year in order for them to be registered with the Department of Health as junior interns. Firstly, the registration document has to be captured and paid for so students can begin their clinical rotations. Secondly, the completion document has to be captured in order for students to be registered with the Department of Health and for them to obtain their HPCSA licence to practice medicine.

The HPCSA's offices are based in Cape Town and, as such, physical copies of documents from the UKZN offices have to be hand delivered by courier to the Council offices in batches. As the Council does not have a designated staff member dealing specifically with applications from KwaZulu-Natal, these documents often are lost or misplaced. This has a direct impact on students' ability to begin work at provincial hospitals as they cannot work without HPCSA registration. Participant PA_DP emphasised this point in his response:

> "*What happens is that Health Professions Council of South Africa is based in Cape Town so once we receive the student information, completed forms with the supporting documents, it has to be couriered to Health Professions Council of South Africa. We send them off in bulk and depending on who's…Health Professions Council of South Africa doesn't have designated staff for these. So whoever is on call that day, will collect the forms, then sometimes these forms are left in out trays, in trays and only after follow up, when we follow up and follow up then these forms are located. There are a whole lot of delays in administering these forms" - PA_DP*

6.7.2 Major theme 2: Operational challenges

This theme deals with the challenges related to the distribution of equipment, logistics and transport provided to the Cuban cohort when they return to South Africa. Two sub-themes form the basis of the challenges facing the UKZN administrators in providing for and acquiring the goods and services to assist the students in the cohort.

6.7.2.1 Sub-theme 1: Distribution of equipment to cohort students

During the orientation programme for the Cuban cohort students, the details of accommodation, transport and distribution of personal protective equipment is discussed with students. However, there are many challenges that arise in terms of these operational aspects. The distribution of equipment and personal protective equipment provided for the cohort students by the Department of Health is one of the initial difficulties administrators at UKZN face. The programme administrators are supposed to distribute lab coats, stethoscopes, patella hammers, and even laptops purchased by the Department of Health in accordance with the registration list. The problem is that these items are not always available on the day of the orientation programme because of delays in the registration system. One administrator had this to say in this regard:

> *"It would be easier if all of this could be taken care of when they first arrive because they do arrive as a group, they basically do have a lot of DOH commitments where they are all together. So, you know there's that timeframe where everyone is together, where this could be distributed, then everyone splits"- PA_DP*

A lack of coordination and poor planning by the Department of Health, as well as poor planning in the office of the central coordinator of the Cuban Council, results in additional work and a waste of resources by the UKZN administrative office, who consequently have to make arrangements for pick up or delivery of personal protective equipment for clinical sites as students are not able to practice without these. An administrator, PA_DP, stated:

> *"The challenge is, one is distribution and two is the students themselves. A lot of these students basically are not from University of KwaZulu-Natal so when they do finally get through all the paperwork and logistics of registering and everything, they have a week or two week period where most of these students go back home. So then getting them back to collect and start is an issue because some of them don't come back on time, then they not based in Durban directly. Depending which rotation they doing, they could end up in Ngwelezane, Newcastle, Stanger, Port Shepstone or if you are doing Public Health you could end up in one of the rural sites for your rotation so they not like coming back to Durban to Med School to*

collect these stuff. You must remember that all these things are procured by Department of Health they have to be collected by the students in person, to sign and ensure that it is received and things like that" -PA_DP

6.7.2.2 Sub-theme 2: Transport and logistic challenges

The transportation of medical students to the outlying clinical sites is a significant challenge for administrators at UKZN. These challenges are particularly in terms of coordinating large groups of students to be transported to the ten Decentralised Clinical Training Programme sites. These include trips to Stanger, Port Shepstone, Empangeni, Queen Nandi, Newcastle, Pietermaritzburg, as well as the local public hospital facilities in Durban. Additional paperwork and approvals are required from the UKZN administrators when students miss scheduled transportation or when they may get sick and need transportation back from the training sites.

Many of the sites do not have designated vehicles and staff, while those located in deep rural areas do not even have functional public transport that students can use. In this case, administrators use local taxi operators who must be paid in cash as they do not have bank accounts, which makes processing these types of payments extremely difficult. Due to audit practices at UKZN, a paper trail has to exist, especially with regard to financial arrangements, but this is not possible in these circumstances where cash payments are required. In these instances, special requests and approvals are necessary. Participant PA_SM aptly explained this challenge:

"But in the area where even the public transport is a challenge there are areas where public transport is a challenge. So in those instances, even if we want to assist the students it becomes very difficult because you find that we need to arrange with the local taxi people and the local taxi people they operate on cash basis so, you know the university cannot pay cash rather you render the service and then you invoice us and that doesn't you know, I mean apply with the local taxi people. Even if they do want to you know kind of assist us you find that I mean for us to pay you have to have some documents that are required like your tax clearance, your, your, your, whatever else, banking accounts, confirmation and all of that. So, you find that those local taxi people, I mean don't those documents as a result even if they want to assist us then they won't be able to invoice us because of the documentation. So those are the kind of challenges we encounter with transport" - PA_SM

However, UKZN is more adept at supporting students with the arrangement of transport especially for family emergencies and other urgent matters. The idea behind this is to offer students who are separated

from their families during their medical training additional support and assistance. Participant PA_SM stated:

> *"We provide them with transport and err we assist with transport in cases of emergency like maybe if students is, is, is, is sick or maybe family crisis. You know sometimes they will ask err maybe you need to come err err, go home you know for family emergencies" - PA_SM*

6.7.3 Major theme 3: Social challenges

From the responses of the programme administrators, the theme on social challenges can be divided into communication and psycho-social support. These themes were related to language and communication and the psychological impact of challenges facing the Cuban cohort students when returning to South Africa.

6.7.3.1 Sub-theme 1: Communication challenges

Language played a large part in the social challenges faced by administrators at the clinical sites. Not only was it difficult for the cohort students to communicate with the administrators at the UKZN offices, reports of language challenges at the hospital sites were also evident. Participant PA-CG said:

> *"It was also their language that they couldn't understand. For an example if there was a Zulu speaking patient at the hospital and they had to go clerk that patient the students had problems understanding what the patient was saying so there always had to be an English-speaking student or consultant or a doctor there with them in order for them to understand the teaching" - PA_CG*

The Cuban cohort students have an excellent foundation in medical knowledge, however they have a difficult time when they have to translate that knowledge into English, not only because they were taught in Spanish but also because English is not their home language. Participant PA_SS explained:

> *"Their foundation medical knowledge is good, it's really good. I mean Cuba really has an amazing medical programme. I can't speak to the curriculum per se but our kids know the stuff but translating it into English is so terrible because firstly they're thinking in Spanish, errr, they're working with ligaments in Spanish, note even in their home language" PA_SS*

6.7.3.2 Sub-theme 2: Psycho-social support challenges

Acclimatising to the UKZN culture was one of the psycho-social difficulties the Cuban cohort students had to navigate. This was challenging for the administrators who had to assist students who lacked the

motivation to change and adapt to the processes of the university. In addition, administrators frequently had to assist students in solving personal issues but this proved challenging for the administrators because they lacked the necessary training. As a result, they would recommend that students contact the College of Health Science's Student Support Services counsellors or the Academic Development Officers in the School of Medicine to assist them.

The difficulty that Student Support Services and the Academic Development Officers encounter is that the students are reluctant to disclose their problems. Participant PA_SM's response made this clear:

> *"You find that they do not want to disclose their personal issues so as a result we've had, we, we've, errr, had a lot of students that had mental issues at the sites. And when they are persuaded to see the counsellor they will tell you that they are not comfortable you know, to speak to the counsellor" - PA_SM*

The full workload and adjusting to their busy schedules also leave students with little to no time to speak with the counsellors at Student Support Services. This meant that programme administrators had to work after hours to accommodate the students in assisting with psycho-social difficulties. Participant PA_SS explained:

> *"So, the programme itself was quite long. We would start at eight o clock and finish at four, four thirty. Quite a long day, errmm, digitally it's impossible to stay focused and alert. Err, the students maybe had an hour break. We saw them continue throughout their studies, throughout their blocks. They would have choc-o-block blocks in the sense whether it's full online or blended learning out into the ward rounds and coming back to tutorials in the afternoon. They were constantly busy and that kinda prevented us from having direct access to them during their blocks. So if a students needed to access student services, if would have to be in the evening" - PA_SS*

An additional challenge for Student Support Services was that students also had trouble locating a private space where they could speak openly to a counsellor about their issues. Participant PA_SS felt that this impeded their ability to help the students:

> *"If we do get permission to consult with them during the day, they don't have a confidential space to consult. Errmm, they would either be in the work, err, ward rounds, they, I had a student sitting in the bathroom, whispering to me on their cellphone and whatsapp video call and I looked at them and you could see the tiles behind them and you would say, you know, are you in the bathroom?" - PA_SS*

The outbreak of the Corona virus in 2019 added to the challenges for the administrators who deal with the Cuban cohort. Due to the widespread stigma surrounding those who had contracted COVID-19, some students withheld the results of their COVID-19 tests in order to continue their clinical rotations and attend classes. This however, put other students and staff at risk. Participant PA_SM indicated:

> *"They were not willing to disclose their COVID status. You would see that they have all the signs of COVID but they, I mean, they would not disclose. But what they would do, they would isolate themselves without telling anyone, they would transport themselves to, to, to the clinical site you know. They would not use the student transport you know as a means of isolation but they would not want to disclose because they know that they going to miss some days in the block and they would not want that to happen" - PA_SM*

Unaffected students felt the strain of the situation because they were afraid of becoming infected with the virus, and some of them chose to report it in confidence to programme administrators at the sites. Participant PA_SM revealed:

> *"It would now cause panic to other students because they would see that, you know, the student has got COVID signs but they are kind of like still attending classes and whatever and whatever. And the student would report the matter but now you can't, because they would say, please I'm reporting this in confidence so I don't want my name to be mentioned" - PA_SM*

Additionally, COVID-19 restricted the programme administrators' ability to hold workshops to help students with orientation to the programme. They were unable to commute to the students and to assist them in person as they had done prior to the restrictions of lockdown that were imposed by the government in the effort to reduce the transmission of COVID-19. Participant PA_SS explained:

> *"So, timetables, lecture venues, in the past before pandemic we would host workshops at residences so we didn't have issues with venues other then, err, you know, getting ourselves to the residences to host those sessions" - PA_SS*

6.7.4 Major theme 4: Technical challenges

The theme of technical challenges includes issues to do with load shedding, internet connectivity, and other infrastructure-related setbacks like water shortages. The registration process and access to academic information was severely impeded by the lack of Wifi connectivity and access to data for the cohort students returning to UKZN. This caused students who were already behind and having trouble catching up to experience a great deal of anxiety because of the internet connectivity problems. This was clear from participant PA_SS's response:

"limited access to Wifi, free Wifi actually cos some of the students bought Wifi with the little monies that they had, some students didn't receive their stipend at that time. Errrmmm, so it was quite unsettling for them" - PA_SS

Programme managers and administrators therefore had to come up with temporary solutions to assist the students. These included supplying students with routers until the problem with internet connectivity was resolved. Connectivity was vital in order for the students to register and to have access to the UKZN databases, hence a more permanent solution had to be explored to guarantee that all the Decentralised Clinical Training Programme sites had full internet coverage. Participant PA_MM highlighted this in her response:

"Most of the sites didn't have Wifi connectivity has now got Wifi connectivity. So it's been like two years they have really excelled. The ICS department has really gone way beyond their call of duty I would say cos they used to work all the time to get this Wifi connectivity to all the Parkhomes, wherever our Cuban students were cos Addington residence is fully Wified, RK Khan residence is fully Wifi-ed for our students so they have no issue with residences and Wifi" - PA_MM

The technical challenges also had an impact on the ability of the cohort students to contact Student Support Services and Academic Development Officers, adding to the difficulties in accessing psycho-social support for students. The Wifi networks, regardless of service provider, were unstable especially in the rural sites and students struggled with internet connectivity. This was evident in the response from participant PA_SS who explained that administrators always needed to have a back-up plan:

"We found that Zoom after hours, errrmmm, on the residence Wifi is terrible because everyone is on Wifi at that time. So, err, if there is a break in the, the Wifi connectivity, we have our plan B which is a WhatsApp video call which is a lot easier on the system" - PA_SS

The other challenges facing programme-level administrators was having to deal with load shedding and disruptions to water supply. Students would not go to clinics or attend lectures because of these challenges. To resolve this, programme administrators have been involved in projects to have water tanks and solar power installed. This expensive ongoing exercise is currently in progress. This challenge was reflected by participant PA_SM:

"electricity outage in your area, ja, in your home you know. It's the same thing even at the site they would have water outages and those kind of things do impact the cost. They tell you that can't go to, to, to, to the clinics because we can't bath and we don't have… And we can't study because we don't have electricity. So, what we've

done, you know, to kind of counteract that, we have installed Jojo tanks in all our, in our accommodation, yes. We have installed Jojo tanks with pumps and everything just to assist when there are things like water outages, you know so that they can still be able to proceed. And we are in the process of again, err, of installing what you call this rechargeable energy…what do you call it? Errr, solar energy, solar energy again, yes, so we are trying to secure funding to, to, to install" - PA_SM

6.8 Themes that Emerged from the Meso-level: Programme Managers

The analysis of the results of the interviews with the UKZN programme managers was performed separately from that of the results obtained from the administrators. Table 6.10 on the next page presents a summary of the themes that emerged from the interviews with the programme managers at the meso-level. Even though some of the themes arising in the section that follows were the same as the programme administrators, the experience of the managers was totally different to the administrators. However, the themes from both levels will allow for comparison between the programme administrators, managers and the students from the Cuban cohort.

Table 6.10: Meso-level programme managers themes and sub-themes

Themes and sub-themes arising from University of KwaZulu-Natal programme managers' interviews		
Main themes and sub-themes	**Frequency**	**Percentage**
Theme 1: Challenges adjusting to University of KwaZulu-Natal life	4	100%
Sub-theme 1: Orientation acquiring University of KwaZulu-Natal identity	2	50%
Sub-Theme 2: Facilities challenges related to accommodation and connectivity	2	50%
Theme 2: Academic challenges	4	100%
Sub-Theme 1: Curriculum differences between University of KwaZulu-Natal and Cuban universities	2	50%
Sub-Theme 2: Academic preparedness	3	75%
Theme 3: Social Challenges	4	100%
Sub-Theme 1: Repatriation Support	3	75%
Sub-Theme 2: Challenges related to COVID-19	2	50%
Theme 4: Cultural Challenges	4	100%
Sub-theme 1: Language barriers	3	75%

6.8.1 Major theme 1: Challenges adjusting to University of KwaZulu-Natal life

Programme managers at the Nelson Rohihlahla Mandela School of Clinical Medicine address the Cuban cohort on orientation day. Basic information relating to accommodation, stipends, Wifi access and transport are discussed at this event and students are introduced to the various staff involved with the programme.

6.8.1.1 Sub-theme 1: Orientation and acquiring a University of KwaZulu-Natal identity

At the start of the orientation, the goal is to address the students and to introduce them to the UKZN brand. The orientation is the first approach to transitioning the cohort students to the university's identity and culture. This was revealed in the response below from participant PM_FB:

"week long was sufficient enough to build a relationship with them, to build an identity with them with the University of KwaZulu-Natal brand, errr, within the medical school brand, errr, to help to see themselves fit within a university in South Africa" - PM_FB

The team of programme managers, administrators and support personnel who assist the Cuban cohort students in adjusting to UKZN are introduced at orientation. This is an important part of the process of assimilating the Cuban cohort with the ethos of and procedures to be followed at UKZN. The purpose of this step is to help the students become accustomed to the academic setting and to introduce them to the rules that must be adhered to, as well as the services and resources that are available to them. This process was described by participant PM_FB:

"insisted that we have an orientation, integration programme and that programme will tell them about the university, will tell them about the policies of the university, will tell them about the facilities, the service that the university offer as a whole, and then the school provides them with additional information, can I say an academic orientation. They definitely get a proper orientation and integration" - PM_FB

The difficult part of orientation for the managers was being able to ensure that everything was ready on time. In spite of this, the responses from the participants showed that using what they, as managers, had learned in the past had significantly improved things over time. Participant PM_FB highlighted this learning process and the ability to be prepared in the comment below:

"*I think initially we were not all there because the students came and we did not have the computers ready. But within a few weeks' time, we had the computers in place. If I can say from the logistics, administrative side, we learnt a lot cos now we expecting a new group coming soon and all these things are already in place waiting for the students to arrive" - PM_FB*

6.8.1.2 Sub-theme 2: Facilities challenges related to accommodation and connectivity

In terms of accommodation, programme managers are tasked with ensuring that students are placed in residences within or external to the university. Part of the agreement with the Department of Health is the provision of accommodation for students from the Cuban cohort. However, UKZN faces difficulties in finding, funding and guaranteeing housing for these students. The UKZN residences are not sufficient to accommodate the students, as participant PM_FB explained in this response:

"We ensure that all facilities are available in that site. We have to ensure from the basics of whether the accommodation has been paid for, if we are outsourcing the

res or procuring a University of KwaZulu-Natal res, whether it is an outlying res that we hire for the duration of the block that has to be complete" - PM_FB

Since students are paid a stipend and are housed in facilities with fully functional kitchens, meals were not included in the Department of Health agreement. However, in some instances the delay in providing accommodations with a kitchen setup created a problem when the students arrived at these accommodations. In such cases, UKZN had to provide meals until the problem was resolved.

Internet connectivity was also a challenge at programme management level especially in terms of devices not being ready and available when the students arrived. In addition to the other challenges facing the programme in terms of connectivity, it was discovered that students were having to buy data with their stipends. This became stressful for them, and added to the challenges faced by students to keep up with and continue with the programme due to the fact that they did not have laptops and access to Wifi. Participant PA_SS described the situation as unsettling for the students in the excerpt below:

"limited access to Wifi, free Wifi actually cos some of the students bought Wifi with the little monies that they had, some students didn't receive their stipend at that time. Errrmmm, so it was quite unsettling for them" - PA_SS

6.8.2 Major theme 2: Academic challenges

Programme managers felt that Cuban cohort students returning to UKZN in fifth year needed additional time to catch up with the MBCHB group who had been studying at the university's School of Medicine from the beginning of their degrees. Participants said that the programme at UKZN offered to the Cuban cohort students felt disjointed and did not allow the cohort group to integrate with the locally trained medical students. Hence, two themes that emerged in terms of the academic challenges were: curriculum differences between Cuban universities and UKZN; and academic preparedness.

6.8.2.1 Sub-theme 1: Curriculum differences between the University of KwaZulu-Natal and Cuban medical universities

There is a great deal of evidence to indicate that there are challenges faced in the Cuban-South African medical collaboration programme in terms of the disparity in the curriculum. The MBCHB programme at UKZN and the Cuban medical curriculum take completely different approaches to training medical professionals. Cuba uses a primary health care approach while South Africa teaches its medical students hospital-based, curative medicine. This was indicated by participant PM_BD who described the two approaches as comparing apples with bananas:

"The two curriculums, it's very difficult to say that they compare because the usual thing that we always say is it's very difficult to compare bananas with apples because the two systems are just different" - PM_BD

The problem with the curriculum taught at UKZN is that South Africa's medical training has been so heavily focused on providing curative care and individualised patient care that it has neglected to examine the root causes of issues and to address health promotion at the community level to prevent diseases from progressing to the point where treatment is necessary.

In order to address the curriculum issues, the findings of the study revealed the concerns of programme managers at UKZN who have to integrate the methods adopted in the MBCHB programme with the teachings of the Cuban medical curriculum. This was no easy feat, as some of the responses expressed by the programme managers reflect:

"It's not meant for someone who is already trained in PHC who's coming in. Because, when they come in now, there's so much curative, far less PHC you know" - PM_BD

So rural or urban or whatever that's in place. What we're saying that is from, err, err, err, a medical curriculum point of view is that we need to just, just relook at our training so that we meet the requirements of this primary health care system so that we equip our doctors with skills for care at a clinic level because right now they have skills for care at a hospital level but whether they have skills in an under-resourced clinic is what we are unaware of" - PM_SR

However, one participant expressed the view that the South African curriculum needs to adapt to the country's health care needs because curricula are constantly vibrant and active and therefore ought to change and adapt:

"There is no curriculum cast in concrete. The curriculum should change with the health care need in South Africa. We live in COVID times so we need to adapt to that. Should be a balance. The curriculums are very alive and active all the time. It should be ever changing and adapting e.g. to new treatment techniques" - PM_FB

6.8.2.2 Sub-theme 2: Academic preparedness

The degree of preparedness in terms of assimilating with the locally trained students was a part of the issue in dealing with the Cuban cohort at UKZH. The problem, according to participant PM_BD, is caused by the Department of Health failing to provide medical universities with guidance on how to

proceed. In addition, the different training environments, such as Cuba's community-based approach that encourages home visits and South Africa's hospital setting with registrars, nursing staff and allied health professionals, expose students to diverse settings, which takes time to adapt to. Participant PM_SR did acknowledge the value of the Cuban cohort students in preparedness for primary health care:

> "*Now, because our students are so hospital-based. Out students do not go out into the community and do that. So, when our, when our students encounter the patient with hypertension and diabetes they can only look at prescriptive medication whereas we're not talking about lifestyle changes adequately enough to look at prevention because we already got them at the point where they got the disease" - PM_SR*

6.8.3 Major theme 3: Social challenges

The mental health and well-being of the students is important to UKZN. Student Support Services in the university's College of Health Sciences provides a confidential space for students to engage with counsellors and advisors on any personal, academic or health related matters. In order to assist students with their difficulties, programme managers work with administrators, Academic Development Officers and counsellors at Student Support Services. The findings presented in this section deal with the theme of the social challenges facing the UKZN programme managers, which is further divided into two sub-themes, namely repatriation support and challenges related to COVID-19.

6.8.3.1 Sub-theme 1: Repatriation support

Social integration into the UKZN academic environment was among the biggest difficulties the students in the Cuban cohort faced. Due to prejudice and stereotyping, they frequently believed that 'local' students were 'better than them' because they had higher socioeconomic status, better matric scores, and other advantages. The programme managers therefore made every effort to help the students to repatriate to the system and environment.

Participant PM_SR expressed how UKZN, via the Department of Health representative, works to provide all the necessary support for students before they arrive. However, despite these efforts, it was evident at administration level how difficult it is to fulfil these requirements in advance. Participant PM_SR stated:

> "*So, before students come, come to the University, they are given, we make them aware, err, err, of the broad learning areas that should, that they will, that they will encounter because they get a sense of the curriculum. We also then, we also the, you*

know, we're also asked through the intermediary who is the Department of Health, what text book requirements the students will need, what sort of, errr, how will we address their equipment needs like the stethoscope and lab coats and all of those things. When they come into the system they're, they're, you know, errr, sort of pretty well equipped to, to, to meet the require, to meet the, errr…they're aware of the academic requirements of this, err, of the programme" - PM_SR

Given the difficulties they faced with reintegration, programme managers believed that the amount of time given to students in the Cuban cohort to catch up with the UKZN mainstream MBCHB programme was insufficient. By modelling clinical skills training blocks for the first six months of the 18-month programme, programme managers have attempted to aid students in integrating with the local medical students. It was extremely challenging for Cuban students to keep up when they were paired with MBCHB students and as a result, they were divided into smaller groups at the decentralised locations so that they could study at their own pace.

However, separating the cohort students from the mainstream MBCHB group created further anxiety and division. Cohort students felt that they were being treated differently. This is expressed in the response from participant PM_BD:

"in the past errr it became a political issue because some, especially in the JAM, you know, there was this general feeling that we don't want to make them second class citizens. Separating them would make them, will endorse the fact that they're second class" - PM_BD

This was exacerbated when the initial cohort groups were not even represented by the Medical Student Representative Council when they first arrived at UKZN. They were made to feel like outsiders and despite all of their challenges, they had no platform to raise their concerns. Participant PM_SR shared:

"initially when they did come back, they were not even represented on the MSRC, The Medical Student Representative Council. So, they were quite excluded from that perspective" - PM_SR

6.8.3.2 Sub- theme 2: Challenges related to COVID-19

The COVID-19 pandemic created an additional challenge for the programme managers dealing with the Cuban cohort. Despite efforts to help the students by giving them more time, the pandemic-related lockdown interfered with the planned visits to the Decentralised Clinical Training Programme sites. The two weeks per block that were originally planned were reduced to one week in order to accommodate the cohort students' need for more time to understand the syllabus and to allow them to

study for the exams. The timetable had to be rearranged under tremendous pressure as a result of these changes. The impact of COVID-19 had repercussions for the mainstream students as well, so it was not only the Cuban cohort students who were experiencing difficulties. These challenges were beyond the scope of the institution, as the university had to abide by government-imposed rules and regulations.

The challenges arising from the COVID-19 pandemic created a shift in medical perspective. The emergence of the COVID-19 virus made it necessary for it to be included in the medical education curriculum, but not to the extent that it overemphasises treatment at the expense of other diseases like HIV and tuberculosis. This was expressed by participant PM_FB:

> *"Currently, I believe we live in a different time because of COVID and the curriculum need to accommodate that but one should also be cautious because we don't want to train everyone now to look after COVID patients and maybe we do succeed in winning this virus and in two, three years' time, COVID is like a normal cold or flu that come by and then you don't have the doctors in place that can look after the other disease like still one of our more prominent is HIV and tuberculosis" - PM_FB*

6.8.4 Major theme 4: Cultural challenges

The overall culture of health in South Africa is changing. This theme further expands to the sub-theme of language barriers as a challenge for the UKZN programme managers. The Department of Health has policies and procedures in place for providing primary health care to the country. This is evident in the number of primary health care facilities established as the first point of contact in the health care setting. However, the profile for the newly prescribed primary health care doctor is not communicated by the Department of Health to programme managers at UKZN. The ongoing challenge is that despite the primary health care training of the cohort students in Cuba, they eventually adapt to the ways of how medicine is practiced in South Africa. The response from participant PM_BD supported this notion:

> "*The main problem is that at national level now there was never a portrayal of an envisaged doctor out of this programme. Yes, we know that we wanted these doctors to strengthen the PHC, we wanted them to come with what, what, so many things we said but in a very concrete sentence or paragraph you can say we envisaged a doctor that will this kind of identity and be able to play this kind of role. It goes back to the culture thing, you know. That is our culture, that's what our doctors do and when they get here, they get confuse, confused, confused, disorientated and then once they catch up then they also do the same" - PM_BD*

6.8.4.1 Sub-theme 1: Language barriers

At all three stages of the study, language issues emerged as a common challenge. At the programme level, language difficulties were based more on medical terminology and semantics than on actual dialogue. According to the responses of those who were interviewed, it was difficult for the cohort students to adapt to using certain abbreviations for medical terms. As a result of this, programme managers had to adjust the way they delivered content to the students from the cohort.

Time and effort spent on term translation was a challenge for the Cuban cohort students. This had an effect on their ability to keep up with the class that included the MBCHB students. This was highlighted by participant PM_LM:

> *"I think the language, the words cos often they struggle to find the English word for certain things but then they also, they do adapt after a few months because I think when you learn a new language, first is your home language, then it's another language and then you translate. So probably if it's a words, it's Zulu then Spanish then English" - PM_LM*

Participant PM_SR added:

> *"the medical vocabulary they developed was err, err in Spanish. And then when they came here they had to almost undo the Spanish to learn in English and then they had to undo the Spanish to converse in isiZulu despite it being their first mother tongue language" - PM_SR*

Participant PM_FB had a different perspective on language, stating that despite the difficulties experienced by the students in the cohort, they are South African and learning multiple languages is common in South Africa. However participant PM_BD highlighted that these students are selected from rural areas to study medicine in Cuba. Hence, their level of English proficiency may not be very advanced when they depart to Cuba since there is not much need for the use of English in the rural communities.

6.9 Phase 3 Micro-level: Social, Cultural and Psychological Challenges

The final phase of analysis is the micro-level. Twenty South African students who studied medicine in Cuba between the years 2015 and 2019 were selected to participate in the study however only fifteen interviews were completed by the point that data saturation was reached when no new data was being obtained in the interviews. Some students were consulted after their interviews that were conducted in

order for the researcher to seek clarity on the terms that they had used and their responses in the transcripts. The micro-level aims and objectives have been provided in Table 6.11 below.

Table 6.11: Micro-level aim and objectives of the study

AIM 3: MICRO-LEVEL To analyse the challenges facing South African medical students trained in Cuban cohorts in terms of social, cultural and psychological adjustment	•OBJECTIVES •To identify the social challenges facing the South African students trained in Cuba in terms of stereotypes, social alienation and academic/institutional culture of Cuban universities •To identify the cultural challenges facing the South African medical students trained in Cuba in terms of race, gender, language and culture •To identify the psychological challenges facing the South African medical students trained in Cuba in terms of language, trust and performance

6.10 Participant Characteristics

The sample of fifteen South African medical students from the Cuban cohort provided the basis for the collection of data at micro-level. The same level of anonymity and confidentiality was maintained for the micro-level participants as it was for the programme administrators and programme managers. Aliases were created for each participant with a prefix CC referring to 'Cuban cohort'. This was done to protect the students' identities and allow them to speak freely during the interviews as they were assured that their identities and personal details would not be revealed to anyone. Student responses to the interview questions form the basis of the findings generated in the study that answer the aims and objectives of the micro-level. The research aims and objectives informed the questions that were developed to be included in the interview schedule.

Race and social background were constant among all participants interviewed and the two variables for the demographic profile were thus gender and home language. All participants were Black South Africans who come from socially and economically disadvantaged backgrounds. Table 6.12 on the next page indicates the number of female and male participants and the different mother-tongue languages spoken by these Cuban cohort students.

Table 6.12: Demographic characteristics of micro-level participants

Participants	Gender	Mother-tongue language
CC_AN_1	Male	isiZulu
CC_KR_2	Female	isiZulu
CC_MM_3	Male	Xhosa
CC_MG_4	Male	isiZulu
CC_ND_5	Male	isiZulu
CC_NM_6	Male	isiZulu
CC_NC_7	Female	isiZulu
CC_NX_8	Male	isiZulu
CC_QS_9	Male	Xhosa
CC_ZN_10	Male	isiZulu
CC_JM_11	Male	Tswana
CC_VM_12	Male	isiZulu
CC_RM_13	Female	Sepedi
CC_DrM_14	Male	isiZulu
CC_ST_15	Female	isiZulu

Of the fifteen interviewees in the micro-level phase, eleven were male and four female. While there were fewer females that volunteered to be interviewed, their responses to the interview questions provided a rich source of data from the female perspective. This was not evident among the male candidates. The difficulties that the female participants faced were related to sexual advances and inappropriate remarks made by the local Cubans, which were offensive and uncomfortable for the female participants to deal with. The mother tongue of eleven of the fifteen participants was isiZulu, while two of the participants' home-language was isiXhosa, one was Sepedi and one Tswana. Given that isiZulu is the official language in KwaZulu-Natal, it was to be expected that the majority of the interviewees were isiZulu-speaking participants, since they originate from communities within KwaZulu-Natal.

6.11 Themes Emanating from the Interviews with Cuban Cohort Students

Table 6.13 on the next page highlights the main themes and sub-themes that emerged from the interviews with South African students who had studied medicine in Cuba. The themes were organised into six main themes and corresponding sub-themes. The findings regarding the application process,

arrival in Cuba, adjusting to the educational system, as well as the personal challenges faced by the cohort students were all noted and recorded as they related to these main themes. It was interesting to learn that the students had faced challenges even before they left South Africa. These are captured in the theme of preliminary challenges (application process, travelling to Cuba, and arrival in Cuba). The other themes, such as institutional challenges, language and cultural challenges, psychological and social challenges, and technical challenges, reflect issues that the cohort faced in Cuba, as well as challenges upon their return to South Africa.

Table 6.13: Micro-level Cuban cohort interviews themes and sub-themes

Themes and sub-themes arising from University of KwaZulu-Natal Cuban cohort interviews		
Main themes and sub-themes	**Frequency**	**Percentage**
Theme 1: Preliminary Challenges	15	100%
Sub-theme 1: Application process	13	86.67%
Sub-theme 2: First impressions of Cuba	13	86.67%
Theme 2: Adjusting to the Cuban Institution	15	100%
Sub-theme 1: Language challenges	14	93.33%
Sub-theme 2: Adjusting to Cuban institutional requirements	10	66.7%
Theme 3: Technical Challenges	15	100%
Theme 4: Psychological Challenges	15	100%
Sub-theme 1: Stereotypes and other psychological challenges in Cuba	14	93.33%
Sub-theme 2: Isolation and rejection leading to serious psychological issues and distress	14	93.33%
Theme 5: Social Challenges	15	100%
Sub-theme 1: Challenges related to accommodation, transport and food in Cuba	14	93.33%
Sub-theme 2: Health-related challenges in Cuba	14	93.33%
Theme 6: Cultural Challenges	15	100%

6.11.1 Major theme 1: Preliminary challenges

The preliminary challenges were covered as a starting point for students in the Cuban cohort. This theme examined how the students had learned about the Cuban-South African medical collaboration programme, their experiences of the application process and traveling to Cuba, and the early challenges they encountered when they arrived in Cuba. This theme is divided into two sub-themes encompassing the challenges of the application process and the students' first impressions of Cuba. Table 6.14 below lists the different ways in which students had found out about the medical training in Cuba. The findings indicate that most participants were informed about the Cuban medical training through radio and newspaper advertisements, from their high schools, or from friends or family.

Table 6.14: How the cohort students heard about the Cuban medical training

Participants	How they heard about the Cuban Medical training programme for South African students
CC_AN_1	Heard from a friend
CC_KR_2	Heard from a friend
CC_MM_3	High school
CC_MG_4	High school
CC_ND_5	High school
CC_NM_6	Heard from a friend
CC_NC_7	Heard from a friend
CC_NX_8	Newspaper advert on Cuban medical programme
CC_QS_9	Newspaper vendor showed the advert
CC_ZN_10	High school
CC_JM_11	Mom worked at a hospital
CC_VM_12	Heard from sister-in law
CC_RM_13	Advert on the radio - went to Department of Health for forms
CC_DrM_14	Father heard on radio advert
CC_ST_15	Heard from a friend

In fact, in most of the interviews, participants revealed that medicine was not a career path that they had intended to pursue but rather one that they had stumbled upon. This is important because later in the discussion of the challenges that students faced, it reflects the unpreparedness of the students for the

vast disparities of Cuba and South Africa. Only one of the fifteen students interviewed conducted research on Cuba before embarking on the Cuban-South African medical collaboration programme.

6.11.1.1 Sub-theme 1: Challenges with the application process

The students found the application process for acceptance into the Cuban-South African medical collaboration programme to be especially challenging because they lived in rural areas, had to travel to district hospitals to fill out and submit forms in order to make the deadlines, and also had to cover the costs of transport and the submission of the forms. This was evident from the response of participants CC_ND_5 and CC_NC_7:

> *"District Office called me after more or less a month and I had already forgotten about it, even about the application" - CC_ND_5*

> *"Basically, you get the forms, you fill in the forms with accompanying documents, such as your ID copy, proof of income of your parents, affidavit if your parents are dead, to actually declare them as dead, and the death certificate" - CC_NC_7*

> *"Oh I think if I'm not mistaken there's also a letter from Department of Labour to declare that your parents are not working, you know. Make it yourself. The government doesn't cover that part but when it comes to the visa part they actually do cover that because it's part of your ticket" - CC_NC_7*

In addition to the stress of obtaining the required documents, in most cases this had to be done on short notice, as participant CC_MM_3 expressed:

> *"I think one of the biggest problems was just the time because it's… We had to get, they told us, oh you also need passports and then you were like, hey. We need them before this time and they gave us a very small bit of time so you had to get those passports" CC_MM_3*

There was also a verification process to confirm that these students were indeed eligible for study in Cuba. This was obtained through a letter from the church leader or chief, as participant CC_ST_15 said:

> *"There's a lot things that you have to fill in, those forms that need to filled in by your chief or your church leaders and they come visit your home cos they had said it's for, err, non-privileged kids so the Department of Health sent people home to check so, and then, ja, that's how I got in" - CC_ST_15*

As shown in Table 6.14 above, the students had not actively sought information about the Cuban medical training; rather, they discovered it by chance or through family and colleagues. As a result of this, they were under pressure to get documents within a short timeframe, to obtain the necessary

approvals and to meet the deadlines. Consequently, the difficulties for many of the cohort's students started during the application process.

6.11.1.2 Sub-theme 2: Culture shock on arrival in Cuba

The next sub-theme relates to the students' first impressions of Cuba and the resulting culture shock, which is so titled in light of the unanimous responses of the students upon their arrival in Cuba. The responses revealed shock and disbelief, almost to the extent that the students no longer wanted to continue with their studies in the programme, but had no other option. In the word cloud exported from NVivo showing the high frequency words of the participants, displayed in Figure 6.6 below, elements of the airport, climate, language and difference from the people in Cuba are featured.

Figure 6.6: Word cloud of high frequency words used to describe students' first impressions in Cuba

The students' responses demonstrated that they were unprepared for what they encountered when they arrived in Cuba. They were astounded by the country's extreme heat and humidity as soon as they landed. The air was described as being 'thick' making it difficult to breathe. Participant CC_MM_3 compared this feeling to a room full of smoke:

> *"The air is hard for you to breathe because the air is too dense. Let me paint a picture. Have you ever been in a room where people are smoking hookah and then you coming in?" - CC_MM_3*

The challenge with language, according to the students, starts at the airport which is small and crowded. Everyone speaks in Spanish and there is minimal or no assistance for the students arriving from South Africa. Participant CC_NC_7 aptly described the scene:

"So problems start when I get to Cuba. Immediately when that plane landed the problem was everyone was talking but I understood nothing cos they were speaking Spanish and we didn't know Spanish and it was a rainy day that day, I recall. It was raining, eerrr, you know that airport at that time was not well constructed as it is right now" - CC_NC_7

6.11.2 Major theme 2: Adjusting to the Cuban environment

Adjusting to the Cuban environment was the second main theme identified during the interviews with the students and encompasses the sub-themes of language challenges and adjusting to the institutional requirements.

6.11.2.1 Sub-theme 1: Language challenges

Following on from the challenges encountered in terms of the students' immediate first impressions on arrival in Cuba was the language barrier, both on arrival and with the commencement of the academic programme at the Cuban universities. Home language was a mandatory demographic detail that was recorded for all students participating in the interviews. The graph presented in Figure 6.7 below, which was compiled from the data entered into NVivo, indicates the mother tongue languages of all participants.

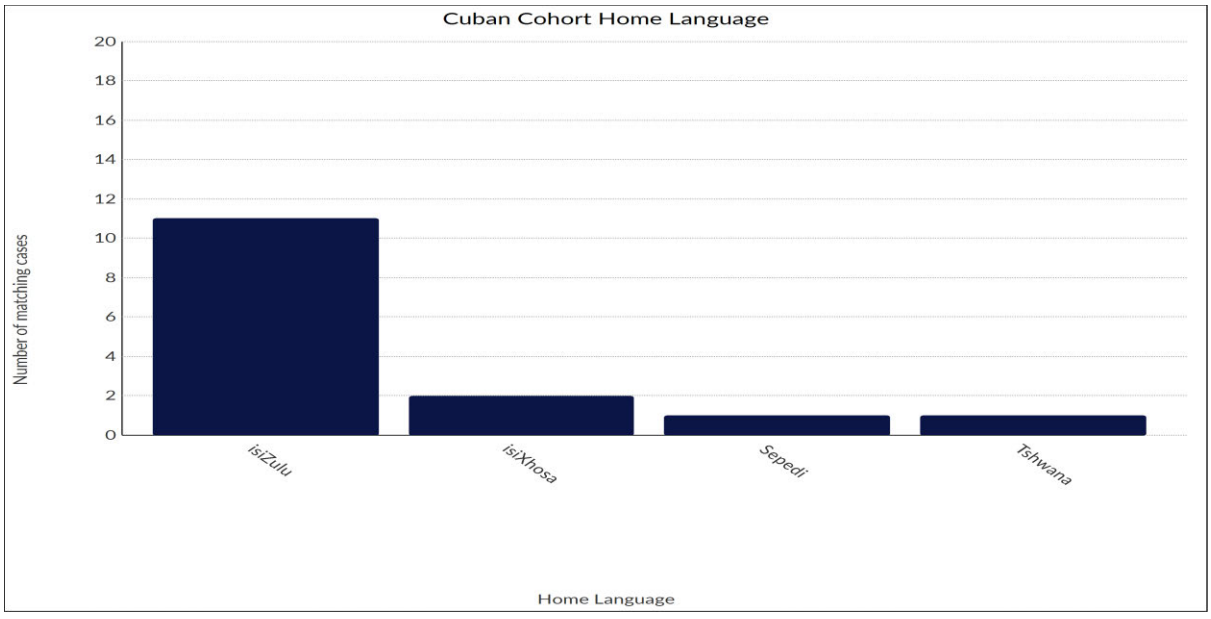

Figure 6.7: Mother-tongue language of micro-level participants

The graph shows that most participants spoke isiZulu as their mother tongue, which is reflective of the overall demographics of KwaZulu-Natal as the majority of the population in the province is Zulu. Many

of the participants could speak more than one language before going to Cuba and learning Spanish. However, given the foundation of Spanish and the fact that it originated in Europe and is not spoken widely in South Africa, learning the language proved to be difficult for the South African students.

Some students struggled even with learning English and had never attempted to learn any other foreign languages prior to travelling to Cuba. The response from participant CC_ZN_10 briefly explains this:

> *"It was very, for me it was very difficult because I'm coming from a background where you only speak one language. I mean even school I learnt English speaking Zulu, you know. So, I was never exposed to learning other languages, let alone learning a language that I never heard before" - CC_ZN_10*

Aside from having never been exposed to Spanish, the students found it difficult to learn from mother-tongue Spanish speakers. Prior to starting the medical curriculum, the South African students were given six months to learn Spanish. Many participants from the cohort described this as an overwhelming experience and lamented that they were taught Spanish in Spanish, which proved extremely difficult for them to gain the basic understanding in order to fully comprehend the language. They also added that the time given to learn Spanish was not adequate. This added to the pressure of then having to move on to actually studying medicine. Students felt that they had to master the language just to survive in Cuba. This is expressed in participant CC_JM_11's response:

> *"It was hard, we had no choice. I had no choice. I couldn't take a break, I couldn't, I couldn't breathe. I had to do it, I had to do it. If I don't do it I can't eat, I can't ask where is my food so I am supposed to do it. It's so hard I'm not sure what I'm doing, it's too much, every day is a new thing. I didn't get what they said yesterday. They saying something again, yoh, it's just so overwhelming for me" - CC_JM_11*

The South African students' poor academic performance was caused by these language difficulties, which also affected their participation in class. Participant CC_RM_13 claimed that many students in the cohort failed their first-year assessments because of the language challenges. In most cases, the professors teaching the curriculum could not speak English and therefore it was difficult for students to get any assistance from them. In addition, evaluations were oral, which only served to exacerbate the situation. In fact, language difference created separation between the South African students and their Cuban counterparts. This is evident in the quote from participant CC_MG_4:

> *"So when it comes to now speaking in the class, asking questions or, they would excel a lot during those times. Whereas the South Africans they were known as those 'quiet ones', we at the back. I even, I even had, err, a picture. It was South Africans*

at the back and Angolans and Congolese next, the other one and then Cubans in the front. The language would automatically separate us." CC_MG_4

Students also described a difference in the Spanish that was spoken in class and the Spanish spoken on the street. People speaking street Spanish spoke faster and used a great deal of slang, making it difficult for students to understand. Thus the participants explained that the challenge was not just learning a new language but it was also difficult keeping up with the speed of the conversation. This affected their communication when they were socialising with the local Spanish communities. Participant CC_MG_4 in this regard, had the following to say:

"*I think after two years, we were able to cope, ja, and relate cos we could not understand a joke, the culture, the habit or whatever was happening. Like we couldn't understand anything so, it was just going to class, come back until maybe second, mid first year, second year whereby we were able to make friends" - CC_MG_*4

The socialisation component is crucial for the South African students' adjustment and psychological health while studying in Cuba. According to the participants' responses, language had a significant negative psychological impact on the cohort students' self-confidence. This was revealed by participant CC_KR_2:

"I know what she wants, this is the answer but how am I going to say it, you know, because, you know, have to transform a sentence, okay I am gonna say this and say that, you know. And sometimes people would laugh, it doesn't come out the way that you want it to come out, you know, but the professors themselves were quite professional" - CC_KR_2

One participant shared their feelings about learning Spanish and being ridiculed in class:

"The language came with a lot of down moments. You felt like you were dumb where you felt like, errr, what am I doing here?" - CC_MM_3

This indicates the extent of the impact that language had on the students. Surprisingly, upon their return to South Africa, these challenges related to language continued. Many participants described language as the main challenge that they encountered when they assimilated with the UKZN medical school. Participant CC_VM_12 highlights this experience:

"We had to now translate everything that we learnt that side and try to actually spell it out and try to translate to English now and remember we started six years that side. So the whole of six years we have to translate into English within a space of

two years. It was a big, the biggest challenge" - CC_VM_12

Here again the problem was terminology and students struggled to use the correct medical terms in English. Due to the lack of prevalence of certain illnesses or viruses in the country, many medical concepts were not covered in Cuba. Students explained that a disease like HIV is not common in Cuba, yet when arrived back in South Africa they were expected to know everything about a virus that they had little exposure to.

6.11.2.2 Sub-theme 2: Institutional challenges

The theme on adjusting to the institutional requirements of both the Cuban universities and UKZN was included as a prelude to the major differences between Cuba and South Africa in terms of institutional rules and requirements. The responses revealed that the South African students in the Cuban cohort struggled to adjust and adapt. Many participants felt that they had to try to fit in and do what was required.

The consensus was that Cuban institutions were stricter about punctuality and attire. In fact, many responses highlighted that the experience was more like school than university. Participant CC_KR_2 said:

> *"They very punctual, you got to get there in the correct school attire so one thing we knew was don't be late. They send you out if you are late" - CC_KR_2*

These changes created a great deal of stress and anxiety for the students who had to learn to adapt and not fall short of the requirements of the institution. Attendance was also compulsory and monitored. An attendance register was taken at the start and the end of the class:

> *"They will go through a whole register, everyday there was a list, an attendance register. I mean you stand up, ja err, you stand up and they sign you off and even before you leave" - CC_KR_2*

Some participants felt that it was too difficult to follow the rules and resorted to breaking them. Participants associated these extreme rules and discipline with the socialist values and military system of Cuba. This was expressed by participant CC_AN_1:

> *"They would come up with really stupid rules. You had to follow really stupid rules, something that did not make sense to us. They'll be like at ten come back, but mind you when we got there in Cuba, I am sure not even a single person were under the age of eighteen. We were all adults. So, it was kind of hard to abide to those, to those rules cos you'd find that people were, who were taking of us that they were even*

younger than us but, but they were giving us huh. They were enforcing really strange rules and regulations so it was really hard to abide to those rules" - CC_AN_1

Upon returning to South Africa participants experienced great difficulty due to their lack of exposure to certain medical procedures. The participants found it overwhelming to adjust to managing thirty beds at a South African public hospital as opposed to three beds in a Cuban facility. The evidence of these struggles is provided in the responses from participant CC_MM_3 and participant CC_NC_7 respectively:

"You were not exposed to a lot of patients. In a hospital, err, I'm talking, I'm talking level three hospital in Cuba, I would have one patient for the whole week. People don't get sick. I would have one patient of where I would do, do the history of the patient for four hours" - CC_MM_3

"That was another challenge that, err, it was very overwhelming. Now I have to see or look at thirty beds while I'm only used to just one or two beds" - CC_NC_7

During clinical rotations and working in wards in South Africa, participants also discovered that a number of procedures that were reserved for senior doctors in Cuba had to be performed by the medical students. These included drawing bloods, inserting a catheter, and administering an angio-tube. Participants also found that the equipment used in Cuba was old and outdated. As a result, they had trouble using the sophisticated technology when they returned to the South African hospitals. This was demonstrated in the response by participant CC_ST_15:

"*Some of our colleagues were interested in showing us around cos first of all we used different instruments to do things. For example, the BP machine, that's side, it's still the old one where you use your stethoscope to check the BP and this side it's the machine one where you just press and everything is done. So you have to kinda adapt to such things" - CC_ST_15*

6.11.3 Major theme 3: Technical challenges and connectivity

For this theme relating to technical challenges, two aspects should be emphasised: internet accessibility and the cost of connecting with family in South Africa. On arrival in Cuba, the South African students struggled with rejection from the local community. Participants literally moved between their residence and school in Cuba and still did not feel comfortable or accepted. Prior to 2019 they battled with little or no access to the internet to communicate with friends and family back in South Africa and this significantly exacerbated the situation.

When the 2015 cohort of South African students arrived in Cuba, there was limited access to the internet. Where internet access was available, it was very expensive. The participants revealed that they would save up money just to Skype with family and friends and even then, it would only be enough to Skype one important person such as a parent. Participant CC_RM_13 shared:

> *"So initially it was super difficult cos we didn't have Wifi so we used to use emails or phone calls which was very expensive. I remember that ten dollars was five minutes. And then we upgraded, thankfully to Wifi so a few years later you have Wifi in the city where you can sit in certain area where you can connect to the Wifi and you can chat to your family and friends. And when I left, err, I heard that you could buy a SIM card cos you could call and text with a sim card but it was so expensive. So I had an MTN account and my mom would buy the airtime time for me and then I could text back. It was R2.50 an SMS" - CC_RM_13*

Another issue was that these students' smartphones were not as sophisticated when they went to Cuba or they could not afford to buy one with functions for calling home. As a result, they had to go to an internet café and pay to access Facebook or send an email.

Many students turned to covert shops or residences that sold coverage to participants in order for them to connect with family. This was because of the high costs of internet at legitimate facilities. However, it was challenging and tiring to travel to these locations after lectures and then to spend an hour or two speaking to family. Many participants would cut down the time connecting with family and resort to sending a SMS to let their families know that they were fine. This was the situation for the first two years of their stay in Cuba, but they did indicate that things progressively got better.

However, several participants felt that it was preferable to not have access to the internet. Restricting their access to the internet was deliberately done by these students in order to prevent them from realising what they were missing at home. Participants found that when they had more access to the internet, they became distracted and more depressed. This sentiment was expressed by participant CC_JM_11:

> *"It's a Friday you looking at your phone, people are just doing things in South Africa and you feel like you missing out. You hungry, just eat beans and rice, nothing is nice here, you speaking Spanish, yeah. It was a good thing because you could talk to them but it was also that thing that distracted us and it ate a lot of our money. It was very expensive. It was fifty percent of stipend would go like to that. Sad" - CC_JM_11*

6.11.4 Major theme 4: Psychological challenges

The results of the micro-level analysis of the data collected from interviews with students revealed that there needs to be substantial attention given to the psychological difficulties that the South African students in the Cuban cohort are experiencing. Much more serious psychological issues surfaced from the interviews, in addition to loneliness, academic pressure and stereotypes.

Not having access to the internet, as mentioned in the preceding section, resulted in some very serious psychological problems for the students. Participant CC_QS_9 explained how problems with the internet led to stress and loneliness:

> *"It's like the communication with our family was closed because of the internet or the internet problems in Cuba, So, it's just me, you felt lonely, you felt almost like you were stressed. Everyone was stressed in Cuba" - CC_QS_9*

To add to this sentiment participant CC_JM_11 said that they felt they had to survive while everyone else was getting on with their lives. This is represented in the response:

> *"When people stop calling you from home, you don't have time to call, when they call you can't answer, you sleeping and sometimes even friends they busy or people won't. There was some point where people, everybody was just going through their own thing and you needed to survive, you understand? So, the only way we could talk or we had the courage to talk it was when we would engage in alcohol" - CC_JM_11*

The language barrier gave rise to feelings of inadequacy and insecurity among the cohort students. This was expressed by participant CC_KR_2:

> *"They would know the language, I mean they were dominant, you know, so that in a way your, your, non-dominant language showed a bit more you know. It created some kind of insecurity like, oh my God, Spanish is not my language. I mean some Cubans would laugh at you when you trying to say something, you know. And lots of South Africans couldn't who, who were not vocally strong with the language you know. That was the biggest challenge for us when we started going to school with Cubans because now we could, because if I'm speaking English and I'm dominant in English and somebody else comes and tries to speak English and they not dominant you'll see the difference. You know obviously, ja err, not feel as competent" - CC_KR_2*

Language issues also created feelings of distrust. Participant CC_KR_2 found that when Cuban students wanted to say something nasty or speak behind the South African students' backs, they would speak in Spanish but there was always that notion that they were talking about her. Participant CC_QS_9 expressed that this feeling of distrust and being left out of the conversation was prevalent on the bus and in class. An example of this is indicated in the response:

> *"A lot more, especially in the buses. They would always speak about us, saying things but you couldn't hear but you could just sense, or see that there is something being said about me. But I couldn't understand. Ja even sometimes in class, maybe there was a joke and you could just hear the Cubans laughing but I didn't get the joke, you know" - CC_QS_9*

In fact, most participants agreed that people in the Cuban community could not be trusted. Even those students attending churches had strong reservations about the true intentions of the locals. Participant CC_NM_6 and participant CC_RM_13 shared their views on this matter:

> *"I would, I would say Cubans are mostly, err, okay they are friendly. They, they, as much as they are friendly but you can never trust them" - CC_NM_6*

> *"You can't say that you are really your friend. You are lying to yourself when you say that. Even in church. I used to go to church and even in church they used to tell us, you guys need to be careful. Even in the church we know that these people are not good, they are not true friends" CC_RM_13*

This distrust was evident in the response from participant CC_RM_13, who called Cubans gold diggers because of their extreme poverty. Most poor Cubans saw foreigners as a means of obtaining money. This happened mainly with the South African male students who would date Cuban women. Participant CC_RM_13 expressed that:

> *"A Cuban woman is willing and able to sell you her daughter just for money" - CC_RM_13*

Participant CC_ST_15 explained further the feeling of distrust when out on the streets:

> *"So now you don't know if they are planning to steal or take something or something. It's better to walk away cos now you don't know and try not to go back there again cos you don't understand what they are saying" - CC_ST_15*

However, many participants fell victim to the infractions of the Cubans, especially local businesses. This was elaborated on in the response from participant CC_AN_1:

"Say you met Cubans for the first time or maybe you go to a restaurant you find that you as a foreigner they will just give you ridiculous prices. Err and then not abide to the actual prices that they give to Cubans. You find you end up paying extra because you are a foreigner. That was really not nice" - CC_AN_1

For the cohort of students, even using public transportation became an ordeal. Participant CC_KR_2 explains how they were cheated and robbed when they first arrived in Cuba:

"The first few months when you going to, err, we use a lot of public transport in Cuba, taxis. So, Cubans are really smart. They can see someone who's new and there's two currencies in Cuba. So, if you pay, for example, a one rand it has another form, you now. So, we didn't know that. So, we would just pay a certain amount but that, we would actually be overpaying you know. And sometimes you couldn't even ask how much exactly am I supposed to pay? So, we'd be cheated and stuff like that you know and only find out like two months later that hey Cubans were cheating you" - CC_KR_2

However, the cohort students found that using public transportation was more of a challenge than anything else experienced in Cuba. Participant CC_NC_7 explained:

"The buses are always so congested, err, so what we had, I'll just sum up some of the challenges we had, which transport was just one. So, in the buses, you'd hop in, you know we wash, put on perfumes and whatever but you'll hear them saying getpeste. Getpeste is more like what a smell? So, when they see, yes, yes dear, so when they see Africans they associate them with the smell, dirty stuff and everything but it's not every Cuban that is like that. The Cubans that you would find in the bus those are your low economic growth ones, you understand? So, that's how they perceive us" - CC_NC_7

6.11.4.1 Sub-theme 1: Stereotypes and other psychological challenges in Cuba

The students in the cohort were also subjected to a large number of stereotypes. Incidentally, some of the stereotypes actually occurred amongst the group that travelled from South Africa. This resulted from the fact that students were chosen from the various provinces and transported to Cuba. Although many students choose to stay in the organisations connected to their region, gradually there was overlap between the groups, particularly as the male and female students were separated. To illustrate this participant CC_MM_3 said:

"You get to Cuba and, err, people from KZN who are mainly Zulus literally have a prejudice from you being GP. I'm privileged, ehhh. Ahhh, you speak English wena.

Ehhh, ahhh, you think you better. Ahhh, you see, Xhosas have a problem with the Zulus. So all of these things that people have had growing up and are these how can I say, err, what we call it these err, these, errr, stereotypes growing up they brought to Cuba" - CC_MM_3

There are a staggering number of preconceptions that South African students studying medicine in Cuba have to deal with. The South African students in the Cuban cohorts provided a great deal of emotional responses during this part of the interview process. One of the biggest issues the students all agreed on was the impact of stereotypes, which for some of them resulted in more serious psychological problems and even fatal circumstances. These include stereotypes about:

- Race and appearance
- Where South African students come from
- Socio-economic status of South African students
- Derogatory and negative stereotypes
- Other stereotypes

Hence, the stereotypes are divided into different categories which will be explored in further depth in the sections to follow.

6.11.4.1.1 Stereotypes about race and appearance

Participants found that the stereotypes about race were most prevalent among the Black Cubans. This was unexpected for the students given that they had never encountered such stereotypes in South Africa and that their skin tones were the same as the Black Cubans. Participant CC_ST_15 said:

"Surprisingly the Black Cubans had a problem with us and we like, we kinda the same colour cos it would be kind, okay not understandable but a little bit acceptable when the White Cubans don't want us, cos they wouldn't want to mix with us. We were making groups and everything so we would stick to other Africans. So sometimes in a group with Black Cubans, they'll discriminate, you know, and you'll be like, we kinda like the same skin colour so I wouldn't expect this from you" - CC_ST_15

While this issue of racist remarks came from the majority of Black Cubans, other Cubans believed that there were only Black people living in South Africa. This left the students feeling baffled and stigmatised as participant CC_MM_3 shared an incident of a colleague in the cohort who was not Black:

"Cubans think that Africa is only for Black people. I remember, errr [redacted] (name omitted)*, a friend of mine, she's Indian right? So, like one thing she always had to face was being, every time she says she's South African they were like, ahhh ha ahhh, stop lying yeah" - CC_MM_3*

There were also some Cubans who could not understand how South Africans could be light skinned. They felt that all South Africans were supposed to be dark skinned. Participant CC_AN_1 highlighted this:

"And they even ask, for an example, do you guys have like White people in Africa? So ja we do, we do. And then whenever they see a South African that is lighter in complexion, they'll actually ask why is this person err light in complexion. And they'll ask are you South African? And people were like ja we are South African and they wouldn't believe it cos they think all Africans are just Black, Black." - CC_AN_1

In general, the students in the cohort were made to feel like outsiders. There was even a label given to the South African students by the Cubans. They were called 'estrangeros' meaning 'foreigner'. Participants considered this label as a racist remark.

"Some Cubans are racist, ja. Some Cubans are racist especially the White Cubans because there are also Black Cubans. Especially the White Cubans, ja they would like classify us as, they would call us estrangeros, which means foreigner" - CC_NM_6

6.11.4.1.2 Stereotypes about where Cubans think South African students come from

South African students were subjected to stereotypes about living in the bushes, amid lions, in the jungle, and not even wearing clothes. The main misconception amongst the Cubans was that South Africa is a jungle. Participants CC_MM_3 and CC_AN_1 shared the common comments they received from Cubans:

"South Africa is perceived in a different light. Firstly, first world countries and countries outside Africa perceive Africa as just a jungle" - CC_MM_3

"There was this guy who asked if we live, if we actually see lions whenever we walking around. And our response to that we'll be like, ja we actually live with lions. So we see them on daily basis" - CC_AN_1

The stereotypes about South Africa being a jungle was even something experienced in class among professors. Participant CC_NC_7 explained in the comment below:

"We are not like animals like that they think we are, are probably our professors at the school but you still find professors that are like that hey. They tell you that in Africa, you stay with lions and stuff. Yes, I remember this one professor asked this in class…how do we actually survive, playing with lions?" CC_NC_7

Participant CC_KR_2 characterised Cubans as narrow-minded and asserted that stereotypes about the South African students are likely the result of Cubans' infrequent travel. Participants also cited government and media exposure as a factor in the limited perspectives held by Cubans. Participant CC_RM_13 stated that the Apartheid era continues to shape Cuban perceptions of South Africans:

"So, in the bus now this Cuban just starts ranting and saying all things but you don't blame him cos remember on TV they only show certain Apartheid times. They don't have resources like in South Africa. There TV is quite controlled. They only watch what their government allows them to watch. So, they think we live in the bundus, they think they walk with lions. So, there is was saying you guys only wear lion skins. You only buying clothes for the first time in Cuba" - CC_RM_13

6.11.4.1.3 Stereotypes about socio-economic status of South African students

Another stereotype was that South Africans brought sickness to Cuba because they were from Africa and that due to their poverty they were not clean. These stereotypes are expressed in the response from participant CC_ST_15:

"And most of the time in my class, most Blacks had a problem, you know like….okay. Maybe they thought they were Spanish speaking Black and they didn't want to associate with Africans, all the Africans cos most people there were saying, Africans bring diseases and everything. They really wouldn't want to mix with us" - CC_ST_15

Some Cubans even believed that South Africans ate just from the floor. This infuriated the South African students, who eventually resorted to responding sarcastically to these questions, shocked by how intolerant and ignorant the Cubans were. Participant CC_AN_1 expressed this frustration in the response below:

"There was a time whereby one guy even asked me that when we eat in South Africa, how do we dish up, do we use plates or do we just dish up on the floor? Ja he asked that and I was like how naïve are you? You don't know anything about South Africa. They didn't even know that South Africa is actually a well-developed country compared to their country. So, they didn't know that so the way they treated us, they treated us just like we are some animal" - CC_AN_1

Participant CC_JM 11 explained that the reason they believe this is because of the information fed to them by Americans in the past. They did not realise how developed South Africa was in comparison to Cuba. On one occasion, participant CC_MG_4 was annoyed and amused at the same time by a Cuban who thought he had never eaten an apple before. He explained that he was just excited to see the fruit after a long time and this was misinterpreted as there being 'no apples in Africa':

> *"Err the resources they are not a lot. If there's a season for apples and then you buy apples a lot because you excited oh now they think there are no apples in Africa. So, they'll ask you, in Africa you don't eat apples? Hahahaha I was like so annoyed" - CC_MG_4*

6.11.4.1.4 Derogatory and negative stereotypes about South African students

Several participants related their experiences about being the target of demeaning, negative stereotypes. Speaking about their experiences was challenging, and in some instances emotional. These stereotypes included being called animals, being picked on for supposedly having bad body odour, being blamed for the crowded buses, being called the 'quiet ones' in class, and even getting told to go home. The students from the cohort were most frequently the targets of these derogatory stereotypes when riding the bus. Participants CC_MG_4, CC_ND_5 and CC_MM_3 illustrated these events in the comments below:

> *So even when we got to the bus some Cubans would be annoyed because sometimes we'll be like ten students, foreigners, coming into the bus. So, err, native Cubans they can't get to the bus because now the bus is too full. I remember this one time we were called animals hahaha but we were used to it so we just laughed at it" - CC_MG_4*

> *"I remember this other time where, we got into a bus, coming from, from, from attending classes and this White lad, this White Cuban was saying, you Africans, you should go back to your country, you smell, we don't want you. It was, you know, it was very horrible experience, I won't lie" - CC_ND_5*

> *"And after pushing him, now this is what happened. He says this, "what are you monkeys doing here? I know you not used to this thing. Go back home" - CC_MM_3*

The other extremity was that students were constantly being blamed and picked on for bad body odour. The South African students were painted with the same brush as students from other African countries. This was very unpleasant for the cohort. Participant CC_AN_1 said:

"So, the problem that we had the other African countries, they were associated with bad odour, body odour. So, whenever a Black person shows up and the moment they see that you are African and then they will be like ahh these people stink" - CC_AN_1

In class the South African students were called the 'quiet ones' because they did not speak much. Participant CC_MG_4 explained that the reason for this was due to their difficulty with Spanish but their professors and other students assumed that they did not know their work. Participant CC_MG_4 stated:

"So, when it comes to now speaking in the class, asking questions or, they would excel a lot during those times. Whereas the South Africans they were known as those 'quiet ones' we at the back. I even, I even had err a picture" - CC_MG_4

The Cuban people were under the impression that South Africa was not paying for the cohort to study medicine in their country. Participant CC_NC_7 reflected that the first group of ten students that joined the cohort when Fidel Castro and Nelson Mandela had originally entered into the agreement in the 1990's were able to study for free, but once the programme expanded then the South African government began to cover the costs for students to study medicine in Cuba:

"So that agreement was only between Cuba and South Africa to have, err, an exchange of only ten students. So those ten students, they were not paying anything apparently as far as I am concerned. So, when they did an expanded programme of which I belong to, South African started paying fees for us. So, they are just, I don't know inclined on the idea that we are there for free and nje they are doing us a favour" - CC_NC_7

6.11.4.1.5 Other stereotypes about South African students in Cuban cohorts

The irony identified by participants was that South African students in the cohort were perceived as being privileged by Cuban and other African students. The South African students in the cohorts came from a low-income rural background, however the local Cubans and students from other countries believed they were 'better off' than they were. Many students from the other countries presumed that the South African students had money. Participant CC_JM_11 expressed this in the response below:

"Most of them they would feel intimidated whatsoever and they swear at us like ja you think you have money and whatsoever. Hey you come here and enjoy all these things, you don't have them in Africa you know" - CC_JM_11

This was baffling for the students because they had never considered themselves 'better off', or privileged. This is clear in the statement by participant CC_MM_3:

"I remember there was a point where when I was doing my first year there were like two hundred and sixty-seven countries so students from those 267 countries. So, African students when they look at us they see us as privileged. Literally I've never thought about it that way but literally that's when, that's where your mindset also changes. South Africans are literally privileged in a lot of sense" - CC_MM_3

Additionally, there was a presumption that South Africans in general consume a lot of alcohol, and students who claimed to be from South Africa were immediately labelled as such. Students from South Africa were also frequently confused for students from other African nations. This was upsetting and had an effect on students' sense of self as South Africans. Participant CC_AN_1 stated:

"First of all, the Cubans really believed that South Africans drink a lot. So, whenever they see you, the moment you mention that you are a South African, ahh they'll be like oh you drink a lot neh" - CC_AN_1

The final stereotype that really affected the students in the cohort was the assumption that all Black people were the same. This created great tension as the South African students were proud of their heritage as South Africans and acknowledged that there were so many obvious differences between themselves and students from other African countries. Participant CC_ZN_10 highlighted this:

"especially because you know some of the African countries, like people like Congo they look like us but their behaviour is different, their mannerism is different right, their tone. They have a different accent to us right. Then they will think that everyone that's Black, coming from outside their country is from Congo. Then they'll be like ahh you know, you know then they will have this stereotypical approach to people from Congo you know" - CC_ZN_10

6.11.4.2 Sub-theme 2: Isolation and rejection leading to serious psychological issues and distress

The students also believed that Cubans were very rude to the students from the cohort. Participant CC_JM_11 described how Cubans would ridicule a person:

"And they really rude I can say or very honest. They needed not to hide. They will say whatever they want to say. They'll be like you ugly. Ugly girl come here, fat girl come here" - CC_JM_11

There was a distinct feeling of being outsiders among the cohort group. Several incidents affirm this, like those described in the responses from CC_JM_11 and CC_MG_4 respectively:

> *"I would say we would not go by fourteen days or a week without you feeling like you not Cuban, that you are not wanted and you are, you are Black, you are African and you don't know anything" - CC_JM_11*

> *"The entire years of my stay in Cuba I was always reminded I'm not from here. We had to like remember why. You know when you experience, maybe errr discrim, I don't want to call it discrimination because it was not that but ja, you reminded that you are not from there" - CC_MG_4*

This was also noticeable in class, as South African students had a very difficult time speaking in Spanish. Participant CC_MG_4 said:

> "*It was South Africans at the back and Angolans and Congolese next, the other one and then Cubans in the front. The language would automatically separate us" - CC_MG_4*

Having lived in Cuba for five years of the training, the cohort were left dealing with anger and depression. Participants said that the environment was repulsive, which caused several students to experience mental breakdowns.

Suicide is prevalent among the students in the cohort and several cases of suicide attempts and deaths in Cuba have been reported. Participant CC_DrM_14 highlighted this in the response:

> *"Some of our friends committed suicide, some of our friends died, from drowning. So, there was a lot of traumatic stuff happening, I mean towards the end before we could even get to South Africa" - CC_DrM_14*

Many described the experience in Cuba as a fight for survival saying that students just had to tell themselves that they had come to the country to study medicine. They stated that they had to learn to push past the obstacles of learning Spanish in order to pursue their academic goals and had to convince themselves that they can do it. This sentiment was expanded on by participant CC_JM_11:

> *"Every day in Cuba was a fight you know and you always hope this one day will come. I'm gonna go home, you know because, I don't know. We had to grow up, we had to be independent, we had to survive, you know"* - CC_JM_11

Trying to cope with all these psychological challenges divided people into extreme groups. There were those who chose religion and went to Church to deal with their issues, while the other group turned to alcohol and would spend their time drinking. According to participant CC_MM_3 there was no 'in

between'. Those struggling to cope went to the extreme to involve themselves into religion or became 'drunkards'. As a result, most cohort students felt completely helpless.

Participant CC_MM_3 describes this phenomenon as the 'down syndrome', not referring to the congenital condition affecting chromosomes but rather to an emotional state of emptiness. This is described in the response:

> *"There's a syndrome of my diagnosis in Cuba ha, I call it the 'down syndrome'. It has no correlation with Down Syndrome but it's their down syndrome. You have to include 'their down syndrome'. Basically, it's err, firstly there's a gaping hole in your heart, err, that you can't fill, you'll try to listen to music you used to listen to, it doesn't hit you the same. You try to, try to call the people you used to call. Your, you, it doesn't feel the same. You try to look at videos or movies or pictures that you used to look at, it doesn't feel the same" - CC_MM_3*

Participant CC_JM_11 added that the situation in Cuba leaves students feeling numb to the point that they accept their fate:

> *"At some point I think Cuba made me, err, what's this word, what's this word, err, I can't feel anything, where I can't feel anything, like numb. Ja numb to that point where anything could happen. Whatever happens happens, whatever. I've been through a lot" - CC_JM_11*

> *"Cuba left a lot of scars, a lot of heartache from there. Too many to just go back and reflect" - CC_JM_11*

6.11.4.3 Sub-theme 3: Stereotypes and other psychological challenges in South African

Returning to South Africa to enrol at the UKZN medical school did not do much to change the cohort students' sense of alienation. This was highlighted in a number of responses from the participants. Two of the responses from participants CC_RM_13 and CC_NC_7 are shared below:

> *"Come to South Africa and you realise that you going to be alienated in your own country" - CC_RM_13*

> *"South Africa was our home, you see. Cuba no, no, no we just there for studying and what not but we felt really appreciating how much of us was actually created and made in Cuba. So, when we came back this side I for one, everything felt just so strange. Like err with family, friends, everyone around. Like they had lives that was actually progressing without me. They had stories that they would tell that I can't*

relate with. They've got jokes that I don't know probably aunty what not did this to who and who and I was not there. So, I just felt like hey it was quite – tooks quite some time" - CC_NC_7

The training of the cohort students was frequently questioned and subject to stereotypes. There was a perception that the cohort students knew nothing or very little about medicine, yet according to the participants, the only difference in their training was contextual. This left most participants feeling frustrated and this is evident in the responses of participants CC_VM_12 and CC_KR_2:

"They had formed a stereotype already, a very bad one. So, when we came back, it was like here are these doctors from Cuba, coming to trouble us, from the side of the students and also from the side of lecturers" - CC_VM_12

"The first assumption already they know that you Cuban trained, there's this stigma that we know less, you know. We know this in Spanish but we don't know it in English so automatically we don't know it, you know. It's the attitude at medical school with professors, doctors, there's that thing oh you from Cuba, oh okay did you guys do this? They explain it more to you, you know which is quite irritating because and also, it's the whole attitude from medical schools, HODs, doctors, even the students who are locally trained end up having a stigma towards us. Ah shame they from Cuba they don't know much, you know" - CC_KR_2

The fact that the students from the Cuban cohort were separated from the other medical students added to the perceptions of discrimination against them. Additionally, they endured prejudice and hatred as well as attacks from local students. The local students resorted to belittling them and calling them 'Cuban.' This was clear in the responses from the participants below:

"Then we were totally separated from the, errr, the usual academic programme. We had our own separate programme at medical school. Errr, we attended alone as Cubans so everything we were called Cubans, so as Cubans we like ja neh we no longer have that nationality now" - CC_MG_4

"They paying so much money there so that's why some of the lecturers would tell us that South Africans we don't deserve this. We just wasting the Governments money. So because you are South African they will always treat you that way" - CC_NC_7

"She said we are government property. Ja she called us government property" - CC_NM_6

Due to the segregation of the cohort from mainstream medical students in South Africa and scrutiny of their training in Cuba, there was always a comparison of the two programmes. Participants discovered that this stigma was pervasive among medical professionals, nurses and even patients.

Their ability to work in this environment was hampered as a result, as explained by participant CC_MG_4:

> "*Number one were continuously being compared to the so-called South Africans err, err students. Errr, and then there was a bit of comparison which was the current students and students that passed which created a stigma between the nurses, doctors and patients ja. So, it also affects our confidence per se. Ja so that I think. I think if we Cuban trained, that is the most challenging part. You come to South Africa after so long, excited to come back home but when you get here, it's like what is happening now?" - CC_MG_4*

Participant CC_KR_2 refuted this notion, saying that many of the Cuban cohort students did exceptionally well in terms of their exam results. Participant CC_ST_15 added that the local medical students often left extra work for the cohort students to complete, which only benefitted them. This is supported by these responses:

> *"So, for me that was the most challenging thing that we had to overcome. Having done a degree and done well in Cuba only to come here and be undermined. They didn't teach them as much in Cuba and that was nonsense you understand. Because you'd find kids that even did way better than the South African students. They would do, perform outstandingly in a certain subject. They are a lot of Cuban students that outdid themselves, did exceptionally well. Even I myself I didn't think I struggled that much to go about South African medicine and TB and HIV because you have to push" - CC_KR_2*

> *"The other students since they had been doing their practicals for a long time, they would leave work for us to do. So, we were like okay, more practice for us. So we just took it positively. We were like it's fine, even if you leave work, it's fine, we'll leave late but we'll do all the work, take all the bloods, do everything, write everything" - CC_ST_15*

The knowledge acquired from, and benefit of the Cuban medical training was often overlooked because the focus was usually on the language differences. Despite the fact that language was a barrier, the cohort students were not given enough time to adjust and integrate, yet they were still required to perform at their best. Participant CC_KR_2 and participant CC_ZN_10 emphasised this challenge:

"And some of things that you try to explain, you know, you speak them in Spanish but nobody really understood. It like oh no why you speaking in Spanish in South Africa? But I've been learning in Spanish my whole life, my whole medical career so why is it a surprise and such a big thing. So, in terms of that, it's really a rough patch for us neh? It's a rough adjustment for us and we not given a truly, errr, a good back up or good support system. You just thrown into the deep end and you supposed to swim and survive" - CC_KR_2

"I don't know what people heard, their own perspective about Cuban trained doctors. And the problem is because we learn in Spanish it made people think we don't know what we talking about" - CC_ZN_10

The participants felt discouraged as a result of the challenges they encountered during the cohort's assimilation with the UKZN medical school. The students experienced feelings of exclusion, alienation and isolation even though they had returned to their home country. To highlight this, participants CC_MG_4, CC_NC_7 and CC_NM_6 expressed their sentiments:

"So, the first thing was the language. No but before the language it was the separation. Errr, I felt like I'm no longer a South African. Err, I came from Cuba whereby we were called foreigners and the time we come here, we were called Cubans" - CC_MG_4

"I was so lost like I was so troubled but I didn't want to tell them like guys I felt so left out and everything" - CC_NC_7

"My main challenge was that and also when the Cuban students, when they get back to South Africa, in a way, we feel a bit isolated because I don't know. It's just that general feeling that we, we, we are not capable students, errr, we don't know anything, errr, we just, we wasted government's money and ja, ja. And you, you could just, you just feel that from, from the management, from the staff and also from the local students" - CC_NM_6

6.11.5 Major theme 5: Social challenges

As discussed in the earlier sub-theme on 'first impressions of Cuba', the difficulties with adjusting to the Cuban environment and conditions under which they had to study were immediately apparent for the students. Arriving at the airport in Cuba was overwhelming for all the participants interviewed, who emphasised the extreme heat and inability to breathe the air as major impediments that they faced. These students embarked on this journey to study through the Cuban-South African medical collaboration

programme to improve their lives but their experience in Cuba proved challenging and required the students having to endure conditions worse than that of their rural background.

The students' unmet expectations of Cuba are evident in the response of participant CC_QS_9:

> *"When we arrived in Cuba, it was a totally different story. It was a totally different story because you remember that being a child from a rural area, then they tell you are going overseas to study you are expecting much, that I'm going to a country that is maybe better than South Africa because that is overseas. The mere fact that it's overseas it's a better country where we find everything easier for us but it was not like that. It was difficult. The first time we landed in airport we saw a totally different picture. We saw a totally different picture because the airport was not up to standard compared to Johannesburg. It was very, very of a low standard. Yes, too much, it was very low. I don't know, I don't know but it was not what we expected" - CC_QS_9*

6.11.5.1 Sub-theme 1: Challenges related to accommodation, transport and food in Cuba

In addition, difficulties with accommodation, food and transport exacerbated the challenges faced by students in adapting to the climate and environment in Cuba. Most responses from the participants show that life in Cuba was difficult and intolerable. After their difficulty in navigating the airport and experiencing challenges in communicating, the cohort students were taken to their housing. They stated that it was intimidating to use the transportation provided. Participant CC_QS_9 explained:

> *"By the time we were at the airport, we were waiting for transport to take us from airport to the university. We were thinking maybe the buses will come like the coach buses. It was an old bus hahaha. It was old bus. If you watch these old African, err American movies, the school buses? Yes, it was that bus but it was old. For our luggages, it was a truck, like a truck, a normal truck that you see here. So we had to pack our bags there" - CC_QS_9*

Another major problem that the cohort students had to face was adapting to their accommodation. There were between twelve and twenty students assigned to each room. Additionally, the showers and ablution facilities were rudimentary and unpleasant to use. This was expressed by participant CC_QS_9:

> *"The most traumatic thing that we experience was that now we were, that we had to live in one room, I think with twelve. Twelve in one room. And then that twelve, I think we shared, err, three, three showers and, errr, with cold water. In Cuba they*

don't have hot water. They don't have hot water and then the toilet, the toilet they use, I don't know if you are aware of it, Chinese system in toilet. Where you don't flush, you just take a toilet paper and ja. So, in Cuba they use that thing even now" - CC_QS_9

In contrast to the others, one student asserted that there were advantages to sharing space with so many individuals. Participant CC_NX_8 expressed:

"So, we were twenty in some room, in some rooms twelve. So, it was easy to make friends. "So, if we are staying in the room, we will get along ja cos you are not alone. If you have a problem, there's like nine people you can reach to tell them no guys I'm stuck at this stage, I don't have money, I need advice, ja so that's how we remain friends. We didn't struggle much with that" - CC_NX_8

The cohort group experienced many struggles with the food in Cuba. The majority of the responses from participants indicated that the meals in Cuba were difficult to adjust to. Participant CC_AN_1 highlighted this:

"The food was, the food was really bad, so I ended up not eating from the cafeteria. So, I ended up buying my own food, errmm, and then renting my own places. So, I decided to cook for myself and ja even though it was not allowed but ended up living like that" - CC_AN_1

There were no provisions for special dietary requirements and the cohort students had to eat what was available. Students had to get used to eating food they had never eaten before or they had to go without a meal. This was expressed by participant CC_JM_11 and participant CC_QS_9 respectively:

"Some people didn't eat pork but at some point it was the only thing available so they had no choice but to get into it" - CC_JM_11

"So, it was just traumatic and then when we get there we were given two slice of bread and then there was a ham inside. So they didn't care if you eat pork or what. For instance, I don't eat pork so on that day, I couldn't eat. I just drank a juice and I slept" CC_QS_9

Participant CC_MM_3, on the other hand, believed that the Cuban system was so effective that they managed to find a means to meet everyone's basic needs. Therefore, there was no hunger in Cuba because everyone received their monthly supply of beans, meat, bread and vegetables. However, luxuries were in short supply.

6.11.5.2 Sub-theme 2: Health related challenges in Cuba

Dealing with health issues also proved to be challenging for the students in the cohort. This was largely exacerbated by the fact that the students were highly stressed in Cuba and despite offers to provide counselling to the students, there was none provided. Participant CC_QS_9 explained the result of this:

> *"And in Cuba people are getting stressed. I remember there was a time when they said that they will bring psychologists, psychologist. But there was never, that thing never happened. Some people they just have stress, other they just go psychotic. And one of the students that we lost, he committed suicide in Cuba, I think in 2019 inside the res. So, Cuba is stressful. The people get sick in Cuba, one of the students we lost by the time we were about to come back. Ja he died in Cuba. They say it's because of pancreatitis. So, in Cuba people are getting sick and then their health conditions that they get, they are not up to standards. Err after they get sick, they quit the programme" - CC_QS_9*

Furthermore, when the students fell ill while in Cuba, no one attended to them. Some students had to undergo surgery in the Cuban hospitals. While the private hospitals are in good condition, the public sector facilities in Cuba are not up to standard, according to the participants. Participant CC_QS_9 described his experience:

> *"One of the problems, it's a major problem when we got sick in Cuba and when we, I think you heard we lost many students in Cuba. I won't say its negligence or I don't want to say that but when we get sick in Cuba, it becomes a problem, it becomes a problem. So, I remember I once got sick in Cuba. So, what happened there, I did an operation there. It was fine, so they did err, we had a private hospital so I was hospitalised there but they had to take me out. Then I had to join the public hospital. It was horrible, in terms of the condition. Just imagine, Cuba on its own, things are horrible. Now you go to hospital because even here, some of the public hospital things are not good. But now just imagine in Cuba, it's worse. So, we went to a public hospital, that's one of the challenges that we are facing when people are sick" CC_QS_9*

6.11.6 Major theme 6: Cultural adaptation challenges

For the students who needed an escape from the stress of the medical training programme, Cuba's social life and culture provided an outlet. Fortunately, the Cuban culture shared many similarities with South African culture, making it easier for the students to adapt. Participants were able to practice their religion and participate in song and dance, which resonated with the culture of South Africa. On special

occasions, the students even had the chance to display their own culture through their attire, food and celebrations of holidays like Heritage Day. This had a significant impact on the sense of community with the Cubans.

On the other hand, participants noted that it was easy to be influenced by Cubans and their culture, so they had to learn to keep their composure. Some participants explained that it was very easy for the South African students to integrate and learn bad habits. According to participant CC_RM_13, this contributed to many of the South African students smoking and drinking excessively:

> "*You can literally fall into the dungeon of just being Cuban, so it's a matter of choice because you are so easily influenced by Cubans. You can, which is the reason the majority of the boys did fall into it. They developed alcoholism, and they, they, they were just not in the right place. The system had made it incredibly simple for them to integrate into that culture, and that was the only explanation. You already know how inexpensive alcohol is. A can costs 50 cents, or R5 if you want to put that in South African currency. Twenty cigarettes cost R15 in a pack" - CC_RM_13*

6.12 Conclusion

The findings that emanated through the analysis of the data collected during the various phases of the study were presented in Chapter Six. This chapter began with a comprehensive overview of the global and national policy documents that were reviewed in the macro level of the study, which allowed for the main themes addressed in each of the documents to be identified. Four key themes were highlighted namely quality, sustainability, effectiveness and culture. The review of policy also highlighted the aspects of HRH that need to be developed and enhanced for the future in order to make health care accessible to people in under-served areas in South Africa. In addition to the policy documents that were considered, student enrolment and completion figures from UKZN and the HPCSA were outlined. It is evident that output of medical students is significantly lagging behind the demand for critical medical and clinical skills in South Africa.

The next part of the chapter focused on the meso level findings from the semi-structured interviews that were conducted with the Cuban-South African medical collaboration programme administrators and managers. The challenges that the administrators face in supporting the returning Cuban cohort students were identified and it was found that administrative difficulties in registering students at UKZN are faced even before students return from Cuba. The main issues faced by administrators once students were allocated to their respective Decentralised Clinical Training Programme sites had to do with operational, social and technical challenges. Programme managers reported challenges, firstly, in

assisting students to adjust to the culture and processes to be followed as UKZN students. They also identified academic challenges faced by students due to the differences between the Cuban and South African medical curricula, and social challenges for the cohort students due to stigmatisation from fellow students, academic staff and even patients. A further social challenge highlighted by programme managers had to do with the repercussions of the outbreak of the COVID-19 pandemic in terms of readjusting the teaching and assessment timetable, and the impacts for students who had contracted the virus. The cultural challenges pointed out by the managers were the language barriers faced by students who had been taught exclusively in Spanish in Cuba and struggled with translating their knowledge to English or isiZulu.

The last part of Chapter Six presented the findings obtained from the Cuban cohort students themselves in terms of the challenges that they experienced being part of the Cuban-South African medical collaboration programme. The students explained that they had experienced challenges even with the application process to become part of the programme, and that the challenges they faced only escalated from there. The main challenges they faced in Cuba were in terms of the culture shock experienced, learning Spanish and being taught exclusively in a foreign language, and adjusting to the requirements of the Cuban institutions that they were studying at. In addition, students had technical difficulties in accessing the internet to be able to communicate with loved ones in South Africa. The stereotypes that students were subject to in Cuba led to negative consequences for many of the cohort students, who felt isolated and rejected during their time in the country. Students also highlighted their experiences of having to adjust to the accommodations and food in Cuba, as well as the means of transport where they encountered many negative experiences. Finally students identified the ease with which some students were able to adapt to the culture in Cuba, often to their own detriment. The discussion chapter that follows is informed by the theoretical underpinnings of the conceptual framework and the literature reviewed in the study. The findings will be explored in further depth by comparing and contrasting with the existing literature and findings of previous studies, and using the conceptual framework developed in the course of the study to contextualise the findings.

Chapter 7

Discussion of Findings

7.1 Introduction

The purpose of this chapter is to comprehensively discuss the themes that emerged from the research by examining and contextualising the findings gathered during the three phases of analysis. Having presented the data collected during the macro, meso and micro levels of the research in Chapter Six, this chapter discusses, in greater depth, the key themes that are pertinent to the research according to the main aims set out in the introduction to the study. The discussion of the findings of the study will be conducted through a consideration of the data in light of the review of the literature that was undertaken, as well as through the application of theories on migration, Human Capital Theory and Resource-Based Theory. Although the previous chapter's structure separated the presentation of the findings at the macro, meso and micro levels into those associated with the three main aims and corresponding objectives, this discussion chapter will synthesise the data in accordance with the over-arching themes that emerged in the study to discuss the challenges and impacts at various levels.

A recap of the main aims of the study covered in the discussion chapter include: the challenges facing the Cuban-South African medical collaboration in terms of increasing the numbers of trained doctors and producing the relevant skills required for an efficient health workforce, in keeping with the demands of NDP2030; the administrative challenges facing the Cuban-South African medical collaboration programme in terms of professional and regulatory bodies viz., the HPCSA and UKZN, specifically the institutional culture and compatibility of the programme; and the challenges facing South African medical students trained in Cuban cohorts in terms of social, cultural and psychological adjustment. Table 7.1 on the following page provides an overview of the themes and sub-themes, ranging from the macro, meso and micro-level.

Table 7.1: Comprehensive overview of themes and sub-themes of the study

Macro-level	Meso-Admin	Meso-PM	Micro-CC
Major Theme 1: Quality	**Major Theme 1: Administrative challenges**	**Major Theme 1: Challenges adjusting to UKZN life**	**Major Theme 1: Preliminary challenges**
	Sub-Theme 1: Documentation Sub-Theme 2: Administration of the programme	Sub-theme 1: Orientation acquiring UKZN identity Sub-Theme 2: Facilities challenges related to accommodation and connectivity	Sub-theme 1: Application process Sub-theme 2: First impressions of Cuba
Major Theme 2: Effectiveness	**Major Theme 2: Operational challenges**	**Major Theme 2: Academic challenges**	**Major Theme 2: Adjusting to the Cuban Institution**
	Sub-Theme1: Distribution of equipment Sub-Theme 2: Logistics	Sub-Theme 1: Curriculum differences between UKZN and Cuban universities Sub-Theme 2: Academic preparedness	Sub-theme 1: Language challenges Sub-theme 2: Adjusting to Cuban institutional requirements
Major Theme 3: Sustainability	**Major Theme 3: Social Challenges**	**Major Theme 3: Social Challenges**	**Major Theme 3: Technical Challenges**
	Sub-Theme 1: Communication Sub-Theme 2: Psycho-social Support	Sub-Theme 1: Repatriation Support Sub-Theme 2: Challenges related to COVID-19	Wifi connectivity
Major Theme 4: Culture	**Major Theme 4: Technical Challenges**	**Major Theme 4: Cultural Challenges**	**Major Theme 4: Psychological Challenges**
	Sub-theme 1: Connectivity	Sub-theme 1: Language barriers	Sub-theme 1: Stereotypes and other psychological challenges in Cuba Sub-theme 2: Isolation and rejection leading to

			serious psychological issues and distress
			Major Theme 5: Social Challenges
			Sub-theme 1: Challenges related to transport, accommodation, and food in Cuba Sub-theme 2: Health-related challenges in Cuba
			Major Theme 6: Cultural Challenges

7.2 Themes Emanating from Review of Policy Documents

In order to achieve health-related goals, health policies are crucial in determining how a health system operates and is organised (Kayesa & Shung-King, 2021). The comprehensive analysis of policy documents that was presented in Table 6.4 in the previous chapter highlighted sections of the WHO Global Strategy on Human Resources for Health Workforce 2030, the Department of Health 2030 Human Resources for Health Strategy and the NDP2030, according to the identified themes of Quality, Effectiveness, Sustainability and Culture. A review of the aforementioned policies in the macro-level phase of the study provided a basis for the compilation of the rest of the findings of the study, starting from the HRH requirements prescribed by the WHO in the Global Strategy on Human Resources for Health: Workforce 2030 (World Health Organisation, 2016a). This document highlights important aspects of HRH in line with UHC. The policy document's text may provide answers to queries about the context, background and justification for the need for the policy in the form of references to political or economic factors that support the context (Cardno, 2018). The four themes that emerged from a macro-level analysis of the three policy documents are considered essential for the Cuban-South African medical collaboration's success in transforming its goals in terms of health care. They can be considered as the four pillars (quality, effectiveness, sustainability, and culture) for successful health-related reforms. Findings from the analysis of the policy documents revealed that in order for health systems to deliver better health outcomes and higher social value, health policy must take in to account evolving health needs, rising public expectations and ambitious new health goals.

7.2.1 Major Theme 1: Quality (Macro-level)

The study's underlying assumption is that addressing the shortage of medical doctors in South Africa is critical to improving health care. The policies examined in this study call for better service delivery and higher quality of care, which can only be attained by increasing the number of health care professionals employed and improving their skill sets. In fact, research on quality in health care agrees that it should be ingrained in all health systems, not just the domain of the wealthy (Kruk et al., 2018). The medical collaboration between Cuba and South Africa serves to supplement the shortage in numbers of doctors and to increase medical capacity of doctors in the country. However, for the medical collaboration between Cuba and South Africa to be successful, challenges must be identified and overcome. Doing so will help to increase efficacy and quality for a long-term health workforce as well as a change in the way that health care is perceived in the country. Addressing the study's aims and objectives revealed valuable information on how the Cuban-South African medical collaboration contributes to the larger goal of health-related outcomes, which are in line, not only with South African policy, but also with the WHO's call for UHC.

Ideally, the aim of government and stakeholders in South Africa should be to parallel the objectives set out by the WHO's Global Strategy for Human Resources for Health: Workforce 2030 (World Health Organisation, 2016a) by increasing the number of doctors to ensure accessible, quality health care for all people in the country. This is only possible if the right skills are provided in the right places. Being one of the few solutions to supplement the shortage of doctors, a holistic approach to strengthening the Cuban-South African medical collaboration programme has benefits for the future health workforce in line with the goals of the NDP2030 and the future NHI plan. Transforming health care in South Africa starts with aligning the country's medical education and training with the global trends and guidelines of the WHO for UHC.

Part of the motivation for undertaking this study was to present a model for stakeholders and policy makers to increase the support for and to promote the Cuban-South African medical collaboration to increase the programme's quality, effectiveness and sustainability and to drive a culture of change towards primary health preventative medicine. High-quality HRH serve as the foundation for the qualities of medical capacity building for successful health promotion. Poor quality of health care in South Africa stems from high turnover, migration of medical doctors and misdistribution of human resources between the private and public sectors.

7.2.2 Major Theme 2: Sustainability (Macro-level)

Sustainability of doctors is crucial to ensuring quality service delivery and health outcomes. Mortimer, Isherwood, Wilkinson and Vaux (2018) identify sustainability as a 'domain of quality.' Other studies

(e.g. Udekwe, Iwu, de la Harpe & Daramola, 2021) highlight that the lack of clear succession planning guidelines in policy has an impact on knowledge transfer and the sustainability of skilled doctors. The Department of Health 2030 Human Resources for Health Strategy suggests that the sustainability of health care workers can be achieved through strengthening the capacity of HRH by increasing the number of medical universities to train health care workers. This should create sustainability of HRH by providing output of medical graduates to serve the needs of all communities in the country (Department of Health, 2020). However, given the numerous challenges that the South African health care system faces in implementing these strategies, the best option would be to use the existing complement of Cuban-trained doctors to bridge the gap in South Africa's HRH and the provision of health care services to under-served communities. The underlying crisis in South Africa's shortage of health care workers is exacerbated by the migration of qualified medical doctors to other countries. Lee's Push-Pull Theory of Migration (Lee, 1966) highlights the problem of doctors leaving based on a number of predictors. These aspects range from 'pull factors' such as better salaries and job opportunities, to 'push factors' such as political crisis and poor working conditions. In South Africa in particular, the health care situation has strong influence on the willingness, or lack thereof, of medical doctors to practice in the public sector (Maphumulo & Bhengu, 2019). In addition to the opportunities provided by other nations abroad, the movement of medical professionals has caused the health care industry in South Africa to suffer considerably in terms of medical capability and public service delivery (George et al., 2019).

This study was based on the assumption that by identifying and addressing the challenges facing all stakeholders of the Cuban-South African medical collaboration, the programme can be strengthened for medical capacity building for primary health care in line with the SDGs for UHC set out by the WHO. The WHO's Global Strategy on Human Resources for Health: Workforce 2030 highlights the need for: the transformation of medical education; equipping health care workers with skills for UHC; creating labour market frameworks for UHC; and human resources planning, training and management for the retention of health care professionals (World Health Organisation, 2019).

In the South African context, the NDP2030 advocates reviving primary health care and improving quality in all aspects of the system. The themes of quality, effectiveness and sustainability resonate within the NDP2030 and South African doctors emerging from the Cuban cohort may hold the key to achieving these goals. Motala (2014) and Motala and van Wyk (2016) have criticised the Cuban medical training because it does not fit into the context of curative medicine in South Africa. A comparison of the populations and burdens of disease between Cuba and South Africa shows that drastic differences in these aspects can be considered as impediments to the success of the programme (Sui et al., 2019). However, when compared to the British model of medicine, the Cuban medical system is nevertheless better adapted to South Africa's socioeconomic situation. Still, the consideration of recruiting from

rural, impoverished communities as a means to ensure that doctors, return to serve in these places has not been given adequate attention (Econex, 2015). The fluidity of the health system and the need for transformation according to population demographics were overlooked in the planning of the Cuban-South African medical collaboration programme (Figueroa, Harrison, Chauhan, Meyer, 2019).

In areas of the country where there is a lack of key skills, applying the Resource –Based Theory (Barney, 1991) to the large pool of untrained and semi-skilled people in South Africa will help to address the doctor shortage. In addition to the unused labour, the majority of the population living in rural communities cannot afford to access quality health care. The political context and conditions facing South Africa's public health system are similar to Cuba. Hence, the government's novel strategy of recruiting medical students from these rural regions, training them in Cuba and requiring them to serve back in these communities upon their return to South Africa is beneficial and an effective implementation of Resource-Based Theory.

Low doctor output can also be linked to the HPCSA's regulation of the accreditation of medical universities in South Africa as well as the intake of doctors per medical school (Tiwari, Wildschut-February et al., 2021). The issue of an inadequate number of medical schools in South Africa and the limit on the number of medical students trained in each of them needs to be addressed. Ideally, the Departments of Health and Education should plan to build the necessary infrastructure to support more students at more medical universities but the economic factors and restrictions enforced by the HPCSA would have to be modified in order to accommodate such a mammoth task. Therefore, South Africa should consider using existing resources to implement change in the interim.

7.2.3 Major Theme 2: Effectiveness (Macro-level)

The government's plan to choose students for the Cuban cohort who meet the requirements of coming from low-income families and living in rural areas was a step towards this redress. The findings of the study indicated that this action to recruit a specific type of student to train and develop and supply a need resonates with Barney's (1991) Resource-Based Theory. The information gathered from student interviews highlighted that the socio-economic status of applicants was intensely interrogated in order for them to be considered to be part of the medical training in Cuba. An intriguing finding was that South African medical students trained in Cuba return to serve in their community of origin or other under-developed rural health care facilities, increasing the numbers of medical professionals and expertise needed in these areas. This finding is in line with Barney's (1991) Resource-Based Theory in that the feedback from respondents of the Cuban cohort shows that the students did originate from uner-developed communities and did in fact return to serve in these communities after studying in Cuba. The

cohort students' dedication and passion are reflected in the social value they add to the areas where they live, areas which have previously suffered from a severe lack of service delivery.

However, despite the fact that the Cuban collaboration students contribute to the South African public health care system in this way once they return home, the HPCSA's records revealed very low enrolment and output figures of doctors who were part of the Cuban cohort during the five-year time period of 2015 to 2019 considered in this study. This calls for greater investment and better recruitment practices to increase the number of students enrolling and qualifying through this programme.

Another surprising finding from the interviews with the students in the Cuban cohort showed that the primary health care skills that they acquire in Cuba are absorbed into the curative model of medicine upon their return to South Africa. A possible explanation for this is due to the generic structure of the medical curriculum that is tailored specifically towards a curative approach for the MBCHB programme. Interviews with the programme managers, however, revealed that changes in the medical curriculum are imminent. The conceptual model to be presented in the final chapter of the study demonstrates the necessity of a hybrid strategy for returning cohort students to maintain their knowledge and to put into action the skills acquired in Cuba as a crucial element in the re-engineering of primary health care in South Africa. In order to increase the level of appropriate skills and capacities required for medical doctors in South Africa, Motala and van Wyk (2016) concur that primary health care should be the focus of medical capacity building.

This implies that significant change is needed at the macro level, and that the South African government and higher education institutions in charge of training medical doctors need to work together to support these changes. Delivering universal, high-quality, and affordable health care that defines UHC starts at institutional level (World Health Organisation, 2019). Hence, the need for HRH policies and strategies to coordinate efforts in order to set priorities, directions and means to address the major challenges in the recruitment, management, motivation and retention of health care workers is the driving force behind them (Ahmat et al., 2022). Although South Africa has developed a number of macro-level policy documents and specific health workforce planning strategies outlining how the required capacity would be developed in the country, challenges still exist in this area (Ile, 2021).

7.2.4 Major Theme 4: Culture of Health (Macro-level)

The primary health care approach is the foundation for the training of South African medical students in Cuba. The review of policy at macro level revealed that the re-engineering of primary health care is a prerequisite for health reforms that need to be effected in South Africa. It is important to note that changing policies is the most efficient way to change systems. Thus, the review of macro-level policy

played a crucial role in providing an understanding of the goals and effects of raising the number and calibre of doctors in South Africa.

Bala (2019) and Zweigenthal et al. (2016) revealed that the health care system in South Africa was created under Colonial rule during Apartheid times, serving the interests and needs of an elite White society. During these years, little or no changes were made to adapt the health care system to support the needs of the mass majority. The transition from Apartheid to a democratic system of government has left much to be desired in terms of reforms in health for the country. The current system of health care is stratified and unequally distributed, and only adequately serves those who can afford medical care while disregarding the needs of the general public who rely on a public health system that is frequently short on staff, underfunded, and in a state of disarray. The elements that contribute to South Africa's low doctor population appear to have an effect on the shortage, and these factors were included in this study so that some of the aforementioned issues can be addressed in order to increase the number of future doctors. South Africa's political history saw the restrictions of Apartheid legislation constrain the Black majority's access to education and training, which needs to serve as the starting point of skills redress (Gallo, 2020). Mannion and Davies (2018) refer to the culture of health as patterns of care. Adopting a new pattern or approach is the focus of this study in creating a transformed health care system for the future. In order to achieve the SDGs of UHC, the WHO has issued a worldwide mandate calling for changes to health systems. While South Africa is committed to executing these reforms under the NDP2030 and the NHI Plan, key intermediary stages that are essential to the success of these reforms are often overlooked.

7.3 Major Theme 1: Programme Administration Challenges (Meso-level)

The meso-level of the study set out to examine the challenges facing the Cuban-South African medical collaboration in terms of the administration and management of the programme. These challenges included dealing with professional and regulatory organisations, specifically the HPCSA and UKZN, in terms of the programme's compatibility with institutional culture. Often overlooked, the institutions to which the Cuban cohort must assimilate face several challenges that inhibit their ability to assist these students to reach their full potential and achieve the desired purpose. This research has shown that in order to modify health care outcomes in a way that is efficient and long-lasting, changes must be made at all levels of the Cuban-South African medical collaboration programme. Building robust health systems necessitates enhancing local organisations' capacities, their relationships with one another, and the institutions that support those relationships.

While South Africa needs to make improvements to its policies, infrastructure and medical practices, there is one factor that has frequently been ignored in earlier studies. This factor relates to the changes and improvements that are necessary at programme level with regard to the Cuban-South African

medical collaboration programme. Part of the training of South African doctors in Cuba involves them returning to South Africa to join the local medical universities before they write their final exams to qualify. Motala and Van Wyk (2021) found that the educational and social stress challenges experienced by the Cuban cohort were understood to be transitional. However, this study delved deeper into the initial administrative processes that pose difficulties from the outset of the cohort's integration into UKZN. The findings related to these administrative challenges, as well as the academic challenges faced by students, will be discussed in the sub-sections to follow.

7.3.1 Sub-theme 1: Challenges related to administration and documentation (Meso-level)

Assimilating with UKZN meant that the students from the Cuban cohort have to register as a UKZN student. The distance between Cuba and South Africa is a challenge from the beginning of the process of the cohort students returning to South Africa. The process of getting students to fill out mandatory paperwork to register with UKZN presents several difficulties. It is not practical and efficient to wait for students to return to South Africa to fill out forms as this will result in delays in the commencement of the academic programme. Therefore, UKZN makes an effort to encourage students to register online and to complete the relevant paperwork while they are still in Cuba so that everything is ready when they arrive in South Africa. Ideally, this should save time, yet this process appears to be the start of the challenges facing the administrators at the university.

The findings from the interviews with programme administrators revealed that students do not register online, do not complete documentation, or they fill out documents incorrectly, and this delays the start of the programme when they return to South Africa. When students return, administrators struggle with this registration process and spend a great deal of time helping them at orientation. The impact of this challenge is that other processes such as issuing equipment, arranging accommodation, and providing books, personal protective equipment and stipends are delayed. It is important to address this challenge at the beginning to allow for the smooth running of the programme once Cuban cohort students are repatriated to South African. There appears to be a dearth of previous studies and literature that investigate the administrative aspects of the Cuban-South African medical collaboration.

Although straightforward, this procedure is crucial for maintaining records, keeping track of progress, and managing the degree progression of the Cuban cohort. Hence, the completion of documents required by the Department of Health at the start of the Cuban medical training is not sufficient for the cohort students. The completion and submission of the relevant documents pertaining to the registration of these students on the UKZN database is a crucial step in the administration of the Cuban cohort. Registration itself is a verification process to capture all the relevant details and documents on the ITS

system and to issue the student with a student number. This allows the student access to campus and all of UKZN's facilities for their academic studies and training.

When it comes to registering with the HPCSA, the Cuban cohort must adhere to the same rules and procedures as local MBCHB students. All health care professionals have to be registered with the HPCSA in order to practice in their medical field. The completion and registration of documents with the HPCSA represents another major challenge in addition to the completion of the required UKZN documents. Even though the programme administrators at the university assist students with the processing of completion certificates, it seems that the source of delays lies with the offices of the HPCSA. There are no designated staff at the HPCSA to process forms for UKZN students.

Addressing the challenges at programme level is crucial to the change in health care that the country is seeking. Upon returning to the Nelson Rohihlahla Mandela School of Medicine at the University of KwaZulu-Natal, students from the Cuban cohort need to fulfil a number of requirements before they can commence with the completion of their medical journey, and these processes need to be streamlined and simplified to enable students to be able to do so.

7.3.2 Major Theme 2: Academic challenges (Meso-level)

The transformation of medical education in South Africa is a step toward the implementation of the changes that are so necessary in the health care system. Phasha (2021) studied the transitional experiences of the South African medical students returning from Cuba and emphasised the need for radical transformation in medical education. This transformation is essential since the education sector in South Africa has historically been segregated by socioeconomic status as well as language, ethnicity and gender. Given Nelson Mandela's view of investing in education *'as a weapon to change the world'* (Nelson Mandela Foundation, 2017), providing educational opportunities to students from lower socioeconomic levels to study to become doctors was a significant contribution to the development of medical education as well as a benefit to the future of health care in South Africa.

The economic worth of people's knowledge, skills and competences is a key component of the Human Capital Hypothesis (Becker, 1962). The hypothesis acknowledges that investments in education and training will raise quality and productivity. The notion to optimise the existing workforce supports the Sustainable Developments Goals of the NDP2030 and UHC outlined by the WHO. The Resource-Based Theory (Barney, 1991) provides a theoretical basis for the recognition of competencies that organisations, or this case government, can exploit as a benefit. Two assumptions of this theory, as proposed by Penrose (2009), to achieve sustained competitive advantage is based on heterogeneity of resources and capabilities, and resource immobility. Considering only the human resources aspect of

Resource-Based Theory, this study recognises the intangible value of the Cuban cohort and the knowledge and skills they bring. 'Dynamic capabilities', which is a concept of Resource-Based Theory (Barney, 1991), speaks about how organisations respond to external environments and market pressures. Adapted to the health care context, dynamic capabilities will serve as a useful characteristic in the re-engineering of primary health care especially in a financially constrained economy.

The success of Cuban health care is based on a strong emphasis on disease prevention and health promotion. South Africa, on the other hand, has fully adopted the British medical curriculum for training medical doctors. This curriculum prioritises the curative model of care for a population that cannot afford to access it. Participants interviewed at micro-level, that is, students who were part of the Cuban-South African medical collaboration programme, indicated that the issue with South Africa and other countries in the world is that too much emphasis has been placed on curative care and individual patient care. They believed that South Africa has neglected to look at the underlying causes of problems at a community level and to address health promotion at this broad community level to prevent diseases from progressing to the point where patients are in need of cures for these diseases. Squires et al. (2020) agree that greater community involvement and primary care teams will best serve the shift in health-related outcomes. With the current health care approach that is prevalent in South Africa, individuals must go to a hospital where doctors and other medical staff are stationed to seek medical care. As a result of this system, only those who can afford to travel to these facilities and have the resources to do so can receive health care.

While the WHO Global Strategy for Human Resources for Health: Workforce 2030 document highlights a number of areas for consideration as part of the global strategy on HRH, the ultimate goal is the attainment of UHC in all member states (World Health Organisation, 2016b). The transformation of medical education, the training of health care professionals in UHC capabilities, the development of a labour market for UHC, and human resources planning and management for retention are all components of attaining this goal.

Even though the NDP2030 highlights the need to reform teaching methods, the majority of medical school curricula in South Africa are based on curative medicine. Participants at the programme level concurred that the curriculum is flexible and subject to change. However, the reason for the delays in fully adopting a disease prevention and health promotion approach in medical school curricula is due to the financial impact this change will have on hospitals, especially those in the private sector. The future of medicine in South Africa is a shift towards UHC and with the upcoming provisions for the NHI, medical education needs to evolve in order to ensure that progress is made in this direction.

In the Cuban health care system, the manner in which information is communicated and assimilated into the minds of the public leads to alterations in behaviour and lifestyle changes (Lage, 2019). It is becoming increasingly difficult for curriculum designers to foresee the scientific knowledge and skills that students will require twenty years after they have graduated, hence the knowledge and tools available to doctors today must be updated during the course of their careers (Lage, 2019). Effective recruitment practices, high-quality training and development programmes, embracing transformative changes, and improved retention strategies are all ways to improve the quality of human resources for the health sector (World Health Organisation, 2016b). Hence, HRH must be recruited and developed in accordance with the present and future requirements of the population, and the curriculum must change to meet those demands. Participant programme managers stated that the medical curriculum needs to be adaptable and fluid. An illustration given in the interviews was that, for instance with reference to the COVID-19 virus outbreak, the curriculum should be able to adjust to incorporate it into the syllabus without neglecting other topics like TB and HIV.

While South Africa is re-engineering its medical curricula to include more of an emphasis on primary health care, the Cuban cohort faces a number of obstacles upon returning to South Africa that prevent them from contributing to these intended improvements. The students in the cohort meet the necessary requirements and reflect the socio-demographics of the target communities when they are recruited to train in Cuba and return to work in disadvantaged and rural health care facilities. However, the challenges that they encounter in integrating with the MBCHB programme offered at South African medical schools impedes the realisation of this goal. The challenges that are discussed below highlight the concerns that must be taken into account and remedied in order to enforce the primary health care training of students from the Cuban cohort.

The MBCHB programme's curriculum differs from the Cuban medical cohort's curriculum in both approach and setting. Participants who took part in the micro-level interviews indicated that while they are taught the same medical principles as the MBCHB, the presentation of these principles in South Africa and Cuba differs. These differences in the approach to medical care which the Cuban cohort are exposed to should be recognised as important to the health reforms of South Africa but are often overlooked and absorbed into the curative health care approach. The meso-level participants emphasised that the structure of the South African medical system is one in which doctors and other medical professionals are based in hospitals or health care facilities and where patients seek medical care at these sites. On the other hand, Cuban medical education makes sure that doctors go into the community to help people prevent illnesses and sickness before it worsens to the point where extensive intervention and medical care is required. The Cuban cohort are also taught the impact of the social and cultural determinants of health in order to promote health and prevent illness. This is another difference between South Africa and Cuba in terms of each country’s medical curricula and approaches to health

care. Vandeyar (2020) calls for radical reforms and the decolonisation of the medical curriculum, not only in what is being taught but also in terms of the academic perceptions, attitudes and beliefs.

7.4 Major Theme 3: Social Challenges (Meso-level)

The social challenges facing programme level for both administrators and programme mangers relate to the repatriation support and support during the Covid-19 pandemic. There is a plethora of literature (e.g. Corrales-Reyes, Hernandez-Garcia, Vitón-Castillo & Mejia, 2021; Escobedo, Auza-Santiváñez, Rumbaut, Bonati & Choonara, 2021) on the diplomatic ties with Cuba based on their medical brigades assisting countries world-wide during the COVID-19 pandemic. While this study extensively covered the role of the student support services in assisting students in this respect, there is a dearth of literature in this area.

7.4.1 Sub-theme 1: Challenges related to COVID-19 (Meso-level)

The corona virus pandemic placed enormous pressure on most, if not all public health establishments indicating a desperate shortage of medical capacity throughout the world (Xu, Zhang & Qian, 2020). As late as December 2020, the South African medical association (SAMA) expressed concerns over the vast shortages of personal protective equipment, oxygen and medical staff in KwaZulu-Natal (TimesLive, 2020). The literature on the challenges that health care workers face is consistent with the findings at the meso-level, which indicated that students in the Cuban cohort struggled to deal with the COVID-19 virus and were unsure how to handle the situation when they contracted the virus or knew of others who did. “Protecting health care workers (HCWs) from COVID-19 is a global priority” (Rees, Dunlop, Patel-Abrahams, Struthers & McIntyre, 2021). Aside from cases of the virus resulting in death of health care workers, the time taken to quarantine and recover placed tremendous demand on an already pressured system. This was a major concern for the programme managers who had to manage the stigma associated with the COVID-19 virus as well as the non-disclosure of the students who tested positive. In a study conducted by Rees et al. (2021), the number of leave days taken by employees as recorded in July 2019 was 86 per 100 but this rose to 177 per 100 in July 2020. The findings in this study revealed that students would secretly self-isolate just so that they would not miss out on lectures and clinical rotations. The findings indicate that South Africa needs to adopt a ‘workforce preservation’ approach by prioritising the health and safety needs of doctors and frontline workers (Dramowski, Zunza, Dube, Parker, Slogrove, 2020).

The province’s shortfall of medical personnel has been evident for many years but the COVID-19 crisis exacerbated the problem. Reports from the Human Rights watch in Africa indicated that morale was low among health care workers in South Africa (Human Rights Watch, 2020). Staff shortages resulted

in burnout and fatigue during the pandemic and the rising number of deaths among health care workers has widened the gap in the shortage of doctors (Human Rights Watch, 2020). Retaining and sustaining an effective quality of care among medical doctors requires intense interrogation into providing support and assistance when needed.

7.5 Major Theme 4: Cultural Challenges (Meso-level)

The key to carrying out the changes required in the South African health care approach is to use the skills that the cohort students bring with them from their training in Cuba. There are several benefits of having the South African students study medicine in Cuba. Firstly, they are taught the required approach for bolstering future health care models, which is primary health care. They have been trained to promote health and prevent disease at community level with limited resources and access to technology. In a qualitative scoping review conducted by Squires et al. (2020), data revealed that the students from the Cuban cohort displayed the same confidence in practical skills as those of the locally trained medical students. This, combined with their primary health care abilities learned in Cuba, should be employed as a cutting-edge tool in the health care reforms mandated by policy in the re-engineering of health care in South Africa.

Public hospitals and health care facilities in the rural areas of South Africa have benefited greatly from being teaching sites for the Cuban cohort students. According to a programme manager at UKZN, any resources, materials and equipment required by students at the hospital sites is provided by the Department of Health. The Department of Health even provided funding to renovate and upscale the hospitals to accommodate the teaching of students, which inevitably was a benefit to the community who received better resources and greater levels of care. The primary goal of UHC, which is the central objective to improve health-related outcomes, connects the three policies that were examined in the macro level of the study. The aim of improving health-related outcomes is observable in the recurring themes in the policy documents scrutinised. Research objective two at the macro-level speaks to the alignment of skills produced in the Cuban-South African medical collaboration programme to the requirements of skills in HRH in the WHO and Department of Health policy documents. When reviewed, the challenges identified revealed that, globally, a transformation in medical education and training is required in order for effective human resource for health planning to take place.

The South African Department of Health is attempting to integrate primary health care into its health system, however, it is unclear how much of the Cuban cohort's training has been incorporated. When students from the Cuban cohort return to South Africa, it appears that their training is absorbed into the current health care model. This contradicts the goal of sending these students to Cuba to learn about health promotion and illness prevention strategies. The South African government needs to pay more

attention to the education and skills the Cuban cohort has to offer and must determine how to make the most of the money spent on these students' training in order to maximise the benefits to the South African health care system.

The primary goal of HRH is to create value through the human resource function. This requires application of the principles of the VRIO framework in the Resource-Based Theory (Barney, 1991). The purpose of the VRIO framework is to assist organisations in identifying and protecting resources and skills that offer them a sustainable competitive edge. The Cuban-South African medical collaboration is important because it makes use of human resources, a factor that has previously been unrecognised, and using the Resource-Based Theory may help to identify potential opportunities and to plan for the future.

7.6 Major Theme 2: Challenges adjusting to the Cuban Institution (Micro-level)

The challenges faced by students that were discovered in this study through the interviews with the cohort will be discussed in the sections to follow.

7.6.1 Sub-theme 1: Administrative challenges (Micro-level)

The students in the Cuban cohort encountered a number of administrative difficulties, and these were also evident as part of the challenges facing the programme administrators at meso-level. The application process to the Cuban-South African medical collaboration programme was unfamiliar and difficult based on the responses of the students, and it was found that no assistance or support was provided by the Department of Health in this process. Bearing in mind that these students were selected from rural, disadvantaged backgrounds, it is clear that more support was needed.

7.6.2 Sub-theme 2: Culture shock on arrival in Cuba (Micro-level)

For many of the students, the most challenging aspect of the experience was arriving in Cuba and then adapting to the institution that they were placed in as well as the broader Cuban society. While it was exciting to travel abroad for the first time, the students were unprepared for what they encountered when they reached Cuba. Given that many of the students described feeling as though they were choking and indicated that they were having trouble breathing in Cuba, it is clear just how anxious they were. What was not clear from the information gathered from the interviews was why the students were not informed or prepared for the adjustment required when they arrived. They claimed that the conditions in Cuba were worse than those they had experienced in South Africa, despite the fact that they had grown up in rural, underdeveloped areas.

7.6.3 Sub-theme 3: Language (Micro-level)

Language proved to be the students' greatest challenge throughout their studies in Cuba, with many students describing being '*thrown into the deep end to learn Spanish in Spanish*'. Several authors (Donda et al., 2016; Motala & van Wyk, 2016; Phasha, 2021) have extensively covered language barriers as a challenge in the Cuban medical training. Many scholars, for example Phasha (2021), have also studied the language barrier encountered by students upon returning to South Africa in several studies of transitional challenges. Previous research acknowledges the struggles of South African students in the cohort in terms of the issues that learning in Spanish presents, as well as the difficulties that programme managers experience in having to teach students when they return to South Africa. This study however looks at language as a cultural concept and examines how it associates with elements like trust, stereotypes, performance and separation. Earlier research (Motala, 2014; Phasha, 2021) in this area has paid little attention to these concepts, yet they have an impact on the programme's outcome especially in terms of mental health and well-being of the students. The language challenges continued when students returned to South Africa and affected their ability to assimilate with UKZN. The cohort was given extra time to adjust but many of the programme managers found that students struggled with medical terminology and translating from English to Spanish and back to English. They were also unfamiliar with the abbreviations of medical terms, which are quite common in South Africa as opposed to Cuba.

7.7 Major Theme 4: Psychological Challenges (Micro-level)

Even though the psychological well-being of the students in the cohort is given considerable attention when they return to South Africa, it is often neglected when they are in Cuba. Phasha's (2021) study reflected on adjustment problems students from the Cuban cohort face, when they return to South Africa. From the findings of this study, it is clear that the support and counselling that the students seek is mainly required in Cuba. To deal with the pressures of the difficulties they experienced, students frequently turned to the church, alcohol, or other students for support. This is concerning because some of these methods that students resorted to did not always provide favourable outcomes. Furthermore, many students' attempts at self-reliance failed, leading to them experiencing depression and anxiety, and unfortunately to some students even committing suicide. Donda et al. (2022) aptly describe the impact the challenges of 'unbelonging' has on the identity of the students in the Cuban cohort. Despite South Africa's rife history of revolt and student protest to advocate against unfairness, studying in Cuba left many cohort students feeling subdued and despondent. Students described the Cuban institutions as being very 'militaristic' in their approach to the South African students. This was evident in the dress code for classes, as well as the curfews and restrictions imposed on students, which prevented their freedom of movement off campus. Students did not have the means to form student bodies to raise their

concerns with the Cuban universities, especially on issues of accommodation, meals and the criteria used for assessment.

In line with these challenges experienced in Cuba, some students and programme managers also indicated that initially the students from the cohort were excluded from the Medical Student Representative Council when they returned to UKZN. This increased the Cuban cohort students' sense of exclusion and marginalisation. Unfortunately, there are no other studies that have focused on the challenges of the Cuban-South African medical collaboration at this level.

7.8 Major Theme 3: Technical Challenges (Micro-level)

Technical challenges and access to Wifi and internet in Cuba contributed to the psychological challenges facing the cohort students. Many of the students interviewed said that when they were in Cuba, access to computers, the internet and phones was expensive and scarce. Landa, Zhou, Marongwe (2021) highlighted the need for technology innovation, especially in rural regions, as an emergency education approach, particularly during times like the Covid-19 pandemic. The lack and cost of connectivity made the students desolate and lonely, since they were unable to call home to talk to family and friends. The impact of this had implications for psychological issues which were exacerbated by these challenges. Fortunately, thanks to technological advancement, this issue does not exist for the more recent groups of students studying medicine in Cuba. However, students who had maintained family ties while studying abroad in Cuba also felt resentment over missing out on important family occasions, national festivities, significant events, and even changes in the country.

When the cohort arrived back in South Africa, the distribution of laptops to students presented difficulties for programme managers and administrators, and Wifi was not available in all residences. This resulted in delays in students being able to finish the university registration process and to start the syllabus. Programme administrators reported that this made the cohort students feel anxious and sidelined.

7.9 Major Theme 5: Social Challenges (Micro-level)

Social challenges were experienced by students in the cohort both in Cuba and when they returned to South Africa. When the students left their rural homes in South Africa, they found the living conditions in Cuba to be worse than what they had experienced in their home areas. Many students stated that they had shared a room with between 12 and 20 other students in the residences in Cuba. In addition, their dietary and religious requirements were not properly taken into consideration. Since pork was inexpensive, meals frequently included this protein, forcing some students to make concessions to eat

it or risk going hungry to bed. Students believed their fundamental human dignity had thus been violated and disregarded.

Students in the cohort also faced challenges related to their health. While in Cuba, students who became ill were admitted to the provincial hospitals, which they claimed were subpar. Due to the United States' embargo on Cuba, there are fewer resources and essential supplies available in the country. Hence, students' stay in hospital was not pleasant. Challenges in transitioning back home, also left students feeling vulnerable and inadequate. Phasha (2021) focused on the aspect of 'culture shock' as a major challenge for the students returning to South Africa. Xui et al (2019) adds that in order to cope with their challenges, students from the cohort, would group together to support each other. Students who returned to South Africa in the midst of the COVID-19 pandemic also faced challenges in terms of dealing with the virus. As a result of social distancing and lockdown restrictions, the students from the cohort were afraid to reveal that they had contracted the COVID-19 virus. This led to students making excuses and self-isolating without informing anyone that they had contracted the virus and seeking support in this regard. There is a dearth of literature covering the health of the South African students in the Cuban cohorts.

The challenges facing males and females in HRH differ vastly. Several authors have highlighted various aspects such as disparities from how jobs and roles are assigned (Ellemers, 2018), while others have explored why people may make decisions to leave a country or to stay (Bjerén, 2021) or to select a particular career. There are significantly fewer women practicing medicine in South Africa than men. It is advised that HRH planning incorporates forecasting strategies for reaching gender equity targets in order to provide guidance for planning the production of health care personnel (Tiwari, Wildschut-February et al., 2021).

Although fewer women offered to volunteer for interviews, the information they provided in response to the interview questions was rich from a female perspective. The male candidates did not exhibit challenges similar to the female participants. The challenges faced by the female participants were significantly more serious and difficult than those faced by the male participants. The causes were local Cubans' inappropriate comments and advances toward them in a sexual manner. The female participants found this offensive and distressing to deal with. This was an additional challenge for the female participants to face whilst studying medicine in Cuba.

7.10 Major Theme 6: Cultural Challenges (Micro-Level)

Participants indicated that adjusting to Cuban culture and the culture of the institution that they were studying at proved to be challenging to some of the students in the Cuban cohort. Phasha (2021)

highlighted the challenge of culture shock for South African medical students returning from Cuba. Previous research has, however, neglected the cultural transformation that occurred while the South African students were in Cuba. There were several positives experiences for students in terms of the cultural aspects of studying in Cuba. Some South African students identified the similarities between their cultures with Cuban culture, which helped them to cope during their stay in the country. These homesick students found refuge in the music, dance, poetry and art in Cuba. The cohort also had the good fortune to meet together as a group to mark significant cultural occasions such as Heritage Day and to celebrate the day with food, music, dance and recollections of home. However, these experiences were few and far between the lonely, challenging days. Nevertheless, these attributes created resilience and allowed Cuban cohort students to adapt to Cuban society.

However, returning to South Africa made the Cuban cohort students feel alienated and rejected, and they explained that they struggled to find their place in their communities, battled to assimilate to UKZN and also encountered difficulties in re-joining to their families. Participants expressed that there were many changes that had occurred by the time they returned to South Africa. They had missed many important events and occasions and even though they were back home, they still felt that they did not belong.

The phenomenon of 'us and them' was a major challenge for the students in the Cuban cohort. The distinction that was made in Cuba of the students not fitting in and belonging continued when they returned to South Africa. The high failure rate amongst the cohort also created a further divide and reinforced the cohort students being stereotyped when they returned to South Africa. Donda et al (2022) found came upon similar results where the outcome of the study revealed a negative sense of belonging for the South African students returning from Cuba.

7.11 Conclusion

The findings of this study indicate that a shift from the historical trends of the South African health care system to a more sustainable approach based on supply and demand is necessary. This change in medical culture from a solely curative approach to a primary health care, preventative approach requires health graduates to fit the gaps of the current South African medical education curriculum. The motivating factor behind the Cuban cohort was to allow for the recruitment of South African medical students from rural areas, to train, qualify and return to serve where their communities could access health services. This chapter provided a discussion of the macro, meso, and micro findings and the challenges that the medical collaboration between Cuba and South Africa faces. In the chapter, the findings from interviews with the UKZN programme managers and administrators as well as with South African students studying medicine in Cuba were explored. The policy review was discussed in light of

the WHO and Department of Health's directive for South Africa to prepare for UHC, one of the SDGs related to health. In addition, the NDP2030 speaks to the re-engineering of skills required for future health care workers to achieve UHC. Challenges highlighted in the study indicated similar problems facing the programme and cohort level and these issues need attention to improve the experience of the students, programme administrators and programme managers. A summary of the key conclusions that can be drawn from the research and the recommendations that can thus be made will be provided in the following chapter.

Chapter 8

Conclusions and Recommendations

8.1 Introduction

In the preceding chapter, the qualitative findings were discussed in relation to the aims and objectives of the study and in light of the findings of previous research. This chapter synthesises and integrates the findings in order to set out the conclusions that can be drawn from the discussion into a model of best practice to address the challenges facing the Cuban-South African medical collaboration in order to manage the retention of medical doctors. The findings of this study add to the body of knowledge currently available, advancing previous research. This was accomplished by considering the challenges and experiences of the South African medical students in the Cuban cohorts, as well as those of the UKZN's programme managers and administrators. The conclusions of the study are connected to HRH policy, which promotes the skills and aims of UHC. The research findings revealed that the Cuban-South African medical collaboration offers a solution to South Africa's HRH and skills shortages. Policies targeted for the year 2030 envision an equitable, accessible health care system that is only possible with major transformation. From the findings of this research, the Cuban-South African medical collaboration has the ability to drive this transformative change in the culture of health in South Africa.

Recommendations based on the key findings to enhance the experiences of the Cuban cohort, programme managers and programme administrators at UKZN that emerged from the research will also be made in this chapter. These recommendations will include suggestions for change to policymakers, programme directors, and medical schools and recommendations for further research will also be outlined. The following sections will be covered in this chapter:

- Conclusions of the study based on the research aims and objectives
- Recommendations to:
    - Policymakers and stakeholders at the Department of Health in South Africa
    - Programme directors at medical schools in South Africa
    - Recommendations to improve the experience of South African students in Cuban medical cohorts
- Future-orientated Health Preparedness Model
- Original contribution of the study
- Recommendations for future research
- Chapter summary

8.2 Conclusions of the Study Based on the Research Aims and Objectives

By drawing on the data that was generated, analysed, and interpreted, each research aim and objective will be addressed in a way that offers recommendations and demonstrates the study's original contribution to the body of knowledge.

8.2.1 Aim 1: Macro-level

To analyse the challenges facing the Cuban-South African medical collaboration in terms of increasing the numbers of trained doctors and producing the relevant skills required for an efficient health workforce, in keeping with the demands of the National Development Plan 2030.

8.2.1.1 Research Objective 1: *To identify the challenges facing the Cuban-South African medical collaboration in producing the desired number of doctors to build and sustain a skilled health care workforce.*

The study has shown that the output from the Cuban-South African medical collaboration is ineffective in supplementing the shortage of medical doctors in the country. The WHO's Global Strategy for Human Resources for Health: Workforce 2030 provides the globally accepted benchmark for the number of doctors aligned with the goal of achieving UHC. The comprehensive analysis of the policy documents and themes presented in Chapter Two shows that the WHO's Global Strategy for Human Resources for Health: Workforce 2030 emphasises the importance of culture, effectiveness, sustainability, and quality. This study adhered to the themes emphasised in the Global Strategy because the overarching objective of achieving UHC by increasing the number of doctors in nations around the world is guided by the principles set out in this document. The findings of the review of the policy documents and relevant literature showed that in comparison to other BRICS nations, South Africa performed extremely poorly in terms of the doctor to patient ratio and that output of the Cuban-South African medical collaboration did not successfully contribute to doctors per capita. This was highlighted in the threshold of figures in which South Africa averaged in the region of 0.78 doctors to patient ratio for the period 2015 to 2019. While India also fared relatively low in terms of doctors per capita, China and Brazil ranked in the region of two doctors per 1000 patients and Russia ranked at 3.9 doctors to a 1000 patients.

In addition, the review of the UKZN Institutional Planning records for students registered in the MBCHB programme and the Cuban cohort assimilating with UKZN for the years 2015 to 2021 revealed low output. This was indicated in the MBCHB graduate numbers of 160 in 2015, 207 in 2016, 189 in 2017, 202 in 2018 and 193 in 2019. Supplementary numbers of students enrolled in the Cuban Cohort at UKZN were considerably high with 94 enrolling in 2018, 128 in 2019, 211 in 2020 and 142 in 2021. However, when compared to the statistics on the number of registered doctors from the HPCSA, these

numbers were relatively lower with 45 registering in 2015, 25 in 2016, 56 and 2017, 20 in 2018 and only 2 in 2019. Considering that all medical doctors have to be registered with the HPCSA in order to practice medicine in South Africa, these numbers hardly scratch the surface of the number of doctors needed for UHC. Therefore, it can be concluded from the findings of the study that the Cuban-South African medical collaboration, as it currently stands, is an insufficient mechanism to supplement the number of doctors needed to create and maintain the desired health care workforce.

8.2.1.2 Research Objective 2: *To assess whether the current Cuban-South African medical collaboration programme is meeting the demand for the relevant quality of skills for the South African human resources for health.*

Despite the futile efforts of the Cuban-South African medical collaboration programme to increase the number of medical doctors in the country, from a skills perspective, the primary health care approach of medical training in Cuba is the ideal model for health care reforms in South Africa.

The findings indicated that the Department of Health's 2030 Human Resources for Health Strategy focuses on developing a skilled, enabled and supported health workforce to boost workforce planning capabilities. In this respect, training South African students in Cuba should meet the criterion of 'effectiveness', yet the findings of the study showed that cohort students are absorbed into the curative medical model when they return to UKZN. The review of the Strategy revealed the reforms required for UHC in the South African health care context. The policy calls for primary health care to be re-engineered in ways that go beyond the primary health care services offered by district health services. The Department of Health 2030 Human Resources for Health Strategy speaks to transforming medical training platforms, strengthening the health care workforce, and building institutional capacity for effective public policy. It is however pointless to invest in the training of the South African students in the primary health care model in Cuba if that training is not reinforced when they return to South Africa.

The Department of Health 2030 Human Resources for Health Strategy highlights the need for competent, quality skills for the HRH in South Africa. The policy also speaks to revolutionising the selection and recruitment of health professional students to overcome health workforce inequities between urban and rural areas, and between the public and private health sectors. Here, the Cuban-South African medical collaboration meets the requirements as students from rural, underprivileged backgrounds are selected to train on the condition that they later serve in these under-served areas. This also relates to the sustainability theme emphasised in the Department of Health 2030 Human Resources for Health Strategy. The theme of 'culture' is reflected in the policy in terms of creating a socially accountable workforce, embracing equity, gender transformation and respectful care. The study found that while there is a need to strengthen existing systems, the emphasis on quality of care requires

improving the effectiveness of the training of HRH. This implies that the social determinants of health, disease prevention and health promotion must be part of the skills set for necessary health reforms to be executed. Despite the fact that Cuban medical training covers all of these topics, the challenge is that the training is not effectively applied to the South African context.

8.2.1.3 Research Objective 3: *To evaluate whether the Cuban-South African medical collaboration programme is aligned in developing a skilled health care workforce in line with the National Development Plan 2030.*

The four themes of quality, effectiveness, sustainability and culture were identified in the NDP2030. The policy calls for complete health system reforms, filling of posts with skilled, committed and competent individuals, and the development of primary health care teams that provide quality care to families and communities, all aimed at the ultimate goal of the provision of UHC. The NDP2030 indicates that these themes align with principles of the Cuban-South African medical collaboration. The study revealed the following factors that resonate with the NDP2030: demographic trends; rural inclusivity; training and education; and promoting health. While the focus of this study was specifically on Chapter Ten of the NDP2030, these aforementioned factors indicate the overall holistic approach to health and developing a culture of wellness.

8.2.2 Aim 2: Meso-level

To analyse the challenges facing the Cuban-South African medical collaboration programme in terms of administrative challenges with professional and regulatory bodies viz., Health Professions Council of South Africa and University of KwaZulu-Natal in terms of institutional culture and compatibility of the programme.

8.2.2.1 Research Objective 1: *To identify the administrative challenges facing the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine when dealing with the Cuban-South African medical collaboration students.*

Interviews with the programme administrators at UKZN illustrated that there are several challenges in terms of the provision of administrative support to the Cuban cohort. These challenges included communication, equipment delivery, psycho-social support, ability to complete required documentation, Wifi connection and logistics. From the start there are difficulties involved in completing forms and online documentation, as well as in gathering information about cohort students to register them and capture their details on the UKZN database. The inability of the Cuban cohort students to register as UKZN students prevented administrators from processing the necessary stipends in a timely manner.

There are additional issues faced in dealing with the HPCSA. Before starting their clinical rotations, students must register with the Council and pay a registration fee. Students must also register with the Council after receiving their degree in order to be granted a license to practice medicine in South Africa. These two processes related to the HPCSA proved to be challenging for students in the Cuban cohort. Delays from the Department of Health in supplying medical equipment and protective clothing like lab coats and scrubs results in distribution challenges for the UKZN administrators. This difficulty affected the planning of transportation to get students from the Decentralised Clinical Training Programme sites to sign for and retrieve their equipment. Cost implications also result from this, and administrators are under pressure to coordinate the processes at the last minute.

When the cohort students returned to UKZN, the availability of counsellors and Academic Development Officers was carefully arranged and greatly aided them in regaining their confidence and establishing themselves. The problem, however, was finding a private space for students to consult with their counsellors. This led to students having to wait until they returned to their residences which meant that counsellors had to be available after hours to assist the students. Students also struggled with COVID-19 and being able to isolate at their residences. The study highlighted instances in which students hid their COVID-19 status solely to avoid humiliation and to avoid missing classes.

8.2.2.2 Research Objective 2: *To identify the programme management challenges facing the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine when dealing with the Cuban-South African medical collaboration students.*

The challenges from the perspective of the programme managers involved orientating the Cuban cohort to the UKZN institutional culture, dealing with the differences in curriculum and health care approaches, the conditions of some facilities, repatriation of students, COVID-19 and language barriers. These challenges had a significant negative impact on the cohort's progress. The primary factors affecting the programme were centred around blending in with the local medical students, acclimating to the UKZN culture, becoming familiar with the curriculum, learning medical terminology and abbreviations, and catching up with the level of the MBCHB students.

Programme managers made every effort to provide additional sessions to account for the variations in training but the main challenge was the context and approach that was difficult for the cohort to adapt to. Despite the additional assistance, programme managers found that the students struggled to adjust to the differences in the curriculum. In fact, it was evident that the cohort was disadvantaged in terms of being assessed on hospital-based, curative medicine after five years of primary health care training in Cuba. One programme manager described the different health systems as comparing 'bananas with apples'. From a social and support level, the integration with the local MBCHB students proved most

challenging for the students. The programme management discovered that there was a high degree of prejudice and stereotyping of the Cuban cohort, particularly among the 'local' medical students who believed they were superior to the cohort. Even though it would have made sense to separate the cohort from the MBCHB group, the programme managers were conflicted because they did not want the Cuban cohort students to feel like 'second-class citizens'. The adjustment to medical terminology and abbreviations of medical terms used in South African universities also proved to be challenging for the cohort. However, one programme manager felt that South Africans are adaptable and knowing more than one language is common. Hence, they viewed this factor of being able to switch between languages as only a benefit for the cohort.

8.2.2.3 Research Objective 3: *To identify the challenges in terms of the compatibility of the Cuban-South African medical collaboration programme to the institutional culture at the University of KwaZulu-Natal, Nelson Rohihlahla Mandela School of Medicine and Health Professions Council of South Africa.*

In order to assess the cultural compatibility, a review of the values of UKZN and the HPCSA were compared with the purpose and outcomes of the Cuban-South African medical collaboration in supporting a culturally competent health care worker for health care reforms. Demographics of health care workers in relation to patients, particularly in terms of race, language and socio-economic background, impacts efficient service delivery. A review of the institutional culture of UKZN and the HPCSA reflects western ways of working. Even though the values and principles of these institutions, especially in terms of ethics, need to be adhered to, the question this raises is whether these institutional cultures improve the quality of care. Understanding the cohort's training requires incorporating the institutional values and cultures that these students bring into that of UKZN and HPCSA, because there is undoubtedly a shift in social norms and approaches to dealing with patients in a community setting, as opposed to attending to patients in a hospital. Hence developing cultural capacity to align to the health-related goals of primary health care is necessary for UHC.

8.2.3 Aim 3: Micro-level

To analyse the challenges facing South African medical students trained in Cuban cohorts in terms of social, cultural and psychological adjustment.

8.2.3.1. Research Objective 1: *To identify the social challenges facing the South African students trained in Cuba in terms of stereotypes, social alienation and academic/institutional culture of Cuban universities.*

Adjusting to the institutional culture of the Cuban universities was difficult for many of the South African medical students in the cohort. The political climate of South Africa as a democracy left students feeling suffocated and oppressed in the Cuban communist realm. This was evident in the complaints that students had but were unable to express due to the rigorous, militaristic nature of Cuban universities. This exacerbated the anxiety that students experienced, being in a foreign land. Another major concern for the cohort was technical difficulties and the high cost of internet connectivity and phone calls. This problem caused students to feel estranged from their family and friends in South Africa. Students who were able to acclimate and develop friendships with other students in the cohort as well as the surrounding Cuban population fared far better than those who withdrew themselves and became depressed, some even turning to alcohol as a result.

From the findings of the study, stereotypes were a major concern for the South African students in Cuba. They experienced bearing the brunt of a range of stereotypes and assumptions about, for example, living in the jungle, their perceived poverty as African students, their appearance, having bad body odour, bringing diseases from Africa, and not being technologically advanced. They were also labelled as the 'quiet ones,' were called 'monkeys' and 'animals' and told to go back home because they were wasting the resources of Cuba. On the other hand, students from other African nations believed that South African students were wealthy and privileged.

8.2.3.2 Research Objective 2: *To identify the cultural challenges facing the South African medical students trained in Cuba in terms of race, gender, language and culture.*

Challenges in terms of race, language and culture were evident even before the cohort arrived in Cuba. Participants grouped themselves according to the provinces they resided in, their mother-tongue language and their cultural background. However, this only served to strengthen the bonds and provide support for the days when they were facing other hardships of Cuba. Adapting to the language and culture of Cuba was not easy for the students from South Africa. Upon arrival at the Cuban airport, the cohort were unable to communicate because of the language barrier. There was little or no assistance from Department of Health staff, and the students had to rely on sign language and a Spanish dictionary to navigate their way. Students experienced extreme anxiety because they believed they left their families and homes in South Africa only to be abandoned in an unfamiliar environment and culture.

Another obstacle that students had to overcome is the strong racism in Cuba. The majority of participants indicated that both White and Black Cubans would throw racist epithets at them. This was

disconcerting for the South African students because it was unusual for them to encounter prejudice from other Black people. While male students interviewed stated that there were no gender biases in Cuba, several female participants were traumatised by their experiences of being harassed due to their gender. Students said that Cuban men made perverse comments about their physical appearance and this made them feel uncomfortable. However, there was no gender stereotyping in relation to the female students choosing medicine as a career.

8.2.3.3 Research Objective 3: *To identify the psychological challenges facing the South African medical students trained in Cuba in terms of language, trust and performance.*

Due to the language barrier experienced in Cuba, the South African students felt excluded from numerous interactions in the classroom and on the streets. This generated trust issues, and the students were frequently deceived and cheated while purchasing things on the street. In the classroom, Cuban students and students from other African nations who spoke languages comparable to Spanish left the cohort out of discussions, raising suspicion among the South African students who felt they were being spoken about and excluded. When they finally understood what was being said in Spanish, they were able to cope better and deal with their academics more proficiently. However, the majority of participants expressed that their academic performance was poor when they first began their studies in Cuba.

8.3 Recommendations

South Africa's health care system has been shaped by its political and economic past, with specialised care distributed mostly in metropolitan regions and only very basic care supplied in rural and peri-urban areas. Hence, the recommendations emanating from the findings of this study are based on the contribution that the Cuban-South African medical collaboration can have in terms of creating a platform for more equitable and accessible health care. The recommendation section of this chapter will be divided into the following categories:

- Recommendations for policy-makers
- Recommendations for programme directors at medical schools
- Recommendations to improve the experience of South African students in Cuban cohorts

8.3.1 Recommendations for policy makers

The fundamental flaw of South Africa’s health system is the inability of primary health care and the district health system to function effectively. Hence, the call for UHC involves the strengthening and re-engineering of primary health care. To strengthen and re-engineer the health care system in the

country is to increase effectiveness, and therefore, the NDP2030 focuses on the achieving these outcomes. Governments and professional councils should work together to implement regulations that will increase the competency, efficiency, and quality of the labour force. The following key responsibilities of regulators should be taken on: maintaining a live database of the health workforce; supervising pre-service education programme accreditation; putting in place mechanisms to ensure continuing competence, such as accrediting post-licensure education providers; and running fair and open procedures that promote practitioner mobility while simultaneously protecting the public (World Health Organisation, 2016b). There is a need to increase capacity by making sure students are equipped with the right skills that match the needs of patients (Department of Health, 2020).

South Africa has struggled with retention of doctors, especially in the public sector, and this has had a major impact on the community's access to health care. Hence, the concept of rural recruitment needs to be explored and developed to consider the changing demographics of the population and to provide support like the Cuban-South African medical collaboration for the training of students in these areas. The theme of developing a labour market framework based on a global scarcity of health care personnel in order to accomplish UHC is centered on a focus on rural recruitment. Greater synergy between health care personnel abilities and patient demands is essential in order for government recruitment to be effective. This coordination should be based on an overall, strategic view of the major areas for recruiting, and coordinated deployment in order to ensure the task-shifting of practitioners with the required training and expertise.

As much as the purpose of the Cuban-South African medical collaboration is to supplement the number of medical doctors produced at South African medical schools, the primary health care skills of the cohort need to be preserved. This calls for a review of the assimilation process when the cohort returns to the South African universities. Instead of diminishing the primary health care training and emphasising the curative approach, the Cuban cohort needs to have a different approach of completing their medical training in compliance with the HPCSA's regulations.

The Ministerial task team needs to empower the alumni of the Cuban cohort to drive the change process in health care. They carry key skills for the re-engineering of primary health care in the country. Ministries need to provide incentives to retain staff in remote and rural health care facilities, and should also assist doctors with professional development and career growth plans. The onset of the COVID-19 pandemic revealed the urgent need for doctor and medical health care personnel throughout the world.

A recommendation for the Department of Health in South Africa is to assign a designated counsellor or psychologist to be based in Cuba, who assists students with transitioning, adapting and coping with the challenges they face on an emotional and psychological level. The presence of a South African Student

Support Service in Cuba will provide a place of refuge and hopefully preserve the mental health and maybe even the lives of students who in the past have had nowhere to turn. There is also a need to change the way that policies are put into practice because there is usually a mismatch between the policy requirements and the availability of resources.

8.3.1.1 More medical schools in South Africa

A review of the UKZN student records indicates that the numbers of students enrolling is significantly low. This, coupled with high drop-out and failure rates, impacts the sustainability of the number of doctors produced locally through the medical universities. However, the statistics on the Cuban medical training also do not fare well. Despite the value of the skills that the Cuban medical training produces, the numbers of doctors who actually qualify through the programme most certainly does not sufficiently add to the number of medical doctors required in the country. Training medical students in Cuba is less expensive than the average training cost in South Africa. Therefore, government needs to invest greater efforts to ensure the success of the programme to supplement the shortage of doctors in the country.

In the longer term, South Africa needs to increase the number of medical schools to accommodate the growing demand for doctors and health care workers. However, plans should already be in place considering the expense, time, and fulfillment of regulatory requirements for the accreditation of health sciences universities. Private medical colleges have been considered as options to address the shortage of doctors in the country, but a major question is whether these would be able to guarantee demographic representation if they were allowed to operate.

The development of rural-based medical schools in South Africa is essential as currently most training facilities are based in cities, which limits and restricts students in fully executing the primary health care objectives. The Umthombo Youth Development Foundation is a non-profit organisation that assists students in rural communities in KwaZulu-Natal to study at tertiary institutions in South Africa. This scholarship scheme is aimed specifically towards qualifications in health sciences and works in conjunction with the needs of hospitals situated in rural areas. Greater investment and government support into projects like the Umthombo Youth Development Foundation will assist in increasing the numbers of health care workers in remote and rural locations.

8.3.1.2 Changes in medical curricula

There needs to be a paradigm shift in how medical curricula are approached since content-based curricula are not responsive to health needs and national health systems as a whole. Knowledge mobilisation needs to take place in the South African context in terms of the Cuban cohort becoming more hands on in the transformation of the curriculum to adopt a primary health care approach. The

Departments of Health and Education need to collaborate to introduce curriculum reforms to include more primary health care accredited by the HPCSA. This would involve strengthening clinical competence and theory in the community based Primary Health Care.

Academic disciplines need appropriate subjects and content to develop primary health care physicians to drive the transformation of the medical curriculum. The entire approach used in the medical curriculum needs to be revised. Training and clinical competence needs to be patient-focused. Clinical practice suggestions should be practical, affordable, and patient-centred, alongside the integration of patients' goals, in training for the primary health care workforce. These recommendations should be adjusted for primary health care settings.

8.3.2 Recommendations for programme directors

The programme directors of the Cuban-South African medical collaboration must devise methods to assist in all processes involved in the cohort's transition, from the time they are accepted to the programme until they qualify and exit. The Department of Health needs to assign more staff to oversee the process, who must ensure that they communicate with the cohort throughout their journey. Perhaps the concept of a counsellor or a buddy system with students from past cohorts can assist pupils to cope with the environment and curriculum that they must become accustomed to in Cuba. These selected personnel should remain with the cohort until they return to South Africa and should be accessible to assist them if they require additional assistance.

While administrative and psycho-social assistance at UKZN is sufficient, more academic participation in how the cohort is managed is required. The idea of having two different streams at UKZN to manage the MBCHB and the Cuban cohort should be explored. This is consistent with the National Development Plan’s request for dedicated primary health care doctors to practice community-based medicine. The Department of Health would need to allocate more employees devoted to this Cuban cohort stream at UKZN.

8.3.2.1 Improving administration at programme-level

A number of methods could be devised to improve the administrative support provided to the Cuban cohort. According to interviews with the programme administrators at UKZN, communication, equipment delivery, psycho-social support, and documentation were some of the major challenges that they encountered. Although the cohort's initial integration with UKZN was affected and delayed due to connection and logistical challenges, these problems were quickly resolved because administrators are keenly aware that it caused the students a great deal of anxiety. The effectiveness of all administrative

issues, despite their apparent simplicity, are crucial to the programme's efficient operation and the student's acclimation upon their return to South Africa.

Considering the challenges facing administrators when the cohort students return to South Africa, plans need to be implemented to assist in streamlining all necessary processes. A designated team should liaise with the Cuban cohort either directly or through the Department of Health to ensure that online registration and mandatory paperwork is completed timeously. This would significantly shorten students' wait time and delays experienced when they return to South Africa, and would provide them more time to settle in at the UKZN Medical School. Cost implications to make this possible should be factored into the budget set aside for the cohort and, considering that this expense would only be annual, provisions should be made for flights, accommodation and transport for dedicated UKZN administrators to travel to Cuba.

If anything, this study has indicated the need for vast improvements in dealing with the HPCSA, not only for the Cuban cohort but for all aspects of medical training in South Africa. Several studies and other literature suggest that the HPCSA's delays affect other foreign-trained doctors who are awaiting council registration and are unable to practice until this is completed. This challenge was exacerbated during the outbreak of COVID-19 when South Africa needed all hands on deck in terms of medical practitioners (Abdool Karim, 2020). Government and Ministries of Health throughout South Africa need to engage with the HPCSA to expedite the administration of documents and registration of students to allow qualified doctors to practice. Mechanisms for improvement need to be discussed and implemented to effect change and strengthen administrative processes.

8.3.2.2 Role of Health Professions Council of South Africa in maintaining quality, effectiveness and sustainability

Government must collaborate with professional councils to improve the competency, effectiveness, and quality of the labour force. To ensure public safety, it is important to maintain an up-to-date list of the health workforce and to supervise the accreditation of pre-service and post-licensure education providers. Determining how South African students are being trained in Cuba requires the HPCSA to be more involved.

8.3.2.3 Future health care worker – world health worker

The future of health care relies predominantly on the future health care worker which would emanate from the transformation of the culture of health in South Africa. The NDP2030 speaks to addressing this change by calling for 'Special Primary Health Care' doctors. These doctors will be involved in health promotion and disease prevention to reduce the number of cases that need to be sent to hospitals.

Community-based doctors doing home visits will eliminate the need for people to commute to a health care facility for medical care and treatment. These home visits should target social determinants impacting health issues and help prevent situations from being exacerbated to critical levels. An example of this is educating the community on the benefits of vaccines, keeping the environment clean to prevent diseases like malaria and dysentery, and counselling families on issues such as gender-based violence and abuse. The presence of community-based primary health care doctors will assist people to take responsibility for their health and well-being. The benefits of this adaptation will be extensive, affecting many locations in rural communities. This will align with the SDGs that call for UHC and making health care equitable and accessible to all.

8.3.3 Recommendations to improve the experience of the Cuban cohort

From the programme perspective, many administrative challenges arose from documentation, registration and administration issues. The programme for the students would be substantially improved by having a designated liaison who was knowledgeable about all procedures, especially those that need to be completed before the students leave for Cuba and return to South Africa.

The language and cultural differences also need to be addressed. Orientation to teach basic Spanish will equip students with the skills to communicate more effectively when they reach Cuba. This should help students to learn their way around and acclimatise to life in Cuba more easily once they arrive, which will have positive effects in terms of reducing the anxiety experienced by students.

The Department of Health needs to provide safe spaces for the cohort students to engage with the UKZN counsellors and psychologists once students return to South Africa, especially during the period of assimilation with the MBCHB group. This study has highlighted all of the psycho-social challenges facing the cohort in terms of adapting and adjusting to UKZN and therefore every effort needs to be made by all stakeholders to ensure the mental health and well-being of the cohort.

8.4 Conceptualisation of the Future-Oriented Health Preparedness Model: Cuban-South African Medical Collaboration

In order to create a model of best practice for managing medical doctors in South Africa, this chapter synthesises and combines the conclusions that can be drawn based on the findings of the study. It was evident from the presentation of the study's findings and the discussion of the outcomes that the Cuban-South African medical collaboration has been hampered by many issues. However, the proposed model emphasises that the cohort must maintain their individuality and the distinctive skills they acquired in Cuba in order to drive the transformation of health to incorporate more of a primary health care

approach. Before beginning to develop the model, a summary of the important points was considered to understand the rationale behind the model. These key points for the model's development are illustrated in Table 8.1 on the following page.

Table 8.1: Summary of key issues for the construction of the Future-Oriented Health Preparedness Model: Cuban-South African medical collaboration

Summary of key issues
WHO calls for UHC
South African HRH policy geared for re-engineering of primary health care for UHC
Change from previous medical model was based on British system but this creates a mismatch because of the vast difference is both countries
The current curative system requires that patients seek medical care at a health care facility or hospital – this requires transport, money, logistics and resources to travel to these facilities
Commonalities between Cuba and South Africa reveal that the primary health care model is better suited to the circumstances in South Africa. This will assist patients living in outlying areas where there is a major lack of basic resources like running water, electricity, medical supplies and technology
Despite the socio-economic status of these areas, the South African students trained in Cuba are prepared to operate in extreme conditions despite the lack of basic resources. Cuba has limited resources because of their embargo with the United States of America yet their approach to health care has been effective.
The question is…why make the cohort change and adapt back to the curative approach when they return?
These students hold valuable skills in the transformation of health needed in South Africa.
They are required to join the local South African universities and to adapt to the institutional requirements, use equipment they were never exposed to in Cuba, learn terms and abbreviations that they have never heard previously or were taught in Spanish, and to handle the pressures of casualties like accidents and violent crime injuries, which were uncommon in Cuba.
…and they are judged for not knowing what to do and how to do it the 'South African way'
After experiencing five years of living in appalling conditions in Cuba (some students saying that Cuban conditions were worse that the conditions in rural South Africa), sharing accommodation with strangers (12-20 per room), being forced to eat food they have never eaten before (e.g. pork that was common in Cuba because it was cheap), not being able to contact or afford to contact their friends and family during their training in Cuba, being stereotyped and blamed for the social inequities of Cubans, dealing with depression, anxiety, poor performance in oral assessments because of the language barrier students are still treated like second class citizens when they return to South Africa
When they return to South Africa, they are told they are government property, wasting taxpayers' money, and they have to adjust to the curriculum at UKZN that all the MBCHB students are familiar with for the five years of their studies to date
Segregated and treated differently by the academic staff who feel they do not know the medical content because now they need to translate what they learnt in Spanish back to English (bearing in mind that English is not even their mother-tongue)
Placed in public sector hospitals and health care establishments where they are faced with pressure, high patient volumes, and having to learn how to use different equipment

It is overwhelming but thankfully UKZN offers support. However, the students struggle to find a safe, private space to discuss confidential matters with counsellors
During lockdown it was difficult for counsellors to meet face to face with students to assist them with their repatriation and assimilation. Hence, students would contact counsellors after hours via Skype or Whatsapp video call

Based on the above factors, the model of future-orientated health preparedness provides a hybrid platform to improve communities' access to health care in South Africa. In order to encapsulate the model best suited to build appropriate medical capacity in KwaZulu-Natal and South Africa as a whole, the health care systems of Cuba and South Africa are discussed before the final model is presented. Based on its colonial past, South Africa still embraces a British-based approach to health care which is quite different to the model adopted in Cuba. While South Africa is deemed to rank quite highly in health care ratings of Africa, there is still much room for improvement, particularly in the public health sector. Access to health care in rural areas and physician retention in the public sector are two significant areas of concern. Health care in South Africa is administered centrally by the Department of Health but two separate systems run parallel to each other in the country. However, the vision of the NDP2030 policy is to provide equitable accessible health care for all. The constitution of South Africa, guarantees access to health care for all citizens of the country, yet currently as the health care system is structured, people receive better medical treatment if they can afford to pay more. This immediately suggests that there is a conflict between the policy's vision and the nation's existing health care system.

The Cuban health care model, on the other hand, works on a three-tier system. Driven by a primary health care approach, the Cuban model is a holistic approach to health where everyone has access to equitable health care. At a basic level, doctor-nurse teams that live within the community take care of the medical, social and environmental issues related to the health needs of between thirty to forty families.

8.5 Key points Extracted from South African and Cuban Models of Health Care

Two key points that emerge from a review of the South African health care system is that, firstly, the public health sector is under-staffed, under-resourced, incapacitated and inaccessible to the majority of the country's population that rely on it. Secondly, the current health care system does not align to the visions and goals of the WHO's Global Strategy for Human Resources for Health: Workforce 2030, the Department of Health Human Resources for Health Strategy 2030 or the NDP2030. Hence, achieving the desired outcomes of these policies is not possible unless there is significant change.

The Cuban health care system, on the other hand, is a unified, government-driven system that offers an individualistic, tailor made health care service to each community, reducing and preventing the need for intensive medical intervention. While this approach is ideal, it may not be easily attainable in South

Africa because of the vast differences in the population, political issues and economic status in the country. Due to this, it is believed that a hybrid model is more suitable to allow the cohort's assimilation into local medical schools during the completion of their training and then on to their placement in the hospitals and health care facilities. Figure 8.1 below illustrates how the skills that the Cuban cohort acquire in their medical training can be incorporated into the South African health care system once they return to the country.

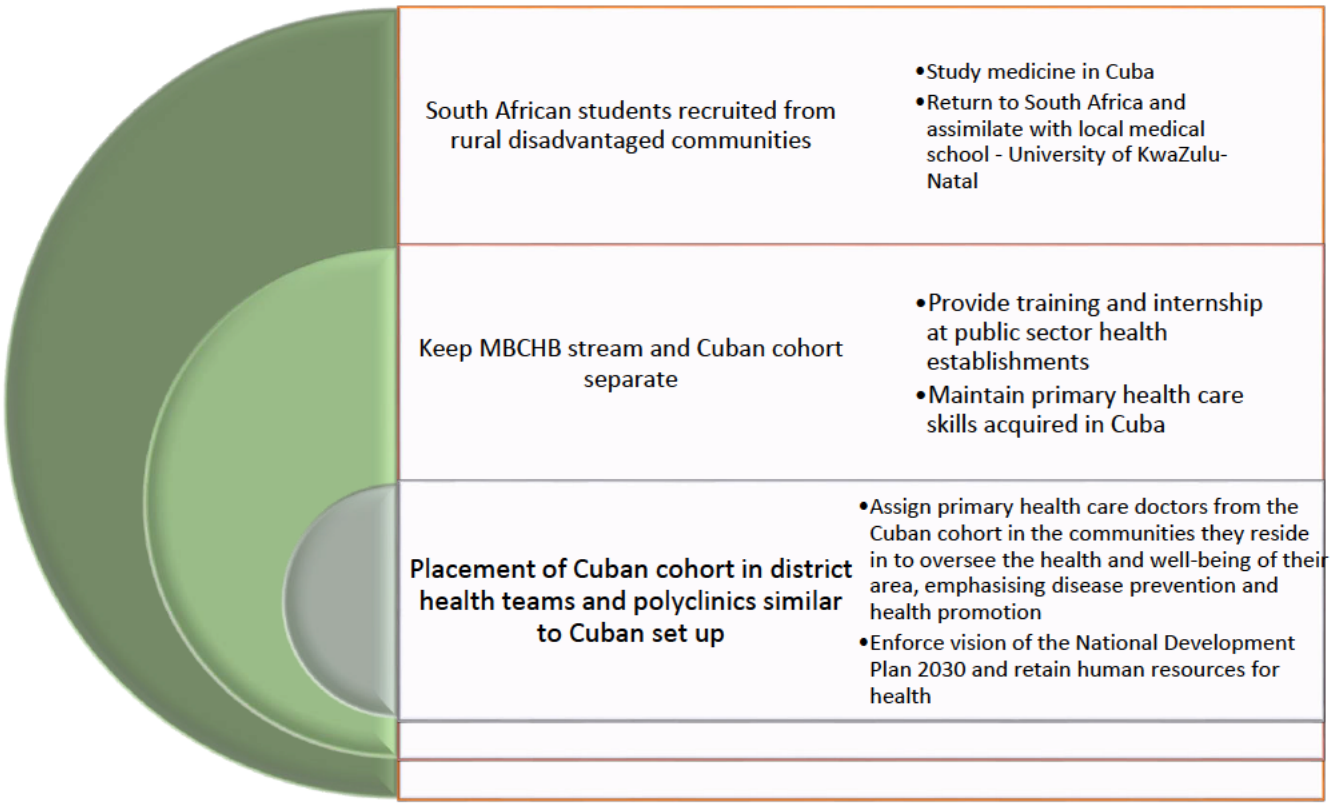

Figure 8.1: Medical training flow diagram of Cuban-South African medical collaboration
(Source: Compiled by the researcher)

As it stands, South African students from impoverished, disadvantaged communities can apply via the Department of Health to study medicine in Cuba. The purpose of recruiting students from these socio-economic backgrounds is on agreement that they will train, return to South Africa, complete their degrees and serve in these areas where they are most needed. The idea behind selecting these particular students and training them in the PHC approach has larger implications for the future health-related outcomes proposed by the NDP2030 which envisions equitable, accessible health care for all. The issue, however, is that after completing all necessary training and facing numerous difficulties, the students from the Cuban cohort return to South Africa and integrate with the local medical schools. They are then immediately absorbed and trained using the curative medical model in South Africa. The Future-

Oriented Health Preparedness Model: Cuban-South African Medical Collaboration presented in Figure 8.2 on the next page illustrates current challenges identified in the findings of this study, and how the flow of the training should be separated in future for the creation of a new culture of health aligning to the health care outcomes of the NDP2030 and global and national HRH policies.

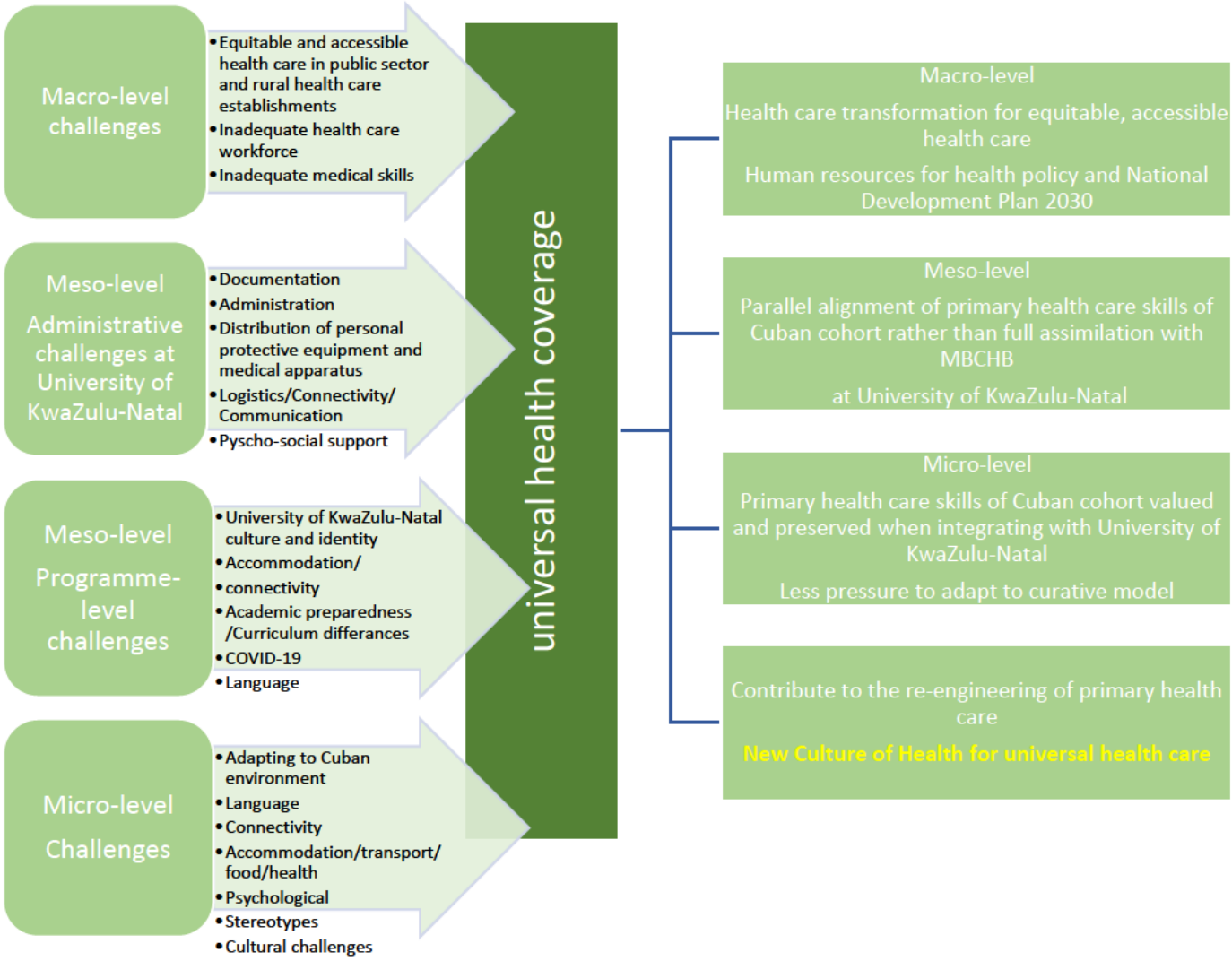

Figure 8.2: Future-Oriented Health Preparedness Model: Cuban-South African Medical Collaboration

The model titled the '*Future-Orientated Health Preparedness Model'*, presented in Figure 8.2 above, is a revised strategy for integrating South African students who have studied in Cuba into the local medical schools. This model places particular emphasis on the contributions made by the Cuban cohort to the redesign of PHC in response to the call for health transformation made by decision-makers in government, and as a result, it calls for the preservation of their skills for HRH. The model reflects the challenges facing the Cuban-South African medical collaboration for all three levels taking note that the meso-level challenges have been split into the challenges facing administrators and programme

managers respectively. These challenges, as outlined throughout this study, inhibit medical capacity building especially in achieving the health-related goals of the WHO for UHC. The manner in which the current Cuban-South African medical collaboration is run restricts the vision for the Department of Health Strategy for Human Resources for Health 2030 to increase the number of health care workers, and also inhibits the goals of the NDP2030 to re-engineer PHC skills for more equitable, accessible health care. Hence, this has an overall impact on achieving the objectives of the WHO Global Strategy on Human Resources for Health: Workforce 2030.

At the meso-level, difficulties with the programme, the curriculum, administration matters and psycho-social issues that arise when the Cuban cohort integrates with the MBCHB students at UKZN further affect how the Cuban-South African medical collaboration is hindered in achieving UHC goals. The challenges at this level suggest that the difficulties the cohort faces in Cuba and the training that they receive are in vain because they are integrated into South Africa's curative medical model when they return. Finally, the actual experiences and challenges experienced by the Cuban cohort in Cuba and also when they return to South Africa, are illustrated in the last block of the model.

The right-hand side of the Future-Orientated Health Preparedness Model proposes that in addition to the administrative, programme and pyscho-social support provided to the Cuban cohort, it is also necessary to run the programme laterally in order to strengthen the PHC skills acquired in Cuba. The Department of Health must acknowledge the advantages of sending South African students to Cuba for their education and should adopt their model of PHC in the public health sector in order to prevent disease, promote health and retain medical personnel in areas where there is a severe shortage. The Future-Orientated Health Preparedness Model emphasises how doing so will result in the policy-required health care reforms, fostering a new culture of health, and enhancing South Africa's overall medical standing.

8.6 Recommendations for Future Research

The Cuban-South African medical collaboration programme has been the subject of extensive research, but there is still much that needs to be learned, particularly in regards to how this programme will affect the country’s future health care needs and transformation agenda. The seminal body of literature suggests that the programme's detractors are waning as attention shifts to the advantages that can be gleaned in re-engineering health care towards a PHC approach.

Several studies have pointed out the shortcomings of the Cuban-South African medical collaboration, highlighting that it has been considered by various stakeholders to be a waste of taxpayers’ money. The focus of this study is on ways to strengthen the programme to serve its intended purpose, which is to increase medical capacity in public health care, help revive and re-engineer PHC, and retain rural health

care workers. Based on financial and time constraints, this study focused only on the province of KwaZulu-Natal. Future research investigating the challenges facing the Cuban cohort in other provinces may provide greater insight into additional difficulties that must also be addressed. Hence further studies in other provinces or even at a national level are highly recommended to broaden the scope of research into this crucial topic.

The other area that was omitted in understanding the challenges facing the Cuban-South African medical collaboration was the perception of the Cuban universities and the difficulties that may be faced by these institutions when training South African medical students. Future research into this topic should yield a set of results unique to the perspectives presented in this thesis. Although it would have been preferable, it was not feasible to study the programme challenges at Cuban universities due to financial and time constraints.

Research into the administration and management of the programme from the perspective of the Department of Health is useful to understand the challenges facing the programme at stakeholder level. This is another area that could not be covered in this study but would be valuable to address for future research.

8.7 Contribution of the Study

Due to its multidisciplinary nature, this study has connections to many different academic fields and disciplines, and its contribution is to health reforms, medical education and training, HRH recruitment and retention, and changing the culture of health in the South African health care context. The all-encompassing strategy of the study provides a bird's-eye view of the Cuban –South African medical collaboration programme from the point at which South African students join the cohort to the point at which they return to integrate with local medical schools. This approach emphasises the value of the skills and training of the cohort. Currently, the skills that South African medical students acquire in Cuba are being underutilised and diminished in favour of the curative model, despite the fact that global policy calls for a shift toward preventative medicine for equitable, accessible health care. This study places a strong emphasis on addressing the issues and integrating the PHC skills not only where they are necessary but also as a component of the policy redress for UHC.

8.8 Conclusion

Even though many academics have studied the education of medical students in Cuba, previous work has not addressed the difficulties in managing and administering programmes. The difficulties South African students in the Cuban cohorts faced were extensively covered in this study, particularly with regard to the programme level and personal experiences of the students in the cohort. Cuban medical

education programmes take a distinctive approach that reflects the principles of UHC by emphasising public health, whole-patient care, and prevention. Comprehensive access and data collection provide valuable information for processes in health care and education that can be improved for enhanced quality. Interventions, education, and active community engagement are designed to meet the biopsycho-social needs of people and communities. The South African government has effectively applied the Resource Based Theory (Barney, 1991) by enlisting medical students from rural areas, sending them to Cuba for training, and requiring that they return to work in these communities. This strategy must be continued in all fields, not just medicine, in South Africa's underdeveloped skill sectors.

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APPENDIX A: ETHICAL CLEARANCE LETTER

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

26 February 2021

Mrs Valerie Chinniah (951035879)
School Of Man Info Tech & Gov
Westville Campus

Dear Mrs Chinniah,

Protocol reference number: HSSREC/00002464/2021
Project title: Challenges facing the Cuban-South African medical collaboration for medical capacity building in KwaZulu-Natal
Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 09 December 2020 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) 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.

This approval is valid until 26 February 2022.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

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

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

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee
Postal Address: Private Bag X54001, Durban, 4000, South Africa
Telephone: +27 (0)31 260 8350/4557/3587 **Email:** hssrec@ukzn.ac.za **Website:** http://research.ukzn.ac.za/Research-Ethics
Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

APPENDIX B: GATEKEEPER'S LETTER

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

21 May 2021

Miss Valerie Chinniah (SN 951035879)
School of Management, IT & Governance
College of Law and Management Studies
Westville Campus UKZN
Email: Govindsamyv1@ukzn.ac.za maharajash@ukzn.ac.za

Dear Miss Chinnah

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), towards your postgraduate degree, provided Ethical clearance has been obtained. We note the title of your research project is:

"Challenges facing the Cuban-South African Medical Collaboration for medical capacity building in KwaZulu-Natal."

It is noted that you will be constituting your sample by conducting interviews with Management involved with the Cuban medical training in the College of Health Sciences (Taking in account the regulations imposed during lockdown ie restrictions on gatherings, travel, social distancing etc. Zoom, Skype or telephone interviews recommended) on the Howard College and NRMSM Campuses.

Please ensure that the following appears on your notice/questionnaire:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using the 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

[redacted]

DR KE CLELAND: REGISTRAR

APPENDIX C: INFORMED CONSENT LETTER

Department of Human Resources Management
School of Management, Information Systems and Governance,
University of KwaZulu-Natal (Westville Campus)

Date:……

Challenges facing the Cuban-South African Medical Collaboration for medical capacity building in KwaZulu-Natal

Greetings,

My name is Valerie Chinniah and I am a Human Resource Management Phd student from the School of Management, Information systems and Governance, based at the University of KwaZulu-Natal, Westville campus. I am conducting my research under the supervision of Dr Ashika Maharaj Telephone: 031 260 8182
Email: maharajash@ukzn.ac.za

You are being invited to consider participating in a study that involves research related to the challenges facing the Cuban-South African medical collaboration for medical capacity building in KwaZulu-Natal. The aim of this research is to identify the challenges facing the students from the Cuban cohorts (micro-level), the challenges facing University of KwaZulu-Natal administration and leadership involved with the Cuban collaboration and the Health Professions Council of South Africa in terms of the registration and completion of the Cuban cohort degrees (meso-level), and the challenges facing human resource for health in acquiring adequate skills and numbers to address the shortage of doctors in South Africa (macro-level). The purpose of the study is to use the data collected to strengthen the Cuban-South African collaboration to build medical capacity where it is most required.

The study is expected to include a total of 30 participants, 20 from the returning 5th year Cuban cohort, 5 from the administrators and programme managers of University of KwaZulu-Natal. There are two study sites; the School of Clinical Medicine, University of KwaZulu-Natal based at 719 Umbilo Road, Durban and the Stanger satellite site where the 5th year Cuban cohort is based. Due to the restrictions of the Covid-19 virus, all interviews will be conducted via Skype, Zoom or MSTeams to ensure the safety of all participants.

It will involve the following procedures;

- an email or telephone call to the participants explaining the aims and objectives of the study
- an explanation of the participant's role in the study and a request for their participation in the interview
- an explanation of the code of ethics adhered to by the researcher
- the duration of the interview if they wish to participate (which will be approximately an hour and half).
- Presentation of copies of the gatekeeper's permission letters, ethical clearance, and details of the study
- The signing of the informed consent form

There are no risks involved in the study but some of the questions on the interview schedule may involve a description of personal experiences and emotions in order to understand the impact of the challenges of the programme at the meso and micro-levels. We hope that the study will create the following benefits;

- Improve the experience of South African students in the Cuban cohorts by providing better administrative and personal support.
- Improve the administrative process at University of KwaZulu-Natal and Health Professions Council of South Africa to strengthen the programme
- Increase the output of the students completing their medical training in Cuba and assimilating into the South African health care workforce

This study has been ethically reviewed and approved by the University of KwaZulu-Natal Humanities and Social Sciences Research Ethics Committee (approval number HSSREC/00002464/2021).

In the event of any problems or concerns/questions you may contact the researcher at (provide contact details) or the University of KwaZulu-Natal Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001
Durban 4000 KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any time with no negative consequence. There will be no monetary gain from participating in the study. Your anonymity will be maintained by the researcher and the School of Management, I.T. & Governance and your responses will not be used for any purposes outside of this study.

All data, both electronic and hard copy, will be securely stored during the study and archived for 5 years. After this time, all data will be destroyed.

If you have any questions or concerns about participating in the study, please contact me or my research supervisor at the numbers listed above.

Sincerely

Valerie Chinniah

CONSENT TO PARTICIPATE

I …… have been informed about the study entitled the Challenges facing the Cuban-South African medical collaboration for medical capacity building in KwaZulu-Natal by Valerie Chinniah.

I understand the purpose and procedures of the study.

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at School of Clinical Medicine, NRMSM 719 Umbilo Road, University of KwaZulu-Natal Tel: 031 2604545.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001
Durban
4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview / focus group discussion YES / NO

_____ _____

Signature of Participant **Date**

_____ _____

Signature of Witness **Date**

(Where applicable)

APPENDIX D: INTERVIEW SCHEDULE

Micro-level interview questions

Race: _____ Gender_____ Home Language_____

1. Please can you tell me how you heard about the Cuban medical training and what you had to do to apply?
    a. How did you feel to travel to a foreign country? How was your flight and experience when you arrived in Cuba?
    b. Was there someone to guide you and show you around?
    c. What was the first thing that you did when you arrived in Cuba?
2. Can you describe you experience when you arrived at the Cuban university?
    a. Which university were you based at?
    b. What were the institutional requirements (rules, timetable etc)
    c. What did you find challenging about the people and process
3. Tell me about your experience making friend with other South African students
4. Tell me about your experience making friends with the local students of Cuba
5. Were you able to communicate with the locals? What were the challenges you experienced?
6. Were there people who stereotyped you for being South African? (I mean did they ask questions or make assumptions that were offensive?)
7. I would like to talk about your year of learning Spanish. Did you find it difficult or easy?
8. Are there any incidents that you can share where you were unable to communicate?
9. Did the language affect your participation in class? Do you feel you would have participated more if the curriculum was in English?
10. Did you ever feel left out of a conversation in Spanish because of the colloquial or slang like manner of speaking among the locals?
11. Did this raise issues of distrust or suspicion among the local students and academic staff?
12. Do you feel that learning a new language and studying medicine in Spanish had an impact on your academic performance?
13. Did you ever feel isolated or lonely during your stay in Cuba? So you were able to adapt to social life. Internet connectivity with family, friends and the South African embassy?

14. Were you ever in a situation where your identity as a male or female was undermined? I am talking about patriarchal stereotypes or assumptions about males and females in your profession.
15. Were you ever in a situation where your identity as a Black South African was interrogated or diminished? So the local staff and students made you feel part of their community?
16. How did you adjust to the culture of Cuba? Describe the differences you noticed between Cuban culture and your own?
17. How did you maintain your own cultural identity while being away from home eg. Religious practices, rituals and common practices.
18. Upon returning to South Africa to join the UKZN Medical School, can you describe the differences between the academic institutions?

Meso-level interview

UKZN Administrators – I would like to learn about your experiences and the challenges that you face when assisting the medical students from the Cuban cohort.

1. Can you tell how many Cuban cohort students you work with? Which disciplines are they from?
2. Can you go through the documentation that is required when the Cuban cohort students arrive at UKZN?
3. Can you describe the challenges you experience in terms of timetables, clinical placements, completion documents, graduation?
4. How are the Cuban Cohort assisted with transport, accommodation, meals?
5. What are the challenges related to these?
6. Can you compare your experience with the Cuban cohort to UKZN medical students?
7. Does UKZN provide any support or counselling for the student from the Cuban Cohort for their repatriation and assimilation with the UKZN Medical School?Is there an induction program for these students?

HPCSA

1. Do you experience any problems when registering students from the Cuban Cohort with the HPCSA?
2. Can you compare the experience with UKZN medical students?
3. Have these challenges been addressed or resolved?
4. When the students from the Cuban cohort qualify, what is the degree called?
5. Why is there a separate graduation for the Cuban trained medical students?
6. In terms of the institutional culture of the HPCSA, how do these students fit in?
7. Can you provide examples of any other challenges you experience?

Programme Managers

1. What are the main challenges of the Cuban South African medical collaboration?
2. How does UKZN address or resolve these challenges?
3. How would you compare the compatibility of the Cuban curriculum to the UKZN medical curriculum?
4. Is there assistance provided for the students from the Cuban cohort to align with the academic expectations, when you assimilate with UKZN Medical school?
5. What are the challenges of the Cuban curriculum being taught in Spanish? Does it affect the teaching at the UKZN medical school?
6. In view of NDP2030, the Cuban medical training programme can be beneficial to creating a new cultural approach to healthcare in South Africa. How can UKZN reinforce the training and strengthen these skills?
7. Do you think it is necessary to re-examine the curriculum that the Cuban trained student follow when they return or is the current curriculum sufficient and necessary for these students to qualify as doctors?

APPENDIX E: EDITOR'S LETTER

Write Start Editing

10 November 2023

To Whom It May Concern:

Re: Editing of PhD dissertation – Mrs Valerie Chinniah (951035879)

This letter serves to confirm that I have indeed edited Mrs Valerie Chinniah's Doctor of Commerce dissertation titled 'Challenges facing the Cuban-South African medical collaboration for medical capacity building in KwaZulu-Natal'. Mrs Chinniah's supervisor is Dr Ashika Maharaj. The specific areas that I paid attention to in the dissertation were:

- **Language:**
  Sentence structure, correction of grammar, coherence, clarification of expression, syntax, spelling and punctuation;
  Logical flow of ideas within and between paragraphs and sections;

- **Referencing:**
  Cross-checking in-text with Reference List entries;
  Looking up of missing references to add to the Reference List;
  Correction of format of in-text and Reference List entries in line with APA 6th referencing style;

- **Formatting:**
  Spacing between headings and paragraphs, consistency of size and style of fonts used throughout the dissertation;
  Correction of numbering of sections and sub-sections;
  Page numbering;
  Generating Table of Contents, List of Acronyms, List of Figures, List of Tables;
  Correction of format of table and figure headings;
  Correction of page layouts and overall appearance of thesis;

Please do contact me if you require clarification regarding any of the above matters pertaining to the editing of Mrs Chinniah's dissertation.

Yours sincerely,

[redacted]

Ms Serrenta Naidoo
Tel: 031 260 2121/ Email: naidooserrenta@gmail.com