THE DEVELOPMENT OF A PARTIAL SOUTH AFRICAN MEDICAL PRACTITIONER COMPETENCY MODEL

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Thesis presented in partial fulfilment of the requirements for the degree of Masters of Commerce in Industrial Psychology at Stellenbosch University.
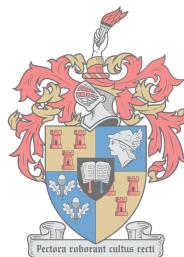
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MARCH 2018

DECLARATION

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ABSTRACT

South Africa's healthcare sector is facing a crisis. In order to solve this crisis, the healthcare workforce is also considered to have a responsibility to solve these challenges. Challenges such as staff shortages, mismanagement and chronic diseases are only a few of the daily challenges the health sector faces. The public health sector is responsible for the majority of the country's health needs. Unfortunately, this task is even more gruelling due to the high pressure and frequent insufficient health resources available to health workers in the public healthcare sector. Dozens of medical staff struggle to cope with the work conditions and ultimately burn out or leave the public sector for the private sector or emigrate overseas.

The current situation requires a solution to not only attempt to change the working conditions in itself, but to develop a framework for the support of medical staff in the public healthcare sector. Medical practitioners are considered part of this healthcare workforce. A need exists in South Africa to determine the factors that will ensure the success and improve the functioning of medical practitioners in the South African public health sector. These factors are complex to determine. To successfully address the optimisation of medical practitioners it is necessary to gain a comprehensive understanding of the determinants that influence the competence of medical practitioners. The improvement of the South African medical practitioner workforce will be effective to the extent to which a comprehensive understanding exists of the factors underlying the most favourable medical practitioner performance and the nature in which these factors interact.

An in-depth literature study was conducted from which a partial medical practitioner competency model was developed which explains the different competency potential and competency latent variables that constitute medical practitioner performance. It was furthermore indicated how these variables are structurally interconnected. The limited research on this topic within the South African context is worth mentioning.

The current study adopted a qualitative research approach in order to explore the competency potential latent variables that are required to develop medical practitioner competence. Subject matter experts were consulted by means of in-depth sessions where the Repertory Grid Technique was applied which allowed the researcher to thoroughly explore their understanding of medical practitioner competency potential. The Repertory Grid Technique contrasts behaviours with regards to medical practitioner competency potential person characteristics that lead to the identification of novel latent variables that did not emerge from the literature study. A sample of ten medical practitioners (including specialists) was consulted for data collection.

By means of thematic analysis, twenty-nine distinct first-order themes relating to medical practitioner competency potential was elicited. The themes were compared to the competency potential latent variables that were identified in the literature study and it was confirmed that 10% were additional to the competency potential constructs that were identified from the literature review. The second-order themes were classified into thirteen distinct second-order themes.

Finally, a conceptual model is proposed that the hypothesised interrelationships between medical practitioner competency potential and medical practitioner competence. This study contributes to the empirical understanding of medical practitioner competency potential which is suggested to be utilised as guidance for human resource management, recruitment and selection of medical students at tertiary level as well as the recruitment and performance management of medical practitioners in the private and public health sector. However, the current study is of exploratory and qualitative nature and therefore lends itself to quantitative validation of the Partial Medical Practitioner Competency Model.

OPSOMMING

Suid-Afrika se gesondheidsektor staar 'n krisis in die gesig. Die verantwoordelikheid om hierdie krisis aan te spreek lê gedeeltelik by die gesondheidsarbeidsmag. Uitdagings soos personeeltekort, wanbestuur en kroniese siektes is 'n daaglikse realiteit wat die gesondheidsarbeidsmag in die publieke sektor in die gesig staar. Tog is die publieke gesondheidsorg verantwoordelik vir die meerderheid van Suid-Afrikaners se gesondheidsbehoeftes. Ongelukkig bied die publieke sektor nie altyd die hulpbronne aan die werkersmag wat nodig is om hulle werk te doen nie. Talle mediese personeel worstel gevolglik met die werksomgewing in die publieke gesondheidsektor en skuif dikwels na die private sektor of emigreer oorsee.

Die huidige situasie vereis 'n oplossing wat nie net die werksomstandighede van die publieke sektor verbeter nie, maar wat ook 'n raamwerk skep vir die effektiewe operasionalisering van mediese personeel in die publieke gesondheidsektor. Mediese praktisyns word beskou as deel van die mediese arbeidsmag. Daar bestaan 'n behoefte in Suid-Afrika om te verstaan watter faktore die sukses van mediese praktisyns in die publieke gesondheidsektor sal optimaliseer. Om die optimalisering van die arbeidsmag aan te spreek is dit belangrik om te verstaan wat mediese praktisyns se sukses bepaal. Hierdie faktore is egter in kompleksiteit vasgevang. As die bogenoemde nie ondersoek en verstaan word nie, word daar geargumenteer dat daar nie verbetering en ondersteuning tot die mediese praktisyns se arbeidsmag aangebring kan word nie.

Vanuit 'n in-diepte literatuurstudie is 'n gedeeltelike mediese praktisyn bevoegdheidsmodel ontwikkel wat bestaan uit 'n verskeidenheid latente persoonlikheidskaraktereienskappe en bevoegdheidsveranderlikes. Hierdie model streef daarna om duidelikheid te bied aangaande die latente veranderlikes wat mediese praktisyns se bevoegdheidspotensiaal bepaal wat gevolglik tot mediese praktisyn bevoegdheid lei. Navorsing van die bogenoemde is baie beperk in die Suid-Afrikaanse konteks en daarom is dit noodsaaklik dat mediese praktisyn bevoegdheidspotensiaal binne hierdie konteks verken word.

'n Kwalitatiewe navorsingsbenadering is gevolg sodat bevoegdheidspotensiaal latente veranderlikes wat lei tot mediese praktisyn bevoegdheid ondersoek kon word. Vakkundiges is geraadpleeg deur middel van in-diepte onderhoude waar die repertoirerooster tegniek ('repertory grid technique') toegepas is. Dit het die navorser toegelaat om 'n in-diepte begrip van mediese praktisyn bevoegdheidspotensiaal te verkry. Die repertoirerooster tegniek kontrasteer mediese praktisyn bevoegdheidspotensiaal wat die navorser bemagtig het om nuwe latente veranderlikes te identifiseer wat nie in die literatuurstudie na vore gekom het nie. 'n Steekproef van tien mediese praktisyns (insluitend spesialiste) is geraadpleeg gedurende die data-insamelingsproses.

'n Tematiese ontleding is toegepas en nege-en-twintig afsonderlike eerste-orde temas geïdentifiseer met betrekking tot mediese praktisyn bevoegdheidspotensiaal. Die nege-en-twintig temas is vergelyk met die latente veranderlikes wat geïdentifiseer was in die literatuurstudie en gevolglik is 10% van die temas as addisionele temas bevestig wat nie na vore gekom het in die literatuurstudie nie. Die eerste-orde temas is in dertien tweede-orde temas gekategoriseer.

'n Konseptuele model is voorgestel wat die verhoudings tussen mediese praktisyn bevoegdheidspotensiaal en mediese praktisyn bevoegdheid hipotiseer. Die huidige studie dra by tot die empirisie begrip van mediese praktisyn bevoegdheidspotensiaal wat aanbeveel word om menslike hulpbronne te bestuur en die keuring van mediese studente op tersiêre vlak, asook die keuring en prestasiebeoordeling van mediese dokters, te bevorder. Die huidige studie is egter van kwalitatiewe aard en vereis dat die gedeeltelike mediese praktisyn bevoegdheidsmodel kwantitatief gevalideer word.

ACKNOWLEDGEMENTS

First I want to acknowledge the health workforce in South Africa, who sacrifices so much in order to serve our nation. The aim of this study was to create a spark – a spark that can hopefully lead to the improvement of the quality of the public health sector in South Africa. I therefore dedicate this work to the health workforce of this country.

I thank all lecturers, staff, and fellow students at the Department of Industrial Psychology for their continuous support.

I would like to give specific thanks to the following people:

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All praise, honour and glory to my Lord Jesus Christ for granting me the opportunity to conduct this research. He was my primary source of inner strength and guidance in completing this work.

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Catharina Johanna Hattingh

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CHAPTER 1

INTRODUCTION, RESEARCH INITIATING QUESTION AND RESEARCH OBJECTIVES

The quality of health care is a vital issue that receives immense global attention. Global epidemics and health extracts billions of dollars worldwide which propagates the improvement of global health as an international priority. According to Ravishankar et al. (2009) global funding for health has increased from US$5.6 billion in 1990 to almost US$21.8 billion in 2007. Chang, Chen and Lan (2013) emphasise that people are placing an increased importance on the quality of living which is accompanied by a growing demand for medical and health care. Health care is also considered by the United Nations as a priority by dedicating three of the eight Millennium Developmental Goals to health namely: child health, maternal health and disease control (Accorsi, Bilal, Farese & Racalbuto, 2010).

With specific reference to health care in South Africa, the HIV prevalence in the adult population is ranked 133th of 144 countries and the average South African life expectancy is 56.7 years (Schwab, 2015). It is clear that it is of immense importance that South African health care receives the much needed attention it deserves. Gruppen, Mangrulkar and Kolars (2012) stress that in resource-poor countries such as South Africa, resources for health care are finite and often insufficient. In sub-Saharan Africa, the estimated health workforce (including public health practitioners, doctors, nurses and allied health workers) is 1.3% of the world's health workforce. It is frightening to consider that these health professionals are responsible for addressing 25% of the world's burden of disease (Addressing Africa's health workforce crisis, 2004). Consequently, South Africa is facing a ticking bomb due to the mismatch between professional competencies and the health care needs of the population (Frenk et al. 2010) because there are not sufficient health practitioners to serve the population of South Africa's health care needs.

The responsibility of South Africa's health crisis falls on the shoulders of the medical workforce. The rapid changes of the global and local health spheres demand consistent revision and improvement of the approaches and standards. According to Gruppen et al. (2012) resource-poor countries have a tendency to try and match resource-rich countries with regard to their educational standards and health care outcomes. These attempts are not always successful due to the contextual differences. Therefore, it is important for South Africa to determine unique requirements to address the pressing health care issues. Frenk et al. (2010, p.1925) reminds us that "beyond the glittering surface of modern technology, the core space of every health system is occupied by the unique encounter between one set of people who need services and another who have been entrusted to deliver them". There is a

pressing need to determine the specific requirements for medical workforce specific to the South African context to return to this core space of medical service in order to address our country's unique health issues.

A competent medical workforce is key in order to return to this core space of medical service. South Africa has a unique context with situation-specific demands. Epstein and Hundert (2002) states that whether or not an individual is truly competent depends on the ability to exhibit competencies effectively within a specific environment. There is a live relationship between a task, the environment and the clinical context in which the task occurs. Gruppen et al. (2012) emphasise that competence in domains such as professionalism and communication, like all competencies, is very sensitive to the context of the individual and his or her culture. Competencies and person characteristics of the medical workforce have to be amended to suit the specific prerequisites of a country such as South Africa with a unique socio-cultural, historical and societal context. It is also important to consider that a certain degree of tractability is required to adapt these prerequisites in order to serve the health sector of South Africa. Frenk et al. (2010) believe that South Africa should adapt to global trends in certain components of medical practice (pedagogy, gaining of credentials, evaluation) whilst remaining flexible to allow advancement and restructuring. It is essential to develop a medical workforce that can execute the necessary competencies to meet the contextual needs of the South African health environment. Kent and De Villiers (2007) report that medicine in South Africa is no longer a white male dominated, specialist-orientated domain, but it is rapidly changing to a demographically representative primary care profession. The challenge is to make this a smooth transition and to deliver a competent medical workforce that can flourish in the public South African health sector.

Medical practitioners can be considered as a central component of the South African medical workforce. According to Frenk et al. (2010) professionals are falling short on appropriate competencies for effective teamwork and they are not exercising effective leadership to transform health systems in South Africa. Even though South Africa's medical practitioners are considered world class and sought after internationally, a necessity was identified to develop the necessary requirements to determine if the medical practitioners are competent within the South African public health sector context.

Kent and De Villiers (2007) suggest South Africa necessitates medical practitioners who will serve the health needs of its population, despite the challenges of under-resourced teaching facilities, over-extended staff, tertiary hospital cutbacks and an HIV-epidemic. When the above mentioned is considered, it can be concluded that our country desperately needs medical practitioners who are

competent to serve our country's specific health sector context. It is therefore suggested that a specific personality profile, values and interests can enhance an individual's propensity to develop the required competencies.

The perspectives between rich (Canada) and poor countries (South Africa) and the different medical professions are unalike. These differences reflect the diversity of conditions between countries at various stages of educational and health development and consequently the core competencies of different professions. It is argued that the make-up (competency potential) of a medical practitioner who can deliver optimum service and treat patients effectively differs immensely in different countries. A certain combination of elements will shape a practitioner and provide him or her with the propensity to develop the required competencies and achieve the expected outcomes in the health sector of South Africa.

In order to determine the required competency potential, human behaviour must be explored. It is essential to consider the field of Psychology and more specific, Industrial Psychology, when attempting to predict and measure human behaviour. Psychology attempts to scientifically clarify human behaviour through investigating mental processes in order to comprehend, guide and advance human behaviour (Bergh & Bergh, 2011). Industrial Psychology shares many fundamentals with psychology through its attempts to study and influence human behaviour and related processes in workplaces in order to achieve optimal work and business performance (Bergh & Bergh, 2011). Through the study of human behaviour, Industrial Psychology strives to optimise an individual that is classified as 'normal' in the working environment. Barnard and Fourie (2007) identified six broad roles of the Industrial Psychologist: scientist/researcher, strategic partner, enabler, developer/counsellor, watchdog and leader.

Professionals have special obligations and responsibilities to acquire competencies and to undertake functions beyond pure technical tasks – such as teamwork, ethical conduct, critical analysis, coping with uncertainty, scientific enquiry, anticipating and planning for the future, and most importantly leadership of effective health systems (Frenk et al. 2010). For medical practitioners to develop the above mentioned, it can be argued that certain person characteristics (competency potential) would enable individuals to acquire these competencies more effortlessly than others. Industrial Psychology can assist with respect to identifying the above mentioned.

The current South African health crisis seems to be especially challenging for the public health sector. Therefore, medical practitioners in the public health sector are facing strong expectations due to their role as key players when pressure is experienced. It is essential for medical practitioners to be equipped with the right 'make-up' in order to deliver what is expected of them in South Africa's high

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pressure public health sector environment. Previous research has investigated sporadical elements of a medical practitioner's desired person characteristics. However, there is currently no research indicating which person characteristics would enable a medical practitioner to acquire the competencies more effortlessly and portray them in the public health sector in South Africa.

This research will focus to identify the person characteristics which determine the level of competence achieved by the medical practitioner as defined by the competency model, the manner in which these competency potential latent variables map on the competencies as well as the manner in which they relate to each other. This proposal will also outline the Development and Empirical Testing of a South African Medical Practitioner Competency Model.

CHAPTER 2

LITERATURE STUDY

It is important to consider that the public health sector in South Africa exists not to serve society only, but must also be sustainable in terms of profitability. Recently it has been debated that businesses and organisations should not only exist to make a profit, but to carry a certain "social-responsibility" with the intention of making a profit. Davis (2005) explores the debate between the sole purpose of a business to make a profit and the Anglo-Saxon model that implies businesses have an incidental responsibility towards society. Even though both arguments are compelling, most businesses are still primarily driven towards maximising profit. Friedman (2007, p.6) insists that "there is one and only one social responsibility of business - to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud".

Health care institutions, regardless of the service they provide towards society, are lately considered by many as a business. Sloan and Vraciu (1983) states that both profit and non-profit medical institutions have started to compete in recent years for patients, patient care services and physicians and argues that medical institutes exist to enhance profit to keep providing services to society. If this argument is considered, the core business of hospitals is then to provide a service to society better than the competition. When hospitals, or any public medical institution, compete to deliver the best service, the orientation shifts from a service ethic to a more prominent business ethic. Delivering the best service ensures trust in the hospital's services which leads to a higher patient intake and consequently increases monetary funds. Even though it was mentioned that a hospital is a business, it still has a social responsibility towards society. Sloan and Vraciu (1983, p.25) reaffirms this by stating that "hospitals must balance their financial needs with the social responsibilities in which they are invested by society". It can be argued that society is dependent on the services a medical institution provides and therefore cannot be considered a commodity but rather as a service to society due to the contextual factors it operates in (Dougherty, 1990).

2.1 Differentiating the Public and Private Health Sector

It is important to consider the difference between public and private sectors in order to determine if it has a service orientation or a business orientation. Public health is usually provided by government and private health is provided by private institutions. Both private and public sectors operate in low- and middle income countries. Basu, Andrews, Kishore, Panjabi and Stuckler (2012) identify the different public and private healthcare delivery agents in low- and middle-income countries:

multinational and national for-profit corporations, formal individual private providers, informal for-profit providers, not-for-profit providers, public hospitals, health centres and clinics and public–private partnerships. For the purpose of this study, only multinational, national for-profit corporations, public hospitals and public–private partnerships will be considered and defined with reference to Basu et al. (2012). Private hospitals can be classified as multinational and national for-profit corporations which are medical institutions directed towards maximising profit. Public hospitals are usually located in most districts with fluctuating receptiveness and fees per service and can also contribute to private sector healthcare. Public-private partnerships are the third form of medical services operated by international or national associations with varying ambition to be profitable. Collaborations with government or non-profit institutions often exist with fluctuating user fees and public funding.

The question arises which of the two domains, public or private, offers the best medical assistance to patients. Basu et al. (2012) investigates health sectors in both Africa and Asia based on the six essential themes of health systems stipulated by the World Health Organisation (2016): accessibility and responsiveness; quality; outcomes; accountability, transparency and regulation. It was concluded that financial barriers were prevalent in both public and private sectors. Both sectors indicated poor transparency and accountability and surprisingly the private sector indicated more violation of accepted medical standards and lower efficiency. The results/indication of the private sector is unexpected considering medical contradicting perceptions. Taking into consideration that South Africa is a middle- and low income country it can be argued essential to investigate the context specific factors of South African health and hospitals to determine the current urgencies of our health services.

2.2 South African Health Sector

As mentioned previously, South Africa has a unique history with distinctive challenges. Mayosi, Flisher, Lalloo, Sitas, Tollman and Bradshaw (2009, p.1) state that "15 years after its first democratic election and liberation from apartheid, South Africa faced four colliding epidemics: HIV and tuberculosis; a high burden of chronic illness and mental health disorders; deaths related to injury and violence; and a silent epidemic of maternal, neonatal, and child mortality". These factors all weigh in on the contextual factors of the South African health sector. Goosen, Bowley, Degiannis and Plani (2003) contribute by stating that the prevalence of intentional and non-intentional injury that is primarily caused by alcohol and substance abuse is enhanced by South Africa's poverty and rapid urbanisation status. With the above mentioned taken into account, vast inequalities exist between the access South Africans have to trauma care. It will now be explained why inequalities with regards to medical care exits amongst South Africans.

During the apartheid era, access to medical care was distributed unequally. As a country in a more matured state of democracy it is a challenge that is not yet resolved. De Villiers and De Villiers (2006, p. 24) report the following as challenges within the South African health sector: work load, deficient infrastructure, deficient equipment, deficient medicines, lack of staff, remuneration and low reward, undergraduate training, limited internship experience, continuous community service rotations, limited exposure to procedures and a malfunctioning public health system. These factors will have a considerable influence on the health sector's functioning as well as on the functioning of medical practitioners. Consequently, national health insurance was implemented to address the high mortality rate in South Africa by providing universal access to health care for all South Africans , prevention of disease and support for the disabled (Mayosi et al. 2009). Even though this can be considered as positive progress, numerous health issues are not yet addressed or resolved.

The Global Competitiveness Report 2015-2016 (Schwab, 2015) provides an overview of 144 countries' competitive performance based on over 100 indicators and is considered a flagship publication to assist countries in international development. One of these indicators is Health and Primary Education. Even though South Africa is ranked very low with regards to health care, the World Health Organisation (2006) identified that South Africa falls above the critical benchmark of 2.5 health workers per 1000 people with four health workers available per 1000 people. This is more than most African countries and supports the notion that South Africa is a middle-income country with a fairly advanced health service infrastructure. Taking the above mentioned into consideration, Ashmore (2013, p.1) still argues that "the situation of inequitable distribution of health workers has been termed critical with the Western Cape having triple the number of doctors per capita than four of the most rural provinces and Limpopo with one doctor per 5000 people". The Rapport newspaper included an article on 27 September 2015 (Brand-Jonker, 2015) that reports the recent considerations of the minister of health, Dr. Aaron Motsoaledi, to change legislation to allow international medical practitioners with greater ease to register to practice in South Africa. The above mentioned considerations were instigated by the low ratio of patient to practitioners in South Africa. Figure 2.1 illustrates a more optimistic picture: an increase in the registration of medical practitioners that may lead to a better balance between the two sectors in terms of human resources:
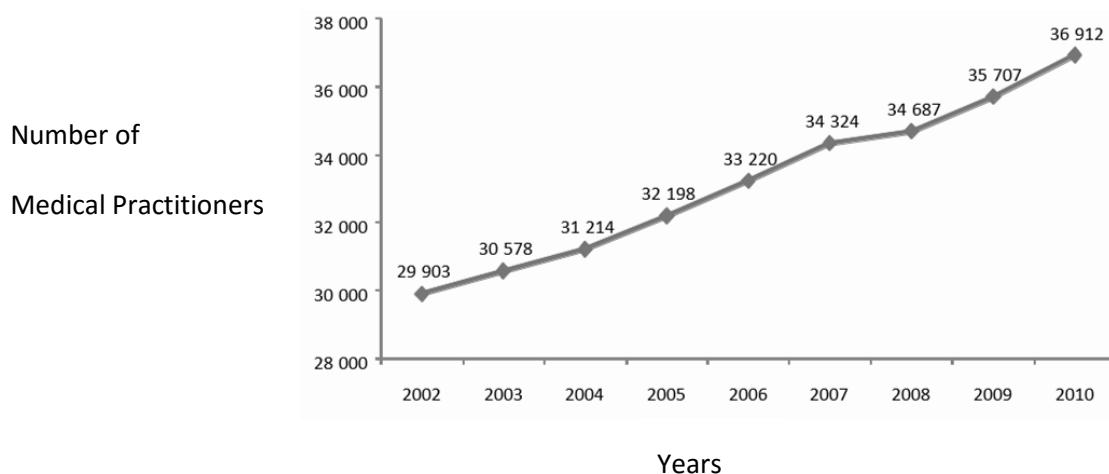
Figure 2.1 Growth in Medical Practitioners (GPs and Specialists in South Africa, 2002-2010)

(Mayosi, et al. 2009, p.2036)

To have a good perception of this unequal relationship it is important to consider the access of South Africans to the private- and public sector.

The statistics in Figure 2.1 stress the importance for medical practitioners in order to address the health crisis in South Africa. Medical practitioners who have the 'make-up' to function under these circumstances and have the competency potential to develop the required competencies, are essential to address the health issues in South Africa. It is considered valuable to identify these competency potential person characteristics in order to ensure medical practitioners are able to perform in this unique and challenging environment of South Africa's health sector.

2.3 The Public versus Private Sector in South Africa

The South African health sector can be divided into two broad categories: the public health sector (funded by the government) and the public health sector (funded by private interest holders). South Africa's public and private sector operates in a great deal of inequality. Public hospitals mainly serve vast numbers of patients whom are dependent on public health services for health care. Mayosi et al. (2009) report that the private sector enjoys more abundant specialised and skilled human resources.

Health Reform Note (October 2010) released the following statistics based on the data from the government's public sector Personnel and Salary Administration System (PERSAL):

- 36.9% of the South African population utilise private medical services for primary health care needs.

- 63.1% of the South African population utilise public medical services for primary health care needs.
- 19.1% of South Africans have access to private sector specialists.
- 80.9% of South Africans see only public sector specialists.

The unequal ratio of the medical workforce between the public- and private health sector are emphasised with these figures of data. The number of medical practitioners in South Africa will now be considered separately due to the relevancy for the proposed research. Data from the Health Reform Note (October 2010) reports a more equal distribution of General Practitioners (GPs) in both the public and private sector:

- A total of 17 802 GPs actively practicing in South Africa
- A total of 6 775 GPs actively practicing in the private sector in South Africa
- A total of 11 026 GPs actively practicing in the public sector in South Africa
- 2,723 people per GP in private sector
- 2,861 people per GP in public sector

However, it is important to consider that human resources are not the only resource to take into account when comparing the resource equality between the public and private sector. Monetary resources, compensation resources and infrastructure in the public sector also influence equality between public and private health care. The ratio of patients served by the public health sector also accounts for the more equal relationship between medical practitioners. It is important to consider the immense difference in patients that the public sector is responsible for.

Ramjee (2013) compares the cost of delivering hospital services across the public and private sectors on behalf of The Hospital Association of South Africa in Table 2.1. Only a small difference between public and private hospital fees was reported:

Table 2.1

Comparison of Average Cost per Admission for Private Hospitals 2010 and Public Hospitals 2010/11 (Base Scenario)

Average cost per admission	Rand
Public-sector average cost per admission	R 8,775
Private-sector average cost per admission	R 9,284
Ratio of private- to public sector	R 1,058

(Ramjee, 2013, p.5)

Even though the public-sector average cost per admission and the private-sector average cost per admission only differs with approximately R500 it is still considered a difference South Africans of a low socio-economic status would consider, especially if the individual does not have a medical aid. In order to address the unique health issues of South Africa, it is vital to develop a competent medical workforce that is equipped to address these specific challenges and inequalities. Mayosi et al. (2009) state that the expansion of competent human resources can still aid and attend to South Africa's health care needs.

2.4 The South African Public Health Sector as a Work Environment

The work environment of the South African public health sector will be considered in order to gain an accurate perception of the circumstances in which the medical workforce, and specifically medical practitioners, have to attend to our population's health needs. Von Holdt and Murphy (2007) observe the following with regards to the structure of the South African public health sector:

The National Department of Health determines the amount of funding available for each provincial department of health that is responsible for managing public hospitals. The government provides three categories of health services. As the category increases, the level of specialists and expertise available at the hospital also diversifies. The first category is the primary-level hospital which provides the service of mainly internal medicine and general practice with limited laboratory services available. The primary-level hospitals are commonly referred to as district-, rural-, community- or general hospitals. The secondary-level hospital is known as a provincial hospital, and has 5 to 10 clinical specialities and 200 to 800 beds. The tertiary-level hospital has 300 to 1500 beds together with highly specialised staff, technical equipment and research facilities. The tertiary-level hospital often

facilitates teaching activities (academic university hospital), and is known as a national- and central hospital (Hensher, Price & Adomakoh, 2006). Tygerberg hospital in the Western Cape is an example of the tertiary-level hospital. The intention of this structure is for patients to enter the health care system at primary-level hospital for basic medical attention and thereafter referred to the next level (secondary-level hospital) if the expertise or facilities is not sufficient. Unfortunately, this system is not always implemented as it was intended. Von Holdt and Murphy (2007) states that in practice South Africans often seek health care from higher level hospitals instead of consulting primary health care clinics or hospitals. The implication is that higher level hospitals treat patients with basic illness and are too crowded to treat patients who are in desperate need of expertise or intensive care. Schneider, Oyedele and Dlamini (2005) state that public hospitals suffer from staff shortages, incontrollable workloads and management failures due to the misuse of the above mentioned structure.

The contextual circumstances within South African hospitals is important to investigate because it is the work environment that medical practitioners face every day. De Villiers and De Villiers (2006) provides a conceptual framework (or skills boat) of the working conditions medical practitioners deal with in rural hospitals in the Western Cape:
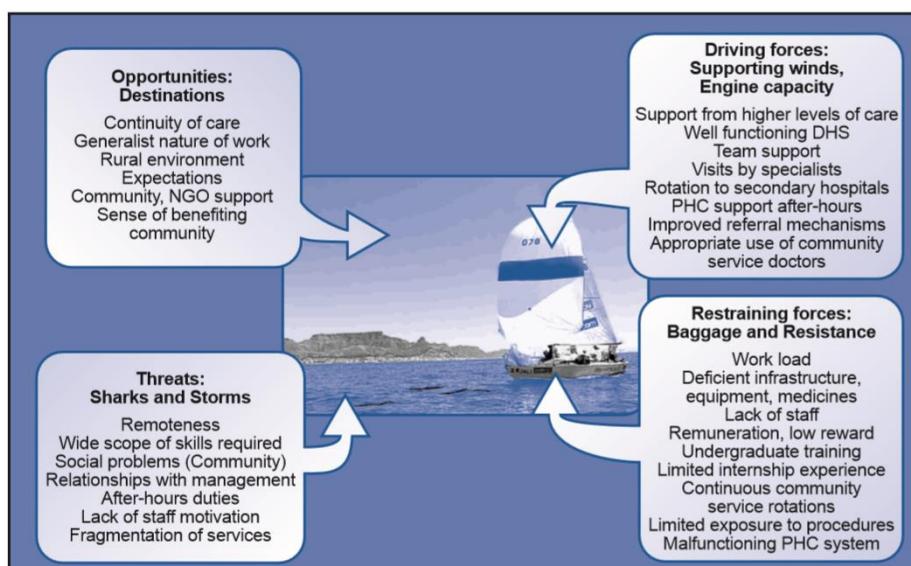
Figure 2.2 Conceptual Framework of Working Conditions in Rural Hospitals in the Western Cape

(De Villiers & De Villiers, 2006, p.25)

As Figure 2.2 indicates, public hospitals in South Africa can be described as high pressurised and stressed work environments with many contributing factors that manoeuvre in and out of the system. Examples specifically in relation to the medical practitioner, is the amount of experience the medical practitioner has in the field and the degree to which the practitioner can cope with the pressures of the work environment. Medical practitioners are expected to be able to cope with the mentioned

factors (Figure 2.2) and still remain effective in the delivery of service to patients despite the existing factors. With an immense staff shortage, Von Holdt and Murphy (2007, p.315) describe public hospitals as 'stressed institutions' where "institutional functioning is stressed (weak functioning, problems and breakdowns not addressed, dysfunctional management and lack of systems), staff are stressed (high workloads, reduced health, high levels of conflict, poor labour relations) and public health outcomes are poor (inadequate patient care, poor and inconsistent clinical outcomes, increased cost of poorly managed illness)".

Pretorius, Basson and Ogunbanjo (2010) reported that the medical practitioners' work environment was considered the primary source of stress which further emphasise the high stress environment medical practitioners operate in (Figure 2.3):
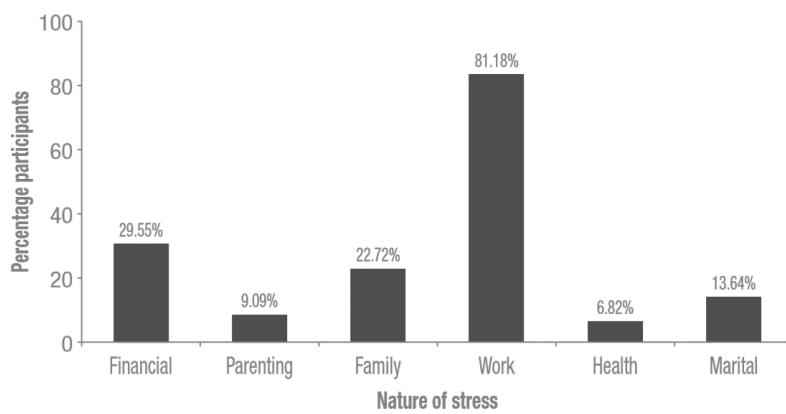
Figure 2.3 Perceived Stressors of Family Medicine Vocational Trainees

(Pretorius et al. 2010)

During an interview on 22 May 2015 with a medical specialist at a public hospital (personal interview 1 May 22 2015), the pressurised environment in public hospitals was emphasised: "We (medical staff) do not have time to show compassion or get to know patients on a personal level. There is too much work, we only have the energy to get the job done". This opinion states the impact of the work environment of the South African public health sector on medical practitioners' perception of their job. Rossouw (2011) investigated the prevalence of burnout and depression among medical practitioners working in the Cape Town metropole community health care clinics and district hospitals of the Provincial Government of the Western Cape. It was reported that 76% of medical practitioners experienced burnout, 27% of medical practitioners suffered from moderate depression and 3% were considered to suffer from severe depression. Rossouw (2011, p.3) also reported that these statistics were caused by "the number of hours, work-load, working conditions and system-related frustration"

that medical practitioners experience. These factors must be considered as important contextual factors with regards to the expansion of the Partial Medical Practitioner Competency Model.

Chris Hani Baragwanath Hospital CHB Transformation Task Team (2006) identified alarming staff shortage figures within health care institutions in South Africa for the year 2006:

- 36% shortage of nursing staff
- 73% shortage of pharmacists
- 45% shortage of allied health professionals
- 46% shortage of managers/administrators
- 30% shortage of support staff

Even though the above mentioned statistics do not include medical practitioners, it is important to consider the impact it has on the functioning of medical practitioners within their work environment. If there is a staff shortage in the public hospital that the medical practitioner operates in, it can cause additional pressure on the medical practitioner due to a shortage of the support system and staff which will probably have extra responsibility to compensate for the shortage in staff. It is vital to identify medical practitioners who will be able to manage the high pressurised environment and develop the necessary competencies to treat patients effectively despite the working conditions of South African public hospitals. It is also necessary to keep in mind that the level of stress the medical practitioner experiences will be mediated by the extent of involvement with the public health sector. Huby et al. (2002) identified a complex mediating relationship between workload, personal style and practice arrangements of the medical practitioner. High workloads as well as negative partnership arrangements were considered a cause of low morale in medical practitioners.

Ashmore (2013, p.1) argues that even though the financial incentives in the private sector can be appealing, the public sector offers job satisfaction to medical practitioners in its own right. The following reasons are stated: it provides a stronger team environment, more academic opportunities and greater opportunities to feel 'needed' and 'relevant'. These intrinsic motivators may be considered just as strong as the salary difference between the private and public sectors. During an interview with a medical practitioner at a public hospital, the mentioned statement was confirmed: "Very few medical practitioners are in it for the money. There are other occupations where you can earn so much more by working less hours. People who are practitioners in the public sector are there because they want to make a difference" (personal interview 2, September 18, 2015).

One cannot ignore the reality of the work environment practitioners face in the South African public health sector. Pretorius et al. (2010, p.446) report the following: "Heavy work load, after-hour calls, conflicts between work and personal lives, and dealing with life and death stressors form part of the

daily routine of medical practitioners". The above mentioned can be considered daily challenges medical practitioners in the South African public health sector have to face. Therefore, it is deemed necessary to identify medical practitioners that can cope with this work environment.

2.5 What is a Medical Practitioner?

It is necessary to understand the role of a medical practitioner before the importance of ensuring person-job fit for medical practitioners in the South African public health sector can be investigated. Charlton (2001, p.9) considers the medical practitioner's ability to accurately diagnose illness through consultation as the main part of the medical practitioner's workload and can also be considered a fundamental aspect of the medical profession in general. The Health Professions Council of South Africa (HPCSA) is a statutory body that was established in terms of the Health Professions Act that regulates registration as a prerequisite for practising any of the health professions with which Council is concerned. The regulations stipulated by the HSPCA (1974) include the practice of medical practitioners and the following is considered part of their job description:

1. "The physical medical and/or clinical examination of any person;
2. performing medical and/or clinical procedures and/or prescribing medicines and managing the health of a patient (prevention, treatment and rehabilitation);
3. advising any person on his or her physical health status;
4. on the basis of information provided by any person or obtained from him or her in any manner whatsoever
    i. diagnosing such person's physical health status;
    ii. advising such person on his or her physical health status;
    iii. administering or selling to or prescribing for such person any medicine or medical treatment;
5. prescribing, administering or providing any medicine, substance or medical device as defined in the Medicines and Related Substances Act, 1965 (Act No.1 01 of 1965);
6. any other act specifically pertaining to the medical profession based on the education and training of medical practitioners as approved by the board from time to time".

(Regulations defining the scope of the profession of medicine, 1974, p.38)

A summary report for a family and medical practitioner (O-Net online. [s.a.]) provides a detailed account of a medical practitioner's job description. Tasks of a family and medical practitioner include:

- Administration and prescription of treatment, therapy, medication, vaccination, and other specialised medical care in order to treat or prevent illness, disease, or injury.

- Order, perform, and interpret tests and analyse records, reports, and examination information to diagnose patients' condition.
- Collect, record, and maintain patient information, such as medical history, reports, and examination results.
- Monitor patients' conditions and progress and re-evaluate treatments as necessary.
- Explain procedures and discuss test results or prescribed treatments with patients.

The above mentioned job descriptions of the HPCSA and Onet online are considered relevant because it explains the role that governs the functioning and abilities of the practitioner. Fundamentally, the practitioner is required to execute all of the above mentioned by providing primary healthcare with additional stressors from the public health sector work environment. The South African public health sector work environment can at times make it very difficult for the practitioner to execute these tasks. It is therefore concluded that medical practitioners can be considered a central part of the operationalisation of the South African public health sector contact due to the primary health care contact medical practitioners provide.

2.6 Industrial Psychology and Medical Practitioners

The objectives of the field of Industrial Psychology is to enhance the overall job performance and job satisfaction of employees. Barnard and Fourie (2007, p.50) investigated the role of industrial psychologists in South Africa and reported that "the selection of people to promote the organisation's core business, the identification of core competencies and the development of core competencies" are considered as an essential task. By aligning the competencies with the individual's competency potential, Industrial Psychologists can enhance the work performance of individuals.

The relevant scope of practice of industrial psychologists (according to the Health Professions Act, 1974) with regards to competency modelling for the current research is stated as follow: "Planning, developing, and applying paradigms, theories, models, constructs, and principles of psychology in the workplace in order to understand, modify, and enhance individual, group, and organisational behaviour effectively (Regulations defining the scope of practice of practitioners of the profession of psychology, 1974, p.9). Therefore, industrial psychologists have the scope of practice to enhance the functioning of medical practitioners in their work environment. With regards to the development of models as mentioned above, Theron (2015, p.17) argues that "Industrial/Organisational Psychology embodies the conviction that in spite of the extreme complexity of human behaviour, regularities underlying the work-related behaviour of working man can be unravelled and explained in terms of a complex nomological network of constructs." This implies that through the development of the Partial

Medical Practitioner Competency model, Industrial Psychology will attempt to capture the essence of what a successful medical practitioner must pertain. The author further suggests that:

Interventions designed to affect employee flows attempts to change the composition of the work force by adding, removing or reassigning employees [e.g. through recruitment, selection, turnover or internal staffing/promotion] with the expectation that such changes will manifest in improvement in work performance and ultimately in the quantity, quality and cost of the product or service (Theron, 2015, p.17).

The elaboration of a Partial Medical Practitioner Competency Model will attempt to guide the composition of the medical practitioner workforce in order to enhance the probability of the achievement of the expected outcomes.

2.7 The role of person-job fit in medicine

It will now be argued that the extent to which a person-job fit or person-environment fit (work) occurs has an important influence on the medical practitioner's development of the highlighted competencies and achievement of the expected medical practitioner outcomes. Furnham and Medhurst (1995) states that during the early developmental years of psychology it was established that efficiency and job satisfaction are directly correlated between the characteristics of the individual and the nature of the position. Various occupational approaches and theories have been developed to ensure that individuals choose and develop a career that suits their individual characteristics. Parson's trait-and-factor theory will be discussed due to its significance with respect to person-job fit. Figure 2.4 illustrates the phenomenology of Person-Environment Fit:
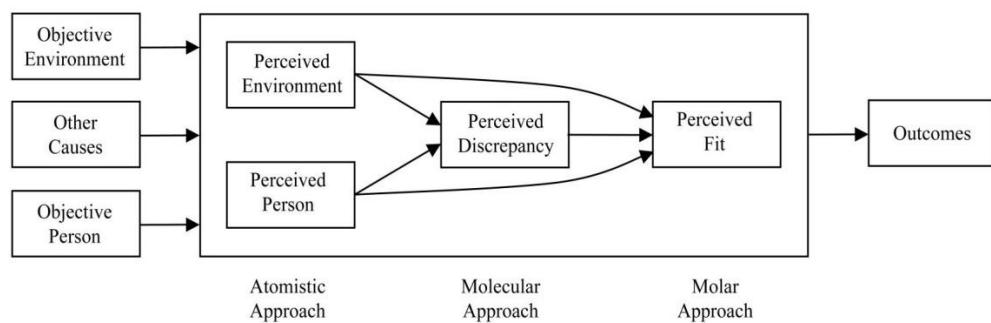
Figure 2.4 The Phenomenology of Person–Environment Fit.

(French, Caplan & Harrison, 1982, p.309)

Figure 2.4 illustrates the process behind the individual's determining of their fit with their environment. In 1909 Parson developed an approach to assist individuals who are at the beginning of their career to make the right career decision and become happily employed. Parson argued that if an individual's unique make-up suits the occupational environment, the individual will be satisfied in their position and will work more efficiently as argued by Furnham and Medhurst (1995) mentioned above. Parson explored the following traits and factors: mental abilities, person characteristics, interests and values which lead to the development of numerous assessment instruments and classification systems for occupations such as the Occupational Information Network (O*NET).

Fisher (2010) argues that 'Fit' or 'need satisfaction' theories suggest that happiness occurs when what the situation offers corresponds to what a particular individual needs, wants or expects. The assumption can be made that if individuals experiences "fit" with their environment, they are more likely to be satisfied and happy. Fisher (2010, p.22) states that happiness can be considered as "pleasant judgments (positive attitudes) or pleasant experiences (positive feelings, moods, emotions, flow states) at work".

If practitioners experience fit, it is suggested that medical institutions can expect medical practitioners to perform better and engage more in their position, which in return produces satisfied patients. Industrial Psychology can assist the medical field to determine what competency potential in individuals are required to have to be a successful medical practitioner and experience fit within their profession and work environment. This can be established by creating a competency framework that determines what competency potential and competencies a medical practitioner ought to demonstrate in order to ensure person-job fit. It is vital to identify the competency potential of an individual that can predict, to some extent, individuals who can function optimally as a medical practitioner in the South African health sector.

It is also suggested that not only a person-environment fit is required for a medical practitioner to be successful in the South African public health sector, but also the degree to which a medical practitioner considers the work environment as a calling. Phalime (2014) is a medical practitioner who realised after nine years of study and four years of practicing that she was not able to further pursue her career as a medical practitioner. Even though Phalime was successful with medical training and indicated a person-environment fit, she lost her calling due to the high contextual expectations that accompanied the career of a doctor in South Africa. Therefore, it is important to investigate the importance of work as a calling in order to understand its importance in order to 'survive' in the public health sector.

Recently, individuals started developing the need to experience meaning in their work and not only to receive material rewards for their efforts. Steger, Dik, and Duffy (2012) advocate that meaningful work

can be understood as the participation in work that has reason not only in the individual's work context, but also the broader context of the individual's life which leads to individual fulfilment or meaningfulness.

2.8 The role of competency modelling for medical practitioners

Mischel (2004) argues that there is an invariable consistency assigned to the behaviour of people that is not merely a random event. The author further advocates that "psychological processes lead people to interpret the meaning of situations in their characteristic ways that result into distinctive patterns of behaviour to particular types of conditions and situations in potentially predictive ways" (Mischel, 2004, p.4). If this conclusion is assumed, it is suggested that the same is true for the prediction of people's occupational behaviour and success. As discussed in section 2.7, certain individuals are more likely to function effectively within a specific occupational environment. Therefore, a valid and credible explanation of the performance of a working person in a specific occupation can be developed. The development of an occupational competency model is a strategy to capture the above mentioned statement and predict occupational success. Campion, Fink, Ruggeberg, Carr, Phillips and Odman (2011, p.226) declare that "competency models refer to collections of knowledge, skills, abilities and other characteristics (KSAOs) that are needed for effective performance in the jobs in question".

Competency models basically consists of three main components that maps a network of causally inter-related person characteristics (which captures an individual's competency potential), which are causally related to a network of causally inter-related key performance areas and the set of desired behaviours (competencies) which in return is related onto a network of causally inter-related results as the outcomes of behaviour (Bartram, 2011, p,5). Environmental variables further moderates these relationships. Figure 2.5 depicts the fundamental components of a competency model:
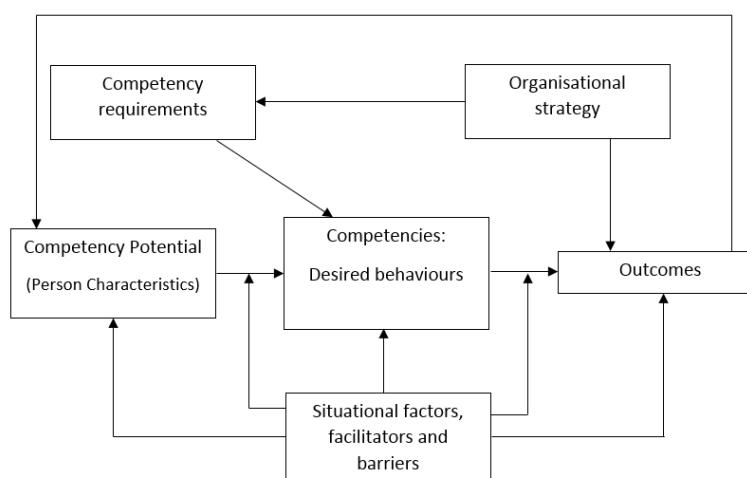
Figure 2.5 Essential components and structure of a competency model: Competency design; towards an integrated human resource management system

(Saville & Holdsworth, 2000, p.7-8)

In order to truly comprehend the significance of a competency model, it is important to explain the value and contribution of each primary component. The first component of a competency model is competency potential and can be described as the degree to which an individual has the required characteristics or abilities that enables him or her to perform effectively in a presented situation. Bartram (2005) considers person characteristics as motives, personality traits, values and cognitive abilities and part of the competency potential of an individual. Furthermore, Bartram (2011) states that competency potential also consists of an individual's attainments (academic background, courses, diplomas) as it serves as an occupational foundation that impacts the individual's competency potential. All of the above contribute to the individual's potential to develop competence within their occupation. Research has found that there are specific antecedents related to the achievement of desired behaviours for specify occupations. Murphy and Shiarella (1997, p. 852) argue that "the attributes that lead some applicants to excel in specific aspects of performance (e.g., performing individual job tasks) appear to be different from those that lead some applicants to excel in other aspects of job performance (e.g., teamwork)". The purpose of assessing competency potential is to "provide information about who is more likely to demonstrate the desired job performance" (Bartram, 2011, p.6). As stated previously, this study will investigate the taxonomy of person characteristics which ensures the highest probability to develop the required competencies for a medical practitioner in the South African public health sector. Geisler-Brenstein, Schmeck and Hetherington (1996, p. 89) declare: "Yet, we feel that it is possible to create a taxonomy of person characteristics at a higher level of abstraction".

The next component of a competency model is competencies. Two overarching views of competencies exist: a construct orientated school of thought which seems to be the dominant approach in the United States (US) and a content orientated school of thought which seems to be the dominant approach in the United Kingdom (UK). The difference between the two approaches lies in the understanding of the term 'competencies'.

Rodriguez, Patel, Bright, Gregory and Gowing (2002) argue that the construct orientated approach understands competencies as inherent attributes or individual characteristics individuals possess that are causally related to success that can identify high performers. According to Bartram (2005) the UK

view of competency modelling, the person characteristics are seen as competency potential latent variables and the key performance dimensions as competencies. Theron (2015, p. 9) argues that the content orientated approach (UK) declares that:

> Competencies are the abstract representations of bundles of related observable behaviour, driven by a nomological network of [unknown] constructs [competency potential], which, when exhibited on a job, would constitute high job performance and would [probably, depending on situational constraints/opportunities] lead to job success defined in terms of output/the objectives for which the job exists (Theron, 2015, p. 9).

Therefore, the content approach argues that competencies are sets of bundles of behaviour that help attain objectives and not the results or consequences of those behaviours in itself (Bartram, 2006). The required competencies are derived from the set of desired outcomes. The competence potential is derived from the nature of the competencies and the situations in which they are expressed. This research study will support the UK's approach and argues that competency is considered a certain group of behaviours that leads to job success.

Outcomes are considered the desired results which an individual is instructed to achieve. Bartram (2005, p.5) considers it "the actual or intended outcomes of behaviour, which have been defined either explicitly or implicitly by the individual, his or her line manager or the organisation". Campbell, Jeffrey, McHenry & Lauress (1990) distinguishes between performance and the outcomes of performance by arguing that outcomes are the result of behaviour and competencies are the behaviours through which the outcomes are achieved. If the desired outcomes are identified it can be linked with the competencies required to obtain these outcomes. If an individual without the required competencies is placed in a position it can have a negative impact on the functioning of the organisation. In the case of a medical practitioner it can imply that a patient is treated ineffectively which can lead dissatisfied patients or even life threatening consequences.

Situational factors are external forces that moderate the relationship between competency potential, competencies and outcomes. Situational factors can be considered as the situational context in which the individual is expected to convey their characteristics and competence in order to achieve the desired outcomes. The individual cannot be separated from situational factors and therefore these factors has a moderating effect on all elements of a competency model. Situational factors can be considered the societal context, upbringing, organisational climate, etc. Mischel (2004) advocates the recognition of the person as well as the situational factors and argue that dispositions are elicited by certain situations. Bartram (2006) describes situational factors as the influences upon individuals

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within a setting that moderates behaviour. It is important to consider the environment in which an individual operates in order to understand the influence it has on the degree to which outcomes are achieved. Therefore, it is valuable to consider the situation wherein the individual operates in order to predict and understand behaviour.

It is considered relevant to lastly differentiate between competence and competencies. Bartram (2011) distinguishes between the two concepts by describing competence as the mastery of specific tasks and outcomes. Competencies, on the other hand, relate to the behaviours underpinning successful performance that enables competent performance. Theron (2015, p.10) further explains that "competence represents a correspondence between an ideal set of behaviours required by the job to optimally deliver the outputs for which the job exists and the actual behaviours delivered or competencies". Therefore, if an individual has the required competencies and delivers the expected outcomes successfully despite situational factors, the individual is considered competent.

The assumption can be made that competency models will vary across different occupations and even different jobs within an occupation. Therefore, it can be deemed valuable to create a unique and customised competency model for different positions. The industrial psychologist can consequently investigate the components that constitute a competency model for medical practitioners in the public health sector by investigating the linkages between the competency potential, competencies and outcomes of a medical practitioner competency model. Ackerman and Heggestad (1997, p.239) emphasise the important relationship between competency potential, competence and outcomes: "That is, abilities, interests, and personality develop in tandem, so that ability level and personality dispositions determine the probability of success in a particular task domain, and interests determine the motivation to attempt the task". This holds true for the current study as it will determine the competency potential (person characteristics) of a medical practitioner in the South African public health sector and causally link it with the identified competencies and outcomes identified by Fourie (2015). It can be argued that for each of the above mentioned components (competency potential, competencies, competency requirements and outcomes) a structural model can be developed such as a Medical Practitioner Competency Model. Therefore, the proposed study will investigate the competency potential of medical practitioners with regards to their motivation, abilities and personality that will make the practitioner an ideal candidate to work in the South African public health sector.

2.9 Medical Practitioner Competencies

Fourie (2015) developed a unified partial South African medical practitioner competency model by exploring the causal relationships between medical practitioner competencies that will lead to the

achievement of medical practitioner outcomes. Fourie (2015, p.173) "integrated participants' personal constructions of effective medical practitioner performance with the original and additional literature on medical practitioner performance". The objective for this research was to initiate a series of studies that would come to a valid explanation of the underpinning phenomenon of the performance of medical practitioners in the public health care sector. This was projected to be illustrated and elaborated as a comprehensive medical practitioner competency model. An extensive literature study was completed and it was concluded that the Partial Medical Practitioner Competency Model is the first of its kind in South Africa. Fourie (2015) argued that medical practitioners have a critical role to play in the public health sector and the human resource function of the hospital or clinic should therefore focus to measure the performance of the practitioners in order to manage and improve performance. Identifying competencies expected from practitioners are important to measure behaviour and consequently a competency model for medical practitioners was developed. Fourie (2015) hypothesised specific structural relations between the outcome latent variables and the competency latent variables that a medical practitioner should develop in order to achieve the expected outcomes. It is important to take note that the proposed study will build onto the structural model of Figure 2.6. The definitions for the eleven competencies on which the model was developed and tested are shown in Table 2.2.

Table 2.2

Summary of Defined South African Medical Practitioner Competencies (Fourie, 2015).

No	Competency	Definition
1	Communicating effectively	Clearly articulates the message one wants to deliver, through one's words, writing and body language by using appropriate language or diagrams which the audience will understand; listening, without interrupting others; giving the patient the opportunity to communicate their 'story'; probing for the right information through respectively open and closed ended questions; attending to the words, writing and body language of other to comprehend the message they want to deliver.

Table 2.2

Summary of Defined South African Medical Practitioner Competencies (Fourie, 2015).

2	Coping with pressure	Remaining calm while working under stressful conditions and to be able to take control of the situation to remain effective; prioritising activities and delegate tasks to other healthcare professionals.
3	Medical professionalism	Applying specialist and detailed expertise to all patients; treating all patients, colleagues and other people with respect and dignity; being punctual and accessible while on duty; displaying integrity, and complying with ethical and legal standards.
4	Patient-centeredness	Displaying compassion, empathy, and responsiveness to the needs, values, and expressed preferences of the individual patient.
5	Working with people	Showing respect for the views and contributions of other team members; collaborating with healthcare workers from other medical professions and viewing yourself as equal to others; listens, supports, cares and appreciates others; consults others and shares information and expertise with them; builds team spirit and reconciles conflict; adapts to the team and fit in well.
6	Lifelong learning	Reflecting on work that was done, identifying knowledge and skill gaps and taking the necessary action to improve one's knowledge or clinical skills on a continuous basis to remain competent.
7	Self-care	Being aware of one's inner state and implementing the necessary strategies to achieve emotional and physical well-being for oneself.

Table 2.2

Summary of Defined South African Medical Practitioner Competencies (Fourie, 2015).

8	Efficiency	Using resources effectively; contributing to the larger organisation's success; not compromising patient care for profits; and believing in one's own opinion.
9	Problem-solving	Recognising when problems exist, gathering and analysing all relevant information and identifying different solutions to solve the problem with the available resources and time.
10	Clinical leadership	Taking the lead and delegating activities to team members in a calm way; taking responsibility above and beyond one's duties and standing up to do the right thing.
11	Health advocacy	Responsible use of one's expertise and influence to advance the health and well-being of individuals, communities and populations.
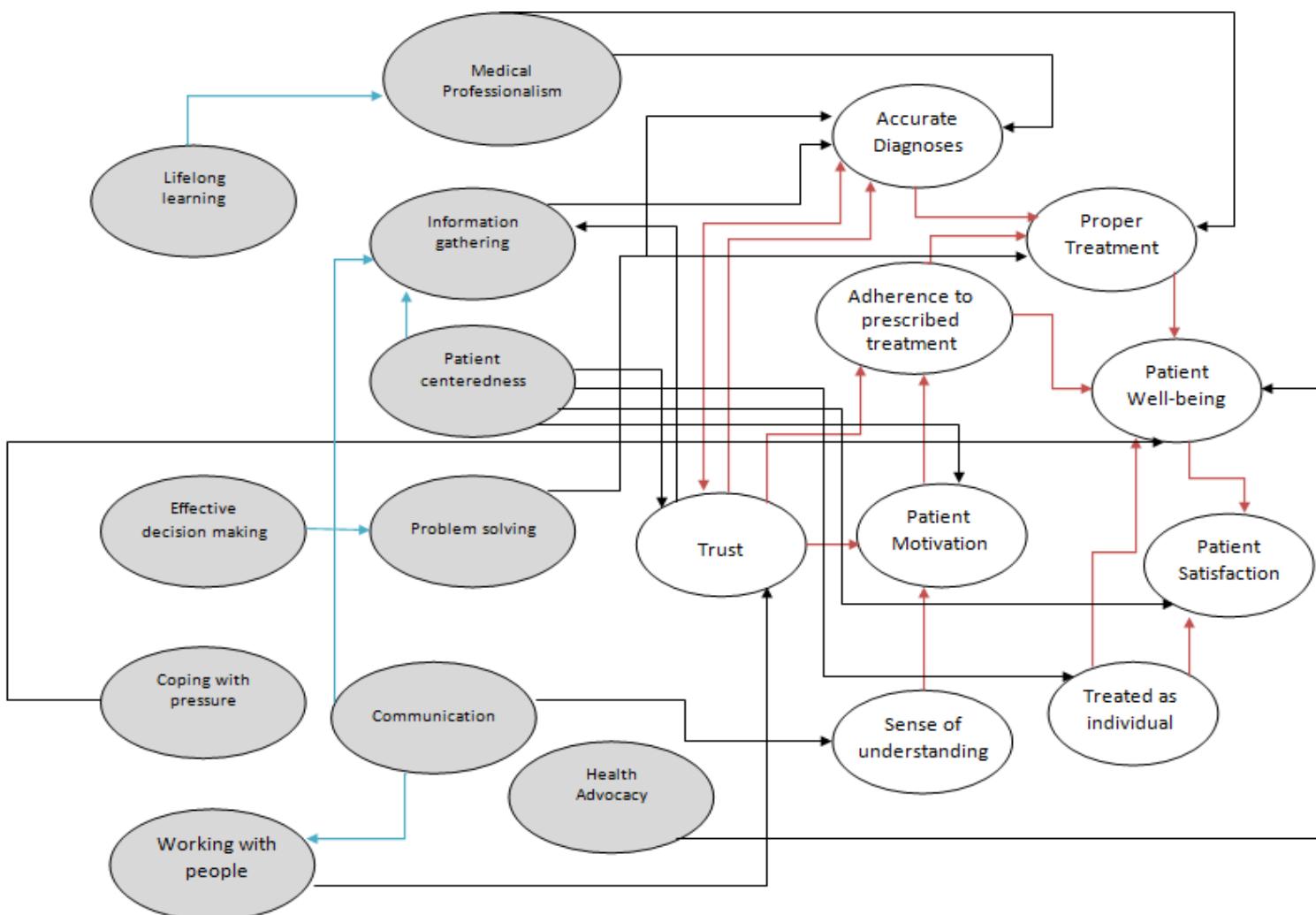
Figure 2.6. Partial Medical Practitioner Competency Model   (Fourie, 2015)

Note: The grey circles represent competencies and the white circles represent outcomes. The blue paths represent the hypothesised structural paths between the competency latent variables; the black lines represent the hypothesised structural paths between the competency and outcome latent variables; and the red lines represent the hypothesised structural paths between the outcome latent variables.

2.10 The person characteristics required for a medical practitioner in the South African public health sector

The exploration of the relevant person characteristics of a medical practitioner is essential in order to ensure the established medical practitioner competencies are acquired and consequently the prescribed outcomes are achieved. This enables medical institutions and hospitals alike to predict the success of medical practitioners to some extent. If the person characteristics of a medical practitioner are clear, a better person-job-fit can be predicted. This will not only be advantageous for the public hospital or clinic that the practitioner practices in, but also contribute to the health and happiness of the medical practitioner alike.

Cherniss (1995) determined the prevalence of job burnout in human service professionals at the beginning of their career as well as the onset of certain stressors due to the interaction of person characteristics and work-setting characteristics. It was found that professionals with the wrong person characteristics adapted to their work environment by the display of reduced aspirations and responsibility, loss of idealism, increased cynicism and pessimism, increased emotional detachment and withdrawal from work. It can be assumed that factors like these can be true for medical practitioners in the public health sector in South Africa. Therefore, it is vital to investigate and identify the combination of person characteristics that will enhance the competency potential of a medical practitioner's success in the South African public health sector. The following thirteen person characteristics were further investigated in order to expand a Partial Medical Practitioner Competency Model: Resilience, Neuroticism, Internal Locus of Control, Emotional Intelligence, Self-efficacy, Agreeableness, Calling, Altruism, Achievement Motivation, Openness to Experience, Conscientiousness, Fluid Intelligence and Coping with Pressure (competency).

2.10.1 Resilience

The first person characteristic required for a medical practitioner in South Africa is the ability to be resilient. Patterson et al. (2013) identified resilience as an indispensable person characteristic for the practicing generalist. Due to the high pressurised work environment of a South African public health sector, a medical practitioner is expected to be able to execute medical duties, even in the face of pressure and adversity.

Resilient individuals are prone to overcome challenges and adapt to different circumstances even if it is uncomfortable or discouraging. Windle (2011, p.12) defines resilience as "assets and resources within the individual, their life and environment that facilitates the capacity for adaptation and 'bouncing back' in the face of adversity". People who are resilient have a certain degree of optimism

and believe everything will turn out for the good, they believe that others do not intend to harm them, they accept that setbacks and failures are normal and can happen to anyone, they believe they are agents of change in their own world, show emotional stability and display positive emotions (Schabracq, Winnubst & Cooper, 2003).

Research has suggested considering the importance of including resilience assessments in the recruitment process of medical students due to the demanding and challenging nature of medical institutions' curricula (De Kare-Silver, Spicer, Khan & Ahluwalia, 2014). After acceptance to a medical institution, further development of resilience is extremely important. Medical institutions need to cultivate a culture of resilience by challenging students with "things that they can take on and overcome over time with effort, expose students to new strategies, learning methods, help from others, and patience" (Yeager & Dweck, 2012, p.312). By following this mind set, medical institutions can truly prepare medical practitioners for the work environment in the public health sector in South Africa. To conclude, Windle (2011) declares that resilience advocates healthy development despite hardships and focuses on strengths as opposed to weaknesses. The above mentioned is a positive approach to coping with the challenges of the public health sector of South Africa. Therefore, the proposed study defines resilience as:

> 1. Resilience: Internal-individual resources that allows the individual to adapt and remain strong in the face of adversity and stress.

Medical practitioners have finite resources to their disposal in terms of staff, time and equipment. Howe, Smajdor and Stöckl (2012) argue that medical practitioners are required to endure heavy exertion and high levels of responsibility in a continuously changing environment due to fluctuating patients, staff and requirements. With the mentioned demands, the public and health regulators have certain expectations for health care and compel medical practitioners to maintain a high standard of medical service.

As an example, medical practitioners face many challenges during a normal working day in a public hospital. Despite the fact that the practitioners are on their feet and work non-stop for hours without a restroom break, there are still large numbers of patients who are lined up outside the hospital in need of medical attention. Despite the physical toll of constant work, patients frequently decease or have emotional experiences to share which can be emotionally draining. Despite the above mentioned factors, medical practitioners should have the ability to stand up and treat the next patient as well as the previous one (personal interview 1, May 22, 2015). Therefore, it is proposed that a medical practitioner has the ability to exhibit resilience in the face of adversity despite the emotionally and

physically demanding work environment of the public health sector in South Africa (personal interview 1, May 22, 2015).

Hypothesis 2: In the proposed partial medical practitioner competency model it is proposed that *resilience* **positively influences** *coping with pressure.*

2.10.2 Neuroticism

The work environment often exposes the medical practitioner to disturbing and upsetting circumstances. It is crucial that a medical practitioner is emotionally stable and display a low level of neuroticism in order to function effectively in the public health sector in South Africa. Taylor (2004) defines neuroticism as an individual's emotional stability and the general propensity to feel negative emotions in response to environmental factors. Individuals who display and experience neurotic behaviour are known to experience and exhibit the following features:

- Anxiety: nervousness, apprehensiveness and tension

- Depression: the propensity to experience guilt, sadness and hopelessness with feelings of discouragement and dejection

- Self-consciousness: sensitivity towards criticism, frequent feelings of shame and embarrassment

- Affective instability: tendency to upset easily, feelings of anger or bitterness and be emotionally instable (Taylor, 2004, p.68).

Due to the uncertain work-environment of the public sector in South Africa, a low prevalence of the neuroticism personality characteristic can be regarded as advantageous to deal with the emotional demands of the South African public health sector. It could be regarded as detrimental if a medical practitioner experiences these features frequently as it could influence the ability of the practitioner to focus on the patient and task at hand. Schneider et al. (2005) report that there is a low correlation between neuroticism and a pro-active approach to uncertainty as well as low disposition to interact with patients. Schneider, Wübken, Linde and Bühner (2014, p.2) report that "high levels of neuroticism was linked to lower performance across various domains including information processing, pattern analysis and memory and therefore may influence the way medical practitioners deal with uncertainty".

Byrne, Silasi-Mansat and Worthy (2015) established that previous research conducted with relation to performance pressure and distraction theory, high levels of neuroticism was the highest contributing personality trait to impact decision-making effectiveness under pressurised circumstances. The above mentioned discussion concludes that it is essential to include neuroticism in the Partial Medical Practitioner Competency Model as a result of the pressurised work environment of the public health sector in South Africa.

> 2. Neuroticism: An individual's emotional stability and the general propensity to feel negative emotions in response to environmental factors.

Medical practitioners often take responsibility for patient's health and lives whilst regularly experiencing a shortage of resources (staff, equipment, monetary funds and time) and pressure by authorities to maintain a certain standard of medical expertise and patient satisfaction. This implies that practitioners are forced to execute their job requirements despite contributing forces of pressure. Therefore, it is suggested that a low level of neuroticism will aid medical practitioners to cope with pressure.

Van Emmerik (2008) demonstrates that individuals who experience higher levels of neuroticism experience increased levels of time-related tension due to the waste of time and worrying or focusing on negative affects. It was also suggested that individuals who are more prone to experience negative emotions and tension are more vulnerable to experience even more strain (Cano-Garcia, Padilla-Muñoz & Carrasco-Ortiz, 2005). Therefore, it is evident that medical practitioners who experience high levels of negative affect (neuroticism) will display lower levels of efficiency in the public sector due to their worrisome nature. This could have a negative impact on the functioning of the hospital or clinic as it requires medical practitioners who are focused on the task at hand and can function effectively despite time-related strains. Finally, Byrne et al. (2015) established that individuals who experience high levels of neuroticism has a higher propensity to collapse under pressure due to the toll of strain on their cognitive resources. Therefore, it can be argued that medical practitioners working in the public health sector in South Africa should experience low levels of neuroticism in order to cope with the high pressure environment.

Hypothesis 3: In the proposed partial medical practitioner competency model it is proposed that neuroticism negatively influences coping with pressure.

The nature of the medical practitioner's profession expects the practitioner to have continuous interaction with people. Medical practitioners in public hospitals or clinics are required to work in interdisciplinary teams in order to treat patients with complex health issues and interact with patients on a daily basis. Frequently, a medical practitioner will work in a team that consists of a medical

practitioner, a specialist (for example cardiovascular, surgical, anaesthetist) and an occupational therapist or physiotherapist and a nurse. A medical practitioner must be able to function and contribute effectively to the team in order to treat the patient successfully. Peeters, Rutte, van Tuijl and Reymen (2006) report individuals with low levels of neuroticism (high emotional stability) was positively related to task satisfaction and satisfaction with the team as a unit. Fourie (2015) considers team membership, consulting and sharing information with others as an important aspect of medical practitioner's role of working with people.

Various studies indicated a negative causal relationship between a prevalence of low neuroticism and empathy in individuals who offer medical care (Claxton-Oldfield & Banzen, 2010; Teng, C. I., Hsu, K. H., Chien, R. C., & Chang, H. Y., 2007). If a medical practitioner experiences negative affect and has the propensity to portray neurotic behaviour, it is proved to be difficult to be empathetic and caring towards patients which is suggested to be an inherent requirement in order to work with people. This could in return have a negative impact on the expected outcomes. Therefore, it can be argued that medical practitioners working in the public health sector in South Africa should experience low levels of neuroticism in order to work with people.

Hypothesis 4: In the proposed partial medical practitioner competency model it is proposed that low neuroticism positively influences working with people.

2.10.3 Internal Locus of Control

For the purpose of this study, locus of control will be considered as two separate dimensions, each with two opposing poles: high versus low internal locus of control and high versus low external locus of control. Lefcourt (2013, p.7) defines locus of control as "a generalised expectancy about the extent to which reinforcements are under internal or external control". It can be understood as the individual's belief that they are actively involved in what happens to them (internal locus of control) or that they are passively effected by circumstances (external locus control). Schabracq et al. (2003) argue that an external locus of control makes people more vulnerable towards their external environment and an internal locus of control serves as a buffer to protect people from their external environment. If individuals have an external locus of control the chances to develop anxiety are higher due to their belief that they cannot control what happens to them.

In the South African public health sector medical practitioners should be able to cope with various stressors. Kahn and Byosiere (1992) considers internal locus of control as a role player in job stress because individuals with an external locus of control will more likely struggle to cope with job stress and consequently the opposite is true for individuals with an internal locus of control. Thus, individuals

with a high internal locus of control will display higher levels of health and well-being even when confronted with job stress.

> 3. Internal Locus of control: The individual's belief of active involvement and ability to control and manage what happens to him/her in their environment, whether it be positive or negative (internal locus of control).

It has been established that working with people is an undeniable and essential competency of a medical practitioner's role in the public health sector in South Africa. Medical practitioners will encounter many conflict situations. A practical example would be disagreement between practitioners on the treatment of patients and difficult patients who do not adhere to treatment or medicine. A medical practitioner must be able to remain calm, receive feedback on mistakes and make recommendations to colleagues and patients in these situations. It is suggested that a high internal locus of control will assist the medical practitioner with these abilities.

Newman, Brown and Rivers (1983) claim that individuals with a high internal locus of control are more comfortable than individuals with a low internal locus of control to be an evaluator and give recommendations to others and to receive recommendations from an evaluator when they were in the decision-making role. These claims are essential due to the multidisciplinary nature of a medical practitioner's role in the public health sector in South Africa. Medical practitioners are not specialists on all medical fields and should therefore have the self-confidence and high internal locus of control to be able to request input and recommendations from other medical specialists on appropriate treatment or action. A medical practitioner with a high internal locus of control would be able to add value to the team and feedback based nature of their profession by being comfortable to evaluate others and give and receive feedback.

Due to the serving nature of the medical profession, medical practitioners work with people to bring positive change and improvement in their lives. Lefcourt (1992, p.411) argues that "constructs like high internal locus of control encourage those whose purposes are to facilitate change in individuals or groups due to a degree of optimism about outcomes". It can be considered vital for medical practitioners to have a high internal need to bring about change in their patients' lives. Therefore, in order to truly improve the health and well-being of patients, it can be argued that medical practitioners working in the public health sector in South Africa should have a high internal locus of control in order to work with people.

Hypothesis 5: In the proposed partial medical practitioner competency model it is proposed that high internal locus of control positively influences working with people.

Due to the high pressurised work environment of the public sector, practitioners must be able to make effective decisions about the correct diagnosis and treatment of patients. Medical practitioners are often forced to make quick decisions due to the state of health of the patient or the number of patients that need attention. In such a case it is vital that the medical practitioner has the ability to make the correct decision with the information and time to the practitioner's disposal; a patient's life can depend on it.

The same claims are relevant for the current argument that individuals with a high internal locus of control are more comfortable to receive recommendations when they were in the decision-making position (Newman, Brown & Rivers, 1983). The practice of medicine is an extensive field and therefore it is very likely that a medical practitioner will not always have the sufficient knowledge to diagnose and treat a patient. If a medical practitioner is in the process of making a decision regarding a patient's treatment or diagnosis and the medical practitioner has a high internal locus of control, the practitioner will be more likely to avoid or correct the mistake by being open to recommendations and feedback from colleagues and accept responsibility for the decision. This would be advantageous for the patient's treatment and health. Newman et al. (1983) state that individuals with a high internal locus of control are more self-confident and open to new information as opposed to individuals with a low internal locus of control who have a lower self-confidence and is unresponsive to information that contradicts their biases. It can be assumed that a medical practitioner with a high internal locus of control will be able to make more accurate decisions due to the ability to receive recommendations and feedback.

Ethical decision making is an essential part of a medical practitioner's decision-making process; if unethical decisions are made it cannot only imply negative consequences to patients but devastating effects to a practitioner's career. Freedman (1982) argues that a medical practitioner's obligation to help others should not overrule moral principles and ethics. A high internal locus of control can be considered an important factor to enable medical practitioners to make an ethical, effective decision. Trevino (1986) considered a high internal locus of control an essential individual variable to determine the likelihood of an individual acting on cognitions on what is right and wrong and proved that managers with a high internal locus of control exhibit more consistency between moral judgement and moral action as opposed to managers with an external locus of control. During an interview with a medical practitioner in a public hospital (personal interview, September 18, 2015), it was highlighted that practitioners are frequently required to treat criminals. In such a scenario it would be considered important that a medical practitioner has a high internal locus of control in order to act in an ethical manner and give the patient the same treatment as other patients would have received. Therefore, it

can be argued that it is essential that a medical practitioner has a high internal locus of control to ensure that an effective (and ethical) decision is made.

Hypothesis 6: In the proposed partial medical practitioner competency model it is proposed that high internal locus of control positively influences effective decision making.

It can be argued that medical practitioners with a high internal locus of control will be able to cope with the pressure of the public health sector in South Africa due to their ability to take control of the situation and their belief that they determine the outcome. If a medical practitioner is pressured for time with dozens of patients demanding attention, a medical practitioner with a high internal locus of control would more likely be able to remain calm, take control of the situation and give each patient the needed attention. Lefcourt (1992) reports capital of evidence linking high internal locus of control to effective coping styles and that internal locus of control was one of the rare variables to reliably moderate the relationship between stress management and pressurised environments. Therefore, it can be argued that it is essential that a medical practitioner has a high internal locus of control to ensure coping with pressure effectively.

Hypothesis 7: In the proposed partial medical practitioner competency model it is proposed that high internal locus of control positively influences coping with pressure.

2.10.4 Emotional Intelligence

Quick and Nelson (2013, p.735) defines emotional intelligence as "the ability to recognise and manage emotion in oneself and in others" and consists of the following abilities: "the ability to perceive, understand and facilitate emotion as well as emotion regulation". Emotional intelligence is regarded by Goleman (1998) as twice as important as raw intelligence when predicting occupational success. It can be argued that emotional intelligence is an important person characteristic that a medical practitioner in South Africa should possess. Weng (2008) confirms medical practitioners with a high emotional intelligence manages to build higher trust, is distinguished from other medical practitioners and creates a unique medical identity.

With regards to emotional intelligence and medical institutions, Weng (2008) reports that due to the importance of emotional intelligence with regards to interpersonal skills, it is included in numerous selection programs for various medical institutions. South Africa is a country filled with diverse cultures, contexts and people. It is crucial for a medical practitioner to have a mind-set of continuous growth and emotional competence to deal with each patient the way they want to be treated in order to be successful in their position. A high level of emotional intelligence is regarded as a vital

component of the person characteristics of a medical practitioner in the public health sector in South Africa in order to treat our diverse population.

> 4. Emotional Intelligence: the ability to identify and effectively manage emotion in oneself and in others.

Several of the medical practitioner competencies can be linked to the construct of emotional intelligence. The first of which is the medical practitioner competency working with people. Due to the high staff shortage in the public health sector in South Africa, medical practitioners are occasionally forced to work in teams to minimise workloads. In order to treat an overflow of patients' effectively medical practitioners should be able to assist and be assisted to give patients the much needed attention they deserve. McCallin and Bamford (2007) insist that technical expertise and cognition is not enough for interdisciplinary teams; team members need emotional intelligence to work effectively with colleagues, clients and families in order to deliver effective diagnosis and treatment.

A medical practitioner with a high level of emotional intelligence can be considered a vital person characteristic due to the constant interaction with people in the profession. It can be argued that due to the variation of specialities of interdisciplinary teams, practitioners may disagree on treatments and consequently team functioning can be negatively affected. This in return may influence the recovery or treatment of patients. Medical practitioners should have the ability to understand and regulate their emotions as well as the emotions of team members in order to ensure the team stays patient-focused. Goleman, Boyatzis and McKee (2002) believe that emotional intelligence has a considerable impact on the success of interdisciplinary work relationships due to its influence on excellence, quality care, staff retention and job satisfaction. Goleman et al. (2002) argue that even though intellect and expertise is important for effective interdisciplinary team performance, an emotional intelligence is what sets teams apart. Therefore, it can be argued that it is essential that a medical practitioner is emotionally intelligent in order to work with people.

Hypothesis 8: In the proposed partial medical practitioner model it is proposed that emotional intelligence positively influences working with people.

Cherry, Fletcher and O'Sullivan (2013) report that effective patient-practitioner communication is vital for the patients' health, well-being, recovery and the provision of high-quality medical care due to the ability of medical practitioners to pick up patient's insinuations of emotional distress. This has led to numerous cases of effective medical decision-making, improvement in patient health and patient satisfaction.

Effective communication allows the medical practitioner to 'read' the patient by being emotionally intelligent. A practical example will be given to substantiate the argument. During a patient-practitioner consultation, the patient comes to a medical practitioner with a concern of health. Even though the primary sickness might be physical, sickness can also have a psychological origin. In order to determine the cause of the sickness, a medical practitioner must be able to 'read between the lines' and pick up the individual's distress and identify the source in order to treat the patient effectively. The above mentioned is possible because emotional intelligence allows medical practitioners to recognise emotion in others (patients) and act appropriately (treatment). The medical practitioner must be sensitive to patients' and families' emotions and must be able to 'read' the situation. Cherry et al. (2013) state that emotional intelligence is related with interpersonal competency to such an extent that the medical practitioner's level of emotional intelligence influences fluctuations in patient-practitioner communication.

Therefore, it can be argued that it is essential that a medical practitioner is emotionally intelligent in order to communicate effectively.

Hypothesis 9: In the proposed partial medical practitioner model it is proposed that emotional intelligence positively influences communicating effectively.

The WHO (2008, p.1110) describes patient centeredness as "putting people first since good care is about people". It can be argued that in order for the patient-practitioner encounter to be patient-centred, the medical practitioner should own a degree of emotional intelligence. Weng (2008) argued that patient-centeredness advocates a more autonomous and active role of the patient in the patient-practitioner encounter where the patient has more control, the physician's dominance is decreased and there is an increase in reciprocal participation. In order for the medical practitioner to succeed in the patient-centred approach, the practitioner should be able to interact with the patient on an equal level and respect the contributions and inputs of the patient in the diagnosis process. Berrios-Rivera et al. (2006) signal that the patient-practitioner relationship is positively related to the physician's sensitivity to concerns, reassurance and support. These described aspects can be seen as characteristics of an individual that is emotionally intelligent. Compassion can be defined as a feeling of empathy followed by the act to relieve suffering of another through helping, understanding and supporting others (Hwang, Plante & Lackey, 2008). In essence, compassion is based on the rationale that all human beings have an innate desire to overcome suffering in order to be happy, and that they have the natural right to fulfil this fundamental aspiration. Empathy can be understood as the ability to feel the suffering of another individual and share their mental state and feelings (Chang et. al 2014; Gilbert, McEwan, Gibbons, Chotai, Duarte & Matos, 2012).

> That brings me to the question of healing. An organism is an individual and will have an individual response to an illness. In order to be healers for our patients, we have to know them. There will always be people who are yearning for healing and for a healer who can walk with them through their ordeal. It is this lack of openness in the face of suffering which closes off compassion and stops us from being healers. To be healers, we have to be involved, person to person. That means setting aside our abstractions, our theories, our systems and models, and simply becoming a person responding to another person (Mercer & Reynolds, 2002, p.9).

The above mentioned quote captures the essence of the patient-centred approach: a holistic healing of patients. It is suggested that this can only be achieved by a medical practitioner with high emotional intelligence who have the tendency to recognise the hardship and emotions, to understand why the patient is experiencing the hardship and to act accordingly to initiate healing. Therefore, it can be argued that it is essential that a medical practitioner is emotionally intelligent in order to be patient centred.

Hypothesis 10: In the proposed partial medical practitioner model it is proposed that emotional intelligence positively influences patient centeredness.

2.10.5 Self-efficacy

Bandura (1997) defined self-efficacy as an individual's perceptions of his or her proficiencies to execute tasks and accomplish goals across activities and contexts and concluded that individual's with a high self-efficacy are more successful in accomplishing goals and tasks. Self-efficacy can be understood as the belief in oneself to accomplish tasks successfully and is enhanced through personal accomplishments, social persuasion, psychological states and reactions and vicarious learning experiences. The above mentioned has been proved to be one of the main contributors to career choice, career persistence and career advancement (Bakken, 2005).

Numerous internal and external factors can influence the correct diagnosis and treatment of patients and therefore practitioners should believe in their own ability to diagnose and treat patients effectively. Medical practitioners require both self-efficacy and resilience to separate the patient-practitioner encounter from internal and external factors that may influence diagnosis and treatment. Ammentorp, Sabroe, Kofoed and Mainz (2007, p.271) observe that "health professionals who have adequate skills and reasonable confidence in their own abilities are more likely to correctly assess and thereby better respond to patients concerns". The authors argue that internal and external factors

such as personal knowledge and skills, physical condition, self-esteem, interpersonal environment, available time, task complexity and stress can influence a practitioner's self-efficacy and therefore behaviour.

Due to the high stress and high pressure environment of the public health sector in South Africa, it is vital for medical practitioners to have a high degree of self-efficacy to function and complete necessary tasks. Schaubroeck and Merritt (1997) report that self-efficacy moderates the effect of job strain on blood pressure through minimising the effects of job demands with high-self efficacy and job control. Medical practitioners in the public health sector can minimise the job strain of their work environment through high levels of self-efficacy.

5. Self-efficacy: an individual's perceptions of their aptitude to perform tasks and accomplish goals.

It is essential for a medical practitioner in the public health sector in South Africa to be a lifelong learner in order to stay up to date with medical developments and obtain required CPD (Continuing Professional Development programme) points to remain registered as a medical practitioner. If a medical practitioner has high self-efficacy, he or she will have the drive to continually develop professionally by gaining confidence and engaging in more development. Bandura (1997) indicated that individuals with a high self-efficacy are motivated to learn throughout their lives fuelled by their own initiative. Medical practitioners are required to have that initiative in order to stay informed with the latest updates in the medical field and in inherent drive to be a competent medical practitioner. Kurbanoglu (2003) states that individuals with a high self-efficacy will persist and maintain learning until a task is mastered. It can be argued that a medical practitioner with high levels of self-efficacy will be able to commit to the competency of lifelong learning.

Bath and Smith (2009) report that an individual's approach to learning, self-efficacy and openness to experience significantly predict an individual who is dedicated to lifelong learning. It can be argued that an individual who strives to have high self-efficacy in their profession will engage in lifelong learning to further enhance their self-efficacy. Therefore, it is essential that a medical practitioner has high levels of self-efficacy in order to be engaged in lifelong learning.

Hypothesis 11: In the proposed partial medical practitioner model it is proposed that self-efficacy positively influences lifelong learning.

It has been established that it is essential for a medical practitioner to be able to make effective decisions due to the dependence of patients and the pressurised environment of the public health sector. Hepler and Feltz (2012) emphasise that a medical practitioner frequently has a few moments to decide upon the required treatment to save a critical patient's life. It can be considered vital that a

medical practitioner has the self-efficacy to make effective decisions hurriedly. Hepler and Feltz (2012) stated that individuals with higher self-efficacy can make decisions quicker due to confidence in their decision-making capabilities as opposed to individuals with lower self-efficacy who takes longer to make decisions. If the high tension environment of the public sector in South Africa are considered it can be argued that medical practitioners are required to have high self-efficacy in order to make effective decisions.

It is suggested that when a medical practitioner makes effective decisions, this in return would have a positive causal effect on the individual's self-efficacy. Therefore, it can be argued that there exists a reciprocal relationship between self-efficacy and effective decision making.

The reciprocal relationship between self-efficacy and effective decision making can be illustrated through an example: a medical practitioner was effective in diagnosing and treating a patient who has come down with flu which improves his or her self-efficacy in terms of treating flu. When the practitioner encounters another patient who displays symptoms of flu, the practitioner will have the self-efficacy to diagnose and treat flu again. Wood and Bandura (1989) argue that decision making skills are acquired through repetition and therefore the more individuals practice making decisions the more their self-efficacy increases. Bandura (1997) supports the above mentioned statement by claiming that the level of self-efficacy is determined by the individual's mastery experiences which are previous successful behavioural performance. Thus, if an individual is forced to make decisions and does so effectively, self-efficacy will improve. When a medical practitioner's self-efficacy increases it will increase the confidence with which a medical practitioner approaches decision making.

Wood and Bandura (1989) reported that the impression of an individual's self-efficacy with which individuals attempt complex decision making has a considerable impact on the individual's success and fosters a higher level of self-efficacy when the individual manages to succeed. Therefore, in the Partial Medical Practitioner Competency Model it is proposed that the medical practitioner competency potential of self-efficacy will positively influence effective decision making of the medical practitioner. In addition, it is proposed that effective decision making will positively influence the self-efficacy of the medical practitioner.

Hypothesis 12: In the proposed partial medical practitioner model it is proposed that self-efficacy positively influences effective decision making.

Hypothesis 13: In the proposed partial medical practitioner model it is proposed that effective decision making positively influences self-efficacy.

2.10.6 Agreeableness

As previously discussed, a medical practitioner is in constant interaction with different types of individuals; patients, family members and other health care professionals. The public health sector in South Africa also presents patients and family members from various cultures, religions and perspectives. The diverse nature of these interactions demands the medical practitioner to communicate in a way that is experienced as pleasant by others. Agreeableness refers to the extent to which a person is cooperative and friendly. Peeters, Rutte, van Tuijl and Reymen (2006, p.190) report that "highly agreeable persons display behaviours such as being courteous, flexible, trusting, good-natured, forgiving, soft-hearted and tolerant". It is suggested that in order to deliver a service to patients effectively, a medical practitioner should be experienced as a pleasant individual. McCrae and Costa (1989) argue that individuals with the agreeableness personality construct experiences and creates social satisfaction in encounters with others. Therefore, it is suggested that a medical practitioner has the agreeableness personality construct.

It is important to consider that medical practitioners in the public health sector in South Africa are required to participate in interdisciplinary patient care. This implies that medical practitioners are exposed to unceasing interaction with patients and co-workers and are vulnerable to emotional exhaustion. Agreeableness has a negative causal effect on emotional exhaustion (Morgan & De Bruin, 2010) which can protect medical practitioners from emotional burnout.

Taylor (2004) defines agreeableness as the degree to which an individual is able to get along with other people and is compassionate towards others. Individuals who display agreeable behaviour are known to experience and display the following features:

- Straightforwardness: The tendency to be frank and sincere, as opposed to deceitful and manipulative.

- Compliance: The degree to which a person defers to others, inhibits aggression and is able to 'forgive and forget'.

- Modesty: The degree to which a person is humble and self-effacing.

- Tender mindedness: Having sympathy and concern for others.

- Prosocial tendencies: Having the propensity to be kind, generous, helpful and considerate (Taylor, 2004, p.69).

The above mentioned description can be associated with the role of a medical practitioner: to get along with others, be sympathetic and to display prosocial tendencies. Agreeableness is considered a personality construct that will allow the medical practitioner to interact more pleasantly with whomever they encounter as opposed to a medical practitioner who is not considered to have the agreeableness personality construct.

> 6. Agreeableness: An individual's ability to get on well with others and show sympathy for others.

McCrae and Costa (1989) maintain that agreeableness advances the formation of friendships and intimate relationships. It is also reported that agreeableness is associated with high levels of compassion and empathy (Shiota, Keltner & John, 2006; Jolliffe & Farrington, 2006). Even though the purpose of the patient-practitioner relationship is not intended to be intimate, the tendency of the agreeableness personality construct to build strong relationships can be argued to advance the degree of patient centeredness with which the practitioner attempts the patient-practitioner encounter. It can be considered vital that a medical practitioner in the public health sector in South Africa has high levels of agreeableness in order to interact effectively and obtain a high degree of patient centeredness in the patient-practitioner relationship especially with regards to the diverse patient-base of the South African public sector. It is suggested that a medical practitioner that is agreeable will have the competency potential to be patient centred.

The patient-practitioner interaction is a vital component of the role of a medical practitioner. Fourie (2015) argues that the degree to which a patient experiences patient centeredness increases the patient's satisfaction. It is suggested that the personality construct agreeableness is essential for a practitioner to be patient centred and to achieve a certain level of patient satisfaction.

If a medical practitioner has low scores of agreeableness it could have a detrimental effect on the level of patient centeredness achieved during the patient-practitioner encounter. Morgan and De Bruin (2010) demonstrate that individuals who have low scores of agreeableness are argumentative and difficult to get along with. A patient who encounters a medical practitioner who is quarrelsome and not easy to get along with is very unlikely to experience the practitioner as responsive to his or her needs. This will in return influence the outcome of the patient-practitioner encounter negatively.

Hypothesis 14: In the proposed partial medical practitioner model it is proposed that agreeableness positively influences patient centeredness.

It has been established that a medical practitioner is in constant interaction with individuals such as other medical practitioners, family members and patients and therefore it is vital for the medical practitioner to be able to work with people effectively to obtain the discussed medical practitioner

outcomes. Therefore, it can be argued that a medical practitioner should be considered an agreeable individual to work with people effectively.

It is crucial for the medical practitioner to get along with interdisciplinary team members in order to acquire medical information and ensure a patient's recovery. It is suggested that if a medical practitioner has high levels of agreeableness, he or she will be more likely to get along with interdisciplinary team members. Peeters et al. (2006) report that agreeable individuals were regarded as cooperative, courteous and friendly team members and experienced higher gratification through belonging to a team. It has also been reported that team members who are considered to be agreeable will make an effort to enhance team cooperation, motivated to function in positive social situations (Bell, 2007), will strive to preserve harmony, minimise competition within a team (Graziano, Hair, & Finch, 1997) and cooperate and collaborate with other team members (McCrae & Costa, 1989).

If the above mentioned discussion is considered it is advised for a medical practitioner to have high levels of agreeableness in order to care for patients and work effectively in interdisciplinary teams. Therefore, it is proposed that in order for a medical practitioner to be able to work with people effectively, a high level of agreeableness is required.

Hypothesis 15: In the proposed partial medical practitioner model it is proposed that agreeableness positively influences working with people.

Medical practitioners in the public health sector in South Africa will have to encounter patients from diverse backgrounds, cultures and religions. With each of the patients it is necessary to build a trusting relationship in order to obtain the correct information and treat the patient effectively. If the medical practitioner is considered agreeable it can be argued to be more likely that the medical practitioner will be able to build a relationship with patient's that are built on trust. Borges and Savickas (2002) agree that medical practitioners who are considered trustworthy by a diverse range of patients aids the recovery process of patients.

Winning the trust of the patient is considered an important outcome of the patient-practitioner relationship. If a patient does not trust the practitioner, it is argued to be challenging to ensure the recovery of a patient because the lack of trust can cause a misdiagnosis or noncompliance to treatment. Lack of trust is considered one of the primary reasons why patients change from one medical practitioner to another. Gruber and Frugone (2011, p.123) defines trust as "the extent to which the patient feels he or she can rely on and have confidence in the medical practitioner, his or her abilities, diagnosis and intentions".

Morgan and De Bruin (2010, p.187) consider agreeableness as "the interpersonal aspect of personality" that moderates the quality of relationships. Individuals who are considered agreeable

have been argued to be sociable and trustworthy and able to maintain trust in relationships (Digman, 1990; McCrae & Costa, 1989; Zellars, Perrewé, & Hochwarter, 2000). It is suggested that a medical practitioner who has high levels of agreeableness will be more likely to develop the patient's trust in the practitioner. Duncan, Cribb and Stephenson, (2003) declare that when there exists a positive relationship between the practitioner and patient, the patient is more likely to trust the practitioner which in return empowers the patient to share personal information about their health and in return allows the practitioner to treat the patient more effectively. It is therefore suggested that if a medical practitioner is agreeable, a trusting relationship will be cultivated.

Hypothesis 16: In the proposed partial medical practitioner model it is proposed that agreeableness positively influences trust.

2.10.7 Calling

An individual may be drawn to an occupation and perceives it as a calling in which he or she will find meaning if pursued. The core of pursuing occupational calling can be considered finding meaningfulness in one's occupation. Meaningfulness is defined by Steger, Frazier, Oishi, and Kaler (2006, p. 81) as "the sense made of, and significance felt regarding, the nature of one's being and existence". It is suggested that if an individual finds meaningfulness in their occupation, it will satisfy their occupational calling and advance the personal wellbeing of the individual. Steger and Dik (2009) consider meaningfulness as a profoundly personal and subjective understanding that can have a positive impact on an individual's life. Gazica (2014) demonstrates that the engagement of an individual in their calling can be considered advantageous for their health-, life- and job related outcomes. The opposite can also be considered; if individuals participate in work that they feel do not speak to their calling, it might have a negative impact on the individual's wellbeing. May, Gilson and Harter (2004) report that individuals who experience disconnection from their calling report disinterest in work, burnout and apathy. During an interview with a medical practitioner (personal interview 2, September 18, 2015) at a public hospital, she shared that "even though I consider medicine as my calling, the public hospital work environment drained me to such an extent that I had to take a period of sick leave due to burnout. During this time, I hated my occupation and considered to never practice again. Many of my colleagues go through the same experiences. Luckily I recovered and now I know how to look after myself."

Consequently, it is important for a medical practitioner to consider his or her profession as a calling in order to have a positive wellbeing. The work environment of the public health sector in South Africa can place strain on an individual's wellbeing if he or she does not experience their profession as a calling. Calling can be considered a 'buffer' against the challenging work environment of the public

health sector which protects the individual's wellbeing and therefore it is more likely that the practitioner will be engaged and satisfied with the job. Duffy, Bott, Allan, Torrey and Dik (2012) report that when individuals live their occupational calling it significantly increases their career commitment to such an extent that they were more efficient than those who also had an occupational calling but was not pursuing it. This implies that those who live out their calling experience high levels of job satisfaction and commitment as opposed to those who do not have a calling or those who do but are not pursuing it.

The public health sector in South Africa has been described as a high pressure work environment with a lack of resources and a variety of patients. For a medical practitioner to be truly satisfied with this challenging work environment it is important that the practitioner considers medicine as a calling. Rasinski, Lawrence, Yoon and Curlin (2012) demonstrate that physicians reported significantly higher satisfaction treating conditions when medicine was considered a calling as opposed to the practitioners who did not deem medicine a calling. Therefore, it is argued essential that a medical practitioner regards his or her profession as a calling in order to 'survive' the work environment of the South African public health sector. The definition of calling is provided below:

> 7. Calling: An occupation that appeals to a person, is experienced as intrinsically pleasurable and meaningful, and is deemed an important part of an individual's identity.

It can be assumed that if medicine is a calling the medical practitioner will advocate the health of others. The competency of health advocacy has been explored to a great extent by the CanMEDS 2015 Physician Competency Framework by Frank and Snell. Health advocacy is considered as "the medical practitioner's responsibility to use their expertise and influence to advance the health and well-being of individuals, communities and populations" (Frank & Snell 2014, p.9). It can be argued that a medical practitioner who considers medicine a calling will be more likely involved in health advocacy.

Stafford, Sedlak, Fok and Wong (2010) argue that part of a practitioner's responsibility is to utilise their knowledge to guide and improve the wellbeing of patients, communities and populations. Health advocacy implies that practitioners not only improve the health of their patients, but strive to advance the health of the general public. Yoon, Shin, Nian and Curlin (2015, p.189) claim that health advocacy "enables one to work with a vision, namely that the impact of one's work extends beyond the individual realm to benefit others and society." The above mentioned entails the calling of the medical practitioner to necessitate assisting others by improving their health conditions.

It can be assumed that individuals who view medicine as their calling are more likely to engage in health advocacy. As an example practitioners who volunteer for Doctors Without Borders can be mentioned. Doctors Without Borders is an international humanitarian-aid non-governmental

organisation (NGO) best known for its projects in war-torn regions and developing countries facing endemic diseases. Medical practitioners who participate in these endeavours sacrifice their comfort, safety and health to assist those in desperate need of medical attention across the globe. Doctors Without Borders has been involved in most of the health crises and epidemics worldwide such as the Ebola crisis in 2014. It can be argued that a sense of calling must drive a medical practitioner in order to expose himself or herself to such life threatening crisis voluntarily. McGill (1998) described Doctors Without Borders as follow:

> Doctors Without Borders bear witness to the suffering of those they care for and speak out for populations in danger. Advocacy is not a new concept for you; I am sure many of you have been described as being strong patient advocates on your ward rotations. With Doctors Without Borders, advocacy can take on added weight and responsibility (McGill, 1998, p.3).

It is important to consider that even though medical practitioners may have the intention to be health advocates their resources may be limited. The work environment of the public health sector does not allow medical practitioners to focus on the broader societal needs due to the high demands of the public health sector patients themselves. Stafford et al. (2010) reported time constraints, lack of rest, long shift hours, family demands and high stress levels as frequent barriers to health advocacy engagement. This can make it very difficult for medical practitioners to find the time and resources to advocate the health of surrounding communities. Nevertheless, it is suggested that a medical practitioner who considers the profession of medicine a calling is more likely to engage in health advocacy.

Hypothesis 17: In the proposed partial medical practitioner model it is proposed that calling positively influences health advocacy.

If a medical practitioner considers medicine as a calling the patient will be placed at the centre of the patient-practitioner encounter. McGill (1998) argues that only when the medical practitioner displays compassion, empathy and responsiveness to a patient's needs and vulnerabilities will the true purpose of the practitioner be accomplished which is to heal the patient not only physically but look after the patient's general wellbeing.

Literature has advocated the patient-practitioner encounter as the core of medicine. Hutchins (2009) argues the calling of practitioners is to put the patient first and focus primarily on the individual's care. The current generation of medical practitioners are trained to work on a 'clock' system where a patient is only their responsibility until the practitioner's shift ends. "Our life's work as physicians is a calling and we bear responsibility to our patients that does not stop five o'clock" (Hutchins, 2009, p.926). It

should be considered priority to put a patient first in the work of a practitioner and not to be focused only on working hours and other distractions.

Miettinen and Flegel (2003) believe that the autonomy and importance of the patient is essential to the profession of medicine and that every practitioner should consider it vital to be patient centred. They argue that the patient's autonomy and empowerment should be emphasised in decisions regarding treatment. Unfortunately, the reality of the public health sector in South Africa does not always allow the practitioner to give the patients the extensive attention that Miettinen and Flegel (2003) suggest. Nevertheless, it is suggested that a medical practitioner who considers the profession of medicine a calling is more likely to engage in patient centeredness.

Hypothesis 18: In the proposed partial medical practitioner model it is proposed that calling positively influences patient centeredness.

2.10.8 Altruism

De Waal (2008) defines altruism as the response to another's pain, need or distress and is classified as a motivational concept (the motivation to increase another's welfare). When another's pain is observed, a matching state is created by the observer and can evolve into more complex forms such as concern for the other and perspective-taking. Jones (2002, p.624) explains altruism as "the performance of cooperative unselfish acts beneficial to others". It can be argued that a medical practitioner should have a degree of altruism in order to pursue the field of medicine.

Fleming (2002) distinguishes between two levels of service in medical care. The first level is caring for patients on a basic level to ensure not being fired. The second level is considered "volunteer work" by providing extra services and walking the extra mile for patients, free of charge. Fleming (2002, p.1398) maintains that a "love of one's work and patients causes such volunteering. Such is the way of altruism". South Africans who utilise the public health sector services can usually not afford private healthcare. It can be assumed that the majority of public sector patients are from a lower economic status than patients of the private sector. Fleming (2002) and Jones (2002) describe altruistic behaviour in a medical environment as "going the extra mile for patients". This can include working voluntarily after hours and giving free medical advice and treatment to disadvantaged patients. Medical practitioners in the public health sector should have strong altruistic motivation to cope in the emotional challenging care that the public health sector demands because a low socio-economic status usually entails stories of hardship and suffering. If a medical practitioner does not have altruistic motivation, it can be assumed that the public health sector work environment could be challenging for a medical practitioner.

Batson and Powell (2003) advocate that altruism should not only be motivated due to societal expectations. It must be portrayed because the individual has internalised altruistic motivation as a personal norm. The individual feels a sense of obligation to perform a specific helping act and therefore assists others in spite of personal needs. The ideal is for altruism to be a personal need to medical practitioners and not only a societal norm.

        8. Altruism: The motivation to display unselfish acts that is beneficial to others.

As discussed previously, medical practitioners who consider a career in medicine as a calling is more likely to engage in patient centeredness and health advocacy. It is therefore suggested that an individual with altruistic motivation is more likely to consider a career in medicine as a calling in order to improve the wellbeing of others and "walking the extra mile" for patients. Calling is considered an occupation that appeals to a person, is experienced as intrinsically pleasurable and meaningful and is considered an important part of the individual's identity.

Altruism is considered a fundamental quality of competent medical practitioners. McGaghie, Mytkoa, Brown and Cameron (2002) consider altruistic behaviour critical when choosing a career in medicine due to the obligation to care for and relate to others on a daily basis. It is suggested that an individual will find it very difficult to live up to the expectations of a medical practitioner if no altruistic motivation drives him or her to the career. Sir William Osler stated in Aequanimitas that "the profession of medicine is distinguished from all others by its singular beneficence" (Osler, 1932, p. 268) (as cited in McGaghie et al. 2002). It would therefore be strange to consider an individual who chooses to become a medical practitioner without any altruistic motive.

McGaghie et al. (2002) insist that altruism originates from an individual's compassionate core that a crisis is shouting for an altruistic reply. This compassionate core can be considered the drive to pursue a career in medicine. It can therefore be argued that if a medical practitioner is considered an altruistic individual it will be more likely that the individual that is drawn to medicine believes the career will be meaningful or form as a part of his or her identity. When the individual deems the above mentioned, a career in medicine can be considered as an individual's calling. Thus, it can be argued that an individual with altruistic motivation is more likely to consider medicine as a calling.

Hypothesis 19: In the proposed partial medical practitioner model it is proposed that altruism positively influences calling.

Medical practitioners are pressured for time and resources and staff are limited. Current literature has focused on the decline of altruism during a medical practitioner's career due to the work environment of the public health sector (Burks & Kobus, 2012; Jones, 2002; Fleming, 2002). As time in

practice progress, medical practitioners become disillusioned about the profession due to noncompliant and ungrateful patients, failure of treatment and high pressure work environments.

Medical practitioners often discover that their altruistic behaviour is not always appreciated as is initially expected. Fleming (2002) reports that medical practitioners quickly learn that there is no emotional or financial reward for charitable additions to patient care and that these behaviours may actually be penalised which initiates medical practitioners to only give standard patient care. The medical practitioner at a public hospital reported that every hour of a working day is logged in order to determine how efficient the practitioner works. If practitioners spend extra time with patients, efficiency goes down and practitioners are penalised for this. The above mentioned causes medical practitioners to self-persevere through emotional suppression, detachment from patients and burnout by reducing altruistic behaviours (Burks & Kobus, 2012).

Research has argued that altruism is not a fixed trait and can fluctuate within the individual depending on motivation and positive reinforcement (Krebs & Van Hesteren, 1994). Even though medical practitioners may start their careers with an altruistic motivation, it can be argued that as time progresses in practice, medical practitioner's altruistic motivation declines due to disillusionment with the field. Therefore, it is proposed that time in practice reduces the degree of medical calling in medical practitioners.

Hypothesis 20: In the proposed partial medical practitioner model it is proposed that time in practice negatively influences altruism.

It can be deemed valuable to consider the proposed moderating effect of the limited resources available to the medical practitioner and that it is suggested to moderate the effect of altruism on calling. It has been established that an individual with a high level of altruism will be more likely to develop a calling for medicine. However, the medical practitioner will only experience this calling if the work environment of the South African public health sector provides the opportunity for the practitioner to live their calling.

De Villiers and De Villiers (2006, p.16) report that "rural family practice requires that doctors have the knowledge and skills to practise in settings where high technology and specialist resources are not available, while at the same time requiring that they be able to perform a wide range of advanced functions and procedures". It can be argued that the above mentioned factors can create a disillusionment of their calling for medicine. For example, if a medical practitioner considers his/her job in the South African public health sector a calling, but the work environment is too demanding or restricting with regards to the opportunity it offers the medical practitioner to fulfil his/her calling, he or she might not consider their job as a calling any longer. During an interview with a medical

practitioner in a public hospital (personal interview 2, September 18, 2015) the burnout of the practitioner due to the demands of the hospital work environment was emphasised. The practitioner stated that "even though I considered practicing medicine in public hospitals a calling, the environment drained me to such an extent that I was booked off for burnout. I lost myself during that time".

Even though a medical practitioner can consider medicine a calling, the reality of the South African public health sector's work environment consequently does not always provide practitioners with the resources to 'walk the extra mile' for patients. Practitioners often only have the resources to deliver the basics of health care by providing the minimum required care to patients. If the practitioner does not have the required resources it can be suggested to have a negative impact on the practitioner's perception of medicine as a calling. The practitioner can be suggested to only view the practice of medicine as a job and not a calling. The current study therefore proposes that resources acts as a moderator in the Partial Medical Practitioner Competency Model in the following way:

Hypothesis 21: In the proposed Partial Medical Practitioner Competency Model it is hypothesised that the interaction effect between altruism and resources (ALT*R) positively influences calling.

2.10.9 Achievement Motivation

The impact of individuals' motivation to achieve has received substantial attention throughout the years. Scholars have investigated meticulously the extent to which an individual's drive for achievement can allow him or her to achieve. The search for an understanding for achievement motivation was initiated by William James (1890), Henry Murray (1938) and David McClelland (McClelland, 1965; 1979; 1953). Research has indicated that achievement motivation is related to emotional maturity (Verma, 1986), health (Veroff, 1982), self-confidence (Tanwar and Sethi, 1986), apprehension (Ray, 1990) and psychological wellbeing (Diener, 1984; Emmons, 1986).

Nicholls (1984) defines achievement motivation as behaviour acquiring or displaying high ability due to the desire of success and the avoidance of failure. It is suggested that medical practitioners have the same achievement motivation to show their ability in order to obtain successful diagnosis and treatment. Nicholls (1984) further argues that achievement motivation can be distinguished from other motivational factors in that it drives individuals to become competent or create a perception of competence by themselves or others. The key word in the above mentioned sentence is 'competence' as achievement motivation will be argued to relate to certain medical practitioner competencies.

It is suggested that a medical practitioner in the public health sector in South Africa will need to have a high achievement motivation in order to cope with their high pressure work environment. It is also

suggested that medical practitioners with achievement motivation will be more motivated to obtain the required medical practitioner competencies despite the challenges present in the South African public health sector.

Certain scenarios can compel a medical practitioner to make immediate decisions for the appropriate treatment of patients in order to save their lives. It has been previously established that a medical practitioner will have to cope with the situation and make quick decisions in high pressure situations. Cassidy and Burnside (1996) argue that the coping process is dependent on the individual's problem-solving style and achievement motivation. Cassidy and Burnside reported that a positive relationship exists between the appropriate problem-solving style as well as achievement motivation in order to handle emergency situations successfully. Individuals with both these traits have been reported to indicate a higher success rate in emergency situations. French (1958) reports that individuals with high achievement motivation will strive to apply their ability as effectively as they possibly can. It is considered vital for medical practitioners to be motivated to apply their medical ability as effectively as possible in order to always treat patients to the best of their ability.

> 9. Achievement: The individual's drive to become competent and utilise the obtained competence to achieve success and avoid failure.

Medical practitioners are constantly forced to solve problems in the work environment. Not only does patients consult doctors with medical problems, but the South African public health sector poses daily challenges and problems that requires a solution. It can be argued that a medical practitioner who has high achievement motivation is more likely to develop the competency of problem solving due to the drive to utilise their ability as best they can in order to obtain success. French (1958, p.309) endorses that "the obtained data reported that ability level is positively related to problem-solving performance among individuals with high achievement motivation and unrelated among individuals whose achievement motivation was low". If the opposite is true and a medical practitioner has low achievement motivation, the drive to keep persisting to find a solution to cure a patient will be less than a medical practitioner with high achievement motivation because the practitioner will not be as pungently driven to succeed.

As stated earlier, Cassidy (2002) argues that problem-solving, along with achievement motivation, is essential for coping in emergency situations and enables them to cope with emergency situations. The practitioners' drive to utilise their ability and achieve success can enable them to stay calm and handle the situation at hand in order to obtain the desired outcome. Cassidy (2002) consent that candidates with effective cognitive problem-solving styles and achievement motivation can be considered the most effective in crisis situations. When a medical crisis is at hand, or any standard medical

consultation is in progress, it is comforting to know that a medical practitioner who is driven to achieve is in control of the situation due to the certainty that the practitioner is determined to achieve success and confirm their ability. Therefore, it can be argued that it is valuable for a medical practitioner in the South African public health sector has a high achievement motivation in order to develop the competence of problem-solving.

Hypothesis 22: In the proposed partial medical practitioner model it is proposed that achievement motivation positively influences problem-solving.

2.10.10 Openness to experience

Openness to experience is considered part of the Big Five personality factors which is considered the universal five traits of personality: Extraversion, Neuroticism, Agreeableness, Openness to Experience and Conscientiousness. Individuals who have a high level of openness to experience are known to be imaginative and possesses a disposition to attempt new things. Metzer, De Bruin and Adams (2014, p.2) declare that "Openness to experience measures the extent to which an individual is imaginative and curious, as opposed to being closed minded and narrow thinking." An individual who has low levels of openness to experience can be considered conservative and conventional. Taylor (2004, p.68) defines openness to experience as "the extent to which people are willing to experience new or different things and are curious about themselves and the world."

Medical discoveries constantly change due to the way medicine is practiced. In order for medical advancement it is vital that medical practitioners are willing to experiment with and use new procedures and treatments that can improve the patient's recovery. It can be argued that it is important for a medical practitioner to have a high openness to experience in order to have an openness to continuously challenge the status quo.

A medical practitioner should also be willing to re-examine their own values in order to understand the perspective of patients who have a different set of values. This is highly relevant due to the diverse nature of South Africa as well as the diverse patient-base in the public health sector. Literature also reports that individuals with high openness to experience adapts more easily through utilising different coping strategies (Bouchard, Guillemette, & Landry-Léger, 2004; DeLongis & Holtzman, 2005). Medical practitioners who have high openness to experience will be more adaptable to these situations and will find different coping strategies to deal with their stressful work environments. Therefore, it is suggested that medical practitioners who practice in the South African public health sector have a high prevalence of the openness to experience this personality factor.

10: Openness to experience: Having a curiosity to constantly change one's frame of reference with regards to intellectual and social understanding; a willingness to experience new things.

Medical practitioners are obligated to stay up to date with developments in the medical field throughout their career. New developments to treat patients more effectively occur continuously and practitioners have a responsibility to be up to date in order to treat patients even more effectively. It can consequently be argued that in order for a medical practitioner to develop the competency of lifelong learning, a curiosity for developments and new knowledge should be inherent in the personality of a medical practitioner. Cattell (1965) reports that an individual who is considered to have high openness to experience can be described as an 'inquiring mind'. When a person is open to new experiences, he or she is constantly seeking opportunity to alter pre-existing understanding of the world around them. Literature suggests that individuals who have a high prevalence of openness to experience are considered lifelong learners (Bath & Smith, 2009; Barrick & Mount, 1991; Blickle, 1996). Therefore, it is suggested that individuals who are open to experiences are prone to be lifelong learners.

Hypothesis 23: In the proposed partial medical practitioner model it is proposed that openness to experience positively influences lifelong learning.

2.10.11 Conscientiousness

Conscientiousness is considered to be an essential personality trait for surviving in the work environment of the public health sector in South Africa. The work of a medical practitioner in the public health sector in South Africa requires the practitioner to be efficient, organised, neat, and systematic in order to deal with the demands of the public health sector. Consequently, Harrison (2008) declares that conscientiousness is considered the most reliable and valid predictor of occupational performance. Taylor (2004, p.69) defines conscientiousness as "the degree of effectiveness and efficiency with which a person plans, organises and carries out tasks." Individuals who display conscientious behaviour are known to have the following features:

- Order: The tendency to keep everything neat and tidy an in its proper place, and to be methodical;

- Self-discipline: The ability to start tasks and carry them through to completion, and to motivate oneself to complete unpleasant tasks;

- Dutifulness: The tendency to stick to principles, fulfil moral obligations and be reliable and dependable;

- Effort: Setting ambitious goals and working hard to meet them, and being diligent and purposeful; and

- Prudence: The tendency to think things through carefully, check the facts and have good sense (Taylor, 2004, p.68).

Heller, Watsan and Ilies (2004) report that conscientiousness is strongly related to job satisfaction, marital satisfaction and life satisfaction. Conscientiousness can be described as an individual who has the perseverance to continue until a goal is achieved or a task completed and persists systematically and efficiently despite of difficulty (Benet-Martinez & John, 1998). Moutafi, Furnham and Crump (2006) use terms such as discipline, organisation, persistence and need for achievement to describe conscientious individuals.

Conscientiousness has been investigated by various academics and considered one of the most important personality factors as a determinant of success, job satisfaction, income and happiness (Richardson & Abraham, 2009; Sutin, Costa, Miech & Eaton, 2009; Ohme & Zacher, 2015).

The importance of a conscientious medical practitioner can be illustrated through an example. When a patient consults a medical practitioner, the patient's well-being and health is dependent on diagnosis of the medical practitioner. Due to the dependence of the individual's recovery on the medical practitioner's examination and recommendation, it is essential that the medical practitioner investigates the patient thoroughly and efficiently. The medical practitioner should also be able to investigate multiple patients to the same standard and therefore should persist to do so despite challenging circumstances. Conscientiousness is the personality trait that captures these requirements. From the discussed literature it is evident that conscientiousness is considered a fundamental personality trait and should be included in the partial medical practitioner competency model.

11. Conscientiousness: The degree of effectiveness, self-discipline, efficiency and accuracy with which a person plans, organises and carries out tasks and persist to achieve goals.

The competency of lifelong learning is supported by the presence of conscientiousness as a personality trait. To be able to develop expertise and medical professionalism on a continual basis requires persistence and discipline to continuously improve one's professional development. A conscientious

medical practitioner will be able to persist in learning with more ease due to the inherent drive of conscientiousness.

Simmering, Colquitt, Noe and Porter (2003) investigated the positive relationship between a need for development and conscientious individuals. The study demonstrates that individuals with the conscientious personality trait have an advanced need for development. Barrick, Mount, and Strauss (1993) as well as Colquitt and Simmering (1998) proved a positive correlation between goal devotion, motivation to learn and learning. Therefore, it is suggested that an individual who is conscientious is more likely to have a high achievement motivation. Also, it is argued that a conscientious individual is more likely to develop the competency of lifelong learning.

Hypothesis 24: In the proposed partial medical practitioner model it is proposed that conscientiousness positively influences lifelong learning.

It is crucial that the medical practitioner is committed to gather information on all aspects to come to an accurate conclusion. Conscientious individuals are focused and dutiful in their tasks and will persist until goals are achieved and accurate facts are obtained to make the correct diagnosis. Schouwenburg and Kossowska (1999) claim that complex information gathering and processing indicated the conscientious personality traits as well as Tidwell and Sias (2005) who demonstrate that conscientiousness was positively associated with overt performance and task information seeking. Therefore, it can be argued that it is essential that a medical practitioner is considered conscientious in order to gather information effectively.

Hypothesis 25: In the proposed partial medical practitioner model it is proposed that conscientiousness positively influences information gathering.

It has been established that it is essential that a medical practitioner in the South African public health sector should be considered to have a high achievement motivation in order to develop the competencies of lifelong learning and information gathering. It will now be argued that a medical practitioner with the conscientious personality factor can be considered more likely to have a high achievement motivation.

A conscientious individual can be understood as a dutiful individual who persists systematically and efficiently despite of difficulty. Heaven, Ciarrochi and Vialle (2007) as well as O'Connor and Paunonen (2007) attribute conscientious individuals' to the fact that they are motivated, hard-working, responsible and achievement-orientated. An individual who is considered conscientious can be argued to persist in goals and tasks and can be considered driven by a motivation to achieve their set goals and tasks.

Richardson et al. (2009) state that conscientious individuals' performance is distinguished from the performance of individuals who are not conscientious due to the high levels of achievement motivation in conscientious individuals. Zhang (2003) reports that conscientiousness is a good predictor of achievement motive and Furnham, Monsen and Ahmetoglu (2009) argue that conscientiousness is correlated with achievement drive. It is also important to discern that conscientiousness is positively and steadily correlated with achievement outcomes due to the determined, diligent, responsible and achievement-oriented disposition of highly conscientious individuals (Heaven et al., 2007; O'Connor & Paunonen, 2007).

The positive relationship between conscientiousness and achievement motivation as stated in the above mentioned literature can be considered an important facet of the Partial Medical Practitioner Competency Model. As it has been established previously, a medical practitioner in the South African public health sector will have to be highly conscientious in order to consult and treat patients systematically and diligently. Therefore, as indicated by the literature, it can be assumed that a medical practitioner who has high conscientiousness will be more motivated to achieve successful outcomes in their work which will in return enhance the probability for them to acquire the problem solving medical practitioner competency. Consequently, it can be argued that a medical practitioner who is considered a conscientious individual will have a high achievement motivation.

Hypothesis 26: In the proposed partial medical practitioner model it is proposed that conscientiousness positively influences achievement motivation.

2.10.12 Fluid Intelligence

It can be argued that the work of a medical practitioner requires a high level of cognitive functioning. Summary report for Family and General Practitioner (O-Net online. [s.a.]) list the following domains of knowledge that a medical practitioner must master: Medicine, Psychology, Customer and Personal Service, Biology and Therapy and Counselling. The individual should also have the ability to integrate knowledge of the above mentioned domains and apply it in practice. It can be assumed that an individual with an above average intelligence is required to master the skills and knowledge necessary to be a medical practitioner.

Cognitive intelligence can be divided into two broad categories: crystallised intelligence and fluid intelligence. Cattel (1963, p.2) defines crystallised intelligence as the "skilled judgement habits that have become crystallised as the result of earlier learning application of some prior, more fundamental general ability to a field". This implies that an individual has the ability to use acquired skills and prior knowledge salvaged from the long-term memory. If a medical practitioner has good crystallised

intelligence, it would allow him or her to precisely recall acquired knowledge for example theory or of a previous case. Fluid intelligence is defined by Cattel (1963, p.2) as "adaptation to novel situations, where crystallised skills are of no particular advantage". This implies that fluid intelligence allows the individual to think logically and find solutions in situations that have never been experienced before. If a medical practitioner has a high level of fluid intelligence, the practitioner would be able to find solutions for illnesses or problems never encountered before. The proposed research study will argue that it is more important for a medical practitioner to have a high fluid intelligence than crystallised intelligence.

Medical practitioners are continuously confronted with 'new' patients and illnesses. Previous acquired knowledge (crystallised intelligence) is not always relevant to the situation due to the inherent differences in patients and contexts. Medical practitioners should therefore have the ability to think logically and find new solutions to treat inherently different illnesses. Jaeggi, Buschkuehl, Jonides and Perrig (2008, p.6830) declare that "fluid intelligence refers to the ability to reason and to solve new problems independently of previously acquired knowledge". The author further suggests that fluid intelligence is considered a major contributing factor in professional and educational success, especially in complex and demanding environments such as the South African public health sector. Therefore, it is suggested that medical practitioners have high fluid intelligence in order to find solutions for novel situations or problems.

12. Fluid Intelligence: The ability to reason and to solve new problems independently of previously acquired knowledge.

In the following discussion it will be suggested that fluid intelligence positively influences and drives openness to experience. It is considered advantageous if a medical practitioner has a high level of openness to experience in order to comply with the demands of medicine to constantly learn and expand one's medical and social knowledge. Therefore, it will now be argued that a medical practitioner who has a high level of fluid intelligence is more likely to exhibit the personality construct of openness to experience.

Openness to experience is considered the personality factor of the Big Five that has received the most attention and has been awarded numerous definitions (McCrae & John, 1992; McCrae & Costa, 1997). Many have considered openness to experience as the level of an individual's intellect.

Abundant literature has investigated the relationship between cognitive intelligence and openness to experience and concluded that fluid intelligence is indeed positively correlated with openness to experience (Ashton, Lee, Vernon & Jang, 2000; Moutafi, Furnham & Crump, 2006; Lochbaum, Karoly & Landers, 2002). It can be suggested that a fluid intelligent individual would be more inclined to have

a curious mind and seek stimulation. Taylor (2004, p.21) observes that individuals who are considered to have the openness to experience personality trait "are curious about their world, lead experientially richer lives, and entertain novel ideas and unconventional values". The correlation found between fluid intelligence and openness to experience is supported by the above mentioned studies.

It is essential for a medical practitioner to relate to Taylor (2004) in order to adapt new procedures and question and improve current ones in order to advance the field of medicine. The same argument also applies in exploring and comprehending the differences between patients and colleagues different to oneself.

It is important to consider that medical practitioners are required to work in interdisciplinary teams. Team members will probably suggest procedures and treatments that are not familiar to the medical practitioner which does not mean it will not work. Harris (2004) reports that openness to experience and fluid intelligence increase creativity in group settings. It can therefore be suggested that a medical practitioner with a high level of fluid intelligence is more likely to be open to experience and will be able to collaborate better with interdisciplinary team members.

Hypothesis 27: In the proposed partial medical practitioner model it is proposed that fluid intelligence positively influences openness to experience.

2.10.13 Coping with Pressure

The work environment of a medical practitioner in the South African public health sector has been discussed and it was established that a medical practitioner is forced to cope with a shortage of resources, high pressure situations and a diverse patient pool. Rossouw (2011, p.3) reported that medical practitioners in the Western Cape public health sector suffer from high job burnout due to "the number of shift hours, work-load, working conditions and system-related frustration". It can be argued that in order for medical practitioners to function effectively, it is essential that they are competent to cope with pressure.

It is undeniable and unavoidable that a medical practitioner will encounter situations that are extremely stressful and therefore can hamper effective functioning as well as influence the wellbeing of the medical practitioner. Patterson et al. (2000, p.191) identified coping with pressure as a medical practitioner competency and defined it as being "aware of own limitations and not keeping emotions 'bottled-up', shares the load with others, remains calm under pressure, able to 'switch-off' outside work, demonstrates humility, able to apologise and to control one's anger". The segment of the definition that is considered to be the most valuable for the current study is to "remain calm under pressure". If a medical practitioner is competent in coping with pressure and can remain calm under

pressure, it can be argued that the functioning as well as the wellbeing of the medical practitioner will be more positive.

> 13. Coping with pressure: To remain calm while working under stressful conditions and to be able to take control of the situation and remain effective.

It will now be suggested that if a medical practitioner is competent in coping with pressure it will have a positive relational influence on the medical practitioner's ability to make effective decisions.

A medical practitioner frequently encounters a situation where there is pressure to make a quick and correct decision. An example could be where a patient must be treated immediately in order to save the patient's life. In that moment when the practitioner is pressed to make a decision, it is vital that the practitioner has the ability to cope with pressure and remain calm in order to enhance the likelihood that the correct decision will be made.

Literature has investigated the impact of pressure on an individual's decision-making process (Derdiarian, 1986; Pierce, 1993; Bilodeau & Degner, 1996). If an individual cannot cope with pressure it can have a hindering effect on the accuracy of the decisions an individual makes. Altuntas (2003) reports that stress may have a negative impact on one's decision-making ability which can lead to incorrect decisions and mistakes. If the above mentioned is taken into account it can be considered vital for a medical practitioner to be able to cope with pressure in order to make effective decisions.

Research has indicated that individuals who have the ability to make effective decisions experience more fulfilment in their lives (Deniz, 2006). Therefore, it can be argued that a medical practitioner who has the ability to cope with pressure will more likely develop the ability to exhibit effective decision making.

Hypothesis 28: In the proposed partial medical practitioner model it is proposed that coping with pressure positively influences effective decision making.

It has been established that the ability to cope with pressure is indispensable to the practitioner's functioning in the public health sector work environment. Even though medical practitioners may have the best intentions to be patient centred, it is important to consider that the work environment of a South African public health sector does not always allow practitioners to be patient centred. Rossouw (2011) remarks that medical practitioners work long hours, are pressured with high workloads and function under difficult working conditions. It can be considered an important ability for a medical practitioner to be able to exhibit patient centeredness amidst the high pressurised work environment of the South African public health sector. If a medical practitioner cannot exhibit patient centeredness amidst high pressure it is suggested that the practitioner will not place the patient at the centre of his

attention and this creates the opportunity to make the wrong assumptions about how the patient is feeling. Therefore, it can be suggested that if a medical practitioner can cope with the pressure or their work environment it is more likely that the practitioner will exhibit the ability to be patient centred even in a pressurised environment.

Hypothesis 29: In the proposed partial medical practitioner model it is proposed that coping with pressure positively influences patient centeredness.

After extensive research pertaining literature with regards to medical practitioner person characteristics, the Partial Medical Practitioner Competency Model was elaborated (Figure 2.11). The proposed hypothesis was interconnected based on the expected influences of the person characteristics on Fourie's (2015) competencies. The definitions identified for this study will be included in Table 2.3, which illustrates the basis on which the assumptions of the causal hypotheses were made.
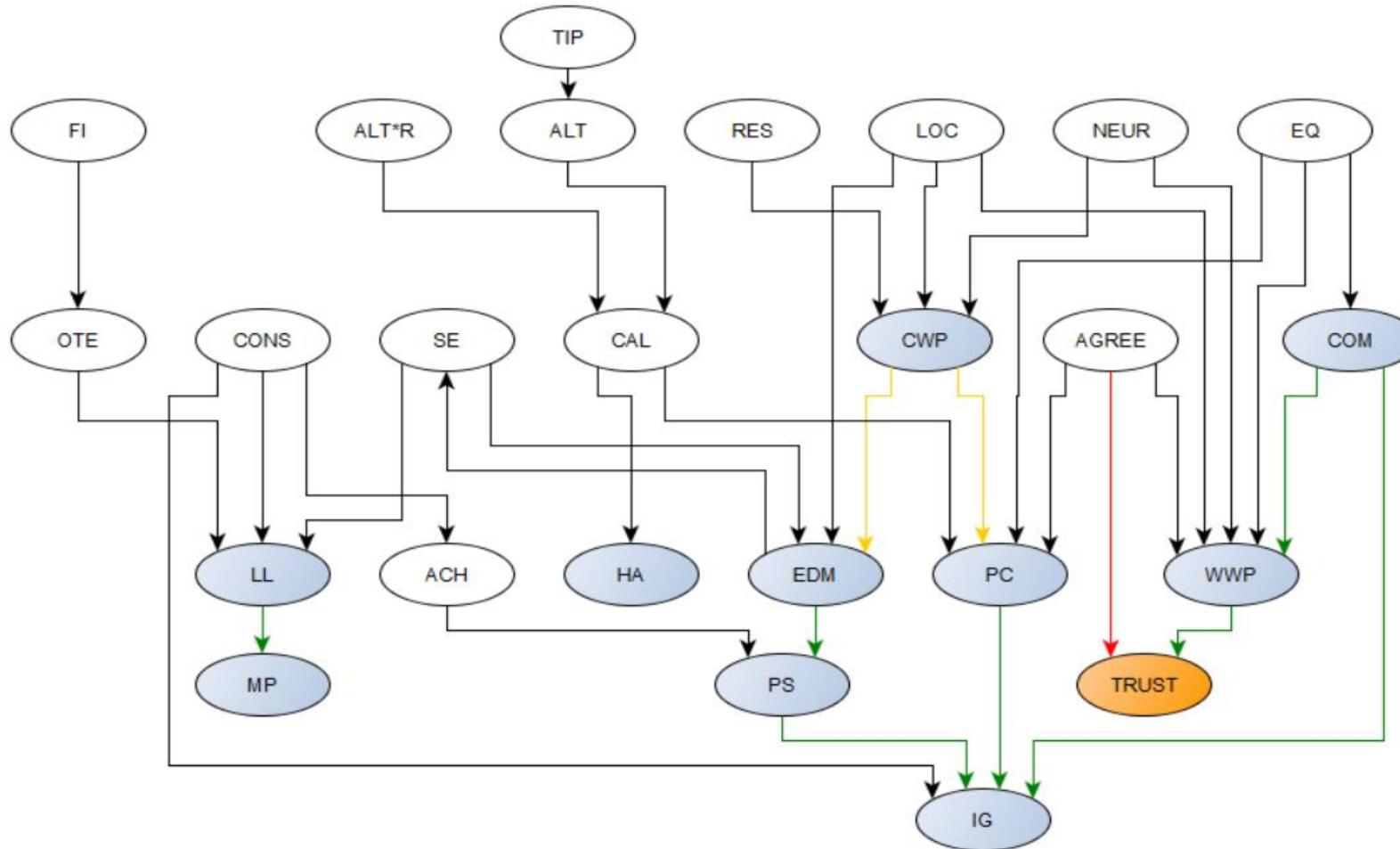
2.11 A Proposed Partial South African Medical Practitioner Competency Model (Figure 2.7)

COMPETENCY POTENTIAL:
ACH: Achievement Motivation
AGREE: Agreeableness
ALT*R: Altruism*Resources
ALT: Altruism
CAL: Calling
CONS: Conscientiousness
EQ: Emotional Intelligence
FI: Fluid intelligence
LOC: Locus of Control
NEUR: Neuroticism
OTE: Openness to Experience
RES: Resilience
S-E: Self-efficacy
TIP: Time in Practice

COMPETENCIES:
COM: Communication
CWP: Coping with Pressure
EDM: Effective Decision-making
HA: Health Advocacy
IG: Information Gathering
LL: Lifelong Learning
MP: Medical Professionalism
PC: Patient Centeredness
PS: Patient Satisfaction
WWP: Working with People

OUTCOME:
Trust

Note: The white circles represent hypothesised competency potential, the blue circles represent competencies and the orange circle represents outcomes. The black paths represent the hypothesised structural paths between the competency potential and competencies, the yellow paths represent the hypothesised structural paths between competency latent variables; the red path represents the hypothesised structural path between the competence and the outcome latent variable; and the green paths represent the original structural paths between the competency latent variables.

Table 2.3

Summarised definitions of the person characteristics of the Partial Medical Practitioner Competency Model

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Definitions of Person Characteristics

Resilience

Internal-individual resources that allows the individual to adapt and remain strong in the face of adversity.

Neuroticism

An individual's emotional stability and the general propensity to feel negative emotions in response to environmental factors.

Internal Locus of Control

The individual's belief of active involvement and ability to control and manage what happens to him/her in their environment, whether it be positive or negative.

Emotional Intelligence

The ability to identify and effectively manage emotion in oneself and in others as well as one's environment.

Self-efficacy

An individual's perceptions of their aptitude to perform tasks and accomplish goals.

Agreeableness

An individual's ability to get on well with others and show sympathy for others.

Calling

An occupation that appeals to a person, is experienced as intrinsically pleasurable and meaningful, and is considered an important part of an individual's identity.

Altruism

The motivation to display unselfish acts that is beneficial to others.

Table 2.3 (Continued)

Summarised definitions of the person characteristics of the Partial Medical Practitioner Competency Model continued

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Definitions of Person Characteristics

Achievement Motivation

The individual's drive to become competent and utilise the obtained competence to achieve success and avoid failure.

Openness to Experience

Having a curiosity to constantly change one's frame of reference with regards to intellectual and social understanding; a willingness to experience new things.

Conscientiousness

The degree of effectiveness and efficiency with which a person plans, organises and carries out tasks.

Fluid Intelligence

The ability to reason and to solve new problems independently of previously acquired knowledge.

Coping with Pressure

To remain calm while working under stressful conditions and to be able to take control of the situation and remain effective.

2.12 Conclusion

The second chapter of this proposed research study attempted to report the relevant literature in order to expand the Partial Medical Practitioner Competency Model with regards to the relevant person characteristics.

The health sector, more specifically the public health sector in South Africa, was investigated through extensive research. The concept of competency modelling was investigated and it was established that a complete competency model has the potential to add value to the success of individuals in occupations.

The value of such a model specific to medical practitioners in the South African public health sector was investigated. The Partial Medical Practitioner Competency Model was expanded by inserting twelve person characteristic latent variables as competency potential constructs as described in section 2.8. Additional relationships were also identified between competencies.

From the literature it is clear that the success of a medical practitioner depends on numerous factors and as such the need had arisen to statistically verify the competency potential person characteristics required to function as a medical practitioner in the South African public health sector. The following chapter will focus on the operationalisation and testing of the proposed hypotheses and stipulate the methodology to do so.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This study was guided by the research aim of investigating the competency potential which determines the level of competence achieved by the medical practitioner as defined by the competency model, the manner in which these competency potential latent variables map on the competencies as well as the manner in which they relate to each other. To provide an answer to this research initiating question, the second chapter elaborated on the Partial Medical Practitioner Competency Model through extensive research on public health in South Africa and possible person characteristics and situational variables influencing the competency potential of a medical practitioner. Through the research in Chapter 2 the Partial Medical Practitioner Competency Model was elaborated through theorising the hypothesised critical determinants of medical practitioner competence and the manner in which these determinants interact.

Extensive research has been conducted relating person characteristics to acquire competency and job success (Sutin, Costa, Miech & Eaton, 2009; Hogan & Chamorro-Premuzic, 2013; Faqeer-Ul-Ummi, Javed & Amjad, 2014). However, no research has been conducted regarding the empirical testing of such variables for medical practitioners in the South African public health sphere that determines the person characteristics that drive the development of specific medical practitioner competencies. The competency model proposed in Chapter 2 of this study was therefore a first in the effort to uncover the nomological variables within the competency potential-competency-outcomes relationship of a medical practitioner in South Africa. However, it was deemed important to consider the possibility that the literature study in Chapter 2 failed to explore all the dimensions of South African medical practitioner competency potential. This could be due to the fact that there are few studies that have explored this topic within the South African context as well as the possibility that the studies itself did not capture all latent variables pertaining medical practitioner competency potential. Therefore, it was suggested that further qualitative data collection was required in order to gain a deeper understanding of South African medical practitioner competency potential.

Qualitative data was collected from experienced medical practitioners who practice within the South African public health sector context. The above mentioned was done in order to determine the accuracy of the identified latent variables in Chapter 2, and also to explore the possibility of additional latent variables that were not included in the Partial Medical Practitioner Competency Model. The aim was therefore to further confirm the connotative meaning and behavioural denotations of the medical

practitioner competency potential construct. In order to achieve this, the researcher brought medical practitioners onto the project in order to gain a deeper understanding of the research topic. The medical practitioners offered phenomenological trustworthy insights as to what they consider as important person characteristics of a medical practitioner in a public health sector environment. Furthermore, it was considered important that the final Medical Practitioner Competency Model represents and corresponds to a large extent the conceptualisation medical practitioners have created for themselves in order to understand the competency potential (person characteristics) of a competent medical practitioner. A structural model, such as the Medical Practitioner Competency Model, can be understood as an intricate nomological network of constructs that attempts to capture and understand the complexity of human behaviour within a certain occupation or situation.

In order to serve the epistemic ideal of science, methodology should be objective and rational in order to make valid conclusions (Babbie & Mouton, 2001). Objectivity refers to the scientific method's conscious and systematic strive towards the reduction of error. In order for scientific research to be considered rational, it is essential for it to undergo evaluation by knowledgeable peers that evaluate the methodological precision of the manner in which the conclusion was derived (Babbie & Mouton, 2001). When the methodological approach is deemed acceptable, it will enhance the likelihood that the data is valid and valuable for its intended purpose. In order for the methodological approach to be inspected meticulously by knowledgeable peers and maintain objectivity and rationality, a detailed description and a comprehensive motivation of the methodological choices were provided in this chapter.

When the scientific method of research is explored, it is deemed valuable to consider and report on the different meta-theoretical schools of thought as these schools differ as to how the ontological and teleological dimensions are viewed, and consequently the epistemic ideal (Babbie & Mouton, 2004). Therefore, the choice of meta-theoretical school of thought of the researcher influences the degree of trustworthiness of the study and the extent to which it lives up to the epistemic ideal when the study is reviewed by knowledgeable peers.

3.2 Research Design

As aforementioned in Chapter 1 the research initiating question from which the study of the Partial Medical Practitioner Competency Model was further elaborated, are as follows:

What are the person characteristics of medical practitioners that determine the level of competence achieved by the medical practitioner?

The abovementioned research initiating question can be investigated by either a qualitative or quantitative research methodology. Babbie and Mouton (2004) suggest that quantitative research allows the researcher to quantify human behaviour, whereas a qualitative research design explores the qualities of human behaviour. Denzin and Lincoln (2011) further argue that qualitative research is a tool through which phenomena is deciphered through the lens of those who study it.

Qualitative research is described by Polkinghorne (2006, p.68) as:

> When what is to be studied are human phenomena that appears and are felt in people's experience, an approach needs to be employed that is able to capture and elucidate such phenomena. As other people's experiences are not directly available to researchers, studies of experiential phenomena depend on people's expressions about those phenomena. Studies that generate or collect people's expressions about an experience and analyse or synthesise those expressions in order to understand and clarify the experience have been classified as qualitative studies (Polkinghorne, 2006, p.68).

In this study experienced medical practitioners were approached as they are considered subject matter experts as to the person characteristics of a medical practitioner who has achieved an acceptable level of competence within their occupation. Consequently, this was done using a qualitative research design as the study attempted to confirm the latent variables identified in Chapter 1 and explore new possibilities in terms of the latent variables of the Partial Medical Practitioner Competency Model.

Before the data gathering techniques are explored, it was deemed valuable to discuss the different philosophical opinions to research, as it has an influence on the operationalisation of the study.

3.3 Philosophical Perspectives: Teleology, Epistemology, Methodology and Ontology

From a philosophical perspective, human beings can be differentiated from their mammal counterparts based on their inherent ability to think and create abstract constructs and thoughts. Furthermore, research allows human beings to explore frameworks through which meaning is created (Babbie & Mouton, 2004). The above mentioned guides the manner in which human beings choose to live their lives and construct the realities they encounter, also known as constructing phenomenon. Phenomenology suggests that in order to truly comprehend human life, attention should be paid to the perspective of the individual who is known to be the one who engages with the phenomenon on

a first hand basis (Babbie & Mouton, 2004). Therefore, this research study set out to phenomenologically capture the conceptualisation of medical practitioner competency potential. This was not only approached through a rigorous literature study of existing research by the researcher, but also by including medical practitioners as subject matter experts to articulate the interpretive structures they have created in order to conceptualise their occupational frameworks.

As previously discussed, it is important for research to serve the epistemic ideal through striving to achieve objectivity. However, Babbie and Mouton (2004) argue that this is not always feasible due to the fact that research is approached through the lens of a specific discipline and that the discipline has its own paradigms and understandings. Paradigms are defined by Neuman (2011, p.94) as "a whole system of thinking". Guba (1990, p.17) states that no set and clear definition exist of what exactly a paradigm is, but describes it as "a basic set of beliefs that guides action, whether of that everyday garden variety or action taken in connection with a disciplined inquiry". Therefore, Veldsman (1986) suggests that no discipline can study world three, the physical reality, objectively. Despite the abovementioned statement, it is still deemed valuable to consider the paradigms in a specific discipline, as it specifically aims to explore and explain a component of world three that other disciplines not necessarily will be dedicated to enlighten.

The current study was approached through the discipline of Industrial Psychology. Furthermore, research within the discipline of Industrial Psychology can be approached through three overarching meta-theoretical interpretations of science: positivism, phenomenology (interpretive) and critical theory (Babbie & Mouton, 2004). The above mentioned meta-theoretical interpretations can be distinguished from one another in terms of their stance of the teleological, ontological, epistemological, methodological and sociological dimensions of science (Babbie & Mouton, 2004; Mouton & Marais, 1990). Also, each meta-theoretical interpretation follows a specific research methodology, namely, positivism follows quantitative, phenomenology follows qualitative and critical theory follows participant action research (Babbie & Mouton, 2004).

The three meta-theoretical interpretations will be briefly discussed and thereafter a general understanding of the dimensions of science will be provided. Positivism argues that social sciences can be studied through the implementation of scientific methods. Guba (1990, p. 19) argues that positivism "is the belief that there exists a reality out there, driven by immutable natural laws. The business of science is to discover the 'true' nature of reality and how it "truly" works". This implies that patterns, generalisations, cause-and effect issues and methods that are used in scientific research are also applicable when human behaviour is studied (Denscombe, 2008). Therefore, positivism aims to explore laws of human nature that can be generalised to all people in any period. It is considered

the "naturalistic interpretation of the social sciences" (Guba, 1990, p. 260) and allows the researcher to validate social sciences through a quantitative approach. The positivistic approach is marked by observation, measurement, experiment and building a theory. Furthermore, statistics play a central part to conducting positivistic research (Guba, 1990).

The interpretive paradigm (also known as the phenomenological approach) argues that humans are constantly trying to find meaning in the world in which they live. This is done through interpreting, creating, giving meaning, rationalising and justifying thoughts and behaviours (Babbie & Mouton, 2001). Furthermore, this paradigm argues that social reality is subjective because it is moulded by the insights of the participant and researcher (Rubin & Babbie, 2010). The general practice of psychology would follow this approach, as it embraces the individual's perspective and places them at the centre of the approach. When the clinical psychologist is suggested to place the individual at the centre, the participant is suggested to be freed through their understanding of themselves. The critical approach argues that the ability to apply reason is what separates human beings from one another, and therefore reasoning should be applied to improve society (Blaikie, 2007). This approach looks at the "intersubjective meanings as constituted in culture, language, symbols and so forth" (Guba, 1990, p. 264).

The critical approach encourages participants to stress their opinions about the world they live in, in order for reason to allow transformation to consequently improve society (Babbie & Mouton, 2001). Furthermore, Guba (1990, p.24) states that within the critical approach, "the task of inquiry is to raise people (the oppressed) to a level of 'true consciousness'. Only once they realise they are the oppressed can they act to transform their circumstances. The current study took the meta-theoretical stance of the qualitative method embedded in the positivistic research.

The dimensions of science consist of the following: teleological, ontological, epistemological, methodological and sociological. Each of these will be discussed as well as their relevance to the study at hand. Firstly, the teleological dimension refers to the meta-theoretical stance as to why the research is conducted (objective and purpose). When the discussion on positivism and the interpretive paradigm (phenomenology) is considered, the teleological dimension of this study is argued to be conducted for the sake of both the above mentioned paradigms. Not only does this study aim to scientifically capture the latent variables of medical practitioner competency potential, but the study also aimed to capture the manners in which medical practitioners find meaning in order to explain how medical practitioner competence is acquired. This could allow for a level of control to be exerted over the development of medical practitioner competence. In other words, the study not only aimed

to free medical practitioners from their perceptions on what person characteristics contributes to a competent practitioner, but the researcher also aimed to influence this phenomenon in practice.

The dimension of ontology poses the question whether we live in a reality that is collective or whether reality is specific to the context in which it is lived (Ritchie, Lewis, Nicholls & Ormston, 2013). The ontology dimension can be divided into four perspectives, namely positivist, post-positivist, critical theoretical and constructivist. The constructivist ontology was considered relevant for this study, as it is argued that medical practitioners have subjectively created a reality as to how medical practitioner competency potential leads to competence within the public health sector (Babbie & Mouton, 2004). The sociological dimension considers the nature of the relationship between the researcher and the participant. A phenomenological meta-theoretical stance was partly taken in the current research as it places the participant at the centre of the study. However, it is suggested that a positivistic phenomenological stance was taken due to the researcher's aim to confirm the objective reality of medical practitioner competency potential through the validation of a medical practitioner competency potential instrument.

Epistemology is concerned in determining two factors. The first factor is the most suitable manner to acquire knowledge. Second, the relationship between the researcher and the participant and how this relationship influences the credibility of the research results (Ritchie et al. 2013). For the current research study it was argued that the qualitative research method was the most suitable manner to acquire knowledge. Therefore, a participant-centred qualitative research approach was followed. This allowed the researcher to investigate the topic through the phenomenological perspective of the participant. The above mentioned method was selected in order to gain an effective and reliable reflection of the paradigm through which medical practitioners explain competency potential for their profession in order to achieve competency in a public sector environment. Also, when the above mentioned research is concluded, the researcher would encourage the development and validation of a medical practitioner competency potential instrument. Therefore, it is suggested that, from an epistemological perspective, the current study is indeed the qualitative method embedded in positivistic research.

Lastly, it is important to consider the contribution of medical practitioners to the nature of the study. It is suggested that individuals who are not classified as scientists as an occupation, also develop and test explanatory structural models unintentionally by making inferences from observable behaviours of their own and others (colleagues). This allows them to confirm and modify their own theories on medical practitioner competency potential and competence. Essentially, the individual is a *person-as-scientist.* The current research study believed that the above mentioned can be translated into a path

diagram, despite the fact that the medical practitioner does not consciously consider their beliefs and hypotheses to be translated as such. Therefore, experienced medical practitioners were consulted as research partners in order to further enlighten the researcher on the phenomenon behind medical practitioner competency potential in order to consequently validate and elaborate the Partial Medical Practitioner Competency Model in Chapter 2.

The current research study thus followed a qualitative method embedded in positivistic research due to the fact that this study was driven to truly capture the essence of medical practitioner competency potential, but also at a later stage to validate the above mentioned by translating it into a structural model and develop and validate it through instrument development. This was argued to capture the competency potential (person characteristics) that lead to medical practitioner competence in the South African public health sector.

3.4 Data Gathering Techniques

Lewis and Ritchie (2003) distinguished between two approaches to gathering qualitative data: generated data and naturally occurring data. The former primarily consists of interviews and aims to "give insight into people's perspectives on and interpretation of their beliefs and behaviours – and, most crucially an understanding of the meaning that they attach to them (Lewis & Ritchie, 2003, p.36). The latter is gathered by means of observations and aims to investigate phenomena in its natural setting (Richie & Lewis, 2003). The current study gathered data by means of generated data, as the Repertory Grid Technique (RGT) was used.

3.4.1 Repertory Grid Technique (RGT)

Tan and Hunter (2002) report that the RGT is a cognitive mapping technique that captures the manner in which people reason about phenomena within their lives. The RGT is based on the Psychology of Personal Constructs (PPC) developed by George Kelly's (1955). The PPC's argument is that individuals create personal constructs in order to make sense (interpret) of occurrences that happen in their lives. The meaning is created through experiences of antecedents and consequences to a situation. Thereafter the construct is created in order to predict future events or understand their current situation. Furthermore, constructs can be modified by further experiences of the individual which implies that constructs go through constant modification. However, these constructs are influenced by the individual's subjective experiences and therefore the construct people form will vary. However, people can have similar psychological processes through the development of similar personal construct systems. An example would be if siblings are raised in the same house, some psychological processes might overlap due to the similar nature of their childhood. The constructs developed by

individuals are bi-polar, which means that for example someone can be a very good listener or a very bad listener (Tan & Hunter, 2002). The most well-known manner in which the PPC is investigated, is through the repertory grid technique (RGT) which was developed by Kelly (1955) who had the intention to develop a technique with the following characteristics: the ability to understand individuals with precision, avoidance of observer bias and to recognise that people can take ownership of their own development without the guidance of an expert (Stewart, Stewart & Fonda, 1981). Furthermore, Walker and Winter (2007) report that 90% of PPC-research utilises the repertory grid technique due to the extensive flexibility it allows the researcher. Stewart et al. (1981) report that this technique enables the interviewer, with very little observer bias, to draw a mental map as to how the participant understands their world. Therefore, this technique was utilised in the current study to uncover the manner in which medical practitioners structure and interpret medical practitioner competency potential.

The RGT uses three components namely elements, construct and links, in order to capture and explain the individual's cognitive maps (Tan & Hunter, 2002):

1. Elements are the entities of which an individual has thought or creates perceptions, such as people, ideas, objects or places. Elements can either be pre-selected by the researcher (supplied elements) or identified by the participant (elicited elements). In the current study the element would be medical practitioners.

2. Constructs are the individual's interpretations of the elements. The individual would apply the bi-polar nature of a construct by arguing that an individual has high competency potential or low competency potential in order to bring further differentiation to a construct. Therefore, constructs allow individuals to indicate how elements are similar or differ from other elements.

3. Links are used by the individual to connect elements and constructs together. This illustrates how the individual interprets an element in relation to a construct and also illustrates the interpretation on the discrepancies and commonalities between the elements and the constructs.

It is important to mention that elements can either be provided by the researcher (supplied elements) or provided by the participant (elicited elements) and that both these techniques were used during the data gathering process (Tan & Hunter, 2002). The bi-polar nature of constructs allows for creating deeper understanding of the construct and how the individual makes sense of that construct and its relevance to their life. Bell and Bannister (2004) suggest that the process of creating constructs is ongoing and iterative; and therefore an individual is constantly re-evaluating the manner in which

they observe and interpret the world around them. When the RGT is compared to the traditional semi-structured interviews, Lemke, Clark and Wilson (2011) argue that RGT accounts for a more in-depth understanding of constructs and behaviours as well as reducing the participant's use of jargon and social desirability responses.

The current study will apply the RGT during phase two of the data gathering process in order to provoke person characteristics that are associated with medical practitioner competency potential in order to confirm and expand the Partial Medical Practitioner Competency Model.

3.5 Sampling Strategy and Research Participants

This research study aimed to obtain information from a particular target population: South African medical practitioners practicing in the public healthcare sector. It was suggested that it would be challenging to obtain response from the entire target population due to a wide geographical scattering of medical practitioners in South Africa. Therefore, a representative sample was used for data gathering as it is important that the selected sample should represent the study's target population. Furthermore, Babbie and Mouton (2001) declares that the representative sample should be intimately familiar with the social world and phenomena of the target population. Taking the above mentioned into consideration, it is important to ensure the chosen sampling method is appropriate in order to obtain a representative sample of medical practitioners in South African public and private health sector.

Babbie (2004) describes sampling as the process of selecting and observing and furthermore distinguishes between two main types of sampling: probability and non-probability sampling. The main distinction between the two types is that the former utilise random sampling at one or more stages and the latter does not (Kerlinger, 1973). With regards to the current research, it has been established that due to geographical constraints and practical implications (cost and location) a representative sample of medical practitioners in the public healthcare sector in the Western Cape was chosen for this study. By reason of the location of the involved academic institution and the researcher, the sampling population for the current study was obtained due to their affiliation as a lecturer at Stellenbosch University (dual-appointment).

Taking the above mentioned into consideration, the current study utilised non-probability sampling procedures due to the dependence on the knowledgeability, availability and willingness of the participants. Even though convenience non-probability sampling has some disadvantages, the nature of this research study necessitated it. Furthermore, the non-probability convenience sampling technique and the snowball sampling technique was utilised to obtain the sample for the study.

Teddie and Yu (2007) considers convenience sampling as a non-probability sampling technique which allows researchers to draw samples that are both easily accessible and willing to participate. A convenient sample was selected for the purpose of the data gathering process as the objective of this research study is not to generalise findings to a population but to obtain research insights into a phenomenon (Onwuegbuzie & Collins, 2007). With regards to the selected representative sample, responses were obtained from medical practitioners (practicing in the public healthcare sector) who are employees or lecturers at Stellenbosch University, Faculty of Medicine and Health Sciences.

The second sampling technique, snowball sampling, was utilised to expand the sample. Tan and Hunter (2002) consider snowball sampling as a non-probability sampling technique which allows researchers to access more participants through existing ones, by means of association or networks. Tan and Hunter (2002) as well as Bryman (2008) suggest that this technique might have a negative effect on the diversity of the sample. However, the sampling technique was selected due to the specialised occupational nature and small size of the sample population (medical practitioners practicing in the public health sector in the Western Cape who have a dual employment with Stellenbosch University, Faculty of Medicine and Health Sciences). Snowball sampling was utilised until data saturation was achieved. Data saturation is defined by Tan and Hunter (2002) and Bryman (2008) as the stage where no novel or fruitful insights are obtained from expanding the size of the sample.

In order to qualify for inclusion as a participant in the proposed research study, participants had to comply with the following minimum inclusion criteria:

1. The selected individual should be a Subject Matter Expert (SME).

2. The participant should have at least 2 years of practical experience in the public health

   sector (excluding community service year and internship).

3. Ideally the sample should include a balance in terms of diversity (e.g. race, gender, etc.).

4. It would be considered favourable to have a distribution in terms of age/experience as

   well as working at a primary-, secondary- and tertiary-level hospital.

5. The participant should be registered with the HPCSA.

6. The participant should be actively practicing as a medical practitioner.

7. The participant should have a dual-employment with Stellenbosch University.

The criteria were aimed at ensuring knowledgeable SME's that have a detailed understanding of what person characteristics medical practitioners in the public health sector are expected to have in order to flourish and become competent.

It is also deemed valuable to mention that the Industrial Psychology Department of Stellenbosch University has a constructive relationship with the Centre for Health Professions Education and the Faculty of Medicine and Health Sciences, which is believed to ease the process of accessing the sample population.

3.6 Data Collection and Analysis

3.6.1 Data Collection

As earlier mentioned, data was collected through means of a repertory grid guide. This allowed the researcher to standardise the data gathering process and bring structure and detail to the response of the respondent. The repertory grid technique was used during the data gathering process in order to gather the required data to gain insights on how medical practitioners perceive medical practitioner competency potential. The RGT was used to identify the latent variables as well as illustrations by the participants. The participants were offered access to the interpreted post-data gathering process in order to confirm that it is an accurate reflection of their perception on the phenomenon.

In order to ensure the data gathering process was the same for each participant, the repertory grid guide (Appendix B) was used for each session. This allows for standardisation of the data that was gathered from each participant and also allowed for more effective interpretation of the data.

The current research study aimed to capture qualitative data that is spontaneous and reflective of the true viewpoints of the participants. Osborne (1994) argues that the goal of phenomenological interviewing is to become as familiar with the participant's perceptive experience of the phenomenon as possible. This is achieved by facilitating the interview in such a manner that the intrusiveness of the interview is minimalised in order to allow the participant to express themselves spontaneously. Osborne (1994, p.183) further argues that "spontaneity and authenticity by the interviewer is incidental to standardisation and replicability". Therefore, the researcher strived to ensure the spontaneity of the sessions.

3.6.1.2 Data Gathering Sessions

The sessions were facilitated in a private, calm and comfortable room where the participant could feel at ease to talk about the topic at hand. Due to the busy schedule of the medical practitioners, the sessions were about an hour and a half. The researcher obtained permission to follow up with participants via a telephonic call if necessary. The data gathering session process consisted of three phases: first, the session was introduced, second the repertory grid technique was applied and lastly the session was concluded (Table 3.1). The following section will discuss the above mentioned stages.

Phase 1: Introduction to the session

Before the session occurred, the researcher sent an email explaining the nature and purpose of the session in order for participants to mentally prepare for the topic at hand. Also, the email included an informed consent form (Appendix A) which was discussed shortly. On the actual occasion of the session, the researcher firstly focused on establishing a rapport between the researcher and the participant. The participant was thanked for his/her willingness to participate in the study, and the participant's rights in terms of anonymity and voluntary participation were explained. Thereafter, the researcher again explained the objective of the study as well as the context of the study by describing the principles of competency modelling by utilising an example of a competency model of a mechanical engineer. A contrasting occupation was chosen as an example with the intent of not influencing or directing the participant's thought process. The researcher then mentioned that brief notes and an audio memo will be taken during the session. Before the study officially commenced, the informed consent form was presented to the participant for completion as well as their biographical information on the repertory grid guide.

Phase 2: Repertory Grid Technique

The repertory grid technique consists of three phases where each phase aims to explore more depth into the construct. The first phase of the technique allows the participant to compare medical practitioners in terms of their standing on the latent variables. The researcher asked participants to think of medical practitioners with whom they have work with in the public health sector at any time in their career. The participant was then handed 10 pieces of paper and asked to write five names (or initials) of medical practitioner whom they consider effective and five they consider less effective. Thereafter, the researcher would take any combination of two effective medical practitioners with one less effective medical practitioner, and ask the following question: "In what way is 1 and 2 similar, and how do they differ from 5 in terms of their person characteristics which allows them to be effective in the public health sector?" The participant would then provide person characteristics which they consider to lead to effectiveness or less effectiveness in the public health sector in South Africa.

The next part of phase 1 was to plot the triad's stance on the behavioural constructs in the grid. The horizontal axis indicated the number of medical practitioners (elements) and the vertical axis indicated the number of latent variables. Comparisons were made within every triad. If element 1 and 2 was considered similar in terms of construct 1, the participant would write an "S" for similar and a "D" for different in the grid (Table 3.1). Thereafter, in phase two of the RGT, the participant was asked to describe the difference between the elements on the construct in the "constructs" column. For example, the researcher would ask the participant to clarify how the two elements that were

considered similar (effective), differs in terms of their person characteristics as opposed to the element that was considered different (less effective) from the two elements. The positive construct was indicated with an asterisk (*).

Table 3.1

Repertory Grid Technique

No.	\multicolumn{10}{c}{Elements}	\multicolumn{2}{c}{Constructs}
No.	1	2	3	4	5	6	7	8	9	10	Why similar	Why different
1	D	S	S								e.g. Calm under pressure*	Not calm under pressure
…												
End												

The researcher then asked the participant to draw three construct comparisons per triad. For example, after the participant thought of three constructs and compared the elements in triad one accordingly, the participant was encouraged to think of three other medical practitioners (element 3, 4 and 6) and indicate who is an effective and less effective medical practitioner, and how their person characteristics have contributed to this. If additional time was available, elements was shuffled and triads formed that are not chronological (e.g. 1, 4 and 7; 2, 5 and 8; … etc.). Elements were linked to constructs in three ways: ranking, rating and dichotomising. However, rating is the most popular method as it allows more flexibility in terms of differentiating between constructs. This is achieved through using five-, seven-, nine- and even eleven point scales. The current study used ranking as a technique to link elements to constructs.

The purpose of phase three of the RGT was to gain a deeper understanding of the participant's perceptions that came forward in phase 2. This is considered important as the participant could either provide too much detail (ambiguity) or too little detail in phase two. *Laddering* is a probing technique that allows the researcher to differentiate between constructs where further differentiation is needed, as well as ensure that the data gathered is detailed enough to make accurate assumptions

(Senge, Kleiner, Roberts, Ross & Smith, 1994). Laddering assumes that a construct is hierarchal which implies that it lies on a continuum from specific to general. Therefore, laddering allows the researcher to either ladder up and investigate meaning and value of a construct or ladder down in order to gain a more descriptive understanding of a construct (Bartram, 2006). Laddering up and laddering down will now be briefly explained.

If the participant states that medical practitioner 5 is more effective than 2 and 3 because he is able to show more patient centeredness during consultation, and the other two medical practitioners are not patient centred, it does not accurately address the person characteristic that allows the medical practitioner to be patient centred. In such a case, the medical practitioner would ladder up by asking "why" questions in order to determine if this is due to the fact that the effective patient medical practitioner has high emotional intelligence, because it is considered his/her calling, or if it is because the medical practitioner is an agreeable person. Consequently, the superordinate construct is identified which encapsulates numerous interpretations of the construct.

Laddering down entails the researcher asking "how" questions in order to clarify behavioural examples of how the construct manifests itself within the medical practitioner's behaviour. The participant would then specify that the medical practitioner is patient centred because he or she is always friendly and accommodating towards patients (agreeable), the medical practitioner knows how to understand people's emotions and act accordingly (emotional intelligence), or because the medical practitioner really wants to help every patient because their work is their passion (calling). Consequently, the construct can be measured when the researcher forces the conversation to ladder down.

When the researcher laddered up and down and gathered enough data on the similarities and differences within the triad on the constructs, the researcher moved to the next phase which was to conclude the session.

Phase 3: Concluding the session

Sessions were concluded when the researcher believed data saturation was achieved or if it stretched over 90 minutes. The researcher thanked the participant for their participation and reminded them to please contact the researcher or supervisor for any questions or further clarification. The researcher also made sure that the participant received their consent form.

During the data collection phase of the research, the researcher strove towards the epistemic ideal by firstly, immersing herself in the world of the medical practitioner in order to fully understand the manner in which the participant makes sense of medical practitioner competency potential. Ulin, Robinson and Tolley (2005, p.13) argue that "researchers using qualitative methods immerse

themselves in a culture or group by observing its people and their interactions, often participating in activities, interviewing key people, taking life histories, and constructing case studies".

Furthermore, the researcher consciously made an effort to listen properly to the participant during the data collection phase of this study. Two listening methods were used in order to achieve the above mentioned: active listening and credulous listening. According to Louw, Todd and Jimarkon (2011) active listening is listening to an individual and being involved in the conversation in order to achieve a specific purpose. This is accomplished by using the correct verbal- and non-verbal communication techniques. The researcher actively listened to the participant in order for them to feel that the researcher is completely present and invested in the conversation. For this purpose, the researcher made few notes about the content of the conversation in order to keep eye contact with the participant. The researcher also consciously applied credulous listening in order to allow for truthful representation of the participant's responses. "Credulous listening involves both letting the orator tell his or her story without interruption (criticising, judging, or correcting) and with the knowledge that the audience will believe or accept the story as a valid representation of the orator's perspective" (Kiser, Baumgardner & Dorado, 2010). After the above mentioned data collection was completed, the data analysis commenced.

3.6.2 Data Analysis

The researcher performed the data analysis in order to further ensure confidentiality of the participants. The analysis of the data was done in a systematic manner, however, this is not always possible as the interpretation of data does not allow for a chronological approach and in such a case the researcher is forced to deviate from the expected order. During the first phase of data analysis the researcher transcribed the sessions for the purpose of transparency as well as familiarisation with the content of each session. During this phase the researcher organised the data according to person characteristics that surfaced during the session.

The second phase of analysis entailed coding the person characteristics (competency potential) and assigning them to relatable themes. It is important to mention that the researcher did not have the agenda to correlate the data with the constructs identified in Chapter 2 and therefore allowed the data to invalidate arguments made by the researcher, as well as show the researcher new competency potential latent variables that was omitted in the literature study.

Thematic analysis was applied during the third phase of data analysis. Braun and Clarke (2006) suggest that themes can be elicited from qualitative data that are relevant to the research topic. The frequency that the themes emerge in the data speaks to the importance of the relevant theme to the research

question. This allows for the researcher to make implied inferences of the framework (mental model) from which participants interpret and understand medical practitioner competency potential.

The fourth phase of data analysis relooked the themes and categorised it into first order themes and thereafter identified second-order themes. Thereafter the first-order themes and the second-order themes were linked. The fifth and last phase of data analysis looked after the reworking and enhancement of the themes. Thereafter, the themes were interpreted and correlated with the literature study in Chapter 2 in order to obtain clear and accurate definitions for the competency potential latent variables. This allowed the researcher to modify the proposed Partial Medical Practitioner Competency Model.

3.7 Ensuring the Epistemic Integrity of the Research Study

The following section aims to report on the researcher's awareness and strive towards the epistemic integrity of the study and will therefore discuss triangulation and the generalisation of the study, with particular reference to reliability and validity.

Triangulation is defined by Golafshani (2003) as the approach to combine data or methods in order to strengthen a study and improve the reliability and validity thereof. Furthermore, Creswell and Miller (2000, p.126) suggest that triangulation is "a validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study". The current research study aimed to do this by firstly conducting a thorough literature review, and secondly conducting sessions that applies the RGT and lastly, confirming the collected and allowing the participants the opportunity clarify or add information to the analysed data. An email was sent to each participant containing their interview's data. Nine out of the ten participants responded to the email with minor language changes. However, all of the participants were satisfied with the output and made comments such as the following: "Thank you for the transcript, I've looked it over well and it seems accurately representative!" and "Hi, I am in agreement with the transcription document". Therefore, it is suggested that the current study practiced triangulation in order to ensure the epistemic integrity of the research study.

Reliability and validity are principles of the scientific method and consequently research strives to deliver reliable and valid studies. However, due to the inherent disparity between quantitative and qualitative research, it cannot be assumed that reliability and validity can be applied in the same manner to the former and the latter. Despite the differences between quantitative and qualitative research, it is suggested that any study should strive towards generalisability. Lewis and Ritchie (2003, p.263) considers generalisation as "the relevance of the findings of a study beyond the sample and

context of the research itself". Furthermore, Lewis and Ritchie (2003) argue that there are three components of generalisation. First, the generalisability of the research findings to the rest of the sample population. Second, the generalisability of the research findings to other contexts beyond the sample population. Last, the generalisability of the theoretical findings for a more practical application.

In order for it to be possible to replicate research findings, it is suggested that the research methods should be reliable. Lewis and Ritchie (2003) suggests that for a study to be reliable, the findings should occur outside the sample population, and the researcher should prove that the study was conducted with consistency and rigour. Furthermore, there can be distinguished between internal and external reliability. Internal reliability refers to the replicability of the research between researchers and external reliability refers to the replication of findings if similar research studies are embarked Lewis & Ritchie, 2003). To achieve this replicability, it is considered essential for the research proposal to be transparent through a thorough report on how the research will be conducted, the manner in which the research was interpreted, and lastly the findings of the research. Lewis and Ritchie (2003) suggest that the above mentioned statement can be achieved by ensuring the following:

- A representative, unbiased sample design and selection from which thorough investigation on the research topic can be conducted.
- Fieldwork that was conducted consistently and allowed respondents enough chances to report on their understanding of the research topic.
- Systematic and comprehensive analysis with thorough explanations of themes and paradigms.
- Interpretations supported by research findings (Lewis & Ritchie, 2003).

Validity refers to the accuracy of the manner in which the facts of the phenomenon or research findings are portrayed. Furthermore, Hammersley (1992, p.69) argues that "an account is valid or true if it represents accurately those features of the phenomena that it is intended to describe, explain or theorise." Internal validity relates to whether the researcher is truly investigating what was set out to investigate initially. External validity relates to findings that can be applied to the broader population (Lewis & Ritchie, 2003). It is important for the researcher to consciously strive towards ensuring that the research conducted is valid, and therefore Lewis and Ritchie (2003) argues that the following should be paid attention to:

- The selected sample covers the topic thoroughly without bias toward the sample population.
- Ensure that the research environment and data collection methods were effective in ensuring that the sample's views were expressed fully.

- The phenomena were labelled and described accurately as depicted by the participants of the study.

- Interpretations are based on sufficient evidence obtained during data collection.

When the above mentioned discussion is taken into account, it is argued that the current research study truly aims to conduct research that is generalisable, valid and reliable.

3.8 Ethical Considerations

The empirical nature of this study requires active or passive participation. This implies that the people's safety, dignity, rights and wellbeing could be compromised to some degree due to their exposure or involvement in the research study. The reflection on the potential ethical risks that can accompany the current research study is an important step in order to determine to which degree the participants' safety may be compromised and to ensure the protection of the safety, dignity, rights and wellbeing of the involved research participants. In order to justify the compromise of these participants, it should be determined what contribution the research study will make to the public health sector in South Africa. The current research study has an altruistic and valuable resolution as debated in the introduction. The purpose is to contribute to the overall performance and wellbeing of medical practitioners in the South African public health sector. Therefore, the determining question is whether the costs or discomfort the research participants will sustain will surplus the benefits of the research to broader society (Policy for Responsible Research Conduct, 2013).

The principles will now be discussed with regards to the current study. According to the Policy for Responsible Research Conduct (2013), any research involving human behaviour that will take place at Stellenbosch University must adhere to the policy as stipulated as follows: The first principle of human research is that it should be relevant to the gap of knowledge and the needs of broader society (Departmental Ethics Screening Committee (DESC) Guideline, 2012). Chapter 2 identified a gap in the knowledge about the functioning and person characteristics that enable medical practitioners to acquire the relevant competencies and outcomes. It can be argued that a further understanding of the medical practitioner competency process could be beneficial for the success of both medical practitioners in their positions in the public and private health sector in South Africa.

The validity and reliability of the methodological rigour is regarded as the second principle. This implies that the research methodology section for this research study should be respected in order to ensure the validity and ethicality of the study. Research participants will have the right to voluntarily decide to participate in the research. All possible steps and precautions were taken to ensure the participants'

rights and safety were not violated. The DESC Guideline (2012) was followed precisely by informing participants of the objective and purpose of the research, what their involvement will entail, how the research results will be circulated and used, the involved researchers and their affiliation with the research and where participants can make further enquiries about the research and their rights as research participants. Only after participants are informed about their rights and have given their informed consent will the research proceed.

After it was established that this study adheres to the above mentioned principles of the Policy of Responsible Research Conduct (2013), the proposed research was submitted to the Departmental Ethics Screening Committee (DESC) of Stellenbosch University and ethical clearance was obtained due to the potential involvement of humans, institutions, communities and groups. The Departmental Ethics Screening Committee (DESC) categorises all research in either the low risk category, medium risk category or high risk category with regards to the perceived risks to the participants (DESC Guideline, 2012). If a research study is categorised as a medium- or high risk, further clearance is required from the Research Ethics Committee in order to commence.

It was concluded that there was no potential risks or discomfort foreseen in this study. All information on all participants and institutions was treated as confidential in order to protect the safety, dignity, rights and wellbeing of all parties involved. The participant contributed to the study by providing their expert opinion and the perception of the competency potential person characteristics that constitute medical practitioner competency attainment. Confidentiality of participation in the study was ensured which encouraged participants to give an honest opinion and perspective to obtain an accurate reflection on the truth. Informed consent was obtained from all medical practitioners participating in the study.

It is important to consider that participation in this study entailed no direct benefit to the individual participant. However, this study is the first of its kind in South Africa and could be used for developmental and performance management purposes as well as recruitment and selection. This in return enhances the promotion of medical practitioner functioning which in return improves the health and wellbeing of patients and broader society.

Further ethical considerations were taken into account with regards to this study. The first consideration is stipulated by Annexure 12 of the Ethical Rules of Conduct for Practitioners registered under the Health Professions Act (Act no. 56 of 1974) (Republic of South Africa, 2006). The act stipulates that it is required of a psychologist doing research to enter into an agreement with the participants on the nature of the research as well as the responsibilities of the participant and the researcher. After both parties' responsibilities have been agreed upon, the research participant

provides informed consent. The informed consent should meet the following requirements as stipulated by Annexure 12 (Republic of South Africa, 2006, p.42):

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(1) A psychologist shall use language that is reasonably understandable to the

research participant concerned in obtaining his or her informed consent.

(2) Informed consent referred to in sub rule (1) shall be appropriately documented, and in obtaining such consent the psychologist shall –

(a) inform the participant of the nature of the research;

(b) inform the participant that he or she is free to participate or decline to participate in or to withdraw from the research;

(c) explain the foreseeable consequences of declining or withdrawing;

(d) inform the participant of significant factors that may be expected to influence his or her willingness to participate (such as risks, discomfort, adverse effects or exceptions to the requirement of confidentiality);

(e) explain any other matters about which the participant enquires;

(f) when conducting research with a research participant such as a student or subordinate, take special care to protect such participant from the adverse consequences of declining or withdrawing from participation;

(g) when research participation is a course requirement or opportunity for extra credit, give a participant the choice of equitable alternative activities; and

(h) in the case of a person who is legally incapable of giving informed consent, nevertheless –

(i) provide an appropriate explanation;

(ii) obtain the participants assent; and

(iii) obtain appropriate permission from a person legally authorised to give such permission.

Taking the above mentioned into account, no data gathering commenced before informed consent was obtained from all the research participants. Annexure 12 of the Ethical Rules of Conduct for Practitioners registered under the Health Professions Act (Act no. 56 of 1974) (Republic of South Africa, 2006, p.41) requires psychological researchers to obtain institutional permission from the organisation where research participants will be solicited:

A psychologist shall –

(a) obtain written approval from the host institution or organisation concerned prior to conducting research;

(b) provide the host institution or organisation with accurate information about his or her research proposals; and

(c) conduct the research in accordance with the research protocol approved by the institution or organisation concerned.

Institutional permission will be obtained from the Stellenbosch University.

The total data that was collected was considered confidential and results obtained were presented in cumulative form. Annexure 12 of the Ethical Rules of Conduct for a Practitioner registered under the Health Professions Act (Act no. 56 of 1974) (Republic of South Africa, 2006, p.41) stipulates that psychological researchers are required to disclose confidential information under the following circumstances:

A psychologist may disclose confidential information –

(a) only with the permission of the client concerned;

(b) when permitted by law to do so for a legitimate purpose, such as providing a client with the professional services required;

(c) to appropriate professionals and then strictly for professional purposes only;

(d) to protect a client or other persons from harm; or

(e) to obtain payment for a psychological service, in which instance disclosure is limited to the minimum necessary to achieve that purpose.

If the above mentioned is taken into account, the current study was categorised as a low risk. The reason therefore is that "the participants are adults and not considered to be a vulnerable research population" (Research Ethics Committee, 2015, p.34). This statement stipulates that there was no real potential risk or harm that the participants may encounter, although the session itself may create discomfort in terms of the time it would require out of their busy schedules.

Even though the study is considered to be a low risk, safeguards were implemented in order to lower the possible risks. The first strategy to reduce the risk of the study was to ensure participants are thoroughly informed about the purpose and implications of the study and have given their written informed consent before the study commenced (see Appendix A). The second strategy was to ensure participants that all information obtained will be held confidential. These set participants at ease and allowed them to share more openly due to the protection against loss of privacy. To summarise, this

research study fully adhered to Annexure 12 of the Ethical Rules of Conduct for Practitioners registered under the Health Professions Act (Act no. 56 of 1974) (Republic of South Africa, 2006) in order to protect research participants as well as the researcher.

CHAPTER 4

RESEARCH RESULTS

In the opening argument it was stated that there is a magnitude of challenges in South Africa's public health sector. In Chapter 2 it was established that not all medical practitioners are able to function optimally in this environment in order to serve patients effectively and efficiently. Consequently, the Partial Medical Practitioner Competency Model was expanded as a result of a thorough literature review that identified competency potential that allows medical practitioners the probability to develop the required competencies. Chapter 3 elaborated on the methodology that was followed to capture the opinions of the subject matter experts. It is expected that the latent competency potential characteristics that were identified in the literature review will be confirmed by the qualitative data gathering sessions. Thereafter, the proposed model will be altered based on the literature review and input from the SME's and tested quantitatively in a recommended subsequent study.

4.1 Description of the composition of the sample

A description of the research sample is important so as to allow meaningful comparison with the results obtained in other studies on the same topic. All the participants in the study were medical practitioners with a dual-employment with Stellenbosch University with at least two years of experience, post internship and community service. This implies that they have a good understanding of what is required to be an effective medical practitioner in the public health sector. Table 4.1.1, Table 4.1.2, Table 4.1.3 and Table 4.1.4 below each report respectively on the demographics of the participants of the study.

Table 4.1.1

Gender Distribution of the Research Sample

		Frequency	Percent	Valid Percent
Valid	Male	8	80	80
	Female	2	20	20
	Total	10	100.0	100.0

Table 4.1.2

Race Distribution of the Research Sample

		Frequency	Percent	Valid Percent
Valid	White	9	90	90
	Indian	1	10	10
	Black	0	0	0
	Coloured	0	0	0
	Chinese	0	0	0
	Other	0	0	0
	Total	209	100.0	100.0

Table 4.1.3

Registration Category of the Research Sample

		Frequency	Percent	Valid Percent
Valid	Paediatrics	1	10	10
	Occupational Medicine	1	10	10
	Family Medicine	4	40	40
	Public health medicine	1	10	10
	General Practitioner	1	10	10
	Medical Officer	1	10	10
	Emergency Medicine	1	10	10
	Total	10	100.0	100.0

Table 4.1.4

Level of care in the healthcare system of the Research Sample

		Frequency	Percent	Valid Percent
Valid	Tertiary	8	80	80
	Secondary	1	10	10
	Primary	1	10	10
	Total	10	100.0	100.0

4.2 Thematical Data Analysis

As mentioned in Chapter 3, the Repertory Grid Technique was used to elicit the understanding of the participants' view of what person characteristics a medical practitioner in the public health sector in South Africa should have. From each session, themes emerged and was captured in Table 4.1 - 4.10 along with a description that describes the essence of the theme, as well as supporting statements from the participant for each theme. Negative manifestations made by each participant are represented by a negative indicator (-) at the end of a statement. It is important to note that, as opposed to the literature review, the researcher did not set out to explicitly identify person characteristics as themes, as this does not allow for the spontaneity of qualitative research. A supporting statement was in some instances used for more than one theme, as it was argued to be relevant for multiple themes. Also note that some of the sessions were translated from Afrikaans to English as English is not the first language of a few of the participants. When a language barrier was identified between the supporting statements, the researcher added brackets in order to clarify uncertainty.

4.2.1 Participant 1

Participant 1 is a white male with over 30 years of experience and a specialist in family medicine. The participant highlighted the importance of patient-centeredness and having a hunger to learn in order to improve the health of others. Participant 1 shared some heart-warming stories and spoke passionately about medical practitioners that inspire him. The session continued for about an hour and a half due to the willingness of the participant to share his insights on the topic. Table 4.2.1 below captures the themes that emerged from the session with Participant 1.

Table 4.2.1

Themes Stemming from Personal Constructs: Participant 1

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES
1	Care for people	Shows a true and open interest in the totality of the patient's well-being, not only diagnosing the problem at hand.	"They are interested in their patients and their well-being. They are not preoccupied." "The first two is interested in the total well-being of the patients, the third is just interested in the diagnosis and in getting the problem solved". "The first two will also be interested in my job, my exercise, my weight, my family relationships, my marriage, my work circumstances, how are you cope with work, your income". "So for them it's more about wellness and health in the bigger picture than just the current biomedical problem. So in a sense it is a biomedical approach versus a biopsychic social / spiritual approach". "The first two is interested in the total well-being of the patients, the third is just interested in the diagnosis and in getting the problem solved". "The other one (1+2) is open before you, they are giving something of their self. Apart of their own humanness, and their own vulnerability, they are also open before you so that you can also identify a little bit with them being a human and not just a technician or a doctor. Something of that wounded healer. We are together on a journey. It's not share your journey and I am this closed book". "It is just the way they are really interested in you". "There is more of an openness. It is open for and open before you".

Table 4.2.1 (Continued)

			"Because they don't really make time to really listen, and just make a diagnosis. If you're just interested in the diagnosis and not the person, you make a diagnosis that you prescribe". (-) "Even a non-interested relationship. Real deep down, you can fake it". (-) "It is in a sense a bit of the African culture where we are in the now, we are not in the future".
2	Sense of calling	Considers job as a calling, want to make a difference.	"For them medicine is more than just a job, it is their calling. For them it is important to make a difference in individual's lives. It is not just about the salary". "It's a job, he doesn't really want to do it, and he gets very frustrated with patients and colleagues". (-) "These are two at peace with themselves. This (6) is in constant conflict. I have one instance where I was walking out of the hospital and he was sitting in his car, did not know that I was seeing him, and he was just screaming at the top of his voice in the car". (-) "And again it boils down to not being at peace with yourself". (-)
3	Positive coping strategies	Practice balance in work and personal life to deal with occupational demands.	"They are real family people; they are real community people. They are involved in their churches. They have the most amazing hobbies. This guy is flying, this guy is playing tennis and singing choir". "And they lead these extraordinary lives of balance. A normal doctor you think works 24 hours a day. These guys work hard and play as hard". "These two were also on the verge of burnout but got help and they had the structures to look after them". "The other two were solid family people with very balanced lives". "So despite their enormous responsibilities that is overwhelming, I won't be able to do that, they are coping with that". "They are trainers, they know that they have to duplicate themselves, otherwise they will crack".
4	Humbleness	Humble about ability and knowledge, see equality in all relationships.	"Where the other one (6) will be a top down or me vs you, or I'm telling you. Even though he is doing it very nicely and civilised you may even think there is a little bit of humbleness until you get deeper into it".(-) "I mean it is dysfunctional communities and families. And in being humble and non-judgemental, and listening often works better than the stuff that you are going to write on a piece of paper".

Table 4.2.1 (Continued)

			"There was sort of a Canmeds score, where you can score yourself. It is very subjective and I handed it out at a training session. And from everybody there, there was about 50 people, number 1 scored himself about the lowest on those competencies. Where he is by far the best, thinking I still have so much to learn. My impression was, that 1 and 4, they will never say they know everything".
5	Community orientation	Serves the community to improve health and not only the patients from the community.	"And they really care for patients. They make a difference in community's lives and not just the patient's lives". "They are real family people; they are real community people. They are involved in their churches". "They live in the community; they don't believe the community will come to them". "He trained some nurses and community workers and he is changing the vision of people in Swaziland. And he has trained other people to duplicate himself in the other stuff he has been doing". "They will teach a community care worker or the mother or a teacher to go and do something in a school".
6	Internal Locus of control	Takes responsibility to take control of imperfect circumstances and changes it for the better.	"So you have this deeper sense of anger for the circumstances that's influencing you so deeply that it is coming through in relationships with your patients. On the other hand it is anger and its fear because you don't feel in control". (-) "And they make a plan. If there is not something they will build something out of wood to do it. The other one will just complain". "The first two will make anything work. If the incubator is broken, and there is no florescent bulb, they will go to the disco in town and they will get a fluorescent light. They won't wait until the pharmacist or the florescent light turns up nine months later". "They are pro-active; they are ready to find solutions. They don't sit and wait for other people to do things". "If it is not possible now they will make it possible. They won't wait because of someone else's incompetence, or a lack of money. I mean he will just start a crèche and it will just happen". "The negative one plays the blaming game, the victim. If anything goes wrong or if they don't feel well that day they will take it out on staff. So relationships they have are totally dysfunctional. The whole unit is dysfunctional as a result of one person". (-) "So everything that goes wrong is someone else's mistake. Where the other two say we are part of a team, how can we solve this problem?"

Table 4.2.1 (Continued)

			"When they are talking in meetings, the other one will be rude, will say I must leave early or will always be late if he pitches. There is always an excuse why he can't be there but it is more out of avoidant behaviour. In a sense it is being pre-occupied which is in a sense also being lazy". (-)
7	Innovative	Creative problem solving by thinking of novel and unconventional solutions.	"And they make a plan. If there is not something they will build something out of wood to do it. The other one will just complain". "The first two will make anything work. If the incubator is broken, and there is no florescent bulb, they will go to the disco in town and they will get a fluorescent light. They won't wait until the pharmacist or the florescent light turns up nine months later". "They are pro-active; they are ready to find solutions. They don't sit and wait for other people to do things".
8	Equal relationships	Engages in a partnership with the patient, considers the patient as their equal.	"No 6 has to be in control with patients, paternalistic." (-) "Patients often feel like they just have to agree to what the doctor says. You know, that sort of paternalistic, top down... . Even if they are really nice you know immediately when it is a top down thing." (-) "1 and 2 are alongside to a patient, to colleagues". "Where the other one (6) will be a top down or me vs you, or I'm telling you. Even though he is doing it very nicely and civilised you may even think there is a little bit of humbleness until you get deeper into it". (-) "It is more an equal relationship. It is more a consensus based relationship instead of a hierarchical relationship." "They are also open before you so that you can also identify a little bit with them being a human and not just a technician or a doctor". "They will never sit at the other side of the desk; they will sit next to you". "The other (6) will sit on the other side of the desk". (-) "A bit more judgemental, although very sophisticated. Where others will be obviously outspokenly judgemental. I mean they will just shout at patients, openly antagonistic." (-) "The interaction you just regard as writing a script. But actually you are just prescribing what they should do with their life". (-) "The other thing is, they know their patient's names. They will bump into you in Checkers and they will greet you by your name even though you were one of 200 people sitting

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Table 4.2.1 (Continued)

			there. They've made it their job to memorise their patient's names. The other one won't even recognise their face 2 hours later". "Conflict and looking down on others. Not just professionals but colleagues as well. Manipulative". (-)
9	Knowledge sharing	Transfers own knowledge to anyone who is willing and able. Empowers others through teaching.	"They empower staff. They are not control freaks. So they empower others (…) They will even teach a junior nurse to do something. It may not be in their (nurse) scope of practice but they will teach them and show them a different way to do something until they can do it". "He trained some nurses and community workers and he is changing the vision of people in Swaziland. And he has trained other people to duplicate himself in the other stuff he has been doing". "It is part of his job to teach. So you have to teach. But I sometimes wonder if he will teach if it is not necessary to teach. He would like to get the clinic finished and go home". (-) "Number 1 will make time anytime of the day to teach and to duplicate himself. For him it means how I can duplicate myself with staff and a passion for students. And not just medical students, all students". "Number 4 is a teacher, he is always learning and learning others because he is an expert on snake bites in the world and he is doing corneal transplants landing with an aeroplane on a corn field and people would gather under a tree and he will do 30 lens replacements under the tree." "The others will teach everybody. They will teach a community care worker or the mother or a teacher to go and do something in a school".
10	Team Player	Considers practicing medicine as a team sport. Works together as a team to solve problems.	"This guy has a very nice saying: 'Medicine and health is a team sport, which is unfortunately primarily nowadays only played by individuals.' These guys make medicine a team sport, he is an individual player trying to play a team sport".
11	Emotional regulation	Stable, and mature interactions with others, regulates emotions despite environmental strain.	"And it is not that you can discuss it with that person. If you go to the other two and there is a problem, they will really listen and do introspection. The other will just blame back. And I mean it will close your door to ever getting anything done". (-) "This one for example is examining a patient and the physiotherapist walks in and would say: "What do you know? Get out, don't you respect patient confidentiality?" Whilst the

Table 4.2.1 (Continued)

NO			
			physio actually had a relationship with that patient and the doctor was just rude to the patient. But the way he treated the other professionals in front of patient, it is just wrong". (-) "So he will come down on everybody below him and blaming them and they must go and sort it out and he will go and report them. The other ones will say how can we solve this and won't blame everyone". "They don't take no for answer but not in an aggressive way."
12	Willingness to learn	Willing to learn new skill sets in order to serve the need of the community.	Number 4 is flying around Swaziland, and he got equipment, and he's doing about 30 lens replacements per day. He is not an optomologist, he taught himself, and he had done some courses". "Number 8 in a sense is just sitting there seeing patients, will read a little bit, but not really committed to further development. I could almost say lazy and apathetic". (-) "And it is not that you can discuss it with that person. If you go to the other two and there is a problem, they will really listen and do introspection. The other will just blame back. And I mean it will close your door to ever getting anything done". (-)

4.2.2 Participant 2

Participant 2 is a white male who is very involved in the training of medical practitioners in the rural environment of the public health sector. The participant highlighted the trials medical practitioners face and the challenge this poses to the educational institutions to prepare them for these trials. Participant 2 highlighted that it is important for medical practitioners to prioritise their work and to foster positive coping strategies in order to deal with the strain of their job. Table 4.2.2 below captures the themes that emerged from the session with Participant 2.

Table 4.2.2

Themes Stemming from Personal Constructs: Participant 2

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES
1	Adaptable	Adjust to inconsistent circumstances to maintain deliverance of care.	"The first two is quite flexible and able to adjust when you can't achieve the ideal. So often in clinical situations, especially in resource-limited clinical situations, you don't

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Table 4.2.2 (Continued)

			have access to the ideal investigations. So you can't do a CT scan at a small hospital if you think there is a kidney stone. You have to use your clinical judgement". "Doctor no 6, as soon as he would get faced with uncertainty, phone up senior doctors at different hospitals and irritate the daylight out of them". (-) "Where 2 and 5 were able to adjust their standards, 6 could not make an adjustment to his standards, or an appropriate adjustment. I mean, if you can't do a and c, settle for a and b. But that would cause tremendous distress for doctor 6. Where 2 and 5 could easily accept it. They can say "listen we are not going to achieve a, b and c. This is better than nothing, let's do it!"
2	Positive coping strategies	Maintain positive coping strategies outside work to cope with occupational stressors.	"So number 8 would be off sick a few days in a week every now and then, and we actually think he used substances to cope with the stress of being a doctor". (-) "1 was a keen mountain biker and used to do lots of sport and number 5 would play golf and was quite social. So that healthier or less damaging coping mechanisms with regards to the stress of being a doctor". "Where 10 is more likely to be overwhelmed and over-reacted and show aggression and other adverse reactions. Not being able to cope with the situation". (-) "Number 8 was every now and then away from work for a few days and was quite emotionally labile (rapid, often exaggerated changes in mood), where no 1 and 5 were fairly stable emotionally. So when confronting no 8, the person would be crying or in denial or avoidant." (-) "Well both 4 and 5 are more resilient to stress. So they have been through some tough situations and when things go wrong they don't get worked up so much about it, they are able to absorb the stress and manage it". "You have to be thick skinned and not easily affected by traumatic events, or unfavourable events and unfavourable circumstances."
3	Care for people	Kind towards patients despite pressure or difficult circumstances.	"They were much kinder, and consistently kind, with patients. Even in the presence of adversity or difficult situations and difficult patients. 9 acted with aggression and distrust, criticism, rudeness..." "With regards to interacting with patients....so your consultation is part of the therapy. If you are nasty and rude with patients, you are giving bad medicine".
4	Consistent work standard	Prioritise patient care above other demands,	"If you don't follow-up or put measures in place, expecting things to fail, things do fail. So you need to put in some extra effort to make sure that things don't fall through the cracks".

Table 4.2.2 (Continued)

		always available to look after patients.	"2 and 4 are very much focused on their clinical work. Where 7 is involved with several other projects and have many other commitments outside of their clinical work. That made the person unreliable and often the person is not there or has forgotten". (-) "It is priority for them. They don't cancel clinics; they don't stay away from clinical activities because they are at meetings or other places or commitments". "They are work-committed. They have a different view of their work. Work is priority. Where 9 has much other interests outside of work which are more important. Quality of life is more important than the work. So 1 and 4 does not have issues with doing overtime. Where 9 absolutely hates it because it interferes with her life".
5	Altruistic	Practice medicine in order to improve the health of others.	"2 and 3 were much more person-centred and caring than 9. At some stage 9 told me 'I didn't study medicine to help people, I studied it because it was interesting and I wanted to learn more about scientific things'. This was shocking for me, as medicine was key at helping people". (-)
6	Innovative	Use resources in a creative manner despite a lack thereof.	"Where doctor 6 was stuck. If everything is not in place he is unable to make a plan. He is unable to work out a solution". (-) "They could make a plan. They could be creative and make creative use of the available resources". "So often in clinical situations, especially in resource-limited clinical situations, you don't have access to the ideal investigations. So you can't do a CT scan at a small hospital if you think there is a kidney stone. You have to use your clinical judgement".
7	Reliable	Consistently available for team.	"Well, especially when you are interacting with team members, if you're consistent you are better with relationship building with the team and the team functions better. The other is there and then not and then away for a few weeks. That limits team functioning". "It is priority for them. They don't cancel clinics; they don't stay away from clinical activities because they are at meetings or other places or commitments. And then that also influences their interactions with the team". "Number 8 was every now and then away from work for a few days and was quite emotionally labile (rapid, often exaggerated, changes in mood), where no 1 and 5 were

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Table 4.2.2 (Continued)

			fairly stable emotionally. So when confronting no 8, the person would be crying or in denial or avoidant."
8	Emotional regulation	Interacts with a level of maturity and emotional regulation.	"And was quite emotionally labile (rapid, often exaggerated changes in mood), where no 1 and 5 where fairly stable emotionally. So when confronting no 8, the person would be crying or in denial or avoidant, where if something went wrong with number 1 and 5 they would be able to talk about it and have a normal conversation with them". (-) "Where 10 is more likely to be overwhelmed and over-reacted and show aggression and other adverse reactions. Not being able to cope with the situation". (-)

4.2.3 Participant 3

Participant 3 is a white male with over 30 years of experience and a specialist in occupational medicine. Participant 3 considered humbleness an important characteristic of a medical practitioner and regards the practitioner-patient interaction as a partnership. The participant fully engaged in the topic and stressed that effective medical practitioners are involved and invested in the community they work in. At times Participant 3 struggled to explore competency potential person characteristics, where the researcher would probe in order to elicit new constructs. Table 4.2.3 below captures the themes that emerged from the session with Participant 3.

Table 4.2.3

Themes Stemming from Personal Constructs: Participant 3

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES
1	Community orientation	Cares for and strives to improve the health of the broader community.	"What I've pointed out in the other two makes them good practitioners. They're on the ground at the cold face". "Understanding where do they come from, not just looking at what the problem is they are coming to me to today, but also what are the other problems that they are experiencing in their communities. So more community-orientated approach." "The way that they get involved with the community at grass-roots level basically speaks for itself".

Table 4.2.3 (Continued)

			"But these are people that will prefer working at the level where they will be much closer to the community, being able to interact on a daily basis with the community and patients". "Because if you are there, and you can listen to it and you can address it and you are a good enough clinician you can be an effective medical practitioner in our public health service. You can't be an effective medical practitioner sitting way above the community and functioning from there".
2	Care for people	Cares for the patient as an individual with problems and not only a person with an illness.	"With their patients you can see that they are interested in the whole of the person, not just the issue at stake at that stage. The issue that is on the table is not the only concern. Their concern is basically the whole person sitting in front of them". "As I've learned from him over the years, he is not really person-directed. He is very much task directed". (-) "Will be people that are focusing on the person that sits in front of them, where do they come from, not just looking at what is the problem they are coming to me with today, but also what are the other problems that they are experiencing in the setting where they are coming from, their communities". "So, I see my patient, I make my diagnosis, I treat and I send out. I don't think further. You know it is like trying to lessen the load of patients that is coming in through the clinic doors and not really thinking a little bit further: who are these people, why are they coming to me, what is the preventative action that I can take so that they do not come in through the clinic doors". "So just asking that extra two or three questions that puts you into contact with the real circumstances of the patient. Even though they are good clinicians and will be able to treat the disease effectively, they will not be able to treat the person effectively". "These people will take that into consideration but they will also understand that I must give the patient enough time and be a good listener to be able to get to the real problem".
3	Team Player	Shows respect and appreciation for team members and their contribution. Brings team together to collaborate	"So they will basically bring them in, show them the respect, make use of their services, compliment them on their contribution". "Where those other two people will very easily pass on the leadership role if necessary in a team environment. And that makes them very good collaborators".

Table 4.2.3 (Continued)

		through building strong interpersonal relationships.	"This person (7) is again a very task orientated person, very centred doing things their own way, not collaborating. But only really collaborating when there is something in it for them as a person, not for the patient or the people that they are serving". (-) "4 are collaborators, so excellent interpersonal relationship skills. Number 9 is not a team-player at all, he has a very aggressive, dominant type of approach." "Well in the way that they will basically solve a patient's problem in the way that they will see to it that they are part of a team. And in rendering effective health care services. They will always look for opportunities where they can bring in other team members of the inter-professional team". "This (9) is more a person that will recognise that there are other people that play a role, but will not necessarily involve them and he will try and dominate and play the leader role as such".
4	Adaptable	Willing to adapt and change their approach to patient care.	"They adapt very easily to a specific situation. Where this is a very rigid person, my approach is the only approach. That is how we do it here". (-) "You have to be adaptive obviously. I think that in the South African context for me it is probably not negotiable".
5	Empathetic	Develops an empathetic understanding for the patient, empathetic towards the patient.	"Empathy, definitely a higher level of empathy and understanding of their patient. This number 10, it's not that the person does not have any empathy with the patient, but it is definitely at a lesser level or degree, more focused on the task at hand, that type of approach. Yes, I know what your problem is, but.... we'll have to do this and this to sort it out. Very focused, very direct". (-) "Those are the people in your public health care service that will basically rise to the top and are the people that are empathetic and good listeners, good interpersonal relationship skills".
6	Selfless service of people	Willing to serve people beyond what is expected.	"If I give this treatment will this treatment be effective taking into consideration the circumstances where these people come from? If I say take your treatment and have it supervised by somebody at home to make sure that you will take your TB treatment as an example, and you don't even ask, 'but is there somebody at home that can actually supervise it for you. Who is that person, are they really a responsible person?'" "So they probably have started off with their personality that makes them an individual that will go that extra mile for other people and patients." "And putting the patient first. So they probably have started off with their personality that makes them an individual that will go that extra mile for other people and patients,

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Table 4.2.3 (Continued)

NO			but then as the years go by it grows and it builds and it feeds on itself until they become really passionate people in working with patients in the public health sector".
7	Sense of calling	Passionate about serving the public health sector and improving the health of others.	"They both share a passion in improving the health of people who are served within the public health arena". "He's concern is not for people being served by public health, but he is more concerned with the system that is serving the people. Very much system/task orientated and not really person orientated". (-) "By working in the health sector and displaying that passion basically feeds their passion as years go by. So eventually they become very passionate people about what is the right thing to do for people that look for health services within the public health sector". "And putting the patient first. So they probably have started off with their personality that makes them an individual that will go that extra mile for other people and patients, but then as the years go by it grows and it builds and it feeds on itself until they become really passionate people in working with patients in the public health sector". "It has basically always been part of their early development to think of helping other people, rendering services to other people that cannot really afford private health care services".

4.2.4 Participant 4

Participant 4 is a white female and a specialist in paediatrics. She has a calm and open disposition and believes that medical practitioners should have a calling to work in the public health sector and have a passion for the people who has to be served. The session started later than expected, but the participant was more than willing to give more of her time. Table 4.4 below captures the themes that emerged from the session with Participant 4.

Table 4.2.4

Themes Stemming from Personal Constructs: Participant 4

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES

Table 4.2.4 (Continued)

1	Sense of calling	Considers professional identity as extension of self.	"It is almost like a calling, being a doctor becomes part of who you are, your identity". "The other side would be if being a doctor is not part of your identity, it is only a job. It is a disconnection between it being a job and being who you are". (-) "They consider it as an extension of what they want to see happen. If they think about good patient care, they don't consider it part of their job, it is just something they do. It becomes part of your professional identity". "Whilst the other doctor considers seeing patients as something abstract outside of himself". (-)
2	Equal relationships	Considers patient relationships as a conversation and a partnership.	"This person does not treat patients as if they are people, there is no personal connection and he did not work with them in a respectable manner". (-) "Whereas 1 and 2 sees themselves at the centre of their patient's care". "I think it is also part of how you see the patient, do you consider it as a patriarchal relationship, they don't consider themselves as the "big" doctor who helps someone in need." (-) "It comes from a place the doctor sees the patient as having the same amount of value and input as the doctor. It is not a top-down approach. It is a conversation".
3	Always willing to try	Maintain hope and look for new perspective in challenging circumstances.	"For me it is someone who can take a fresh perspective on a situation no matter how tough or inconvenient it is. They don't get tired of trying and maintain hope that things can and will work out".
4	Adaptable	Flexible to work in imperfect and unpredictable environment and still deliver patient care.	"The thing that stands out in 3 and 4 is that they are adaptable and that they can work within an imperfect system". "Whilst 7 cannot function when everything is not perfect. It is an all or nothing attitude". "You have to be able to work and function within uncertainty, you have to be able to accept that things will go wrong but be able to function within this". "But if you struggle to work within a system that does not function optimally, then you will not be able to function and be successful within the public health sector. A lot of people struggle with the public sector because a lot goes wrong, and it is not because they are bad doctors, in the private sector they would do well where they can control things and what goes wrong. But if you put them in the public health sector, things go wrong because they do not have control and they still have to deliver care to the patient".
5	Self-directed learning	Continuously learning which is self-initiated due to a hunger	"1 and 3 takes the responsibility of their professional development upon them-self, they search for new information, talk to people, read a lot and wide."

Table 4.2.4 (Continued)

		to know more about medicine.	"Whilst 9 is only one to receive/take knowledge. This person will not initiate the search for new information, they have to be instructed to do so. There is no self-drive to learn and they don't take responsibility for their learning". (-) "We like to refer to them as being a continuous learner. Or self-directed learning. Nobody has to stand behind this person to tell them to go and read on a topic or to learn something new. It is just who they are, they are life-long learners". "The word I would use is reactive learning. Something happens which forces you to have to go on learn about it. Whilst, the other two does not wait for something to happen before they go and learn. They are constantly looking for something new to learn".
6	Knowledge sharing	Willing to share with others what they have learnt.	"They also give in the process, so it is reciprocal. You teach and you are taught". "The difference is also that people pick up on this and they would feel comfortable to ask 1 and 3 because they know they are informed, and that they are open to share information with them. Whilst, people won't ask 9 questions to learn from him because there is no depth or a constant curiosity that resides in this person". "Yes, the first two does not keep knowledge or information to themselves; they are willing to teach others". "Yes, the others only shares knowledge if they are instructed to do so". (-) "1 and 3 involves others when they learn, it is reciprocal learning".
7	Care for people	Truly cares about what happens to patients.	"I would say passion for people, they have golden hearts". "They have an apathetic approach; you get the idea this person really does not care what happens to the patient". (-)
8	Selfless service of people	Willing to serve patients despite personal discomfort or sacrifice.	"So the first thing that stands out for me is internal motivation, to do the best possible for the patient regardless of personal cost". "If this person works 5 min overtime, they expect the 5 mins to be returned". (-) "There is no mind-set that they are working with a patient that needs help even if it is half an hour or an hour later". (-)
9	Driven to bring change	Drive to impact patients' lives for the better.	"And you do it because you want to make a difference in the lives of your patients".

4.2.5 Participant 5

Participant 5 is a white male who works as a general practitioner in a public district hospital. The participant invested more time in the session than was expected and devoted all his attention to the session. Participant 5 displayed a true interest and understanding of human behaviour and enjoyed the session thoroughly. Table 4.2.5 below captures the themes that emerged from the session with Participant 5.

Table 4.2.5

Themes Stemming from Personal Constructs: Participant 5

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES
1	Empathetic	Sensitive towards others.	"The way I can put it is that they are very sensitive. So they are more sensitive, more compassionate."
2	Sense of calling	Driven to improve other's lives, no matter how small the improvement may be.	"Because they are happy with their job. They are happy to work here and happy to do their work. They find their job stimulating and they feel like they are making a difference". "Perhaps say driven to make a difference in other's lives. Whilst the other person is driven to make a difference to the self, and for his own interests". "To work is a privilege, work is love made visible. That is what I see in 3 and 4, they will never ever complain about the amount of work they have to do. They will start at one end, and systematically work through it. You will not hear one complaint, it's really amazing. It is no issue for them to finish work at 19h00/20h00 at night. I don't want to say 7 is lazy, because he is not. It is about how engrossed you become in your job that time barriers or other people's demands are irrelevant".
3	Innovative	Willing to try new strategies to find a solution, despite the possibility of failure.	"1 and 2 is willing to try different things, to explore options. To give anything a go even if it could be a failure. Anything is better than nothing." "Whilst 6 does not like it when you constantly introduce more variables. For example, I suggested to 6 a way we can reduce turnaround times and he said "no, it won't work", no matter how we argued about it. The other two would try anything just to make a small difference, because anything is better than nothing". (-)

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Table 4.2.5 (Continued)

			"The word would be a rigid mind-set. No, it is more than that, it is a fear of failure. Because medicine is a funny thing. In other occupations, when you make a mistake the consequences are not as great as when you make a mistake in other occupations". (-) "6 does not want to think out of the box due to the fear that something can go wrong".
4	Accountable	Takes accountability to solve a problem.	"A classic example: 1 and 2 takes accountability. If something happens or they don't know something, they will take responsibility to solve it".
5	Selfless service of people	Willing to give more than is expected due to a love for what they do. A sense of calling.	"Yes, and 7 always has reservations. There are obvious barriers. Some people will tell you the person with the barriers is healthy, but I don't see that 3 and 4 are unhealthy". (-) "Because their job is not a job to them. Let's put it this way. 7 will always tell you he is only contracted to work these hours. I won't do X because it is not in my contract. It is boundaries to engagement. They are always reserved and can easily get out of the situation and say my time is over, I am not going to finish the clinic, and it is time for me to go home." (-) "On many occasions 4 has entered my office and told me: "I love my job". And it is nice to hear because this job is not perfect".
6	Internal locus of control	Look for opportunities in work environment instead of shortcomings and consequently believe they are in control of it.	"They love their jobs, that's what they tell me. Whilst 7 will constantly talk about the negative aspects and the mistakes that happen, the large volumes of patients, the lack of resources. It is a negative approach. 3 and 4 has an abundance mentality, and 7 have a shortage mentality". "Yes, that is what I am trying to say. They will see and look for the opportunities. 7 focus on shortcomings in their environment. And do you know how important it is to look for opportunities? A lot of the younger people who leave public service feel that there are not enough resources". "They will not be phased by over-whelming odds or a sudden chaos that breaks out". "Perhaps it is the load or diversity or chaos, but they have a filtering process. They have the ability to re-orientate the external environment to prevent that it throws them over". "It has to do with being driven to succeed, and to be proud to say that you did it. The other end would be that it is too much effort, someone else can do it".
7	Experiential approach to learning	Hands on, practical approach to learning.	"It is the manner in which 3 and 4 grow, they are more experiential learners, where 7 is a more an academic learner".

Table 4.2.5 (Continued)

8	Emotional regulation	Ability to do introspection and respond to environment accordingly.	"They will not be phased by over-whelming odds or a sudden chaos that breaks out". "No, they have the ability to manipulate their internal reaction. They have a control mechanism, a filter, the ability to pause and be mindful before they react to their environment. They don't react, they respond to their environment". "I would rather say they respond instead of react. Reacting is a knee jerk that is a response to a stimulus. A response is when you stop and think and then respond to stimuli. Respond also has for me connotations of responsibility. Because I can think, I can take responsibility so I can respond appropriately".
9	Adaptable	Flexible to adapt to changes in environment by changing their approach.	"So I can immediately tell you the first two are more adaptable than 6. They are more suited for adapting, variety, don't have rigid ways of thinking, they are open to change." "It has to do with their ability to adapt and to function in chaos because they approach the chaos by chunking and organising on an internal level". "1 and 2 has a more generalist mind-set towards medicine, where 6 has a more specialised mind-set to medicine. So what it comes down to: 1 and 2 likes everything about medicine. Whilst 6 only likes certain components of medicine". "So 1 and 2 likes everything, appreciates the variety, appreciates the different people with their different families and everything that goes with it. Whilst 6 is more focused on the sickness processes. 1 and 2 is focused on the art of medicine, 6 is focused on the science of medicine". "Because if one thing becomes too much (too much narcotics or ER) you can rotate or focus on something else".
10	Willingness to learn	Admit to their mistakes and accept that it is part of life. Willing to learn from mistakes.	"3 and 4 are not scared to make mistakes and learn from it. So they don't take mistakes in themselves or others as a massive issue. They don't take it personal". "7 takes mistakes very personal. If anything happens 7 is hyper critical". (-) "Both 3 and 4 have made mistakes before, but are not ashamed to admit that they have made mistakes and what they have learnt from them". "They are not scared to make mistakes because they know they will learn from them. 7 is scared of making mistakes".
11	Altruistic	Willing to help others even if it is not expected.	"3 and 4 will help other colleagues in other departments out of their own, even if it is not part of their job, 7 would not do the same. 3 and 4 will easily volunteer to stay longer or come in over weekends to make sure the patients are okay, 7 will not do that. There is a definite altruism here".

Table 4.2.5 (Continued)

12	Humbleness	Humble towards others, does not believe they are better than others.	"3 and 4 does not have a massive ego, they are humble and don't consider them self the best. They are down to earth people. 7 is the opposite". "This allows them to communicate easily and openly between colleagues as well as patients. Because you are human. You don't have this professional, clinical co-worker persona". "For me the opposites would be to admit that I don't know everything, I am not perfect, I still have a lot to learn and every day is a learning opportunity".
13	Planning and Organising	Structure circumstances in such a manner that they are in control and the workload is manageable.	"3 and 4 are also very good with time management and how they plan their day, their planning skills are excellent. For example, if a doctor does not pitch at a clinic, they would say it is not a problem, I will go and sort it out. She will then look after her own department which is short staffed already, look after the other department and source other doctors to look after the department. 8 would just crack". "She is very organised, and it is not OCD or micro-management. It is the ability to take chaos and put it into compartments in order for it to not influence her emotionally and then divide it into manageable chunks. This stops the circumstances from being overwhelming and allows her to work consistently. They know how to analyse and structure problems in order for it to become manageable". "It has to do with their ability to adapt and to function in chaos because they approach the chaos by chunking and organising on an internal level".
14	Self-confidence	Know your own strengths and weaknesses and confide in your abilities and strengths.	"It comes down to the ability to carry the responsibility and not to buckle under it and to know that you can do it".
15	Problem-solving	The ability to effectively find solutions and solve problems.	"A classic example: 1 and 2 take accountability. If something happens or they don't know something, they will take responsibility to solve it. They will build the bridge, whilst 6 will wait for someone else to build to bridge so that they can get to the other side of the river. So it is innovation, problem-solving skills, it is a mind-set, it is an approach". "So if it is too much effort or it will take too long to build the bridge. If you don't give me the resources to solve the problem, then I won't do it. Whilst the others will make a plan". "It also has to do with the science versus art concept. Because with 1 and 2 there is a sense of creativity and problem-solving skills that 6 don't have".

4.2.6 Participant 6

Participant 6 is an Indian male and a specialist in public health medicine. He showed an appreciation for reliable and consistent medical practitioners. At times the participant struggled to think of different constructs that has not been discussed. This required the researcher to prompt the participant frequently. Despite the above mentioned, the researcher experienced the session as positive and fruitful. Table 4.2.6 below captures the themes that emerged from the session with Participant 6.

Table 4.2.6

Themes Stemming from Personal Constructs: Participant 6

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES
1	Self-awareness of competence	Aware of own level of competence and where shortcomings lie.	"It is more about acknowledging their own level of knowledge. Within a health care setting, there is a lot that the doctor needs to know. And there is almost too much information. So knowing what you know, and knowing what you don't know, is important".
2	Knowledge sharing	Approachable to others and provide guidance when sharing knowledge.	"This is more about teaching, because these are more senior clinicians with lots of experience. So they are kind of almost leaders in their field. So the difference is that these two are willing to share their knowledge, and provide guidance". "And this one, he does share, but it is more in a negative way. He is not very good at sharing. It is his style of sharing; he is quite arrogant. So I think it makes learning difficult". (-) "Whereas I guess these are more approachable and compassionate when they teach. So it is more about their teaching style. Where this one can really put you down. You know there are teachers who are approachable and you learn, and then there are others where you are too scared to say anything. They just cut you down. So that is the difference that I see in this group. They (3 & 4) are always trying to teach others. Whereas this one has a teaching style that is quite harsh and I think it makes it difficult for people to learn".
3	Empathetic	Highly compassionate towards patients and truly caring for the wellbeing of others.	"The difference here is about compassion towards patients. So these two really care about patients a lot. On a very personal level".

Table 4.2.6 (Continued)

			"Whereas this one sees his job just as a job, he doesn't care. I suppose it is harsh to say he doesn't care, but I think he is lacking in compassion. Not having a good connection with patients". (-) "The doctor does not only have to show compassion to the patient, but to any person. The opposite is a person who does the job just for the sake of doing the job. Not really caring about work or the people, just looking forward to their pay check at the end of the month and for a doctor this is an issue because you need to have that personality trait where you care about people and what happens to them. You need to have that connection".
4	Trustworthy	Respect for doctor-patient relationship and confidentiality of the patient.	"I suppose it is ethics, having an ethical relationship with your patient. So respecting patient confidentiality. It is about being aware of the trust that the patient puts in you. I mean the patient sees a doctor and the doctor is someone they look up to, that they trust, they are sharing very personal information and they make themselves vulnerable. So it is important that the doctor is then trustworthy".
5	Analytical ability	Ability to deal with complexity of medical situations by understanding all the details.	"It is more about being able to solve complex problems. So the ability to deal with complex and complicated problems". "So if you are faced with a problem you need to have the skill to break it down in order to understand it. To be able to deconstruct an issue to gain a better understanding". "So this one has a lack of analytic ability. I mean it relates also to attention to detail. Being able to play something down to be able to grasp a whole lot of detail in order to get the full picture". "So it is just their mental strength or mental intelligence. They are both highly intelligent people".

4.2.7 Participant 7

Participant 7 is a white male medical officer who is also a clinical tutor. He is very knowledgeable and passionate about the emotional intelligence of medical practitioners and the nature and quality of the practitioner-patient encounter. The session was experienced as very positive and lasted longer than expected. Table 4.2.7 below captures the themes that emerged from the session with Participant 7.

Table 4.2.7

Themes Stemming from Personal Constructs: Participant 7

Table 4.2.7 (Continued)

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES
1	Sensitive to emotional cues.	Sensitive to the emotional cues of others.	"Understanding that the person being spoken to also has a mind and can come to their own conclusions. I don't have to spell out every step. So he has a strong theory of mind". "It is being able to pick up on non-explicit emotional ques. To know when to explain things in more detail or when not to. So if you are explaining a complex subject, the person gives you a nod, you know okay I don't have to give more detail, a penny is dropping". "And because they have sensitivity to the effect that their emotions have on the healing of the patient".
2	Emotional regulation	Regulate own emotions in order to not upset the patient.	"They both can manage their own emotions, and contain their emotions". "He is infantile in his emotional regulation". (-) "If they get to the patient and they examine the wound and they are emotionally upset, that has been proven that if they allow it to interfere with how they interact with the patient, and make them less empathetic towards the patient, that has been proven to prolong the patient's hospital stay". (-) "But for someone to be able to engage empathetically, they can't be busy with their own emotions. They need to have managed it already. So that they can engage with the patient".
3	Team player	Places value on team relationships than on tasks.	"They both have sensitivity that for me to provide the best quality care I can provide. I need to be able to work in a team and that means I need to be emotionally sensitive towards the people I work with". "So I think in terms of their value system, they place more value on people than on tasks. Or on relationships around successful tasks. If that makes it clearer".
4	Knowledge sharing	Energised by the development of others.	"Because they like developing others. They get a kick seeing others reach their potential".
5	Self-confidence	The internal confidence that requirements will be met and tasks accomplished.	"They have got a sense of responsibility and the confidence that they will be able to meet that responsibility". "Having an inaccurate perception of self-efficacy. Or high level of self-deceit". (-)

Table 4.2.7 (Continued)

6	Planning and Organising	Plans sequence of tasks.	"So it is about sequencing his tasks in such a way that there is no doubling back, like you have to walk to one ward and on the way to that ward you are passing to get the results from the laboratory, not having to walk to and fro". "It links onto keeping the information condensed".

4.2.8 Participant 8

Participant 8 is a white male and a specialist in family and emergency medicine with over 30 years of experience. He actively conducts research in his field of specialisation. He considers a practical approach to problem-solving essential to effectiveness in the public health sector. Participant 8 also emphasised the importance for a medical practitioner to be change agents for the people and community within which they work. Table 4.2.8 below captures the themes that emerged from the session with Participant 8.

Table 4.2.8

Themes Stemming from Personal Constructs: Participant 8

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES
1	Self-awareness of competence	Being aware of level of competence and confidence.	"To some extent self-aware, they are aware of the limits of their competence and would ask for help when they need it". "I mean it is also a sense of that every doctor or medical practitioner will make mistakes. You cannot be a human being in a medical context and have a career that is free of error. It is just not possible. I suppose there is error and a sense of your limits of competence or to be aware of the degree of uncertainty, when you need to ask for help". "I think the one is about being aware of one's level of confidence and competence in any given situation and when you feel you need help".
2	Willingness to learn	Willing to evaluate and identify learning needs.	"You know, the person receives feedback that there seems to be an issue here, they will challenge the person back instead of saying 'Oh, okay maybe I have got a learning need here'. They would rather say there is something wrong with someone and criticise them. So it is not somebody the rest of the team would have a lot of confidence in". (-)

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Table 4.2.8 (Continued)

			"I think they will learn by first of all acknowledging that there was an error and be willing to receive feedback or to see it as a learning opportunity…"
3	Problem-solving	Integrated, systematical approach to decision-making and analysis.	"They also have a logical approach to decision-making". "He does not really have a practical approach to helping people or solving problems. He is slightly more philosophical. Working in the health system, there are practical problems and issues that either individual people or the system has that need to be solved. And then abstract philosophy does not really help". (-) "And to follow some sort of medical guidelines and algorithms. Sort of a logical decision-making process. To do that you have to have up to date knowledge, you have to get the evidence, you have to put it together in a sensible sequence". "There would be a lack of logical sequence or structure or flow in the decision-making process. It feels like fragments thrown together. So there might be something that is truth in there, but there are lots of holes in the process. And sometimes this particular person, if you would ask them: 'But why do you want to do that?' Then they would start talking about the bigger South African picture and how common this is in the community or a political thing". (-)
4	Empathetic	Attempts to truly understand the view point of the patient.	"So for me on this side you have got empathy, which would be the attempts the practitioner makes to understand the broader context of the other person, it is not just being nice. It is about actually making an attempt to understand the other person's viewpoint and the context in which this illness has occurred". "I suppose a lack of empathy would be somebody who essentially just sticks to the biomedical facts and does not really make any attempt to understand this person's unique complexities and their viewpoint and the context within which this illness is happening in terms of where they live and their family and all of that". (-) "As opposed to really trying to understand the other viewpoint even if you don't necessarily agree with it, or find it bizarre. You are able to put your own viewpoint to one side in order to understand the other". "You know sometimes people try to understand you but it is so layered with their own particular bias, prejudice and viewpoint that they are not really hearing you". (-)
5	Driven to bring change	Believe they can make a difference to the patient and facility and	"So I think 3 and 4 are positive, they have energy, they are change agents. They take on challenges". "I think mentally their outlook on life is more robust and upbeat and positive. They believe they can make a difference". "So I think this guy is hard working and will see the patients, but won't necessarily be a change agent or try and engage in bigger issues. Maybe he does not offer as much leadership". (-)

Table 4.2.8 (Continued)

		improve the quality of care.	"I think you get people who turns up and shifts the cue and comes back the next day and does it again. Whereas 3 and 4 will also turn up and see the patients but they would be thinking about what is working and what is not working and how they can improve things. So it is a change agency". (-) "I suppose it is somebody who is here to make a difference and that it is possible to make a difference. And that things can get better, and that their role in the team is to do more than just get through the day". "Whereas 7 is somebody who is just coping, turn up and can work hard and can see the patients but don't have any spare energy for much more than that. And I think there are people who are just happy to turn up and shift the cue and go home and get their salary, but they are not offering any form of leadership". "It would be somebody who is just disconnected and not helping the team to find a way forward to improve the system or the quality of care. So it is similar. I think change agency and leadership goes together". (-)
6	Team player	Healthy relationships with clinical team.	"He does not fit in to the team, not a team player". (-) "They are very good team-players being approachable and they are not arrogant, they are pleasant". "Sort of relational, I suppose. A sense of that they have good relationships with people they work with their clinical team".
7	Community orientation	Try to understand the broader health care system and the environment in which the patient lives.	"They will see the bigger picture; they don't just have their nose to the grind stone to see the next patient. They can actually think about the bigger picture, the system, how they can improve how the place functions clinically". "The attempts the practitioner makes to understand the broader context of the other person, it is not just being nice".
8	Planning and Organising	Works efficiently and effectively in order to deliver on time.	"They are very efficient in the use of their time and organised as I said". "So number 8 would be a little bit disorganised, he does not deliver on things when you expect". (-)

4.2.9 Participant 9

Participant 9 is a white female and a specialist in internal medicine with over 25 years of experience. She is very knowledgeable, warm-hearted and believes a positive attitude is an important quality to have in the public health sector. She considers a self-drive to conduct research important as well as a sense of calling to work in the public health sector. Table 4.2.9 below captures the themes that emerged from the session with Participant 9.

Table 4.2.9

Themes Stemming from Personal Constructs: Participant 9

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES
1	Sense of calling	Passionate about achievable output in job.	"I think it is an inherent characteristic of someone who wants to find them self in this environment. I think they are positive because they have a passion for research and good patient care. It is not driven by what their salary will be at the end of the day. It is more about the content of work delivered and the passion to explore and improve their knowledge base". "I would say limited interest, negative. You will get one person who will do the work that is expected of him. And then you would get the person that is passionate about is work and does not mind to put in the extra hour to go and read on a specific topic in the evening. They will go the extra mile. The person that will tell you after a 2-hour round: "And can you believe we get paid to do this?" That type of passion is a distinguishing factor for me. Driven by the good that they are doing rather than the financial or external motivations to do the job".
2	Trustworthy	Know they are trustworthy enough to look after patients on your behalf.	"Or that doctor has a reputation in that other doctors know they need to double check his work". (-) This is very important in a clinical context, when you work with patients. You would ask the one person to see the patient on your behalf. You can then rest assured that this person will do a thorough evaluation of all the important things. When you ask the other person (6) you cannot rest assured that he will evaluate the patient thoroughly". "So you will doubt if he is trustworthy enough to be sent on your behalf to evaluate a patient. Because there are loopholes, he can come back and tell you there is very little wrong with the patient and you don't know if that is true. I want someone that I can give a task and know that he will do it as well as I would have done it. So trust a doctor to look after patient on a similar standard than you would have".

Table 4.2.9 (Continued)

			"I think your ethical principles will determine how reliable you are. But that is not something that I can teach a person when they start working here at the age of 30. It is a thread that has to run through from your parents". "In our job, when someone takes over your patients during night shift, you want to be able to go to bed peacefully, knowing that if someone calls that person he will answer and make sure to attend to your patients. And then you get a sense that someone is not trustworthy when your nursing staff tells you that they are not able to get in touch with the doctor who is supposed to be on night shift".
3	Selfless service of people	Unselfish service towards patients despite possible discomfort to self.	"So one person will inherently be a better person that someone else. And with better I mean being unselfish in your patient care. You can't go home at 16:00 if your patient is still sick. You must have the ability to put yourself second. That is an inherent and genetic difference between people. But I do think your education, tolerance and your frame of reference of what is right and wrong is shaped by your education. And it is very important in our line of work. If you are not taught that it is important to look after someone else's interests over your own than there will be challenges". "The difference lies within inherent personality traits and education and your ability to build good interpersonal relationships. You can have someone from a very high socio-economic class that is extremely selfish and believes that everything revolves around him. And then someone from a low socio-economic class that has learnt to live and get along with 10 other people in a home and he is your better doctor as opposed to the other person who has a selfish approach to doing his work" (-). "Some young doctors only work 6 hours because they argue that is what they get paid to do, and others works 10 hours because they know the patient needs them. That is what differentiates an ideal colleague versus a less ideal colleague". "It is about having a strong work ethic and positive attitude and passion for the greater good". "The ability to take responsibility, the ability to work beyond what the job requires, to go over and above". "A selfless manner of doing above of what is expected from you. I am expected to see three patients but I will see 5 if it is to the advantage of the environment. I am expected to work until 12:00, so I will leave 11:45 because it takes half an hour to travel". "It is the willingness to work harder than what is expected, depending on the situation".
4	Willingness to learn	Self-drive to further explore in field for no additional compensation.	"And then you would get the person that is passionate about his work and does not mind to put in the extra hour to go and read on a specific topic in the evening. They will go the extra mile". "So the degree to which you contribute to teaching and research is over and above. It won't impact your financial outcome. It is a self-driven interest and it differs from person to person but it distinguishes the good academic from the less good academic".

Table 4.2.9 (Continued)

5	Internal locus of control	Re-arrange environment to turn it into a positive situation.	"It is for example to go into a clinic and there are 10 patients and suddenly one doctor is sick. The negative doctor would act as if the world has come to an end, the positive person would consider it an opportunity and say: 'I will be able to help one more patient'". "When we have a clinic on Thursday and we expect many patients, I always say: 'Don't get tired on Wednesday because there are so many patients tomorrow. Start with the first patient, we will get to the last patient before it gets dark'. But the negative person would not be able to get around this. It would drain him/her, which is necessary. So it is the ability to be positive despite work adversity. To turn work adversity into something positive."
6	Accountable	Take accountability for decisions and outputs of work.	"If we go back to one of the previous constructs, it is very important that the person has the ability to take responsibility. Or even a willingness to take responsibility or accountability". "I've found in our line of work that people hide behind the negative aspects of our environment". "The ability to take responsibility, the ability to work beyond what the job requires, to go over and above". "So you will doubt if he is trustworthy enough to be sent on your behalf to evaluate a patient. Because there are loopholes, he can come back and tell you there is very little wrong with the patient and you don't know if that is true. I want someone that I can give a task and know that he will do it as well as I would have done it. So trust a doctor to look after patient on a similar standard than you would have". "I think your ethical principles will determine how reliable you are. But that is not something that I can teach a person when they start working here at the age of 30. It is a thread that has to run through from your parents".
7	Adaptable	Function within imperfect circumstances.	"So I can hide behind the fact that the situation is not 100% so I will distance myself because it might have medical-legal implications for me to get involved with the patient because I don't have everything I would want to. Versus, I work in a resource limited environment and I am asked to look after a patient and I do it to the best of my abilities. I believe it will be enough if there are possible implications. So you can easily say you are not going to see the patient in A5 because it is not a perfect ICU. Or you could say you will do what you are able to do and assist where possible". "Because in primary care you get into situations that you are not supposed to be in, so or you can do nothing or you make best with what you have to the best advantage of my patient. And have the belief that it will be better than standing back and hiding behind the environment". "We had someone from America working here and she could not cope because she wanted to do everything according to the right procedure. But you can't do that here. At some stage you must say I must make do with what I have available". (-)

Table 4.2.9 (Continued)

	"Yes to be able to work to the best of your abilities with the resource limitations in a system that is not functioning optimally. I've found in our line of work that people hide behind the negative aspects of our environment".

4.2.10 Participant 10

Participant 10 is a white male and a specialist family medicine and medical educator with over 40 years of experience. The interview was considered as constructive and at this point the participant confirmed what had been said by other participants (data saturation). The participant highlighted a sense of advocacy for the people that the medical practitioner serves as well as being a reliable and accountable team member for colleagues. Table 4.2.10 below captures the themes that emerged from the session with Participant 10.

Table 4.2.10

Themes Stemming from Personal Constructs: Participant 10

NO	THEMES FROM PERSONAL CONSTRUCTS	DESCRIPTION	SUPPORTING QUOTES
1	Consistent work standard	Takes ownership of the patient's improvement by offering support and doing thorough investigation.	"To follow-up on a patient's progress after they have seen the patient and made a diagnosis. They make sure to get the test results for a patient and follow-up to see if they are getting better. They are involved with the patient and have a sense of responsibility for the patient". "Not really worried about the patient if they are admitted into hospital and does not follow-up that test results are followed through". (-) "The doctor on the one side of the spectrum would make sure the test results are followed up timeously and would go to the patient later in the day to check-in with the patient. If they are off shift, they will make sure the doctor who is working the shift knows all the detail around the patient". "Yes, but it is because they feel responsible for the care of the patient".
2	Reliable	Sense of duty, always on time.	"It is about time, and being there when you are expected to be there. An example would be that if you are expected to be there at 8am, you are there at 8am". "He would phone and say he is sick and then he would not pitch for work. And it is a repetitive thing". (-) "A sense of duty perhaps. Specifically, around being on time for work and being available".

Table 4.2.10 (Continued)

			"Yes, it is also about being available after hours. I don't know if we should make it a different category, but it is also being available within the normal working hours, but also after hours".
3	Sense of calling	Practice medicine because it is more than a job, it is part of their identity.	"I think it is quite a deep question, in a sense it is an existential question. It is about why I am working, why am I a doctor. Am I working because I earn a salary and I have a job and I do what is expected of me, or the cliché of making a difference and truly trying to deliver a good service to my patients". "The other thing I think is relevant here is having a sense of calling. Some of these doctors are very verbal about their Christianity and they feel it is their calling. Where the others are not necessarily not a Christian, they are just not as verbal about it. So there is the one side that believes it is their Christian calling to be a doctor, and there are also doctors that came from a very poor background, and they have experienced the bad circumstances, and therefore they want to make a difference". "And then the opposite would be someone who does not consider being a doctor a calling, it is only considered being a job". (-)
4	Team player	Supports individual team members with their responsibilities and builds team unity.	"It is the concept of emotional intelligence. But I think the thing that I truly see is considering everyone as a team that works together and we support each other, we work until everyone is finished with their work. It is the sense of having each other's backs. We are here to support each other together and we realise that some of us has better skills in certain areas and we consult each other, there is no competition between us." "The one is interpersonal skills and team spirit, we work together to get something done". "To put it directly, that person does their job until it is done and bugger the rest". (-)
5	Willingness to learn	Open to receive criticism in a mature manner.	"We are open to talk and receive criticism and to give constructive criticism without being defensive". "A mind-set of still having to learn so much and checking if what they are doing is still relevant". "And then also being prepared to attend courses or online learning".
6	Self-directed learning	Continuously committed to professional development throughout career path.	"And the other is a sense of improving my knowledge and abilities. Commitment to being a life-long learner". "So it is personal professional development. They would be open to admit they have a shortcoming in their knowledge and ability, and they will be enthusiastic to undertake additional courses or training to improve themselves. But it is also a daily commitment to explore the readily available information at their fingertips. A mind-set of still having to learn so much and checking if what they are doing is still relevant". "It is actually a mind-set of not saying you are now qualified, but realising that it is not the end of the road. You have to consistently commit to learning, being a lifelong learner". "And then also being prepared to attend courses or online learning".

Table 4.2.10 (Continued)

7	Driven to bring change	Driven to improve the lives of others by being their representative.	"It is also a feeling of activism where at the other side the person would say I tried and tried but nothing happened". "There is also an element of being a representative of those who receive poor health care. That is where the activism comes in. 'I don't do it for myself, I do it because I truly want to improve other's lives'". "It is kind of an indifference to suffering. Like a depersonalisation of the patient, not seeing the person as a person anymore. Emotions disappear". (-)
8	Internal locus of control	Committed to taking control of a situation and still make a difference.	Yes, it is also having an internal locus of control versus having an external locus of control. These guys still believe they can do something themselves, the others believe that they can't make a difference". "It is about a commitment to make a difference or to make the best of a bad situation. They are committed despite a lack of resources (personnel and medicine and supplies) and still want to deliver the best service they can. Where 8 has a level of indifference, which they assign to the lack of medicine, equipment and would say the government does not listen and it makes no difference to try".

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4.3 Linking Competency Potential Constructs Identified from Literature with the First-order Themes that Emerged from the Sessions

The following section describes the level of agreement between the competency potential constructs that were identified in Chapter 2 and the first order themes that emerged from the sessions with the participants. First order can be described as the themes that has emerged from the data after the transcriptions have been coded. Thereafter, the first-order themes with similar meanings were scrutinised to form broader thematic categories, referred to as second-order themes. The second-order themes can be seen as an amalgamation of the various first-order themes. The above mentioned is illustrated in Table 4.3 below.

Table 4.3

Linkages between the Competency Potential Constructs Identified from Literature and the First-Order Themes

Competencies Potential from Literature	First Order Themes from Sessions	% Linkages
Resilience	1. Always willing to try 2. Positive coping strategies	
Internal Locus of Control	3. Internal Locus of Control	
Emotional Intelligence	4. Equal Relationships 5. Sensitive to emotional cues 6. Empathetic	
Self-Efficacy	7. Self-confidence 8. Self-awareness of competence	
Agreeableness	9. Humbleness 10. Trustworthy 11. Team Player	
Calling	12. Sense of calling 13. Driven to bring change	90% of the themes identified from the sessions link to the competencies identified from the literature study in Chapter 2
Altruism	14. Community Orientation 15. Altruistic 16. Care for people 17. Selfless Service of people	
Openness to Experience	18. Willingness to learn 19. Experiential approach to learning 20. Self-Directed learning	
Conscientiousness	21. Consistent work standard 22. Planning and organising 23. Reliable	
Fluid Intelligence	24. Innovative 25. Problem-solving	
Neuroticism	26. Emotional Regulation	

Table 4.3 (Continued)

Linkages between the Competency Potential Constructs Identified from Literature and the First-Order Themes

No Competency Potential Construct Identified	27. Accountable 28. Knowledge Sharing 29. Adaptable	10% of the themes identified from the sessions does not link to the competencies identified from the literature study in Chapter 2

Table 4.3 illustrates that 90% of the first-order themes identified from the sessions, relates to the competencies identified from literature. All thirteen competency potential constructs that were identified in the literature study was corroborated during the session. Furthermore, 10% of the elicited themes from the sessions were not present in the literature study, which implies that additional competency potential constructs will elaborate the partial South African Medical Practitioner Competency Model.

4.4 Second-order themes

From the ten sessions that were conducted with the participants, twenty-nine distinct first-order themes were identified. The next step in the data analysis process was to consolidate the first-order themes into broader thematic categories. This was achieved by grouping first-order themes with related meanings into broader second-order themes. The above mentioned process is illustrated in Table 4.4, where after a discussion of each second-order theme will follow in Chapter 5.

Table 4.4

Conversion from First-order to Second-order Themes

First-Order Theme	Frequency	Second-order theme
Always willing to try Positive coping strategies	P4. P1, P2.	Resilience (3)
Internal Locus of Control Accountable	P1, P5, P9, P10. P5, P9.	Internal Locus of Control (6)
Equal Relationships Sensitive to emotional cues Empathetic	P1, P4. P7. P3, P5, P6, P8.	Emotional Intelligence (7)
Self-confidence Self-awareness of competence	P5, P7. P6, P8.	Self-Efficacy (4)
Humbleness Trustworthy Team Player	P1, P5. P6, P9. P1, P3, P7, P8, P10.	Agreeableness (9)

Table 4.4 (Continued)

Conversion from First-order to Second-order Themes

Sense of calling	P1, P3, P4, P5, P9, P10.	Calling (9)
Driven to bring change	P4, P8, P10.	
Community Orientation	P1, P3, P8.	Altruism (13)
Altruistic	P2, P5.	
Care for people	P1, P2, P3, P4.	
Selfless service of people	P3, P4, P5, P9.	
Willingness to learn	P1, P5, P8, P9, P10.	Openness to Experience (8)
Experiential approach to learning	P5.	
Self-Directed learning	P4, P10.	
Consistent work standard	P2, P9, P10.	Conscientiousness (9)
Planning and organising	P5, P7, P8.	
Reliable	P2, P9, P10.	
Innovative	P1, P2, P5.	Fluid Intelligence (6)
Problem-solving	P5, P6, P8.	
Adaptable	P2, P3, P4, P5, P9.	Adaptable (5)
Knowledge Sharing	P1, P4, P6, P7.	Knowledge Sharing (4)
Emotional Regulation	P1, P2, P5, P7.	Neuroticism (4)

The first column of Table 4.4 reflects the first-order themes that were reported in Table 4.3. The frequency column in Table 4.4 indicates each participant by means of a P1-P10 code based on who described the relevant theme in the session. In the second-order theme column, the number in brackets next to the second-order theme indicates the amount of times the theme occurred in the data gathering sessions.

As displayed above, it is evident that the twenty-nine second-order themes were converted into thirteen, including *Adaptable and Knowledge Sharing* as two new competency potential latent variables.

4.5 Summary

This chapter reported the thematic analysis based on ten data gathering sessions that was conducted with the respected subject matter experts (SME's). In these sessions, the Repertory Grid Technique (RGT) was used to gather data as well as insights as to how these SME's makes sense of medical practitioner competency potential. Firstly, the chapter reported emerging themes from each session in Table 4.2.1 – 4.2.10. Thereafter, the first-order themes were linked to the competency potential constructs stipulated in Chapter 2. Lastly, the first-order themes were condensed into second-order themes which will be discussed and substantiated in Chapter 5. Finally, the Partial Medical Practitioner Competency Model will be modified based on the above mentioned discussion.

CHAPTER 5

INTERPRETATION AND SENSE-MAKING OF RESULTS

5.1 Introduction

Chapter 4 reported the themes that were identified from each participant's session which essentially illustrates their implicit understanding of competency potential person characteristics that constitute medical practitioner performance. The twenty-nine themes that were deducted from the interview were compacted into thirteen second-order themes. The goal of the current chapter is to debate the relevance of the thirteen second-order themes as well as to integrate the themes with the literature review that was conducted in Chapter 2. The output of this chapter would be a modified and updated Partial Medical Practitioner Competency Model which illustrates competency potential latent variables that leads to medical practitioner competence.

As previously discussed, the Repertory Grid Technique (RGT) was utilised to examine each participant's understanding of medical practitioner competency potential. From the explained understanding of the subject matter experts, the following thirteen second-order themes were identified in Table 5.1:

Table 5.1

The identified second-order themes

Second-order themes
1. Resilience (3)
2. Internal Locus of Control (6)
3. Emotional Intelligence (7)
4. Self-Efficacy (4)
5. Agreeableness (9)
6. Calling (9)
7. Altruism (13)

Table 5.1 (Continued)

The identified second-order themes

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8. Openness to Experience (8)

9. Conscientiousness (9)

10. Fluid Intelligence (6)

11. Adaptable (5)

12. Knowledge Sharing (4)

13. Neuroticism (4)

The first component of analysing the data was to truly understand the personal constructs that are accompanied with interpreted frameworks that the subject matter experts use to understand medical practitioner competency potential. Thereafter, the themes were defined and interpreted as second-order themes which are considered the latent person characteristics that constitute medical practitioner competency potential. Furthermore, the researcher conducted a thorough literature investigation and consequently deducted thirteen competency potential constructs.

The next component of data analysis is to determine whether the twelve competency potential constructs that were identified in the literature study as well as the qualitative analysis should represent the multi-dimensional medical practitioner competency potential construct. The literature study included a construct only if it was possible to theorise from current literature that it would justify potential for the individual to develop the required medical practitioner competencies. It is deemed relevant to mention that the researcher did not explicitly set out to argue each individual relationship between the medical practitioner competency potential and competency latent variables. This is because the qualitative data gathering process focused primarily on eliciting competency potential constructs, and not necessarily the relationships between competency potential and competence. However, participants did identify directional patterns and relationships between the constructs without being explicitly instructed to do so. These directional patterns were consequently linked and portrayed in the modified Partial Medical Practitioner Competency Model (Figure 5.1).

5.2 Interpretation and Sense-making of Themes

The following section depicts the interpretation of the researcher on the thirteen competency potential constructs that emerged from the qualitative data collection. The interpretations and findings were corroborated by once again looking at current literature for confirmation. Lastly, a definition for each competency potential construct was subsequently developed and presented.

5.2.1 Resilience

P1, P2 and P4 emphasised the importance of resilience in order to be effective in the South African public health sector. Participants explained that a resilient person is someone who is always willing to try as well as maintaining personal resources such as positive coping strategies outside the work environment.

Participants suggested that a resilient individual is someone who maintains hope and looks for new perspective in challenging circumstances. Such an individual is always hopeful and willing to take a fresh outlook no matter how difficult or impossible the circumstances may seem. This is argued to allow the medical practitioner to remain strong in the face of adversity. Schabracq, Winnubst and Cooper (2003) confirm that resilient individuals are optimistic and believe that everything will work out for the best. When medical practitioners are practicing and a number of setbacks occur, it is vital that they are able to remain hopeful and keep perspective in order to continue patient care.

The qualitative component of this study also revealed that positive coping strategies are a key component for the medical practitioner to remain resilient. P1 explained that resilient medical practitioners lead extraordinary lives driven by balance, such as being involved with their family, church and practicing hobbies. This inner drive for balance in life has given them the capability to deal with the enormous pressures they face in their work environment. Windle (2011, p.12) defines resilience as "assets and resources within the individual, their life and environment that facilitates the capacity for adaptation and 'bouncing back' in the face of adversity". It was suggested by P2 that if a medical practitioner develops negative coping strategies such as addiction and absenteeism, it leads to the inability to deliver patient care and maintain positive interpersonal relationships.

Therefore, the resilience medical practitioner competency construct is adapted as stated in Chapter 2 and may be described as:

> The ability to maintain a positive attitude and the commitment to find different solutions despite adverse circumstances. The ability to cultivate positive coping strategies to deal with the challenges within the work environment.

In Chapter 2 it was argued that a medical practitioner should be resilient in order to cope with pressure. Howe, Smajdor and Stöckl (2012) argue that medical practitioners are required to endure heavy exertion and high levels of responsibility in a continuously changing environment due to fluctuating patients, staff and requirements. If medical practitioners are resilient they will be able to sustain hope and look for opportunities in the fluctuating circumstances around them which suggest to enable them to cope with the work strain they experience.

5.2.2 Emotional Stability (Neuroticism)

P1, P2, P5 and P7 alluded to the importance of a medical practitioner in the public health sector to be emotionally stable and have low levels of the neuroticism trait. Such an individual was described by participants as being emotionally stable, has mature interactions with others and regulates emotions despite environmental strain. Taylor (2004) defines neuroticism as an individual's emotional stability and the general propensity to feel negative emotions in response to environmental factors.

Schneider et al. (2014, p.2) report that "high levels of neuroticism were linked to lower performance across various domains including information processing, pattern analysis and memory and therefore may influence the way medical practitioners deal with uncertainty".

The public health sector is a volatile and unpredictable work environment. At any moment circumstances can change and the medical practitioner is usually caught in the middle. This is bound to be emotionally and physically challenging for the medical practitioner. In such an instance, participants considered it vital for the medical practitioner to be in control of their behaviour and not be emotionally unstable. Participant 5 described a medical practitioner who regulates their emotions as someone who has "the ability to manipulate their internal reaction". They have a control mechanism, a filter, the ability to pause and be mindful before they react to their environment. They don't react, they respond to their environment". This consideration can assist the medical practitioner to practice more effective medical procedures and consequently treats patients more effectively. Byrne, Silasi-Mansat and Worthy (2015) established that previous research conducted with relation to performance pressure and distraction theory, high levels of neuroticism were the highest contributing personality trait to impact decision-making effectiveness under pressurised circumstances.

Taking the above mentioned into account, emotional stability can be defined as:

> An individual's emotional stability and the general propensity to regulate emotions despite strain from environmental factors.

In Chapter 2 it was argued that a medical practitioner should be emotionally stable in order to work with people. Taylor (2004, p.68) describes an individual who is emotionally unstable as someone who has the "tendency to upset easily, feelings of anger or bitterness and be emotionally instable". This is still considered a relevant argument, as it was emphasised by Participant 1 that a medical practitioner who cannot regulate his emotions would "come down on everybody below him and blaming them and they must go and sort it out and he will go and report them". It was also argued that an emotionally stable medical practitioner would have a higher probability to cope with pressure effectively. Byrne et al. (2015) established that individuals who experience high levels of neuroticism has a higher propensity to collapse under pressure due to the toll of strain on their cognitive resources. This argument is still considered valid, as Participant 2 described an individual who cannot regulate their emotions as someone who "is more likely to be overwhelmed and over-react and show aggression and other adverse reactions. Not being able to cope with the situation". Therefore, in order to cope with the pressures of the public health sector, it is argued that a medical practitioner should be emotionally stable.

5.2.3 Internal Locus of Control

Internal locus of control was considered an important person characteristic for P1, P5, P9 and P10. According to the subject matter experts, the prominent description would be an individual who can take control of their environment and change the circumstances for the better as well as take accountability for their decisions. Participant 1 (2017) described it as follow: "And they make a plan. If there is not something they will build something out of wood to do it." This implies that an individual with an internal locus of control has the belief that they are actively involved in their environment. Kormanik and Rocco (2009, p.467) argue that "reactions to unpleasant stimuli are shaped by the individual's perceptions of the stimuli and by the individual's perceptions of the ability to cope with the stimuli".

Respondents also associated a positive attitude as an individual with an internal locus of control. Despite a chaotic environment with numerous challenges, an individual with this person characteristic has the ability to remain optimistic in order to allow them to take control of the situation. Scheier and Carver (1985) report a strong relationship between optimism and internal locus of control. Furthermore, Lefcourt (1992) accounts on a capital of evidence linking internal locus of control to effective coping styles and that internal locus of control was one of the rare variables to reliably moderate the relationship between stress management and pressurised environments. Taking the pressurised environment into account within which a medical practitioner is forced to operate, it is imperative that the individual has an internal locus of control in order to remain positive and take control of the situation.

Participants alluded to the importance for the medical practitioner to take accountability for their decisions and outputs of work as well as to solve a problem. According to Frink and Ferris (1998), an accountable individual is willing to answer for their decisions and actions. If an individual is not accountable, they will endeavour in an excuse-making process. Basgall and Snyder (1988, p.659) state that "when faced with a substandard performance (and, hence, a threat to self-esteem), the actor will attempt by means of an excuse to weaken the informational link that connects him or her with the bad performance and to construct a link between that performance and some other person, event, or stimulus". This implies that an individual with an external locus of control will apply the process of excuse-making, whereas an individual with an internal locus of control will be willing to answer to their decisions and actions. In the qualitative sessions, participants often accentuated the importance of medical practitioners who can take accountability for a problem or a treatment, as opposed to medical practitioners who blame others or the system for their own mistakes. This creates a dysfunctional work environment and challenges effective team functioning.

Therefore, the definition of internal locus of control as stated in Chapter 2 is slightly re-adjusted:

> The individual's belief of active involvement and ability to control and manage what happens to him/her in their environment, as well as taking accountability for decisions and actions.

Chapter 2 suggested that a medical practitioner with an internal locus of control would have the competency potential to be able to work with people, be competent at effective decision making as well as cope with pressure. The above mentioned are still considered relevant arguments as an internal locus of control will enable the medical practitioner to maintain a level of optimism towards the situation. Kahn and Byosiere (1992) considers internal locus of control as a role player in job stress because individuals with an external locus of control will more likely struggle to cope with job stress and consequently the opposite is true for individuals with an internal locus of control. Furthermore, if an individual has an internal locus of control, it is suggested that he or she will take accountability for their actions and responsibilities and not blame others or circumstances. This is suggested to promote the success of working with people, as blaming others could lead to dysfunctional relationships. It is vital that the medical practitioner has the ability to make the correct decision with the information and time to the practitioner's disposal as a patient's life can depend on it. Newman, Brown and Rivers (1983) report that individuals with a high internal locus of control are more comfortable to receive recommendations when they were in the decision-making position. Therefore, medical practitioners should have an internal locus of control to take control of their environment in order to make effective decisions despite the challenging circumstances they are faced with.

5.2.4 Emotional Intelligence

Emotional intelligence was considered an important competency potential construct by P1, P2, P3, P4, P5, P6, P7 and P8 as the role of a medical practitioner requires constant interaction with patients and colleagues. The participants explained that a person with a high emotional intelligence is someone who fosters equal relationships, is sensitive to emotional cues of others, empathetic and regulates their emotions.

Participants suggested that an emotionally intelligent individual engages in a partnership with the patient because he or she considers the patient as an equal. This enables a consensus around the chosen method of treatment instead of a hierarchal, top-down treatment method which is argued to make the treatment more effective due to the consensus-based nature of the treatment. Participant 4 described a medical practitioner that "does not treat patients as if they are people, there is no personal connection and he did not work with them in a respectable manner."

Furthermore, Participant 7 considered it important for a medical practitioner to be sensitive towards people's emotional cues as it has an effect on the patient's healing and emotions. Cherry, et al. (2013) report that the ability of medical practitioners to pick up patient's insinuations of emotional distress is vital for the patients' health, well-being, recovery and the provision of high-quality medical care. The participant also suggested that the medical practitioner could apply this in a team environment, where it is important to be able to read the team member's emotions and non-verbal signalling.

A strong component of emotional intelligence that came forward in the sessions was the degree to which the medical practitioner was able to have stable and mature interactions with others where emotions are regulated despite environmental strain. Quick and Nelson (2013, p.735) define emotional intelligence as "the ability to recognise and manage emotion in oneself and in others" and consists of the following abilities: the ability to perceive, understand, and facilitate emotion as well as emotional regulation". It is vital for a medical practitioner to do introspection and respond to the environment accordingly to secure stable relationships and interactions despite a volatile work environment.

The last component of emotional intelligence that was evident in the sessions is the degree to which a medical practitioner is empathetic towards a patient. Participants valued a medical practitioner who develops an empathetic understanding for the patient and attempts to truly understand the view point of the patient. Petrides and Furnham (2000) argue that an emotionally intelligent individual is empathetic and hopeful, whereas Keen (2007) argues that an empathetic person can recognise and understand the cause of another's feelings, as well as participate in their emotional experience.

Taking the above mentioned into account, the definition of emotional intelligence will be altered in the following manner:

> The ability to identify and effectively manage emotion in oneself and in others and builds equal relationships with those they engage in.

Chapter 2 argued that an individual with a high emotional intelligence will be able to communicate effectively, practice patient centeredness and be competent in working with people. The above mentioned relationships are still considered relevant as the themes that emerged from the qualitative sessions allows the practitioner to communicate effectively being sensitive to emotional cues and regulate emotions, to be patient centred by fostering equal relationships and being empathetic as well as being effective at working with people by incorporating all four themes.

5.2.5 Self-Efficacy

Participant 5, 6, 7 and 8 considered self-efficacy as an important competency potential construct in order to achieve medical practitioner competence. Participants explained that an individual with high self-efficacy is someone who has a reasonable level of self-awareness about their competence, as well as possessing the self-confidence to apply it. P8 corroborated that if a medical practitioner is not self-aware of their level of competence, it could have fatal consequences for patients. Furthermore, Ammentorp, Sabroe, Kofoed and Mainz (2007, p.271) observe that "health professionals who have adequate skills and reasonable confidence in their own abilities are more likely to correctly assess and thereby better respond to patients' concerns".

Participants revealed that "knowing what you know, and knowing what you don't know, is important" (Participant 6, 2017). Furthermore, literature suggests that individuals should have an understanding and self-awareness of their own abilities and thought processes in order to further develop and improve skills (Puzziferro, 2008). It is therefore the medical practitioner's duty to cultivate an accurate portrayal of his or her abilities in order to understand the extent of their skills and developmental needs. Stewart et al. (2003) suggest that training courses should foster introspection and self-awareness in order to promote self-correction of medical trainees.

The other component of self-efficacy that emerged from the sessions was the importance for medical practitioners to maintain a reasonable level of self-confidence. Schunk (1991) reports that self-confidence runs parallel with self-efficacy and when an individual is self-confident it can be assumed they have a high level of self-efficacy. Participant 5 (2017) stated that "it comes down to the ability to carry the responsibility and not to buckle under it and to know that you can do it". When a medical practitioner is faced with a situation where a patient needs immediate care, the medical practitioner should have the confidence that they will be able to meet that responsibility.

Therefore, the definition given for self-efficacy in Chapter 2 will be altered marginally:

> An individual's self-awareness of their aptitude and the self-confidence to perform tasks and accomplish goals.

In Chapter 2 it was hypothesised that an individual who has a high level of self-efficacy would have the competency potential to develop the lifelong learning competency. It was also argued that an individual with high self-efficacy would have the competency potential to develop effective decision-making. The reverse was also hypothesised; that an individual who has developed the effective decision-making competency would have a higher level of self-efficacy. All three the above mentioned hypotheses are considered relevant, as a person with high self-efficacy would have the self-awareness and confidence to make effective decisions, which would consequently lead to higher self-efficacy.

5.2.6 Agreeableness

P1, P3, P5, P6, P7, P8, P9 and P10 mentioned agreeableness as an important competency potential construct in order to develop medical practitioner competence. In describing agreeableness participants alluded to being humble towards others, trusted by patients and colleagues as well as being a team player.

Participants explained that it is important for a medical practitioner to have a humble demeanour. Participant 1 stated that the medical practitioner frequently works with dysfunctional communities and families and by being humble and non-judgemental the medical practitioner will be more effective than just treating the patient's illness. Peeters, Rutte, van Tuijl and Reymen (2006, p.190) report that "highly agreeable persons display behaviours such as being courteous, flexible, trusting, good-natured, forgiving, soft-hearted, and tolerant". Taylor (2004) also considers being humble and modest as an important component of agreeableness. Participant 5 conveyed that many medical practitioners believe they "are god's gift to man", which inhibits professional as well as patient relationships due to the distance they create between themselves and others. This inhibits the transfer of knowledge, building support networks and building relationships.

Trustworthiness is another component of agreeableness that participants regard important. Individuals who are considered agreeable have been argued to be sociable and trustworthy and able to maintain trust in relationships (Digman, 1990; McCrae & Costa, 1989; Zellars, Perrewé, & Hochwarter, 2000). Participants considered it important that the medical practitioner respects the doctor-patient relationship and confidentiality of the patient. Furthermore, the importance was highlighted by Participant 9 that a medical practitioner should be trusted by their colleagues to properly look after their patients as they would have done themselves. Borges and Savickas (2002)

agree that medical practitioners who is trusted by a diverse range of patient's aids the recovery process of patients.

The last component participants considered important is for the medical practitioner to be a team player. It was stated that a medical practitioner should enhance collaboration, respect other member's contribution, value team relationships more than tasks and support individual team members with their responsibilities. Participant 1 said the following: "Medicine and health is a team sport, which is unfortunately primarily nowadays only played by individuals". Literature reports that agreeable individuals will make an effort to enhance team cooperation, are motivated to function in positive social situations (Bell, 2007), will strive to preserve harmony, minimise competition within a team (Graziano, Hair, & Finch, 1997) and cooperate and collaborate with other team members (McCrae & Costa, 1989). In the public health sector it is vital that colleagues function as a team and collaborate in order to serve the vast amount of patients that requires their attention. Therefore, it is important that medical practitioners can not only function within a team environment, but also contribute to the improvement of team functioning.

The definition for agreeableness will be modified in the following manner:

> The tendency to have a trustworthy character, has a humble and pleasant demeanour and which contributes to a constructive team environment.

In Chapter 2 it was argued that an agreeable individual is more likely to develop the competence to work with people and to be patient centred, as well as achieve the outcome of being trusted by others. The above mentioned is still considered relevant as it is believed that if an individual is humble they will be able to place the patient at the centre of the consultation. If an individual is considered trustworthy by patients and colleagues, they will inherently gain other's trust.

It is suggested that if the medical practitioner is considered an agreeable person, they will be willing to share knowledge with others. Literature suggests that an agreeable person shares knowledge more willingly, because individuals who have the agreeableness personality factor is sympathetic and eager to help others and expect the same in return (Costa & McCrae, 1992; Mooradian, Renzl & Matzler, 2006).

5.2.7 Calling

P1, P3, P4, P5, P8, P9 and P10 made a reference to the importance for a medical practitioner to have a calling to work in the public sector. Participants conveyed that a medical practitioner should be driven to bring change to other's lives as well as the communities which they serve. Participants mentioned that a medical practitioner who has a sense of calling, cannot separate their identity from

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their occupation. Galles and Lenz (2013) reveals that an individual's identity and career thoughts can lead to develop a calling for a specific career. Furthermore, Dobrow (2004) argues that when someone adopts their occupation as an inseparable part of who they are, it is their calling.

Participants revealed that a medical practitioner who has a calling to work in the public health sector are driven to make a change, whether it be in people's lives, the community they work in or the public health system itself. Participant 8 mentioned that "I suppose it is somebody who is here to make a difference and believes that it is possible to make a difference. And that things can get better, and that their role in the team is to do more than just get through the day". Participant 10 called it a "sense of activism", to fight for people's quality care because they cannot do it themselves. Therefore, it is considered important that a medical practitioner in the public health sector should be driven to make a change, no matter how small, to serve the people of the public health sector.

In six of the qualitative interviews it came forward that it is considered important for a medical practitioner to have a sense of calling for their occupation, specifically for the public health sector. This entails being willing to go above and beyond for the patient, as well as not only caring for the patient on a biomedical level, but being interested in their bio-psychosocial wellbeing as well. McGill (1998) argues that only when the medical practitioner displays compassion, empathy and responsiveness to a patient's needs and vulnerabilities, will the true purpose of the practitioner be accomplished; which is to heal the patient not only physically but look after the patient's general wellbeing. Jager, Michael, Tutty, Audiey and Kao (2017) define calling as committing one's life to their occupation which they find meaningful and has prosocial tendencies.

However, it is considered relevant to mention that practitioners' sense of calling may be dampened due to the challenging work environment the public health sector offers. Numerous medical practitioners are prone to experience burnout during their career due to the demands of their work environment. Jager et al. (2017) argue that medical practitioners who experience burnout are less likely to consider medicine a calling and this might have consequences for themselves and their patients. Therefore, it is suggested to investigate this interaction in future research, but for the sake of this study, the medical practitioner's calling is characterised as a competency potential construct.

Considering the above mentioned discussion, calling will be defined as follows:

> The internal appeal towards an occupation due to the desire to make a difference and consequently the occupation is experienced as intrinsically pleasurable and meaningful and is deemed an important part of an individual's identity.

It was argued in Chapter 2 that a medical practitioner who considers their job as a calling would have the competency potential to be patient centred and practice health advocacy. If medical practitioners

consider their occupations as a calling it is firstly argued that they will practice patient centeredness to truly make a difference in their patient's lives as it is at the heart of practicing medicine. Secondly, it is suggested health advocacy will be prioritised as they would be driven to make a difference not only to their patients' lives, but also the communities and populations which they serve.

5.2.8 Altruism

P1, P2, P3, P4, P5, P8 and P9 considered it important for a medical practitioner in the public health sector to have altruistic motives. De Waal (2008) defines altruism as the response to another's pain, need or distress and is classified as a motivational concept (the motivation to increase another's welfare). In describing altruism, participants mentioned that the medical practitioner should be community orientated, altruistic, truly care for others and lastly be willing to selflessly serve others.

The first component of altruism that came forward is that it is important for the medical practitioner to have a drive to serve and improve the community's wellbeing in which they work. Participant 1 gave the example of a medical practitioner who taught himself to do lens transplants and is now flying a plane and landing in the rural areas in Swaziland to do 20 to 30 transplants a day. This is an example of a medical practitioner who is not only improving the health of those who come to a clinic for medical attention, but is driven to improve the health of rural areas and communities. Fleming (2002, p.1398) maintain that "a love of one's work and patients causes such volunteering. Such is the way of altruism".

Participants indicated the importance of the motivation to practice medicine to improve the health and lives of others, having pure altruistic motives. At some stage another medical practitioner told Participant 2 that "I didn't study medicine to help people, I studied it because it was interesting and I wanted to learn more about scientific things". To make a statement like this is considered a tragedy for a medical practitioner who practices in the public health sector, as it is vital that the medical practitioner is driven to help people, despite an interest in the science behind practicing medicine. Batson and Powell (2003) advocate that altruism should not only be motivated due to societal expectations. It must be portrayed because the individual has internalised altruistic motivation as a personal norm.

Participants referred to the importance of the medical practitioner to sincerely care for people and to not only consider patients as an individual with an illness, but to see the individual in his or her totality. Participant 1 mentioned that the first two (practitioners) will also be interested in the patient's job, their exercise routine, their weight, their family relationships, their marriage, their work circumstances, how they are coping with work, and their income. Essentially it is important for the

medical practitioner to be authentic and have an honest interest in the holistic wellbeing and health of the patient.

The last component of altruism that emerged from the interviews was the selfless service of people that can be linked to altruism. Jones (2002, p.624) argues that altruism is "the performance of cooperative unselfish acts beneficial to others" and can be considered the level to which the medical practitioner does volunteer work by walking the extra mile for patients. Participants mentioned that a medical practitioner should be willing to serve people beyond what is expected despite personal discomfort or sacrifice. Fleming (2002) and Jones (2002) describe altruistic behaviour in a medical environment as "going the extra mile for patients". Participants argued the importance of the medical practitioner to be willing to stay later to help the team finish the clinic, or to come into work on a Saturday to see how the patient is doing. Therefore, it is important for the medical practitioner to be willing to place his or her needs second and make sacrifices for the sake of the patient or the team.

Therefore, the definition or altruism stated in Chapter 2 will be altered in the following manner:

> The motivation to care for others and their communities and display unselfish acts of service that is beneficial to others.

Chapter 2 suggested that an individual with altruistic motivations is more likely to consider medicine as a calling as the nature of the occupation requires caring for people and serving others to improve their health and circumstances. McGaghie et al. (2002) insist that altruism originates from an individual's compassionate core that a crisis is shouting for an altruistic reply. Furthermore, Chapter 2 suggested that there is an interaction effect between altruism and resources as it is argued that a medical practitioner will be able to consider their occupation a calling if the required resources are available to practice medicine in order to prevent burnout and disillusionment with the public health sector. Lastly, it was suggested that time in practice will influence the degree of altruistic motivations the medical practitioner has, due to the fact that the longer the medical practitioner practices in the public health sector, the more likely it could be that they become emotionally disengaged from patients. The above mentioned relationships are still considered valid.

5.2.9 Achievement Motivation

The competency potential latent variable achievement motivation did not emerge from the qualitative sessions, however, it is still deemed a relevant construct to include in the Partial Medical Practitioner Competency Model as it is grounded in literature and a strong argument for its inclusion in Chapter 2.

Nicholls (1984) defines achievement motivation as behaviour acquiring or displaying high ability due to the desire of success and the avoidance of failure. It is suggested that medical practitioners have

the same achievement motivation to show their ability in order to acquire the relevant medical practitioner competencies. Nicholls (1984) further argues that achievement motivation can be distinguished from other motivational factors in that it drives individuals to become competent. If a medical practitioner has the achievement motivation trait their drive to be successful is argued to enhance the probability that they will acquire the necessary medical practitioner competencies in order to achieve the relevant outcomes.

The medical practitioner competency potential construct of achievement motivation is therefore defined as:

> The individual's drive to become competent and utilise the obtained competence to achieve success and avoid failure.

In Chapter 2 it was suggested that a medical practitioner who has the achievement motivation personality trait will be more likely to develop the competency of problem solving. French (1958, p.309) endorses that "the obtained data reported that ability level is positively related to problem-solving performance among individuals with high achievement motivation and unrelated among individuals whose achievement motivation was low". Therefore, it is still argued that a medical practitioner who has high achievement motivation is more likely to develop the competency of problem solving due to the drive to utilise their ability as best they can in order to obtain success.

5.2.10 Openness to Experience

Participants 1, 4, 5, 8, 9 and 10 referred to the importance of a medical practitioner to have the competency potential construct of openness to experience. Furthermore, participants emphasised that the practitioner should have a willingness to learn, as well as an experiential approach to learning.

It was emphasised that it is vital for the medical practitioner to have the self-drive to further explore in the medical field despite additional compensation. There should be an inherent and independent drive to learn new medical advances. Furthermore, the qualitative sessions revealed that medical practitioners should rather see their shortcomings as an opportunity to learn. Cattell (1965) reports that an individual who is considered to have high openness to experience can be described as someone with an 'inquiring mind'. When a person is open to new experiences, he or she is constantly seeking opportunity to alter pre-existing understanding of the world around them. Participant 9 argued that a medical practitioner should be willing to do an hour's reading on a specific topic in the evening, or learn a procedure to be able to perform lens transplants, as Practitioner 1 mentioned. Medical practitioners are constantly faced with new scenarios and illnesses and should therefore be willing to learn and engage instead of disengaging from the situation when it is not familiar.

Another component that participants considered relevant is that a medical practitioner should have an experiential approach to learning. This was described by Participant 5 as having a hands on, practical approach to learning. Taylor (2004, p.68) defines openness to experience as "the extent to which people are willing to experience new or different things and are curious about themselves and the world". It is suggested that in a situation where a medical practitioner is not familiar with the illness or procedure, he or she will not only gain academic knowledge, but ensure to master it by practically applying this knowledge in order to master it.

Taking the above mentioned into account, openness to experience can be defined as:

> Having a curiosity and willingness to constantly learn and change one's frame of reference with regards to intellectual and social understanding; a willingness to experience new things.

Lastly, in Chapter 2 it was suggested that a medical practitioner who is open to experience is more likely to develop the competency of lifelong learning. Literature suggests that individuals who have a high prevalence of openness to experience are considered lifelong learners (Bath & Smith, 2009; Barrick & Mount, 1991; Blickle, 1996). The above mentioned is still considered relevant, as it is suggested that if a medical practitioner has an inquiring mind, he or she is more likely to always be inquisitive and consequently commit to learning and changing their frame of reference.

5.2.11 Conscientiousness

P2, P5, P7, P8, and P10 alluded to the importance of a medical practitioner to be conscientious in order to be effective in the public health sector in South Africa. It was highlighted that the medical practitioner must maintain a consistent work standard, structure their work environment, think sequentially and be a reliable colleague.

Participants revealed the importance of the consistency to which the medical practitioner delivers patient care. It was considered important for the medical practitioner to prioritise patient care above other work demands and to take ownership of the patient's improvement by doing thorough and consistent investigation. Taylor (2004) describes a conscientious individual as someone who is self-disciplined and dutiful. They have the ability to commit to a task through to completion, despite discomfort. Despite the fact that the public health sector is argued to be a challenging work environment, it is considered important that a medical practitioner should deliver consistent patient care to ensure the improvement of patient health.

Another important component that emerged from the qualitative sessions was the importance for the medical practitioner to bring structure to their work environment by planning and organising. The public health sector in South Africa is known for its unpredictability and fluctuating resources.

Therefore participants highlighted that it is vital for the medical practitioner to plan and organise in such a manner that they are in control and that the workload is manageable. Participant 5 highlighted that it is having the ability to take chaos and put it into compartments which makes the workload and circumstances more manageable and Participant 7 emphasised the importance of planning the sequence in which tasks are executed in order to be more efficient. If the medical practitioner is able to bring structure to a chaotic and unpredictable work environment, it is suggested that he or she will be able to prioritise and deliver patient care more efficiently than a medical practitioner who does not structure their work environment.

The last component of conscientiousness that was identified was the importance of the medical practitioner to be a reliable colleague. Participant 9 emphasised the importance that colleagues should know that they will deliver work of a high standard and be available when expected. Furthermore, it was alluded to that the practitioner should have a strong sense of duty and punctuality. Taylor (2004, p68) argues that dutifulness is an important element of conscientiousness and describes it as a person who "sticks to principles, fulfils moral obligations and is reliable and dependable". The public health sector is notorious for shortage of staff and resources. If a staff member, specifically a medical practitioner, is unreliable the work load would be even more difficult to manage. Furthermore, if the medical practitioner's patient care is not up to standard, it would imply more work for his or her colleagues as they would have to check on the practitioner's work. Thus, the reliability of a medical practitioner is considered a vital person characteristic.

The definition for conscientiousness that was given in Chapter 2 is altered in the following manner:

> The tendency to be consistent in terms of dedication, effectiveness and efficiency and to keep one's environment organised.

In Chapter 2 it was argued that a conscientious individual will have a higher competency potential to become a lifelong learner and be competent at information gathering. The above mentioned arguments are still considered valid based on the themes that emerged from the qualitative sessions. To be able to develop expertise and medical professionalism on a continual basis requires persistence and discipline to continuously improve one's professional development. Simmering, Colquitt, Noe and Porter (2003) investigated the positive relationship between a need for development and conscientious individuals. Furthermore, Taylor (2004) suggests that conscientious individuals bring structure and order to their environment which allows them to understand their environment better, which allows them to gather information more effectively.

5.2.12 Fluid Intelligence

The competency potential person characteristic of fluid intelligence was alluded to by P1, P2, P5, P6 and P8. It was highlighted that a medical practitioner should be innovative and have realistic expectations of the possibilities and opportunities in the public health sector in South Africa. Cattel (1963, p.2) defines fluid intelligence as "adaptation to novel situations, where crystallised skills are of no particular advantage".

The prominent component of fluid intelligence that emerged from the qualitative sessions is the importance for the medical practitioner to apply creative problem solving by thinking of novel and unconventional solutions and having a willingness to try new strategies to find a solution, despite the possibility of failure. Participant 1 explained it as follows: "The first two will make anything work. If the incubator is broken and there is no florescent bulb, they will go to the disco in town and they will get a fluorescent light. They won't wait until the pharmacist or the florescent light turns up nine months later". Silvia and Beaty (2012) argue that individuals with fluid intelligence has more creative thought processes and Squalli and Wilson (2014) suggest that intelligence leads to more innovation and creativity at the collective level. A medical practitioner will be faced with unpredictable circumstances and problems. Therefore, it is important that the medical practitioner can be innovative and solve problems by sometimes utilising unconventional resources to ensure patients receive the care they need.

The degree to which the medical practitioner applies sequential problem solving was highlighted by the participants. An integrated, systematical approach to problem-solving and analysis was regarded an important person characteristic to solve the complex and challenging problems medical practitioners often face. There are numerous factors that has to be taken into account when solving a problem or diagnosing an illness and the answer is not always clear. Multiple symptoms could be misleading and consequently the medical practitioner should apply a sequential thinking approach in order to fully understand all the details of the problem. Benet-Martinez and John (1998) describe a conscientious individual as someone who has the perseverance to continue until a goal is achieved or a task completed and persists systematically and efficiently despite of difficulty. Therefore, a medical practitioner in the public health sector in South Africa should apply effective problem-solving when approaching the complexities of their work environment.

The medical practitioner competency potential construct of fluid intelligence is therefore defined as:

> The ability to reason and to solve new problems in an innovative manner, independently of previously acquired knowledge.

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Chapter 2 suggested that a medical practitioner who has a high level of fluid intelligence will be more open to experience. This is still considered a relevant argument, as it is argued that a fluid intelligent individual would be more inclined to have a curious mind and seek stimulation. Furthermore, from the qualitative sessions a new relationship emerged. Participants introduced the relationship between the competency potential construct of fluid intelligence and the competency problem-solving. It was suggested that a medical practitioner with a high level of fluid intelligence would have the ability to successfully solve novel and complex problems without any prior experience or knowledge of the specific situation. Raven, Raven and Court (1998, p.4) corroborate the above mentioned by stating that fluid intelligence allows an individual to develop insights and establish meaning from uncertainty; do further investigation than just taking the situation at face value and forming constructs to solve complex problems with several interdependent variables. In the public health sector, it is inevitable that the medical practitioner should be able to create solutions for problems that were never encountered before. It is argued that fluid intelligence will allow the medical practitioner to find solutions for complex problems that are practical and appropriate. Participant 5 mentioned that "They will build the bridge, whilst 6 will wait for someone else to build the bridge so that they can get to the other side of the river. So it is innovation, problem-solving skills, it is a mind-set, it is an approach". Pretz (2008) confirms a strong and direct correlation between problem solving, fluid intelligence and analytical style. Therefore, it is argued that an individual with the competency potential construct of fluid intelligence is more likely to be competent in problem-solving.

5.2.13 Adaptable

P2, P3, P4, P5, and P9 reported that being adaptable is a significant theme when considering medical practitioner competency potential in the public healthcare sector of South Africa. This is a new theme that emerged from the qualitative sessions and was not explored in Chapter 2 and therefore excluded from the initial Partial Medical Practitioner Competency Model (see Figure 2.7).

In Chapter 2 the public health sector was described as a work environment with resource limitations, shortage of staff, unpredictable circumstances that carries a large burden of disease. Medical practitioners are faced with environmental factors that are often out of their control which has a major impact on their ability to deliver care to patients. Despite the situational variables that influence their work environment, medical practitioners are still expected to develop the required competencies to deliver effective patient care. Therefore, it is argued that an important competency potential construct of the medical practitioner is to be an adaptable individual. Participants emphasised that the medical practitioner should be able to function within imperfect and ambiguous circumstances, and be willing to adapt and change their approach to patient care. Participant 2 (2017) stated the following "You have to be adaptive obviously. I think that in the South African context for me it is

probably not negotiable". Participants also emphasised the importance of the medical practitioner to compromise the manner in which they practice medicine. If all the resources are not available to conduct standard procedure, they must be willing to accept that circumstances are not ideal and be able to deliver care to patients who are in need thereof. Moran, Coyle, Pope, Boxall, Nancarrow and Young (2014, p.525) emphasised that there is a "need for a rural health workforce that is adaptable and equipped with the skills and knowledge to diversify service delivery models". Participant 2 explained that some medicine graduates leave Cape Town for the first time in their lives to complete their internship elsewhere. Individuals who are not adaptable struggle to adapt to their new environment and simultaneously deliver health care services. Therefore, the adaptable competency potential construct is defined in the following manner:

> The ability to respond to an unpredictable environment and inconsistent circumstances by modifying the approach to maintain deliverance of care.

It is suggested that if a medical practitioner is adaptable, he or she will be able to cope with pressure better than a medical practitioner who is not adaptable. Being adaptable allows the practitioner to remain calm when circumstances turn out unexpectedly, and change the patient care approach based on what resources are available. Furthermore, it is argued that a medical practitioner who is adaptable will be more effective in working with people in the public health sector, as they will encounter a variety of patients and colleagues from different cultures and backgrounds. Being adaptable will enable them to change their approach to people who are different from them.

5.2.14 Knowledge Sharing

P1, P4, P6 and P7 considered knowledge sharing an important person characteristic for the competency attainment of a medical practitioner in the public health sector. This is also a new theme that emerged from the qualitative sessions and was not explored in Chapter 2 and therefore excluded from the initial Partial Medical Practitioner Competency Model (see Figure 2.7).

Gibbert and Krause (2002) explain that knowledge sharing is dependent on individuals' willingness to share their acquired or generated knowledge as the knowledge is located within them. Furthermore, Bock, Zmud, Kim, and Lee (2005) lay emphasis that the degree to which knowledge sharing takes place in organisations is dependent on the knowledge sharing behaviours of individuals. Baird and Henderson (2001) state that if knowledge sharing does not occur in organisations, the knowledge gap grows which cause undesirable work outcomes due to a mismanagement of knowledge and information.

Medical practitioners all acquire and generate knowledge through their experiences and learning. The above mentioned allows them to be more competent and effective in their role. The knowledge that

has been acquired can be shared with colleagues in order to make them more effective and not to have to 're-invent the wheel'. If knowledge is shared openly between colleagues, the repetition of mistakes and loss of lives can be prevented and speed of recovery can be optimised. However, the degree to which the acquired knowledge are disclosed depends on the individual's knowledge sharing willingness and habits. In the qualitative sessions participants emphasised the importance of a medical practitioner who shares knowledge voluntarily with others and is enthusiastic and open to share what they learned. P1 described it as someone who empowers other in order to duplicate themselves and P5 mentioned that it is someone who would take on a mentor role where they teach others through compassion and acceptance of their shortcomings. Consequently, others come to them with their learning needs as they become known to be someone who voluntarily shares knowledge, but is also willing to admit to their own shortcomings. Therefore, the knowledge sharing competency potential construct is defined in the following manner:

> The inherent motivation to voluntarily share acquired knowledge with colleagues as well as bystanders due to the drive to teach and empower others.

Sharing knowledge is argued to allow the individual to have a higher competency potential to work with people. It is argued that if a medical practitioner shares information and expertise with others, it will create a positive and constructive work environment and consequently, allow the medical practitioner to build stronger interpersonal relationships and become a valued team member. Therefore, it is argued that if a medical practitioner shares knowledge, he or she will be able to work with people. It is also suggested that an individual who shares knowledge is more likely to develop the competency of health advocacy. Through knowledge sharing, a medical practitioner can influence and advance the health of individuals and communities. Participant 1 used the example of a medical practitioner who is teaching nurses in rural Swaziland to do lens transplants. This example indicates how health advocacy is performed through knowledge sharing to other individuals. Through sharing knowledge, the knowledge base of other practitioners is diversified and consequently the practice of medicine can be applied more effectively.

5.2.15 Coping with Pressure

Coping with pressure was a competency construct that was included in the initial Fourie (2015) partial Medical Practitioner Competency Model, however, the current study hypothesised two additional pathways/relationships between coping with pressure, effective decision-making and patient centeredness.

In Chapter 2 it was argued that if an individual is unable to cope with pressure it can have a hindering effect on the accuracy of the decisions an individual makes. Altuntas (2003) reports that stress may

have a negative impact on one's decision-making ability which can lead to incorrect decisions and mistakes. Participant 2 (2017) also mentioned that a medical practitioner who was unable to cope with the pressure of the environment would constantly disengage, avoid the situation or phone a more senior practitioner because they could not make the decision themselves. Therefore, it is still considered a valid argument that the competence of coping with pressure will enhance the probability for the practitioner to develop the competency of effective decision-making.

If a medical practitioner has the ability to cope with pressure, it was suggested that he or she will be more competent in patient-centeredness. It can be considered an important ability for a medical practitioner to be able to exhibit patient centeredness amidst the high pressurised work environment of the South African public health sector. If a medical practitioner cannot exhibit patient centeredness in a highly pressurised situation, it is suggested that the practitioner will not place the patient at the centre of his attention and this creates the opportunity to make the wrong assumptions about how the patient is feeling. Participant 1 described a medical practitioner who will take the time to really listen and talk to patients despite a massive workload waiting outside the door. The above mentioned is a perfect example of a medical practitioner who has developed the competency of coping with pressure and consequently can be competent at patient centeredness despite the burden of the public health sector. Therefore, it is still considered valid to argue that the competency of coping with pressure allows the medical practitioner to be patient centred.

5.3 Proposed Modified Partial South African Medical Practitioner Competency Model

Table 4.3 illustrates that 10% of the themes that were identified in the in-depth sessions were not identified and discussed in the literature review in Chapter 2. The above mentioned indicates the importance of exploring how the subject matter experts understand medical practitioner competency potential, and not only deriving this phenomenon from literature. Table 4.4 reported the second-order themes that were derived from the first-order themes in Table 2.4. Consequently, the initial partial Medical Practitioner Competency Model was adapted and modified to include research findings and insights from the qualitative sessions (see Figure 5.1).
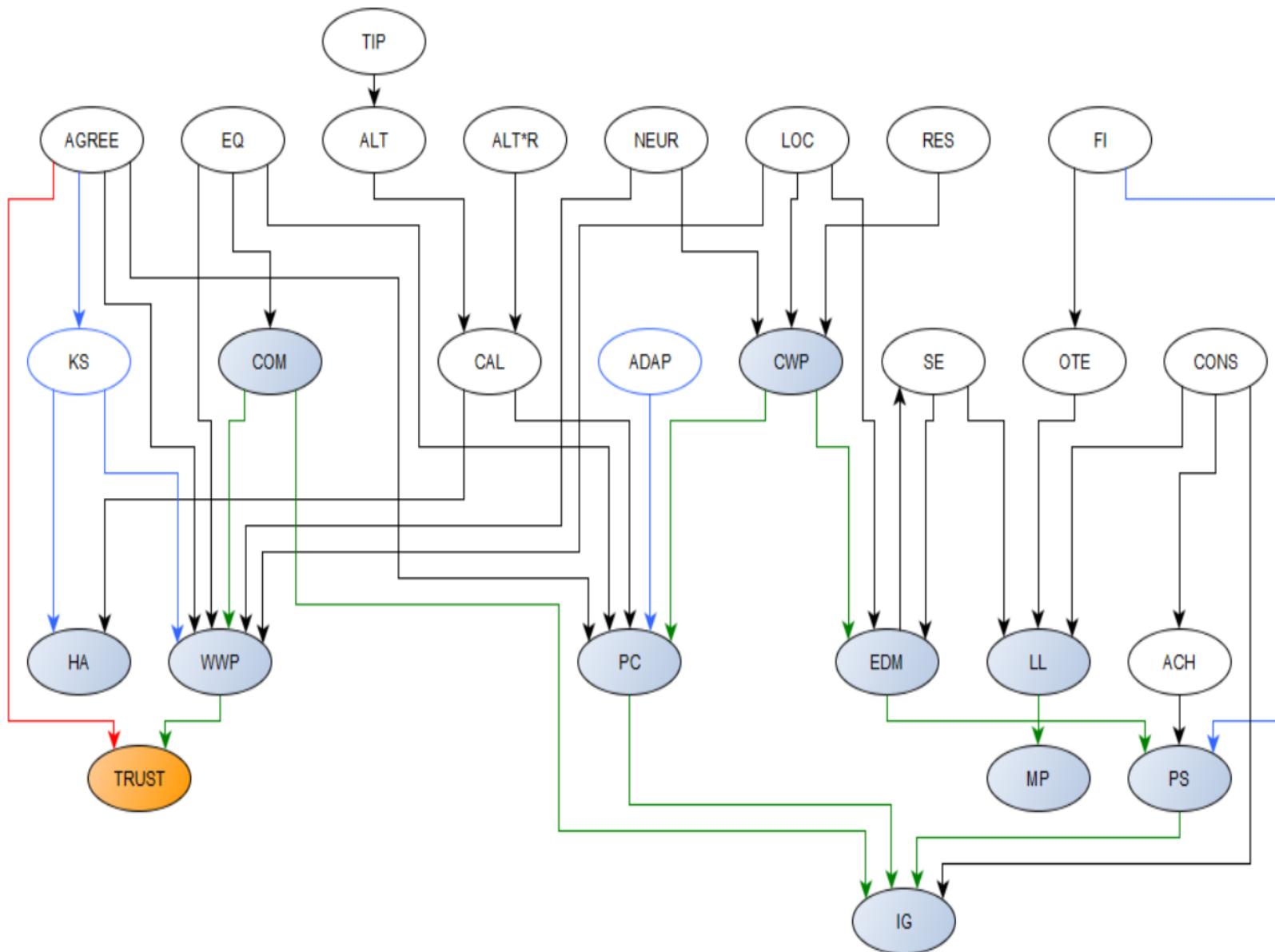
Figure 5.1: A modified proposed Partial Medical Practitioner Competency Model

COMPETENCY POTENTIAL:

ACH: Achievement Motivation

ADAP: Adaptable

AGREE: Agreeableness

ALT*R: Altruism*Resources

ALT: Altruism

CAL: Calling

CONS: Conscientiousness

EQ: Emotional Intelligence

ES: Emotional Stability (Neuroticism)

FI: Fluid intelligence

KS: Knowledge Sharing

LOC: Locus of Control

OTE: Openness to Experience

RES: Resilience

S-E: Self-efficacy

TIP: Time in Practice

COMPETENCIES:

COM: Communication

CWP: Coping with Pressure

EDM: Effective Decision-making

HA: Health Advocacy

IG: Information Gathering

LL: Lifelong Learning

MP: Medical Professionalism

PC: Patient Centeredness

PS: Patient Satisfaction

WWP: Working with People

OUTCOME:

Trust

The Partial South African Medical Practitioner Competency Model depicted in Figure 5.1 was adapted from the Medical Practitioner Competency Model portrayed in Figure 2.7. Newly identified latent variables has a blue boarder and new proposed structural paths are also indicated in blue.

Table 5.2

Summarised definitions of the person characteristics of the modified Partial Medical Practitioner Competency Model as portrayed in Figure 5.1

Definitions of Modified Person Characteristics

Achievement Motivation (Ach)

The individual's drive to become competent and utilise the obtained competence to achieve success and avoid failure.

Adaptable (Adap)

The ability to respond to an unpredictable environment and inconsistent circumstances by modifying the approach to maintain deliverance of care.

Knowledge Sharing (KS)

The inherent motivation to voluntarily share acquired knowledge with colleagues as well as bystanders due to the drive to teach and empower others.

Agreeableness (Agree)

The tendency to have a trustworthy character, has a humble and pleasant demeanour and which contributes to a constructive team environment.

Altruism (Alt)

The motivation to care for others and their communities and display unselfish acts of service that is beneficial to others.

Calling (Cal)

The internal appeal towards an occupation due to the desire to make a difference and consequently the occupation is experienced as intrinsically pleasurable and meaningful and is deemed an important part of an individual's identity.

Table 5.2 (Continued)

Summarised definitions of the person characteristics of the modified Partial Medical Practitioner

Competency Model as portrayed in Figure 5.1

Conscientiousness (Cons)

The tendency to be consistent in terms of dedication, effectiveness and efficiency and to keep one's environment organised.

Emotional Intelligence (EQ)

The ability to identify and effectively manage emotion in oneself and in others and builds equal relationships with those they engage in.

Emotional Stability (Neuroticism) (ES)

An individual's emotional stability and the general propensity to regulate emotions despite strain from environmental factors.

Fluid Intelligence (FI)

The ability to reason and to solve new problems in an innovative manner, independently of previously acquired knowledge.

Internal Locus of Control (LOC)

The individual's belief of active involvement and ability to control and manage what happens to him/her in their environment, as well as taking accountability for decisions and actions.

Openness to Experience (OTE)

Having a curiosity and willingness to constantly learn and change one's frame of reference with regards to intellectual and social understanding; a willingness to experience new things.

Resilience (Res)

The ability to maintain a positive attitude and the commitment to find different solutions despite adverse circumstances. The ability to cultivate positive coping strategies to deal with the challenges within the work environment.

Table 5.2 (Continued)

Summarised definitions of the person characteristics of the modified Partial Medical Practitioner Competency Model as portrayed in Figure 5.1

Self-efficacy (S-E)

An individual's self-awareness of their aptitude and the self-confidence to perform tasks and accomplish goals.

Chapter 6 will provide the summary of the results, the limitations of the study and the practical implications as well as recommendations for future research.

CHAPTER 6

DISCUSSION AND IMPLICATIONS

The following chapter will discuss the summary of results, discussing the limitations of the study, suggesting practical implications and signposting recommendations for future studies.

6.1 Introduction

The urgency to address the health sector's challenges in South Africa makes it essential to establish a medical workforce that can take these challenges at hand. The South African Partial Medical Practitioner Competency Model shines a light on competency potential in the South African public health sector in order to assist in the development of the essential competencies and the attainment of the required outcomes. This research study explored the person characteristics that determine/capture the competency potential of medical practitioners which leads to practitioner competence development and the achievement medical practitioner performance outcomes.

Chapter 2 investigated the literature pertaining the desired person characteristics with reference to the work environment of the South African public health sector. The desired person characteristics were related to the competencies expressed in the Partial Medical Competency Model (Fourie, 2015). Furthermore, additional pathways/relationships were suggested between medical practitioner competencies for a Partial Medical Practitioner Competency Model in addition to the competencies proposed by Fourie (2015). The following person characteristics were identified as desirable for a medical practitioner working in the South African public health sector: *resilience, neuroticism, locus of control, conscientiousness, emotional intelligence, self-efficacy, agreeableness, calling, altruism, achievement, fluid intelligence and openness to experience.* These person characteristics were utilised to elaborate the Partial Medical Practitioner Competency Model of Fourie (2015).

Chapter 3 outlined the selected methodology to explain the attempt to validate the Partial Medical Practitioner Competency Model through the utilisation of the qualitative method. The following aspects were included in Chapter 3: ethical considerations, expected results, possible limitations and threats, practical implications and recommendations for future research regarding the Partial Medical Practitioner Competency Model.

Chapter 4 presented the outcomes of the data gathering process which was achieved by sorting and discussing each interview. The researcher considered the above mentioned as the mental models as to how the participants underpin the logic of what constitutes medical practitioner competency potential. Reporting on the above mentioned entailed identifying emerging themes from the

interviews in terms of the perspective of the participants as to how they understand medical practitioner competency potential in the public health sector in South Africa. Thereafter, the themes that were identified from the interviews were compressed into second-order themes as a consolidation of the first-order themes.

Lastly, Chapter 5 discussed the second-order themes identified in Chapter 4 by arguing against or for its inclusion in the Partial South African Medical Practitioner Competency Model based on scientific literature and logical arguments. Thereafter the model was modified based on the above mentioned discussion.

6.2 Summary of Results

When reflecting on medical practitioner competency potential, the danger exists that one might believe that clinical competency potential is solely determined by mental ability. However, the current study argues that competency potential is much more than mental ability. It is argued to consist of a complex nomological network of competency potential latent variables that allows the individual a higher propensity to become competent in the South African public health sector. Unfortunately current selection procedures in tertiary medical education institutions in South Africa determines competency potential only by looking at an individual's mental- (IQ) and scholastic ability when considering their appropriateness for the public health sector. The proposed partial competency model (see Figure 5.1) reflects the current study's stance that this is not an accurate perspective on the competency potential latent variables and competencies that constitute medical practitioner performance. The partial competency model argues that additional competency potential constructs together with mental ability determines whether a medical practitioner will become competent in the public health sector in South Africa. Competency potential is a multi-dimensional construct that consists of structurally inter-related competency potential latent variables and competencies. This was made evident during the data collection sessions (RGT) where no participants considered mental ability as the sole predictor of medical practitioner competence, it was other medical practitioner person characteristics that distinguished the effective medical practitioners from less effective medical practitioners. Therefore, it is argued that mental ability is not the sole competency potential construct, but that there are additional competency potential latent variables that predict medical practitioner competence in the public health sector.

The thirteen second-order themes that emerged from the currents study offers a noteworthy understanding of the latent variables that constitute medical practitioner competency potential in the public health sector in South Africa. These constructs will now be summarised.

It is evident that resilience is a key aspect concerning medical practitioner competency potential. The medical practitioner will be faced with many challenges and difficult situations in the public health sector in South Africa. The medical practitioner must be able to function despite these challenges and maintain quality patient care.

Medical practitioners will be exposed to emotionally demanding patients and circumstances. This will be aggravated during a 30-hour shift. In such a situation, the practitioner should have the ability to regulate their emotions in order to have an effective patient-practitioner encounter and continue to function productively within a team environment. Therefore, medical practitioners should have the emotional stability trait.

To become a competent medical practitioner, it was considered important to have an internal locus of control. Medical practitioners will be exposed to circumstances which can put them in a difficult position. It is important that they should believe they can take control of the situation and influence the outcome in order to deliver the best possible patient care they can.

A massive component of being a medical practitioner in the public health sector in South Africa is to work and interact with patients and colleagues alike. It is vital that the medical practitioner is emotionally intelligent in order to effectively understand and interpret emotions in order to have success in their interactions with others.

It can be said with certainty that medical practitioners will be confronted with a wide variety of procedures. At such a point, they should have self-awareness of the limits of their capabilities, but also a high level of self-efficacy to perform the procedures that are expected of them.

The current research study revealed that it is important for a medical practitioner to have a trustworthy character and a humble and pleasant demeanour which contributes to a constructive team environment. Therefore, it is suggested that a medical practitioner should have the agreeableness personality trait.

Medical practitioners should consider their occupation in the public health sector as a calling, as it should become part of their identity to serve the public health sector. They should be driven to make a change, whether it be in people's lives, the community they work in or the public health system itself.

It is argued that a medical practitioner will work with patients and people in need who are suffering from larger societal and socio-economic challenges. Therefore, the current study suggests that a medical practitioner should have the altruistic motivation to care for others and their communities and display unselfish acts of service that is beneficial to others.

Although achievement motivation did not emerge from the qualitative sessions, it is still considered an important medical practitioner competency potential latent variable. It is argued that medical practitioners should have the drive to become competent and utilise the obtained competence to achieve success and avoid failure.

It is evident from the results that openness to experience is a key aspect concerning medical practitioner competency potential. Having a curiosity and willingness to constantly learn and change one's frame of reference with regards to intellectual and social understanding is a vital trait for a medical practitioner, as procedures and knowledge constantly change and grow.

Participants agreed that the conscientiousness personality trait is fundamental to being a successful medical practitioner. Medical practitioners in the public health sector should deliver a consistent work standard, have the ability to plan and organise effectively and be a reliable team member.

It is inevitable that a medical practitioner will encounter novel situations and a wide variety of problems and challenges. The degree to which the medical practitioner has fluid intelligence is vital as the medical practitioner should have the ability to reason and to solve new problems in an innovative manner, independently of previously acquired knowledge.

The study revealed that medical practitioners should be very adaptable by having the ability to respond to an unpredictable environment and inconsistent circumstances by modifying the approach to maintain deliverance of care. Adaptability was a new construct that emerged from the qualitative sessions.

An interesting competency potential latent variable that emerged from the interviews is knowledge sharing. Medical practitioners should have a nature where they willingly share knowledge to other colleagues or individuals in order to empower and educate others.

Additional structural paths for the coping with pressure competency was identified in Chapter 2 and corroborated in Chapter 5.

6.3 Limitations of the study

Torraco (2004) declares that researchers should be aware of the possible limitations or threats to theory building by being aware of possible advantages and disadvantages that accompanies their chosen method. The following limitations of the study were identified:

The use of convenience sampling, which is a non-probability sampling technique, is the first limitation of the study. This is due to the fact that the sampling error cannot be calculated. According to Blumberg, Cooper, and Schindler (2008), the sampling error cannot be calculated because the

assumption cannot be made that the sample of 10 medical practitioners situated in the public health sector in the Western Cape as the subject matter experts are representative of the South African population. A larger sample found through probability sampling would be able to address the above mentioned limitation. However, this limitation is momentary, as it is suggested that a follow-up quantitative study is conducted where the latent variables are operationalised and measured with statistical measurement techniques such as structural equation modelling.

The following limitation of the study relates to the demographics of the sample. Despite the fact that the participants were both male and female, it would have been ideal to have a wider variety of participants in order to have a more accurate representation of the demographics of South Africa. Despite the fact that prospective participants from a variety of race groups were invited to participate in the study, only 1 out of the 10 participants was Indian, the other 9 were white. Another limitation to consider was the qualifications of the participants. The majority of the participants (8) were specialists in different fields of specialisation, whereas the others were a medical practitioner and medical officer. Despite the above mentioned limitations, it is still argued that the specialists have had exposure to other medical practitioners in the public health sector, and can therefore report on medical practitioner competency potential.

6.4 Practical Implications

As discussed previously, the field of Industrial/Organisational Psychology has the ability to make scientific contributions to understanding the behaviours of working man.

Babbie and Mouton (2001) consider the contribution of conventional positivistic research, such as the proposed study, to substantially impact the real-life practice and conditions. This theory argues that those who should benefit from the research should participate in conducting the research itself. Even though substantial research is conducted by academics, it is fundamental to consider that it only contributes to the mass literature captured in libraries. Even though the individual or community participates in the study, it can be debated whether their participation will add to the introductory argument. Nevertheless, what should be asked is why there is a barrier between academic research and the potential it possesses for improving human resource practices as well the health sector's workforce. One explanation could be that the research does not always offer an applicable, well-motivated and industry-relevant research initiating question. The research initiating question pertaining to this study is argued to be very relevant at present for human resources as well as the public health sector in South Africa.

Bartram (2006) implies that competency models attempt to capture the domain of performance of work though establishing the personality traits, abilities and motivation that allow the individual (competency potential) to fit in a specific work environment, to develop the required competencies and achieve the desired outcomes. Bartram (2006, p.1) further declares that competency models "provides a single underlying construct framework that provides a rational, consistent and practical basis for the purpose of understanding people's behaviours at work and the likelihood of being able to succeed in certain roles and in certain environments". The Partial Medical Practitioner Competency Model attempted to determine the above mentioned aspects with specific reference to competency potential.

The proposed study offers practical utility to the health sector to enhance the medical practitioner workforce in the South African public health sector. It is suggested that the identified competency potential latent variables can be developed into psychometric batteries for a twofold purpose: first, enhance and refine the selection of medical students for medical school, as it is suggested that academic abilities is not the only predictor of success in the public health sector. Second, to identify developmental opportunities within the public health sector workforce to consequently develop workshops for exponential learning (EQ/Resilience) for the medical practitioner to not only cope, but flourish in their work environment.

The identification of the person characteristics that has the highest competency potential of medical practitioner allows human resources together with the health sector to ensure lower turnover and the well-being of medical practitioners in the South African public health sector and which in return can lead to the desired outcomes to be obtained by medical practitioners.

6.5 Recommendations for Future Research

The current study is considered exploratory in nature as it is the first of its kind to research medical practitioner competency potential in the South African public health sector, following Fourie (2015) who explored medical practitioner competency. The current study serves as a foundation for other explanatory studies to further explore and refine the research topic. It is suggested that future research should determine the statistical relationships between medical practitioner competency and medical practitioner outcomes as stipulated by the Partial Medical Practitioner Competency Model. The future research should be operationalised through a larger medical practitioner sample in order to allow for structural equation modelling to test the causal paths between the latent variables.

A selection procedure, in the form of a psychometric instrument, to determine admittance to medical school is also a recommendation for future research. This would allow the selection panel to not only

consider academic results, but also acknowledge that competency potential constitutes specific person characteristics which allow an individual to optimally function within the public health sector in South Africa. The Industrial Psychology community has a valuable contribution to make in this respect, by assisting to cultivate a workforce that can better serve our countries' medical needs.

It is proposed that the situational variables that impact the competency potential as well as the relationship between medical practitioner competencies and outcomes be investigated in future research. Situational latent variables are known to be factors in an individual's environment that affect the level of competence that is achieved. Furthermore, situational variables can be considered a main effect and/or in interaction with the competency potential latent variables (Mahembe, 2014).

A better understanding of the competency model of medical practitioners in the South African public health sector and areas of recommendations for future research can be illustrated as follows (Figure 6.1):
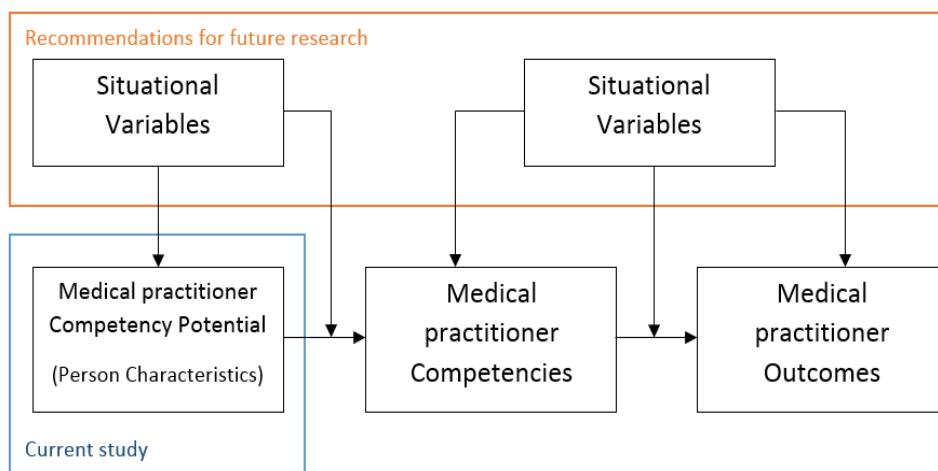

Figure 6.1 Future Research in Medical Practitioner Competence

(Mischel, 2004, p.17)

The following situational variables are recommended:

- The graduate school approach of the medical institution where the individual receives medical training with regards to (Seggie, 2012):
  - Distinguishing between courses that only values the technical aspects (biomedical approach) of the medical field as opposed to a course that values both the technical and interpersonal aspects (biopsychosocial approach) of the medical field.
  - The degree to which the curriculum teaches medical students to look after their own well-being.

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- o The degree to which students are taught to empathise with patients in order to effectively utilise the biomedical approach.
- o The degree to which faculty members are considered a role model and the influence on the development of medical practitioners (Participant 10, 2017).
- The culture and socialisation of the individual (Participant 9, 2017).
- The work environment of the public health sector in South Africa including resources such as time, staff, expertise, monetary funds, infrastructure and supplies (Rossouw, 2011, p.6).
- The ratios between medical practitioners and patients in the public health sector (Ramjee, 2013).
- The work schedule of medical practitioners and the impact thereof on work-life balance/well-being.
- The type of patients as well as the nature of treatment and illness medical practitioners in the South African public health sector faces.
- The influence of the public health sector work environment on the careers of female practitioners.

The above mentioned work environment factors can be further investigated as situational variables with reference to the Partial Medical Practitioner Competency Model.

6.6 Concluding Remarks

The current study contributes to the Industrial Psychology academic community as well as the public health care sector in South Africa by offering what is believed as valuable insights into the complex phenomenon which is medical practitioner competency potential. However, the current research study is not a means to an end in itself, but intertwines with other studies to ultimately develop and validate a South African Medical Practitioner Competency Model. It is suggested that understanding the cunning nomological logic underlying medical practitioner competency potential can enable for more effective medical school acceptance selection as well as facilitating or developing medical practitioner competency potential in order to become more competent medical practitioners.

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APPENDIX A

UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
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CONSENT TO PARTICIPATE IN RESEARCH

Title of the Research Project: The Development of a Partial South African Medical Practitioner Competency Model

Consent Form addressed to: *Medical Practitioner in South African Public Health Sector*

You are asked to participate in a research study conducted by Jani Hattingh (master's student, MComm) and Ms Michelle Visser (supervisor), from the Department of Industrial Psychology, Stellenbosch University. The results of this study will contribute to the thesis of Jani Hattingh. You were selected as a possible participant in this study due to your profession as a medical practitioner in the South African public health sector.

1. PURPOSE OF THE STUDY

The objective of this study and session is to modify and elaborate an existing theoretical model developed by Fourie (2015) with regards to medical practitioner competency potential, competencies and outcomes. The aim is therefore to elaborate on previous research in order to see how the person characteristics play a role in competency development.

2. PROCEDURES

If you volunteer to participate in this study, we would ask you to participate in repertory grid session and respond to questions as objectively and accurately as possible. The session will range between 60-90 minutes and will be conducted in a private room with the researcher and yourself. Participation in this study only requires of you to attend one session, however, a second session may be requested if further clarification on the topic is required.

3. POTENTIAL RISKS AND DISCOMFORTS

The participation in the research only has the risk of being inconvenient due to the time it will take to complete the questionnaire. The participant's identity will remain confidential.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There are no direct benefits associated with the study except for the contribution of literature with regards the work functioning of medical practitioners in South Africa.

5. PAYMENT FOR PARTICIPATION

No payment will be received for participating in the study.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

You as the participant will not be required to provide your identity or particulars in the recording of the session, unless you give permission thereto. A coding procedure will be used to establish and maintain anonymity. Your session will be combined with all the other sessions, and subsequently analysed to find common themes relating to medical practitioner performance. Information that can be identified with you will remain confidential. Only with your written permission or as required by law, will any personal information be disclosed.

Should you give information related to a very specific incident which might lead to the disclosure of any organization or person, the researcher will only report back on the general behaviour of the medical practitioner, and not disclose specific information related to the incident.

The results of this study will be published in a completed Master's thesis (note that only the integrated findings will be published and not the actual sessions). Confidentiality of all respondents will be maintained, unless otherwise agreed on in writing.

7. RECORDING

Your session will be recorded by means of an audio recorder whilst the researcher will also take notes during the session. If you agree that your session may be recorded, please give your written consent by signing this consent form. You will be afforded the opportunity to audit your contribution to the research by reviewing the transcriptions of your session if you feel the need to do so. In order to access this right, please contact the principle investigator (contact information available in section 9) should you wish to do so.

8. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions

you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

9.   IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the particular research study, please feel free to contact Jani Hattingh (084 521 7572 or 16527445@sun.ac.za) or Ms Michelle Visser (021 808 2961 or mivs@sun.ac.za).

10. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to _____ by _____ in English/Afrikaans and I am in command of this language or it was satisfactorily translated to me. I was given the opportunity to ask questions and these questions were answered to my satisfaction.

I hereby consent voluntarily to participate in this study under the stipulated conditions.

Yes / No

I have been given a copy of this form.

Yes / No

I consent to the researcher taking an audio recording of my participation (session).

Yes/No

I consent to the researcher anonymously quoting statements made by me in the thesis by referring to my identity code [e.g. participant 7].

Yes / No

I consent to the researcher quoting statements made by me in the thesis by referring to my name and surname.

Yes / No

_____

Name of Subject/Participant

_____

Name of Legal Representative (if applicable)

_____   _____

Signature of Subject/Participant or Legal Representative   Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ and/or [his/her] representative _____. *[H*e/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in English and [*no translator was used/this conversation was translated into* _____ by _____].

_____   _____

Signature of Investigator   Date

APPENDIX B

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REPERTORY GRID GUIDE

Subject matter expert (SME) information

Code number of SME _____

Race _____

Gender _____

Date _____

Hospital _____

Period of position (e.g. 1999-2017) _____

Position: SU_____

Phase 1: Introduction

Contextual meaning of medical practitioner competency potential, competencies and

situational factors

In this research study medical practitioner competency potential is defined as attributes (personality, values, interests etc.) and attainments (degrees, courses etc.) that allow for the medical practitioner to be competent in his/her role. Situational variables specifically refer to the work environment of the public health sector (specifically public hospitals) in South Africa.

Specifications

When responding to the following questions, please keep the following specifications in mind, since these will give guidance as to what type of information is sought for:

1. Answers should refer to the person characteristics (who they are) of a medical practitioner practicing in the public health sector.

2. Answers should refer to the South African public health care sector

3. The behavioural incidents which are recalled are expected to have a direct or indirect effect on one or more of the competencies that a medical practitioner is meant to have.

Phase 2: Repertory Grid

The repertory grid will be completed during the session on an excel spread sheet.
Throughout this phase, the researcher will encourage the participant to visually illustrate/draw the constructs and the relationships between them.

Elements – Medical practitioners (MP): Think of three medical practitioners, including both more and less effective performers, whom you supervised, or worked with.

Constructs: 'Describe a way in which 2 MPs are similar to each other and different from the third in terms of the way in which they are as an individual? It may be either good or bad differences'

Use laddering up and laddering down to clarify constructs.

Repeat this with other triads.

	Elements										Constructs	
No.	1	2	3	4	5	6	7	8	9	10	Why similar	Why different
1												
2												
3												

Phase 3: Concluding the session

Would you like to make any other comment that you think could be helpful to this research study?

_____

_____

_____

_____

_____

_____

_____

_____

Thank you for your time and for the willingness to contribute to this study.

If you have any questions about this session, feel free to contact Jani Hattingh (084 521 7572 or 16527445@sun.ac.za) or Ms Michelle Visser (021 808 2961 or mivs@sun.ac.za).