DEVELOPING HYPOTHESES ON THE EXTENSION AND MODIFICATION OF THE SOUTH AFRICAN MEDICAL PRACTITIONER COMPETENCY MODEL: A QUALITATIVE STUDY

by
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Declaration …

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ABSTRACT

The South African public health sector is facing numerous systemic challenges. The public health sector is responsible for the vast majority of the country's healthcare needs. However, challenges such as shortage of resources, excessive workload, limited staff and lack of infrastructure make the task of achieving quality health outcomes considerably difficult. These challenges make it difficult to achieve the desired health outcomes as medical staff struggle to perform successfully under these working conditions.

A need exists in South Africa to determine the factors that will strengthen medical practitioner performance. To achieve this, it is deemed necessary to gain a deeper understanding of the factors that influence medical practitioner performance. To improve the effectiveness of the South African medical workforce it is fundamental to garner a comprehensive understanding of the factors underlying medical practitioner performance and the relationship between these factors. As a result, a literature study was conducted where a partial medical practitioner competency model was adapted which outlined the competency potential and situational variables which influence medical practitioner performance and the interlinking relationships amongst these variables.

This research adapted a qualitative research method to enhance the understanding of the constructs above. Subject matter experts were approached to expand the researcher's understanding of medical practitioner competency potential and situational variables and verify whether there are variables which could potentially be added to the partial medical practitioner competency. The Repertory Grid Technique was used to elicit constructs from the interview sessions which help to achieve the objective above. A sample of ten medical practitioners (including specialists) was consulted for data collection.

A thematic analysis approach was adopted where thirty-seven distinct first order themes aligned to medical practitioner competency potential and situation variables were elicited. The themes were compared to the competency potential and situational latent variables which were mapped in the literature study and those which were identified in the previous studies of Fourie (2016) and Hattingh (2018). New variables were explored to determine its relevance and influence on medical practitioner performance. A proposed partial South African medical practitioner competency model was adapted which reflects hypothesised relationships between competency potential latent variables and, situational latent variables

This study serves as a contribution to the empirical understanding of medical practitioner competency potential and situational variables in the South African public health context. It is important to note that the current study is exploratory and qualitative in nature, therefore, quantitative validation of the partial medical practitioner competency model would be required in future.

OPSOMMING

Die Suid Afrikaanse publieke gesondheidsektor staar verskeie sistemiese uitdagings in die gesig. Die publieke gesondheidsektor is verantwoordelik vir die oorgrote meerderheid van die land se gesondheidsbehoeftes. Uitdagings soos die tekort aan hulpbronne, oormatige werkslading, beperkte personeel en tekort aan infrastruktuur maak die bereiking van kwaliteit gesondheidsorg-uitkomste moeilik. Hierdie uitdagings is moeilik oorkombaar, aangesien mediese personeel sukkel om te presteer onder hierdie omstandighede.

Daar is 'n behoefte in Suid Afrika om die faktore te bepaal wat mediese praktisyn prestasie sal versterk in die Suid Afrikaanse publieke gesondheidsorg sektor. Om hierdie doelwit te bereik, is dit belangrik om 'n beter insig in die faktore wat die prestasie van mediese praktisyns beïnvloed, te kry. Om die effektiwiteit van die Suid Afrikaanse werksmag te verbeter, is dit krities om die faktore onderliggend aan mediese praktisyn prestasie, asook die verhouding tussen hierdie faktore te verstaan. Gevolglik is 'n literatuurstudie gedoen waar 'n gedeeltelike mediese praktisyn bevoegdheidsmodel aangepas was, wat die bevoegdheidspotensiaal en situasionele veranderlikes wat mediese praktisyn prestasie beïnvloed, aangedui is, asook hoe hierdie veranderlikes mekaar beïnvloed.

Die navorsing het 'n kwalitatiewe benadering gevolg om sodoende hierdie konstrukte beter te verstaan. Vakkundiges was genader om die navorser se insig van mediese praktisyn bevoegdheidspotensiaal en situasionele veranderlikes te verbeter, asook om te verifieer of hierdie veranderlikes potensieel toegevoeg kan word tot die gedeeltelike mediese praktisyn bevoegdheidsmodel. Die 'Repetory Grid' Tegniek was gebruik om konstukte te ontlok gedurende die onderhoud, wat gehelp het om hierdie doelwit te bereik. 'n Steekproef van tien mediese praktisyns (insluitend spesialiste) is geraadpleeg vir data insameling.

'n Tematiese analise benadering is gebruik waar sewe en dertig eerste orde temas wat belyn was met mediese praktisyn bevoegdheidspotensiaal en situasie veranderlikes, ontlok was.

Die temas was vergelyk met die bevoegdheidspotensiaal en situasie latente veranderlikes wat in die literatuurstudie voorgekom het, sowel as die veranderlikes wat deur Fourie (2016) en Hattingh (2018) in vorige studies geïdentifiseer is. Nuwe veranderlikes is ondersoek om relevansie te bepaal asook moontlike invloed op mediese praktisyn prestasie. Gevolglik is 'n voorgestele gedeeltelike Suid Afrikaanse mediese praktisyn bevoegdheidsmodel aangepas om die gehipotiseerde verhoudinge tussen bevoegdheidspotensiaal latente veranderlikes en situasie latente veranderlikes te reflekteer.

Hierdie studie dien as 'n bydrae tot die empiriese begrip van mediese praktisyn bevoegdheidspotensiaal en situasionele veranderlikes in die Suid-Afrikaanse publieke gesondheidsorgsektor. Dit is belangrik om daarop te let dat hierdie studie verkennend en kwalitatief van aard is, dus sal 'n kwantitatiewe validering van die gedeeltelike mediese praktisyn bevoegdheidsmodel in die toekoms nodig wees.

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Sincerely,

Sakhile Gwija

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CHAPTER 1

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1. Background of the study

In 1994 the newly elected democratic government of South Africa inherited a largely fragmented and disjointed health care system (Kama, 2017). This prompted the formulation of new policies, legislation, and guides to restructure the South African health care system and provide comprehensive health care services to all citizens (Kama, 2017). One of the first active steps of the newly elected government was to decentralise the health care system to a national, provincial and local level (Maphumulo & Bhengu, 2019).

According to Harrison (2009), the early gains from restructuring the health care system have been largely affected by the increased burden of disease related to the HIV/AIDS pandemic in conjunction with an inefficient health care management system. It can be reasoned that the complexities faced by the South African healthcare system cannot be sufficiently addressed without strengthening the system in its entirety including the medical professionals within the system (Ramasodi, 2010).

The South African Government has applied numerous measures to improve health care delivery in South Africa. However, studies indicate that it has experienced limited success (Maphumulo & Bhengu, 2019). Despite these structural amendments, and after many years into the new democracy, South Africans are yet to derive the benefits that were anticipated from the formulation of progressive healthcare policies to address challenges relating to the provision of quality health care (Mayosi et al., 2009).

According to Maphumulo and Bhengu (2019) the delivery of healthcare in South Africa has been hampered by numerous factors that have posed negative outcomes on the quality of healthcare achieved. The underperformance that has been experienced by the South African healthcare system has las led to reduced faith and trust from public citizens. To improve the current situation, it is imperative that better health outcomes are attained. According to

Maphumulo and Bhengu (2019), an improvement in healthcare delivery implies fewer errors, reduced delays, higher efficiency, a sufficient distribution of medical professionals and the implementation of cost-effective strategies.

Health is a fundamental aspect of human development and is closely associated with basic human rights (Iyyanar et al., 2020). Quality health care is a factor contributing to the economic progress of a nation, as healthy populations experience less illness and disease and subsequently live longer and are more productive (Iyyanar et al., 2020).

Good health is an essential tool for maintaining the stability of regions as it can serve as a protective barrier against pandemics and disease that transcends borders, and consequently presents severe social and economic impacts and added pressure on health systems. These factors hold stronger in vulnerable poverty-stricken communities where there is poor provision of quality health care (Iyyanar et al., 2020). When poverty affects a substantial proportion of the population, health is subsequently affected. This is due to a lack of access to the basic necessities that are essential for sustaining life such as access to clean water, balanced nutrition, acceptable housing conditions, access to vaccinations and a quality education (Mayosi & Benatar, 2014).

The World Health Organization (2009) states that hospitals are an essential asset for communities both routinely and in response to medical emergencies, disasters and crises. The South African healthcare system is comprised of three levels namely primary, secondary and tertiary which concomitantly play a critical role in providing healthcare services.

Primary level healthcare consists of community health clinics and community health centres. Community health clinics offer a nurse-driven patient care service, whereas community healthcare centres render primary health care services and consist of medical practitioners that work full time (Visser, 2020).

Secondary level healthcare is typically comprised of district and regional hospitals with a capacity of 200 to 800 beds and is characterised as being highly differentiated in function as

they contain five to ten clinical specialities with professionals performing services such as physiotherapy, speech therapy and dietetics (Young, 2016).

Tertiary level healthcare consists of academic hospitals with a capacity of 300 to 1500 beds and offer highly specialised staff and equipment. These hospitals provide services such as cardiology, neurosurgeries and other complex treatments and procedures (Young, 2016).

According to Lutwama (2011) people play a central role in the delivery of healthcare and the recognition of their importance has been increasing. Human resources are a fundamental corporate asset as the performance of an organisation is largely dependent upon the way it is utilised through effective human resources management (Mwaniki & Gwathenya, 2015). The human resource function of an organization seeks to foster an environment that enables people to make the best use of their capabilities and realize their true potential to the benefit of the organization and themselves (Mwaniki & Gathenya, 2015).

The strategic use of human resources can play a fundamental role in the success of a healthcare institution in that it can aid in the achievement of organisational goals and objectives (Kabene et al., 2006). Human resources in the healthcare setting refers to the different kinds of clinical and non-clinical staff that are responsible for rendering healthcare services (Kabene et al., 2006). These include doctors, nurses and pharmacists as well as those essential to the performance of health systems such as management and support staff (World Health Organization, 2009).

Research studies have indicated that there has been a notable increase in medical practitioners practising in South Africa (Weyss et al., 2017). A study by Tiwari et al., (2021) revealed that the number of male and female medical practitioners in South Africa has increased by 1.7 and 3.3 times respectively, indicating an average annual increase of 3% per annum from 2002 to 2019.

An increasing number of medical practitioners are emigrating to urban areas, and consequently, the workload of those working in rural areas is adversely affected. In their study,

Tiwari et al., (2021) found that the majority of medical practitioners are located in densely populated and urbanised provinces such as Gauteng, Western Cape and KwaZulu-Natal, whereas the lowest density of medical practitioners was found in provinces such as Limpopo, Mpumalanga and Northwest.

According to Ashmore (2013), the imbalanced distribution of medical practitioners between rural and urban, public and private as well as poor and rich settings is a fundamental determinant of South Africa's inability to meet its millennium development goals. To take a case in point, Ashmore (2013) describes the Western Cape as a resourceful province considering that it has over three times the number of medical doctors per capita than four of the most rural provinces in the country.

According to the World Health Organization (2009) strengthening the performance of health systems requires more than just increasing the number of health care personnel, but also assessing the distribution, retention and productivity of personnel. In other words, to successfully restructure a health care system and subsequently improve its performance output, a comprehensive approach needs to be adopted that considers a broad range of variables that have a critical influence on the performance of that system.

The South African Government does not fund private healthcare, therefore, citizens must acquire their own private insurance should they seek to use the services of a private health-care facility. Private healthcare facilities are fewer and are considerably more expensive. These expenses are attributed to the fact that patients are held responsible to pay for their own healthcare visits, medication, and supplementary resources such as wheelchairs and crutches. However, citizens that use private health care enjoy benefits such as reduced waiting times, improved facilities, abundant resources for care and treatment, and proper disease control and prevention practices are utilised. Due to increased demands for accessing quality healthcare and the inability of the public health sector to offer these services, research suggests that some individuals pay out of pocket expenses to acquire private healthcare services (Maphumulo & Bhengu, 2019).

In contrast, public healthcare is largely funded by the national government and offered to all citizens of the country. The advantage of public health care is that it provides relatively affordable healthcare to all citizens, with the state subsidising the majority of pharmaceutical, wheelchair, crutch and home care visit costs (Young, 2016).

According to Mayosi and Benatar (2014), medical practitioners in the public health service account for 30% of the country's doctors. Despite this, they are responsible for providing health care services to some 40 million South Africans who are uninsured and account for 84% of the total population. Weyss et al., (2017) estimated that 17.4% of South Africans have private health insurance, which allows them access to receive treatment in private healthcare institutions where the remaining 70% of medical practitioners in South Africa are working full time (Mayosi & Benatar, 2014). The absence of a uniform health system is a key contributing factor to the differential provision of medical practitioners between the public and private sector, in which the latter is driven by the willingness of the wealthy to pay more for better health care (Harrison, 2009).

As the demand for quality healthcare continues to rise, so does the position of medical practitioners as key role players in the South African healthcare system. Therefore, it is essential to consider what constitutes a medical practitioner and the key functions associated with this role in the South African healthcare context.

1.2. What is a Medical Practitioner?

According to Betterteam (2020), a medical practitioner is a registered health professional who maintains and restores human health through the practice of medicine. Medical practitioners are responsible for the examination of patients, reviewing their medical history, providing diagnoses as well as administering and counselling patients on their health and well-being. In addition to treating individuals with multiple health issues, medical practitioners also provide essential health education to patients during the medical encounter (GetSavvi, 2017).

It is worth noting however, that there are apparent incongruences with respect to the correct terminology to use when referring to a medical practitioner. In South Africa, the terms medical practitioner and general practitioner are used interchangeably to describe the work performed by doctors who treat patients with illness and disease. The Macmillan Dictionary (2021) defines a general practitioner as a medical doctor that tackles an array of medical problems and treats families residing in a particular residential area. Overall, this aligns with the definition provided by Betterteam (2020) to describe a medical practitioner. Furthermore, in countries such as the United Kingdom the term physician Is used when referring to medical practitioners. The Oxford University Press (2020) defines a physician as an individual qualified to practice medicine and specialises in the diagnosis and treatment of medical conditions distinct from surgery. Despite the difference in terminology, it can be argued that the abovementioned definitions all describe a single role. Moreover, it can be said that the general undertone underlying these definitions is that medical practitioners are qualified health professional who play a central role in promoting the general health and welfare of a population and that functions performed under this role are critical to addressing some of the complex health care challenges that South Africa currently faces.

1.3 The performance of medical practitioners

For a business to achieve its goals it relies heavily on the effective performance of its employees. According to Thao and Hwang (2015), increasing employee performance or constantly finding ways to maintain a high level of employee performance has become a decisive factor in contemporary business. The management of a business should strive to get employees together to achieve high level organisational goals through efficient use of available resources. According to Utin and Yesopha (2019) the word performance is derived from job performance which refers to the work performance or actual achievement of employees in their jobs. In other words, performance is inclusive of the performed actions of employees based on their knowledge, skills and expertise and overall responsibility given to them as part of their job requirements (Dakhoul, 2018; Utin & Yesopha, 2019).

According to Lutwama (2011), assessing and enhancing medical practitioner performance is fundamental to respond efficiently and effectively to emerging challenges in the South African health sector. According to Scott (2012), medical practitioner performance refers to what the medical practitioner does on a day-to-day basis. Lutwama (2011) defines medical practitioner performance as the achievements exhibited by medical practitioners in relation to their set goals and standards.

It is fundamental to garner an enhanced understanding between the medical practitioner performance construct and the situational context in which medical practitioner perform their work. According to Kane (1993), the relationship between situational variables and individual job performance has received substantial attention from researchers over the past decade. The discipline of Industrial Psychology is heavily vested in assessing the impact of situational variables on work behaviour, personological influences and the workplace as a dynamic and evolving system (Rauthmann et al., 2017). According to Rauthmann (2017, p1) "situational variables may refer to a broad dimension of situation characteristics that can be used to describe and compare any situation". In the business environment, situational variables may refer to internal and external factors that either inhibit or promote effective workplace behaviours and, subsequently, influence employee performance (Dougherty, 1995; Periyasamy, 2020).

Medical practitioner performance in the public sector is likely influenced by situational variables which may subsequently hinder their ability to perform optimally. These include a shortage of staff, poor infrastructure, poor disease control, lack of resources, theatre time and excessive workloads (Ashmore, 2013; De Villiers & De Villiers, 2004; Young, 2016).

In an optimistic light, Maphumulo and Bhengu (2019) mention South Africa has the potential to build a system of high-quality service delivery for the benefit of all its citizens. Current health policies and social changes reflect the type of medical practitioners required in South Africa (Kent & De Villiers, 2007). Ramasodi (2010) argues that the South African healthcare industry requires a workforce with a vast set of skills due to advancements in medical technology and

sophisticated medical care. Kent and De Villiers (2007) state that it is fundamental to assess the knowledge and skills that medical practitioners need to possess in order to achieve equitable and quality health services and guide subsequent undergraduate, postgraduate and professional education appropriate for rural practice.

The discipline of Industrial Psychology can play a fundamental role in understanding the profile of medical practitioners required to meet the country's health care needs through the development of a competency model that structurally outlines variables that underpin desired medical practitioner performance outcomes suitable for the South African context (Fourie, 2016). Industrial psychologists apply a scientific approach to assess human behaviour in an organisation and play an indispensable role in assisting businesses to develop services, improve existing commodities and facilitate a healthy working environment that promotes healthy behaviours and reduces stress (Stalnaker, 2018).

According to Chouhan and Srivastava (2014) a competency model is an effective measurement instrument designed to help employees comprehend what is implied by superior performance and seeks to translate the organisational strategy into specific behaviours. Gradually, organisations are beginning to understand that the strategic development of competency models can foster enhanced individual and organisational performance and ultimately assist in integrating and promoting all human resource practices (Chouhan & Srivastava, 2014). A competency model consists of a network of four broad domains of variables which influence job performance, namely competencies, competency potential, situational variables and performance outcomes (Bartram, 2012).

According to Leach (2002), in the work context, competence is a professional habit that engages all human faculties. It is about mastery concerning specific goals and outcomes. Measurement of competence involves assessing work performance against a pre-determined set of work-related knowledge and skills (Bartram, 2012). Competence is thus developed over time and is nurtured by continuously reflecting on experiences (Bartram, 2012). From a healthcare perspective, a competent medical practitioner is one who follows sound standards

of practice within the profession or at least follows practices that would not be rebuked within the profession of medicine (Laurie et al., 2005). According to the Health Professions Council of South Africa (HPCSA, 2020) the role of medical practitioners is outlined by two primary outcomes, preventing patients from contracting disease and to cure patients who have developed a medical condition. Visser (2020) argues that this viewpoint is too limiting in that it does not account for other more upstream outcomes that foster the attainment of these outcomes i.e. patient disclosure. The current study posits that the role of a medical practitioner encompasses a broad range of tasks and performance outcome factors. These factors can be obtained through achieving competence on each of the competencies that make up a medical practitioner's job description.

According to Bartram (2012), competencies in the business environment refer to the set of behaviours that support the attainment of organisational objectives. Competencies enable the staff of an organisation to comprehend the behaviours and level of performance required to achieve organisational goals (International Atomic Energy Agency, 2016).

The impetus for this study is driven by the limited research identifying and describing competency potential latent variables (person characteristics) that would enhance the ability of medical practitioners to display the level of competence required on each of the competencies that map onto their job performance outcomes. Moreover, it is fundamental to further identify and describe situational variables that have an influence on medical practitioner performance in the South African context. From the above one can deduce that improving the performance of medical practitioners and the efficiency of the public health sector at large would facilitate the action steps needed to relieve the strenuous pressure on the South African health care system.

The Foundation of the study is inspired by the work conducted by previous researchers in this domain. The first of these studies was that of Fourie (2016) which sought to identify key competencies and outcomes that serve to outline effective medical practitioner performance in the public health sector. This body of work was expanded by Hattingh (2018) where she

further looked at competency potential variables that define the person characteristics medical practitioners should be expected to have. These studies served to contribute to the endeavour of forming a comprehensive medical practitioner competency model. The current study argues that to achieve this endeavour it is important to explore literature on medical practitioner performance in depth and explore further variables which could be possibly included in the proposed partial medical practitioner competency models formed by Fourie (2016) and Hattingh (2018).

1.4. Research initiating Question and Research Objectives

Medical practitioners undoubtedly play a fundamental role in rendering quality health services. According to Lutwama (2011), performance in the healthcare sector is a complex issue to address given the variety of influencing factors at different levels of health and affluence. As South Africa embarks on major health reform under initiatives such as the National Health Insurance plan it has become increasingly fundamental to determine the factors that underpin medical practitioner performance (Ataguba & McIntyre, 2013). The performance achievement of a medical practitioner is not the outcome of a random event but is instead determined through a complex interaction of variables that characterise medical practitioners and their working environments (Fourie, 2016; Visser, 2020). This study will focus on the performance of medical practitioners as key role players in the South African public healthcare sector. Ultimately, this study seeks to contribute to the development of a comprehensive medical practitioner competency model relevant to the South African context.

This study poses the following research initiating question:

Why does medical practitioner performance vary across different medical practitioners and across the different situational contexts found in hospitals in the public health sector?

There is limited research identifying and describing person-centred competency potential latent variables and situation-centred latent variables that influence medical practitioner job performance. This study, therefore, seeks to investigate which cognitive and/or non-cognitive

person-centred latent variables, as well as situation-centred latent variables, create a variance in the levels of performance among medical practitioners in public hospitals in South Africa.

The objectives of the study consequently are:

- To expand (and possibly modify) Hattingh's (2018) proposed medical practitioner partial competency model into a comprehensive medical practitioner competency model;

- Grafting, through literature study grounded theorising, additional person-centred latent variables and situational latent variables that directly and/or indirectly influence the medical practitioner performance construct on to the Hattingh (2018) conceptual model;

- Grafting additional person-centred and situational latent variables that directly and/or indirectly influence the medical practitioner performance construct on to the Hattingh (2018) conceptual model through engaging with subject matter experts. The proposed study seeks to utilise a qualitative inquiry to tap into the interpretive structures of experienced medical practitioners (as subject matter experts) so as to gain phenomenological insights into the manner in which person-centred latent variables and situational latent variables determine medical practitioner success. According to Kielmann et al. (2012), qualitative researchers seek to make sense of what they see and hear in a specific context. Their approach to understanding the world around them is interpretive in that they strive to explain situations as opposed to merely describing them. Lastly this study seeks to;

- Integrate the literature-study grounded proposed explanatory medical practitioner competency model and the conceptual medical practitioner competency model derived from the experiential learning of experienced medical practitioners into the explanatory Gwija-Hattingh conceptual medical practitioner competency model.

Some research has thus far been conducted on this research-initiating question. Fourie (2016) proposed a conceptualisation of the medical practitioner performance construct by

proposing a structural model mapping a set of structurally interrelated medical practitioner competencies onto a set of structurally interrelated outcome latent variables. Hattingh (2018), building on the work of Fourie (2016), hypothesised a set of structurally interrelated medical practitioner competency potential latent variables that she posited to affect the latent variables constituting medical practitioner performance. The Hattingh (2018) hypothesis can, however, not be regarded as the final, definitive, response to the foregoing research initiating question. Firstly, neither the Fourie (2016) conceptual model, nor the Hattingh (2018) conceptual model, has been empirically tested. More important though, from the perspective of the current study, is the assumption that medical practitioner performance is complexly constituted and complexly determined (Cilliers, 1998). Medical practitioner performance is complexly constituted in the sense that it comprises numerous richly interconnected competency latent variables and outcome latent variables. An important consequence of the richly interconnectedness of the nomological net of determining latent variables is that meaning (or understanding) is not located at any given point in the network (i.e. it does not lie in any specific individual latent variable), but is rather spread over the whole of the network (Cilliers, 1998). A single study is not able to definitively capture the complexity that constitutes medical practitioner performance nor the complexity that determines medical practitioner performance, because understanding lies in the whole; this invariably means an incomplete, limited, understanding. A fully comprehensive understanding of the complexity that constitutes medical practitioner performance and the complex nomological net that determines medical practitioner performance is therefore probably forever beyond man's (scientific) grasp. Nonetheless, man has no choice but to attempt to approximate this complexity as best he can through cumulative research.

It is acknowledged that the decision not to empirically test the Fourie (2016) structural model and/or Hattingh (2018) structural model, but rather to further expand it, can be questioned. The current study acknowledges that at some point the proposed competency model has to be empirically tested. It is moreover acknowledged that by further expanding an

already extensive model, it becomes increasingly difficult to empirically test the model as a single explanatory model (Little & Rhemtulla, 2013). [1]Despite these disadvantages the current study would argue that, when viewed from a complexity perspective, the further extension and modification can be justified. Cilliers (1998) argued that complex explanations are characterised by large numbers of richly interconnected latent variables and that the explanation cannot be located at any specific point in the network but that it is spread across the whole of the network. Importantly, omission of any relevant latent variables from the network results in a loss of meaning (Cilliers, 1998). It is acknowledged that this dilemma will always plague fallible empirical explanatory research studies to some degree. The current study would nonetheless want to argue that a series of cumulative hypothesis development studies that through theorising grow an extensive explanatory structural model prior to the empirical testing of the model can assist in limiting this problem.

1.5 Structural Overview

Chapter two will first present a critical review of the Fourie (2016) conceptualisation of the medical practitioner job performance construct. The research initiating question can only be rationally and purposefully pursued via logical scholarly theorising If it is conceptually clear what constitutes medical practitioner performance. If need be, the conceptualisation of medical practitioner performance will be expanded. Subsequently, Hattingh's (2018) overarching substantive hypothesis on the person-centred latent variables that influence medical practitioner performance will be critically reviewed in an attempt to identify shortcomings in her theorising. Subsequently, the literature and previous studies on the nature of the situation facing medical practitioners operating in public hospitals will be used to develop hypotheses on the identity of important situational latent variables that affect medical practitioner performance and the manner in which they affect performance. The theorising based on these literature reviews will culminate in a first version of a proposed comprehensive

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[1] The use of a planned missingness design in the data collection procedure could help to alleviate this problem (Little & Rhemtulla, 2013). The more efficient use of memory in more recent versions of the LISREL software will in addition allow the analysis of more extensive variance-covariance matrices.

medical practitioner competency model that will serve as an overarching substantive research hypothesis offered as a tentative answer in response to the research-initiating question. The first version of the proposed comprehensive medial practitioner competency model will be derived via a series of hypothesised structural paths (as path-specific substantive research hypotheses) between specific competency potential latent variables and specific competencies in the Hattingh (2018) structural model as well as hypothesised structural paths between situational latent variables and specific competencies in the Hattingh (2018) structural model.

The initial version of a comprehensive medical practitioner competency model will be augmented by not solely relying on theorising on input from scientific research studies published in the literature but also on the experiential knowledge of experienced medical practitioners in the public health sector (Pervin et al., 2005).

The process of constructing explanatory, structural models that offer the possibility of exercising control over events in nature (including one's own behaviour and those of others) is not restricted to researchers formally acting as researchers. A key feature that distinguishes humans from lower-level animals is their abstract thinking capacity. Humans, through their enhanced abstract thinking capacity, are able to develop thought objects (i.e. concepts) and form interpretive structures from these concepts, which they then use to make sense of the world around them (Babbie & Mouton, 2001; Pervin et al., 2005). Behavioural researchers can derive valuable benefit by inviting subject matter experts to share their sense-making interpretive structural models as it pertains to a phenomenon of interest to the behavioural researcher. The behavioural researcher essentially uses the input from subject matter experts in his theorising as he would use input from the literature to derive through theorising explanatory hypotheses that he feels are needed to construct a convincing psychological mechanism that regulates medical practitioner performance.

Chapter three will serve to outline the research methodology to be followed to confirm the hypothesised medical practitioner competency model. Chapter four will expand a discussion

on the empirical results of the study and lastly chapter five will discuss the contribution, limitations and recommendations for future research on the basis of this study.

CHAPTER 2

LITERATURE STUDY

2.1   Introduction

In chapter one, it was proposed that a medical practitioner competency model can be used as a framework to enhance health care delivery in the public health sector. Subsequently, Chapter two of this study will be devoted to providing an in-depth discussion on the medical practitioner job performance construct, the role of medical practitioners as key drivers of desired health outcomes, the public health context in which medical practitioners perform their job functions, the underlying theories of competency modelling and subsequent imposition of this study in developing a structural medical practitioner competency model. According to Nel (2019) enhancing our understanding of competency modelling and the medical practitioner performance can influence the review of existing professional and educational standards as well as research to compile a theoretical competency model. The overarching objective of this literature study is, thus, to provide a detailed review on the existing research related to the functions performed by medical practitioners in order to identify person characteristic that are critical for successful job performance and that are linked to outcomes that are relevant to medical practitioners thriving in the public health care context in which they have to operate. The development of a thorough competency model that accurately reflects the competencies of a medical practitioner requires a high-level comprehension of the medical practitioner job function. Therefore, the subsequent section seeks to conceptualise what it means to be a medical practitioner and what this role implies in the South African public healthcare sector.

It is critical to note that public healthcare not only exists to serve society but also strives to be sustainable from a business perspective (Hattingh, 2018). Healthcare has evolved in recent times and can now be considered a business term, due to the manner in which it is organised into a system that seeks to reap financial gain whilst providing healthcare services to patients and related stakeholders (Sawyer,2018). Recent efforts to achieve sustainable improvement in public health care with limited resources and much reduced prospects for economic growth

have prompted calls for improved health care management and governance strategies that strive to achieve more with less (Mayosi et al., 2014).

The human resource component of a hospital strives to maintain the efficient and effective functioning of a hospital in that it seeks to improve the performance of employees and add value to the overall operation of a hospital (Fourie, 2016). The notion of improving performance in public hospital operations can serve as fundamental strategy to improve health outcomes in the immediate communities in which they operate while further enhancing the social welfare of the country.

Chapter one of this study argued that medical practitioners play a fundamental role in the delivery of quality health care in public hospitals. Therefore, this study seeks to sensitise the importance of investigating the medical practitioner job performance construct and how it is influenced by competency potential latent variables and situation-centred latent variables. Moreover, it is deemed valuable to investigate which person characteristics constitute effective medical practitioner performance with respect to the organisational strategy of a hospital as a business. Furthermore, it is deemed valuable to evaluate the influence of situational latent variables on the job performance of medical practitioners.

One of the core objectives of the proposed study is to modify and extend the Hattingh (2018) medical practitioner competency model. However, before embarking on this endeavour, it is deemed valuable to first delve into the science of competency modelling and investigate the ideologies that inform competency models. Therefore, the section that follows will present an elaborate discussion on competency modelling through its application in the field of Industrial Psychology and distinguish between the core dimensions that make a competency model in order to adapt a competency model unique to the South African context.

2.2   Competency Modelling

High performing employees are critical for high-performing organisations, whether driven by the need to improve productivity, profitability or the sheer passion to provide a world-class

client service, and the combination of these two components has always proven critical (Rodriguez et al., 2002).

According to the Philippines-Australia Human Resource and Organizational Development Facility (PAHRODF, 2016) the concern for performance in the workplace has sparked interest in discovering what sets apart top performers from their average counterparts. Organisations now seek to identify and capture success factors in a structural format that allows them to cultivate and harness essential competencies that play a role in driving success (PAHRODF, 2016). This has led to the art and science of what is now known today as competency modelling (PAHRODF, 2016). Competency modelling is based on the fact that the contemporary business climate presents constant and complex change (i.e., technology and/or modifications to job demands) which influences change in the tasks performed by employees on a daily basis. Ensuring the utmost optimisation of human talent in such circumstances requires organisations to develop a framework to match employee capability with output which can result in greater job satisfaction for the employee and greater output and use of talent for the organisation (PAHRODF, 2016). Therefore, one could reason that a competency model can aid as a powerful instrument to guide individual and organisational success. According to Competency Model Clearinghouse (2015) this can be accredited to a competency model's ability to identify workforce skill requirements, develop competency-based curricula and training models as well developing industry-defined performance criteria and certification.

The previous section argued competency modelling (as a tool) can be used to drive better organisational performance. Moreover Rodriguez et al. (2002) argue that a well-developed competency model can assist organisations by providing vital information and resources that can aid to overcome existing challenges. However, before developing such a model it is essential to comprehend what it is, what it encompasses and what that means for medical practitioners in the public healthcare context.

As previously stated, a competency model consists of a four-domain structural model where all domains have a bearing on individual performance. The first of these domains is competency potential. According to Bartram (2012), competency potential refers to attributes that are necessary for someone to possess in order to display desired behaviours. Visser (2020) adds that latent variables such as personality traits, knowledge on specific topics, skills as well as other characteristics that individuals may possess are what constitute competency potential. Furthermore, competency potential can be clustered into two categories, namely: attainments and dispositions. According to Bartram (2012), an individual's attainments consist of his/her qualifications, education and/or training which can serve as a cornerstone that influences competency potential on the job. Dispositions, on the other hand, can be regarded as more stable person attributes such as specific attitudes and/or abilities that are essential for performing job functions (Theron, 2011; Visser, 2020).

The second domain is competencies, namely two schools of thought which inform how competency is generally defined: the United States of America (USA) school of thought and the United Kingdom (UK) school of thought. The USA-based school of thought defines competencies as individual characteristics such as knowledge, skills, abilities, mind-sets, feelings and patterns of thinking that, when used effectively in the appropriate role, result in the achievement of desired outcomes (Society for Human Resources Management, 2011). In contrast, the United Kingdom (UK) school of thought defines competencies as bundles of behaviour that lead to successful job performance. In other words, competencies only become competencies when they are manifested behaviourally and cannot simply be in the job holders' heart and/or mind (something that he/she knows or intends to do) (PHARODF, 2016). For the purpose of the proposed study, competencies will be defined according to the second school of thought, namely behaviour. A definition for competencies that supports this argument is that by Theron (2011) who states that:

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/objectives for which the job exists (p.7).

Competencies support an occupational role in the sense that they can be strategically linked to the mission and values of an organisation. The link between job competencies and organisational goals creates a vivid line of sight between individual and team performance and organisational success. Therefore, by aligning a public health institution's strategic plan with competencies related to the tasks performed by medical practitioners, the institution will be able to formulate recruitment and training strategies that will support its projected needs. Ultimately, this would result in high performing medical practitioners and high performing public health institutions (Rodriguez et al., 2002).

It is important to make the distinction between competencies and competence. According to Bartram (2012), competencies relate to behaviours that underpin successful job performance, whilst competence alludes to mastery in relation to specified occupational goals and outcomes. According to Bartram (2012), competence requires the overarching ability to demonstrate mastery in one's specific job functions Therefore, If a medical practitioner possesses the required job competencies and delivers the expected outcomes successfully in the face of situational factors, then he/she can be considered as competent (Hattingh, 2018).

The third domain of a competency model is performance outcomes. According to Visser (2020), jobs exist to achieve certain outcomes, for example, medical practitioners seek to provide effective patient care to diagnose and treat illness and disease. Therefore, to define successful job performance, it is fundamental to think beyond identifying competencies on which competence should be displayed. According to Nel (2019), when developing a competency model one should ideally focus on the desired job outcomes. Subsequently, the researcher can thus determine which competencies are fundamental to achieve these outcomes. Bartram (2012, p.5) defines outcomes as "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". Therefore, outcomes can serve as a measure of how well competencies were performed through performance reviews and appraisals (Bartram, 2012). In conjunction with competencies, outcomes should underpin successful job performance and should ultimately aid a hospital as an organisation to achieve the goals set out in its organisational strategy.

The fourth domain is that of situational variables; the premise behind situational variables is that the level of competence that individuals achieve on the competencies that make up their occupational roles is the result of a combination between latent competency potential variables and latent variables characterising the context in which individuals carry out their job functions (Visser, 2020).

According to Dougherty (1995), situational factors influence performance by (a) imposing constraints such as an environment that either inhibits and/or interferes with the range of work behaviours that are effective, which consequently affects tasks performance. And (b) influencing affective responses; for example, through analysing their work environments employees may gather information about the reward system of a business, which in turn can influence their motives and expectation that certain behaviours will result in certain consequences. These factors highlight the significant influence which the contextual environment has upon the individual and how a critical analysis of it can aid in understanding and predicting job performance (Dougherty, 1995).

Lastly, it is fundamental to note that the organisational strategy has a fundamental influence on all of these domains. According to Visser (2020), the organisational strategy determines the direction which an organisation or sector seeks to follow. Visser (2020) argues that in order to achieve the objectives set out in an organisational strategy it is fundamental for employees to show competence in the competencies required for a specific role as dictated by the organisational strategy.

Figure 2.1

Presentation of the SHL's adapted competency@work model
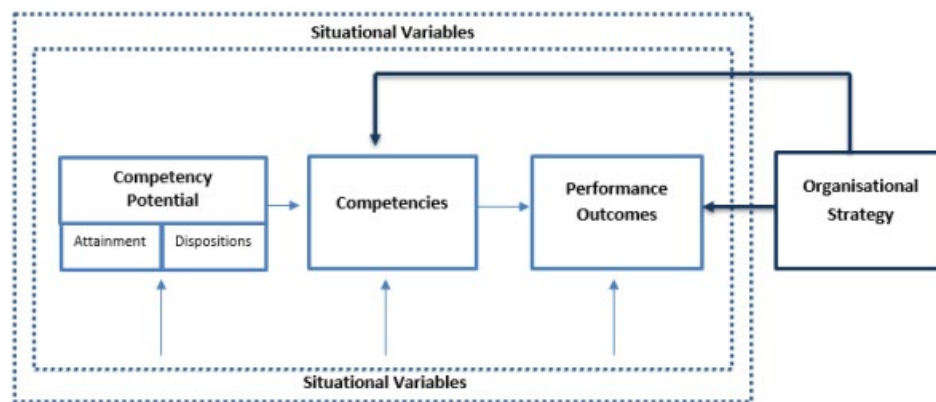
Note: This figure demonstrates a four-domain competency model with an additional fifth situational variable. Adapted from "SHL Competency@Work Model" by Saville and Holdsworth, 2000, *SHL Newsline*, p.7. Copyright (2000) @ SHL Group plc.

In a vastly changing business landscape organisations are taking cognisance of the value of a workforce that not only possesses resounding skill and technical capabilities but more importantly a workforce that can adapt to change and communicate effectively in an environment characterised by continuous learning as this foster's organizational survival (Rodriguez et al., 2002).

By implementing a comprehensive competency model, a hospital as an organisation can, thus, be able to:

- Foster a performance-driven culture that describes competencies that a medical practitioner as a job holder needs to attain.

- Clarify success factors in their roles in order to enable medical practitioners to give their best on the job.

- Provide a platform where medical practitioners can analyse their development for job advancement purposes (Rodriguez et al., 2002).

According to Visser (2020), a competency model represented in a structural format for medical practitioner is much needed. Such model would depict how the organisational strategy interrelates with the desired performance outcomes of each job within a hospital as an organisation.(Figure 2.1 is an example of such a model and also the model that will be used as a basis for the purpose of this study.

As previously stated the job performance of a medical practitioner is a complex construct that is influenced by a dynamic network of latent variables. In this light, the section that follows serves to argue a theoretical structural competency model for a medical practitioner, with a specific focus on competency potential latent variables and situational latent variables which form the basis for this study. The subsequent section will present an elaborated discussion on the medical practitioner performance construct, due to the importance of this construct in a competency model. In business this is the typically standard criteria used against which employees are measured against their performance.

2.3   Medical Practitioner Job Performance Construct

Every organisation has a set of objectives to achieve; these objectives are achieved through the strategic utilisation of resources such as humans, machinery and money. All these resources are fundamental but most critical is that of manpower, as it plays a key role in the performing of tasks and accomplishing organisational goals (Maduok, n.d.).

As an organisation, a hospital is established to serve the public with its healthcare needs. The overarching objective of a hospital is to improve patient health and well-being. Central to the achievement of this goal are the tasks performed by hospital personnel, including medical practitioners, whose successful performance contributes largely to the sustainment of patient health and well-being (Fourie, 2016).

Unpredictable working environments and increasing business competition necessitate that hospitals as organisations should maintain certain standards in order to align to external demands (Muda et al., 2014).

Performance relates to the organisation or individual level, which sees an organisation's human resource function becoming the most influential factor to achieve the organisations' objectives (Muda et al., 2014). To take a case in point, Muda et al. (2014) argue that an abundance of resources and infrastructure provide little meaning without the support of qualified human resources, as the success of an enterprise is highly dependent on the performance of its human resources management.

According to Motowidlo and Kell (2013), understanding job performance should prove useful for the full range of strategies and interventions that the field of industrial and organisational psychology seeks to utilise to enhance the human performance in the workplace. Sonnentag et al. (2008) reason that performance has to be considered as a multidimensional concept encompassing both a process aspect (behaviour) and outcome aspect (results). Performance refers to the expected organisational value of the work performed by an employee, whereas results are the route through which an individual's behaviour either helps or hinders an organisation in achieving its objectives. Therefore, the notion of analysing results becomes appealing when considering the construct of employee performance (Motowidlo & Kell, 2013).

For the context of this study, the performance of medical practitioners is defined as those behaviours displayed by medical practitioners that lead to desirable health outcomes and subsequent attainment of the organisational goals of a primary care institution.

A distinction should also be made between job performance and similar constructs such as effectiveness and productivity. According to Sonnentag et al. (2008), effectiveness speaks to the emulation of the results of the job performance whereas productivity refers to the ratio of the effectiveness to the cost of attaining the outcome.

According to Nel (2019, p.10), "Specific tasks need to be performed by medical practitioners to produce the output for which the job exists. The success at which these tasks are performed refers to task performance". Task performance alludes to an employee's contribution to the performance of an organisation; it is the fulfilment of the requirements that

form part of an employment contract between employer and employee (Sonnentag et la., 2008).

Closely related to task performance is the concept of contextual performance which according to Sonnentag et al. (2008) refers to activities that do not form part of an employee's job description. However, the importance of contextual performance lies within its ability to indirectly contribute to an organisation's performance by facilitating task performance (Sonnentag et al. 2008).

To form an accurate measure of job performance, it is both theoretically and practically essential to identify factors that predict job performance (Sonnentag et al., 2008). Generally, one can make a distinction between person-specific and situational specific variables, in that person-specific variables are variables that differ amongst individuals. In contrast, situation-specific variables characterise the work context where the individual performs his/her work (Sonnentag, et al., 2008).

The tasks performed by a medical practitioner are not only vital for the broader health environment in which they operate but also for the organisation (hospital) they serve. It is important to note that organisations are established to achieve specific goals and objectives. For these goals and objectives to be achieved, specific tasks need to be performed. The overarching purpose of performing these tasks is to achieve specific outcomes that will allow an organisation to flourish in its business endeavours (Fourie, 2016). According to Pantaleon (2019), advancing patient outcomes should be the leading goal in healthcare. Outcomes can serve as a powerful force to improve the performance and job satisfaction of medical practitioners and not just that of patients and stakeholders. The act of measuring and reporting health outcomes is essential in order to guide training interventions designed to improve care over time (Pantaleon, 2019).

To garner a comprehensive understanding of medical practitioner performance, it is fundamental to analyse the outcomes that a medical practitioner needs to achieve and the

tasks that need to be performed in order to achieve these outcomes, in conjunction with the situational factors that either facilitate or inhibit performance (Fourie, 2016). Medical practitioners need to display specific bundles of behaviours (competencies) in order to successfully achieve the outcomes which they are held accountable for. Furthermore, the degree to which they successfully achieve these outcomes is a reflection of their actual job performance (Fourie, 2016).

Fourie (2016) devised a partial medical practitioner competency model (Figure 2.2) that described linkages between latent competency variables and latent outcome variables that influence medical practitioner performance in the South African context. Fourie (2016) argued that medical practitioners play a central role in the public health sector and motivated a need for the development of a framework that can effectively serve to measure medical practitioner performance. By Identifying the critical competencies that are required to perform effectively as a medical practitioner in the public health sector, and mapping these competencies against the outcomes medical practitioner ought to help a hospital as an organisation achieve, a foundation is laid on the performance level required from medical practitioners. Ultimately, Fourie (2016) argued that the construction of such a model would help to serve public health institutions with measuring the performance of medical practitioners more effectively.

The study of Fourie (2016) provided valuable insights into the latent competencies that can contribute to one being a competent medical practitioner in practice. The study of Fourie (2016) proved to be a success in its attempt to fill a void regarding research on the complex construct of medical practitioner performance and sought to proliferate the amount of research regarding the subject matter in a broader attempt to aid an excessively strained South African healthcare system. Not only did the study of Fourie (2016) help conceptualise medical practitioner performance but it also allowed for building a sufficient number of items for a South African Medical Practitioner Competency Questionnaire to be administered to a validation sample in a subsequent study. Fourie (2016) identified eleven medical practitioner competencies (Table 2.1) that are essential and reflective of the behaviours that describe

successful medical practitioner performance and are fundamental in driving the desired health outcomes in the public health sector (Table 2.2).

A limitation of this study is that it did not account for the influence of competency potential variables and situational variables on medical practitioner performance. Consequently, these served as recommendation for future research studies. The proposed study intends to build on the structural model of Figure 2.2 by using the latent competencies identified by Fourie (2016) and expand them on a proposed partial medical practitioner competency model that outlines structural paths between the latent competencies, the competency potential latent variables and situational latent variables identified for the proposed study. If one seeks to understand wholistically why the performance of medical practitioners varies across different individuals and the different situational contexts found in public hospitals, it is fundamental to observe the dynamic relationship between outcomes, competencies, competency potential and situational variables.

Table 2.1

Medical practitioner latent competencies

Summary of defined medical practitioner latent competencies, Fourie (2016)

No	Competency	Definition
1	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.
2	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 others to comprehend the message they want to deliver.
3	Self-care	Being aware of one's inner state and implementing the necessary strategies to achieve emotional and physical well-being for oneself.
4	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.
5	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.
6	Efficiency	Using resources effectively; contributing to the larger organisation's success; not compromising patient care for profits; and believing in one's own opinion.

Table 2.1 (Continued)

Medical practitioner latent competencies

Summary of defined medical practitioner latent competencies, Fourie (2016)

No	Competency	Definition
8	Health Advocacy	Responsible use of one's expertise and influence to advance the health and well-being of individuals, communities and populations.
9	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.
10	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 fits in well.
11	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.

Note: This table describes medical practitioner competencies identified in the study of Fourie (2016). Reprinted from "The Development of a South African Medical Practitioner Competency Questionnaire", by Fourie, M, 2016, p. 52. Master's thesis, Stellenbosch University, Stellenbosch. Copyright 2016 by Stellenbosch University.

To determine the effectiveness of the competencies identified in table 2.1, Fourie (2016) reasoned that it would be critical to tie the competencies to outcomes that are important for driving performance in the public health sector. According to Kind (2018) health outcomes are important in that they provide intelligence that can assist in refining decisions about health care investments and procedures and form an integral part of clinical studies. Fourie (2016) mapped structural paths between the latent competencies identified in Table 2.1 and the outcomes listed in Table 2.2, it was further noted that there are also dynamic structural relationships between the outcomes themselves and those were subsequently mapped too and explicated in figure 2.2.

Table 2.2

Medical practitioner outcomes

Summary of defined medical practitioner outcomes, Fourie (2016)

No	Outcome	Definition
1	Proper Treatment	The extent to which the medical practitioner prescribes the best and most effective remedy for the diagnosed sickness or injury, by taking the person's medical history into account.

Table 2.2 (Continued)

Medical practitioner outcomes

Summary of defined medical practitioner outcomes, Fourie (2016

No	Outcome	Definition
2	Adherence to prescribed treatment	The extent to which the patient accurately adheres to the prescribed medicine and prescribed treatment instructions.
3	Patient Motivation	The degree to which the patient believes the treatment will lead to success and is motivated to complete it.
4	Sense of understanding	The degree to which the patient understands the medical problem, the etiology of the problem and the manner in which the treatment will relieve the problem.
5	Patient wellbeing	The extent to which the patient experiences a good physical, mental and social condition.
6	Treated as Individual	The extent to which the patient feels that he or she is treated fairly and as a human being, and not merely as a number, by being listened to, taken seriously, and being accepted by the medical practitioner who gives the patient the opportunity to have an active role in decision-making regarding their treatment.
7	Patient satisfaction	The extent to which the patient feels gratified by the medical service he or she received.
8	Trust	The extent to which the patient feels they can rely on and have confidence in the medical practitioner, his or her abilities, diagnosis and intentions (Gruber & Frugone, 2011).
9	Accurate Diagnosis	The extent to which the medical practitioner accurately identifies a sickness or injury by evaluating the signs and symptoms, along with the patient's medical history.

Note: This table describes medical practitioner outcomes identified in the study of Fourie (2016). Reprinted from "The Development of a South African Medical Practitioner Competency Questionnaire", by Fourie, M, 2016, p. 33. Master's thesis, Stellenbosch University, Stellenbosch. Copyright 2016 by Stellenbosch University.

The tables above reflect the core latent competent competencies and outcomes which were identified in the Fourie (2016) study. Not only was it deemed critical to identify and define these variables, but it was further important to understand the structural relationships which are formed between them. This led to the conceptualisation of figure 2.2, which serves as a partial medical practitioner competency model outlining structural paths/and relationships between the latent competencies listed in table 2.1 and outcomes listed in table 2.2.

Figure 2.2

A partial medical practitioner competency model (Fourie, 2016)
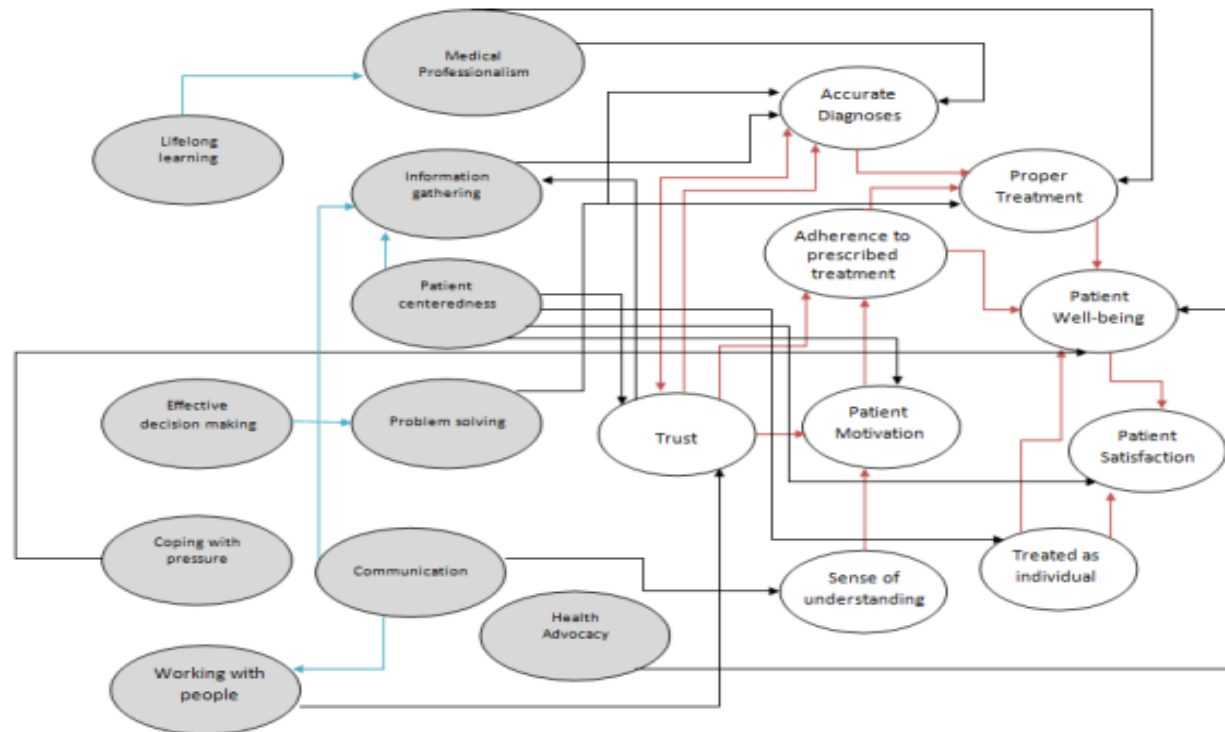
Note: The grey circles represent competencies, and the white circles represent outcomes. The blue paths represent the hypothesised structural paths between the competency latent variables; the black lines represent the hypothesised structural paths between the competency and outcome latent variables; and the red lines represent the hypothesised structural paths between the outcome latent variables.

Reprinted from "The Development of a South African Medical Practitioner Competency Questionnaire" by M. Fourie, 2015, Master Thesis, Stellenbosch University, p. 168. Copyright (2015), Stellenbosch University.

The proposed study argues that the medical practitioner competency model should be expanded in order to account for the influence of situational variables on medical practitioner performance as well as the additional competency potential variables contributed by the proposed study. Given that the previous studies did not include these variables, the proposed study argues that their inclusion and subsequent expansion of the medical practitioner competency model will allow for a more comprehensive description of the psychological mechanism underpinning medical practitioner performance.

Building on the model outlined above, Hattingh (2018) undertook the endeavour of establishing the contribution and influence of competency potential latent variables on medical practitioner performance. While it was deemed important to identify the latent competencies that play a vital role in medical practitioner performance through the work conducted by Fourie (2016). Hattingh (2018) intended to expand Fourie's findings by including an argument for person characteristics that also influence medical practitioner performance. The cornerstone of Hattingh's argument was that it is equally important to determine which person characteristics can enhance the attainment of the latent competencies identified by Fourie (2016) as it should not be assumed that any individual that embarks on a career in medicine would naturally possess such competencies.

Her efforts to contribute to the conceptualisation of medical practitioner performance led her to develop a proposed partial medial practitioner competency model that was established through comprehensive literature review and reconfigured after qualitative data gathering sessions with medical practitioners. According to Hattingh (2018), the act of exploring medical practitioner person characteristics has proven essential to ensure that established medical practitioner competencies are acquired and that prescribed outcomes are achieved. This allows health care institutions (i.e. hospitals) to enhance their ability to predict the success of medical practitioners. It can be argued that the identification of relevant medical practitioner person characteristics can allow for a better person-job-fit to be attained. Subsequently, this can influence better medical practitioner job satisfaction which, in turn, can result in better

performing medical practitioners in the public health sector (Hattingh, 2018). The fundamental result of this study was that she was able to identify thirteen medical practitioner person characteristics (Table 2.2) that she hypothesised affected medical practitioner performance, and which were then grafted onto a partial medical practitioner competency model (Figure 2.3) that yields to the ideas and principles of competency modelling discussed in this research. The Hattingh (2018) conceptual model was considered an expansion of the Fourie (2016) model. Moreover, the fundamental gain of this study was that it was able to demonstrate how latent competency potential variables can influence medical practitioner competencies which, in turn, will have an influence on the overall performance of medical practitioners working in the public health sector. The table below outlines the person characteristics identified by Hattingh (2018).

Table 2.3

Medical practitioner person characteristics

Summary of defined medical practitioner person characteristics (Hattingh, 2018)

No	Person Characteristic	Definition
1	Resilience	Internal-individual resources that allows the individual to adapt and remain strong in the face of adversity.
2	Neuroticism	An individual's emotional stability and the general propensity to feel negative emotions in response to environmental factors.
3	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.
4	Emotional Intelligence	The ability to identify and effectively manage emotion in oneself and in others as well as one's environment.
5	Self-efficacy	An individual's perceptions of their aptitude to perform tasks and accomplish goals.
6	Agreeableness	An individual's ability to get on well with others and show sympathy for others.
7	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.
8	Altruism	The motivation to display unselfish acts that is beneficial to others.
9	Achievement Motivation	The individual's drive to become competent and utilise the obtained competence to achieve success and avoid failure.
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.
11	Conscientiousness	The degree of effectiveness and efficiency with which a person plans, organises and carries out tasks.
12	Fluid Intelligence	The ability to reason and to solve new problems independently of previously acquired knowledge.
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.

Figure 2.3

A Proposed Partial South African Medical Practitioner Competency Model (Hattingh, 2018)
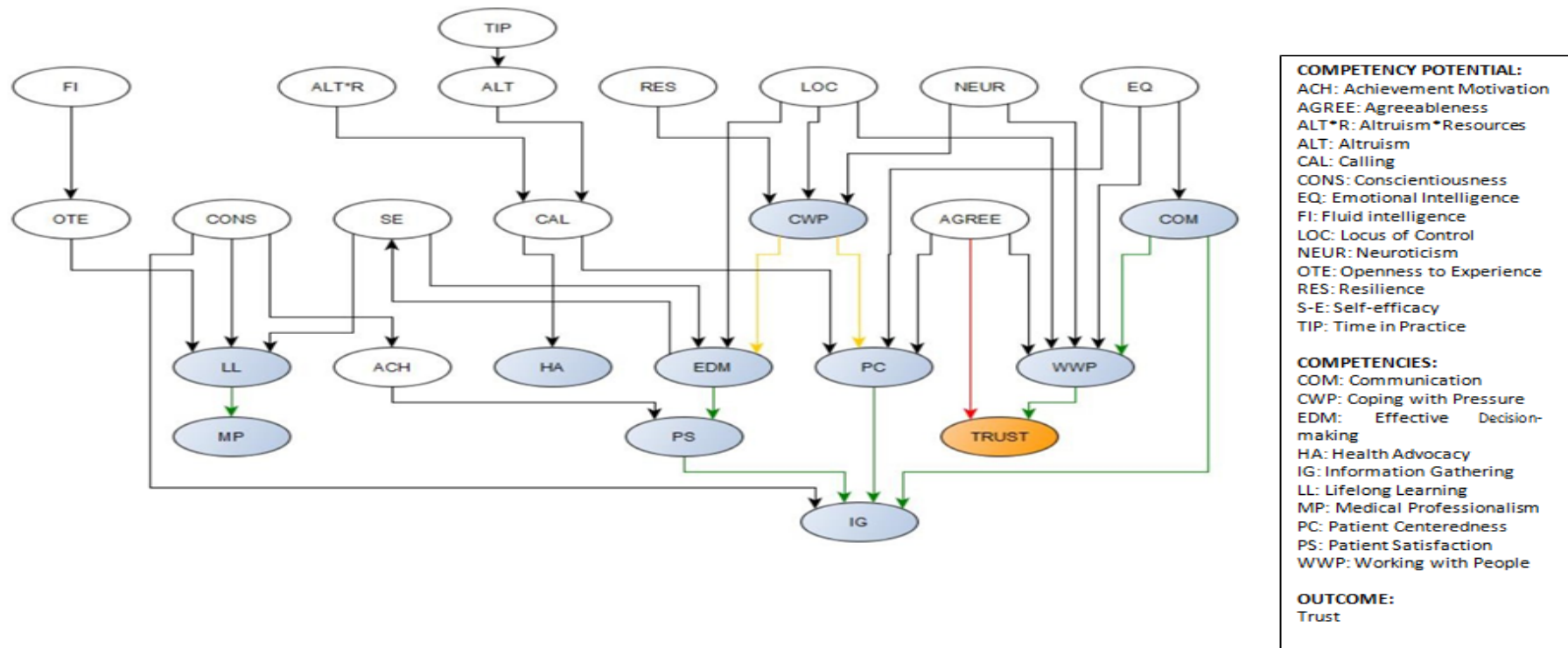
Note: The white circles represent hypothesised competency potential, the blue circles represent competencies and the orange circle represents outcomes. The black paths represent the hypothesised structural paths between the competency potential and competencies, the yellow paths represent the hypothesised 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.

Reprinted from "The Development of a Partial South African Medical Practitioner Competency Model", by Hattingh, J, 2018, p. 143. Master's thesis, Stellenbosch University, Stellenbosch. Copyright 2018 by Stellenbosch University.

The proposed study argues that patients remain a central focus of outcomes in healthcare. Therefore, the proposed study argues that a better person-job fit can only be achieved when more patient-centred competency potential variables are prioritised in healthcare. A limitation in the Hattingh (2018) study is that it did not include enough competency potential variables that were patient centred and nor did it investigate the influence of situational variables on medical practitioner performance. Furthermore, the proposed study also argues that the Covid-19 pandemic[2] also influences medical practitioner competency potential in a manner not previously seen before. The proposed study seeks to incorporate competency potential variables that medical practitioners deem relevant to navigate the current public health environment.

After a comprehensive review of the relevant literature, the proposed study seeks to modify/expand the partial medical practitioner competency model developed by Hattingh (2018) by identifying additional medical practitioner person characteristics that influence medical practitioner performance. The proposed study further seeks to identify situational variables that characterise the working environment of medical practitioners in the public sector. Moreover, the impact of the Covid-19 pandemic in public healthcare will also be explored as an additional situational variable to analyse its potential impact on medical practitioner performance. Subsequently, the proposed study will provide a high-level analysis on how competency potential latent variables and situational latent variables influence the latent competency variables identified by Fourie (2016). The aforementioned steps will culminate in the development of a comprehensive medical practitioner competency model (an expansion of both preceding models by the abovementioned researchers) with additional competency potential latent variables and situational latent variables that influence the medical practitioner job performance construct.

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[2] The COVID-19 pandemic refers to the coronavirus disease 2019, a deadly illness caused by severe acute respiratory syndrome 2 (SARS-CoV-2). The disease was initially identified from an outbreak of respiratory illness cases in China and has since been named a global pandemic by the World Health Organisation (Cennimo, 2021).

2.4   Medical Practitioner Competency Potential variables: Person Characteristics

In recent times personality research has been applied to health care by investigating how certain medical practitioner personality characteristics relate to health outcomes such as patient care and satisfaction (Lemaire & Wallace, 2014). The modern-day medical practitioner is expected to work efficiently in a fast paced and stressful environment, making complex decisions through drawing on his/her logical reasoning and judgement. Therefore, it is expected that a medical practitioner displays a high level of professionalism and communicate with patents in a manner that conveys care, wisdom and guidance. This not only requires technical competence but sound interpersonal skills as well. However, due to the extreme application of or distorted interpretation of such professional standards, medical practitioners are often faced with the challenge of maintaining these professional expectations and thus individuals with certain personalities may be more at risk than others (Lemaire & Wallace, 2014).

The notion of identifying personality characteristics that could foster better adaptations to the demanding work environments that characterise the public health sector could prove vital. A study conducted by Duberstein et al. (2007) on patient satisfaction in primary care practice revealed that personality traits such as openness to experience and conscientiousness positively influenced the ratings of patients' experiences. Duberstein et al. (2007) further argue that further consideration of medical practitioner personality can assist in identifying personality traits that assist or undermine essential health outcomes such as trust, communication, patient-centred care and adherence to treatment.

In recent times medical practitioners have found themselves working in excessively demanding environments. Consequently, these demands have had a growing influence on the job satisfaction and performance of medical practitioners. It can be reasoned that the job satisfaction of medical practitioners working in the public health service is crucial in that increased job dissatisfaction is associated with increased turnover and poor patient care (De Oliveira Vasconcelos Fihlo et al., 2016). Moreover, a study conducted by Sultana et al. (2009)

revealed that some of the major stress factors medical practitioners experience on the job include a lack of organisational support, an excessive workload as well non-healthy working environments.

Taking the above into consideration one can consider personality as an important element in the battery of items that influence medical practitioner performance. The current study posits that attitude is also a fundamental element to consider in its own regard as it can play a role in the behaviours that medical practitioners exhibit on the job and can be attributed to some of the decisions they make as well. Though this may be the case, attitude as a medical practitioner competency variable will not be discussed in detail in this study, primarily because attitude can be tied to various other competency variables which are discussed in the following section of this chapter.

As previously stated, the impetus behind this study is to identity additional person-centred and situational variables that are not currently included in the Hattingh (2018) conceptual model and can be tied to the latent competencies identified by Fourie (2016). Therefore, the overarching purpose of this section is to investigate the dynamic relationship between competency potential latent variables and situational latent variables in a manner that will enhance the competency potential of medical practitioners working in the public health sector and propel them towards occupational success despite facing on-going job-related demands. After a comprehensive review of the literature on medical practitioner person characteristics and situational variables, the following latent variables were identified as themes in the literature study on public health care and will subsequently be explored in detail in an effort to understand the significance of their influence on medical practitioner performance. The competency potential latent variables are namely: Respect, Detail Conscious, Outgoing, Compassion, Patience, Outspoken and Socially confident. Following the competency potential variables, the study will also discuss situational variables namely: Lack of resources, Shortage of staff, Poor Infrastructure, Excessive Workload and Covid-19 (further in the section). It is important to note that this literature study will culminate in the proposition of two medical

practitioner competency models. The first is figure 2.4 which serves as a comprehensive South African medical practitioner competency model (mapping competencies, competency potential (from both Hattingh and Gwija), situational variables and outcomes) and, can be regarded as an explanatory conceptualisation of medical practitioner performance in the public health context. The subsequent model (figure 2.5) can be regarded as an adapted partial South African medical practitioner competency model specific to the proposed study. This model aims to highlight variables which have been identified as part of the literature review of the current study which mainly include, competency potential latent variables (from the literature study and additional to those already identified by Hattingh, 2018) and situational variables which characterise the working environments of medical practitioners. By formulating hypothesis, these variables were subsequently mapped to the competency latent variables and outcomes identified by Fourie (2016).

The subsequent section will elaborate on each of the person characteristics identified for the proposed study.

2.3.1 Respect for the Patient

Good medical practice is patient-centred in that it involves a medical practitioner recognising that every patient is unique. Therefore, it is critical that one adapts their method of practice to address the needs and reasonable expectations of each patient. Furthermore, it is essential to have an enhanced level of cultural awareness, in other words, to be aware of one's own culture and beliefs and respectful of the beliefs and cultures of others (Medical Board of Australia, 2009). It can be argued that this point of view embodies what respect means in the healthcare context. Moreover, Branch (2006) argues that respect is one of the core values of medical professionalism, in that respect for patients manifests itself as an attitude, of which the medical practitioner is only partially self-aware.

1. Respect: A regard and awareness to acknowledge the rights, needs and cultural beliefs of each patient and oneself.

It can be said that respect for the patient by a medical practitioner is a critical component in the provision of a healthy environment in which patients feel cared for as individuals. When medical practitioners are part of an engaged, collaborative and committed healthcare team that has respect embedded within its principles of healthcare delivery, they are likely to perform better, be more innovative and display greater resilience (James, 2018). On the contrary, a lack of respect can stifle teamwork leading to poor interactions with patients and decreased individual performance (James, 2018).

Medical practitioners interact with a vast amount of people all from different spheres of life and carrying different background stories. As such, patients who are treated by medical practitioners are people who want to be treated with dignity and acknowledgement as individuals and not just as medical problems or experiments (James, 2018; O'Donnell, 2019). Therefore, it is fundamental that during the medical encounter, medical practitioners should pay attention to patients' needs, attending to them as and when necessary and not leaving them to feel ignored (James, 2018). Patients want medical practitioners to describe concepts in basic language so as to feel like a valued part of the decision-making process and not be bogged down with medical jargon (O'Donnell, 2019; Washburn, 2019).

A study conducted by Karnieli-Miller et al. (2010) regarding the narratives of respect and disrespect by medical students at Indiana University School of medicine revealed that respectful behaviour resulted in enhanced ability to relate to patients as well as increased communication and willingness to share information. Disrespectful behaviour was described as resulting in a lack of trust. an unwillingness to share information and damage to potential relationships (Karnieli-Miller et al., 2010).

Branch (2006) argues that educational programmes in medicine place less emphasis on professional values and because of this unawareness, some medical practitioners fail to consciously integrate respect into their professional identity and medial toolkit. It is based on this supposition that the current study seeks to include respect as a key competency potential latent variable in the proposed medical practitioner competency model.

Hypothesis 1: In the proposed structural competency model it is proposed that respect positively influences medical professionalism.

Hypothesis 2: In the proposed structural competency model it is proposed that respect positively influences patient satisfaction.

Hypothesis 3: In the proposed structural competency model it is proposed that respect positively influences working with people.

Hypothesis 4: In the proposed structural competency model it is proposed that respect positively influences communication.

Hypothesis 5: In the proposed structural competency model it is proposed that respect positively influences information gathering.

2.3.2 Detail Consciousness

Medical practitioners have an obligation to treat their patients in accordance to the relevant legislative and professional standards set out for their profession. Over a long and established career in healthcare, even the most diligent medical practitioners may experience warranted and unwarranted complaints from disgruntled patients (Murray, 2014). It is reasonable to infer that detail consciousness in medical practice is vital to ensure effective and sustained patient care and treatment. According to Murray (2014), the aspect of being detail conscious enhances a medical practitioner's ability to rationalise their decision making in devising the correct treatment strategies for a patient's health struggles. Moreover, Murray (2014) argues that being detail conscious can allow medical practitioners to track a patient's healthy history, identifying patterns and themes that may impact a patient's future care and recovery from illness or disease and avoid baseless claims of medical negligence.

2. Detail Consciousness: Attention to detail and enhanced cognitive awareness of medical processes.

Medical practitioners often tackle challenging problems on a daily basis as part of the plethora of complexities that come with the functions of their work. A single mistake in medical

practice can have detrimental effects. When a patient visits the doctor's surgery, he or she wants to be assured that the medical practitioner has not overlooked any aspect of their healthcare (O'Donnell, 2019). This has a fundamental bearing on the doctor-patient relationship as a display of being thorough and comprehensive in one's considerations enhances the patient's confidence in the ability of medical practitioner to make an accurate diagnosis, eliminating the possibility of continued physical ailments and additional visits (O'Donnell, 2019).

One can deduce that the element of being attentive and possessing an enhanced sense of awareness during a medical encounter can allow a medical practitioner to gather a comprehensive set of data which he/she can base their medical judgement on. When a medical practitioner does not overlook any aspect that relates to a patient's health, he or she will be able to provide wholistic care and ultimately help achieve the desired patient outcomes. A fundamental strategy in achieving this is through asking patients the vital questions and/or making the necessary observations during the patient encounter. The outcomes of the questions/observations will then serve to aid the medical practitioner in his/her decision-making.

Hypothesis 6: In the proposed structural competency model it is proposed that being detail conscious positively influences information gathering.

Hypothesis 7: In the proposed structural competency model it is proposed that being detail conscious positively influences effective decision-making.

2.3.3   Outgoingness

Empirical studies have indicated that there is a positive correlation between extraversion and job performance in occupations that are characterised by a high level of engagement with others i.e. stakeholders and clients (Barrick et al. 2001). According to Mesurado et al. (2014), extraversion is a personality trait characterised by sociability, excitement-seeking and positive affect. Extraverted individuals tend to possess higher social skills due to their preference for

social interaction and thus experience more positive affect and possess better interpersonal and leadership skills which may enhance their overall job performance (Dietl & Kombeiz, 2020; Moshoeu, 2017).

The proposed study posits that outgoingness as a sub-dimension of extraversion is a fundamental person characteristic in a medical context. Joubert and Venter (2013) suggest that outgoing individuals are lively and animated in social situations, they are talkative and enjoy being the centre of attention. Individuals with an outgoing personality style have a high need for stimulation, Dietl and Kombeiz (2020) postulate that work with a high task significance allows outgoing individuals to strive for reputation and status and has a marked impact on their job satisfaction. Moreover, individuals who are outgoing may feel constrained and demotivated by performing routine work. Conversely, individuals who are more introverted in nature tend to not feel comfortable being the centre of attention and thus will not strive for recognition even if the task significance is high (Dietl & Kombeiz, 2020). It can be said that medical practitioners work in environments that are characterised by a high degree of social interaction. A medical practitioner who conveys an approach that embodies an outgoing nature is likely to experience more satisfaction and operational efficiency on the job than one who does not.

3. Outgoingness: Social energy and investment in activities in the workplace, which allows one to achieve his/her goals.

A study conducted by Alraddadi et al. (2020) which investigated the needs of patients receiving treatment from medical practitioners, revealed that older patients have a higher preference for medical practitioners who devote enough time to talk to them freely about their condition, are interested in their personal situation, tell them how long the illness will last and expected number of follow ups, maintain eye contact, provide information without being probed and show an eagerness to find out how serious the problem bothering them is. It can be reasoned that the findings of this study encompass what can be regarded as an outgoing demeanour in healthcare. In another study, Eley et al., (2012) investigated personality traits that propelled individuals to choose embarking on a career in health care.

The findings of this study suggest that individuals regard the following as essentials factors:

- The element of being outgoing, assertive and motivated.

- Possessing good communication skills.

- Challenging the status quo and pushing the boundaries.

Hypothesis 8: In the proposed structural competency model it is proposed that outgoingness positively influences communication.

Hypothesis 9: In the proposed structural competency model it is proposed that outgoingness positively influences outspokenness.

The functions performed by a medical practitioner have a critical impact on not only the immediate communities they serve but also the broader social environment. It is expected of medical practitioners working in public hospitals to be social and approachable when dealing with their patients and to form strong professional bonds. Adopting an outgoing approach can allow a medical practitioner to experience more novel, exciting and stimulating experiences in the workplace and enhance their overall job satisfaction (Dietl & Kombeiz, 2020; Robertson, 2021).

2.3.4 Compassion

The idea of a medical practitioner going about his/her work whilst being oblivious or non-attentive to the needs and feelings of patients conveys a dismal picture (De Zulueta, 2013). A medical practitioner must take cognizance that he/she is not a machine designed to perform tasks solely with the intention of successful completion. It is fundamental that during a medical visit, patients experience empathy, care and kindness. Compassion, at its core, can be regarded as an intricate process which entails an appraisal of the suffering of others and subsequently translates into context appropriate helping behaviour motivated by a general concern for the welfare of others (Visser, 2020; De Zulueta, 2013). In the medical context, compassion pertains to the precise art of reading the emotions of patients and responding in a sensitive and appropriate manner (De Zulueta, 2013). In this light, it is important to make a

distinction between compassion as a trait and compassion as a latent competency. According to Visser (2020), the conceptualisation of compassion can be twofold in that it can represent either as an abstract characteristic of a medical practitioner or an abstract characteristic of their behaviour. In her study, Visser (2020) conceptualised compassion from the stance of an abstract theme represented by a bundle of related medical practitioner behaviours i.e. how a medical practitioner acts towards a patient. The proposed study seeks to conceptualise compassion from the stance of a state that represents the individual medical practitioner as a person.

4. Compassion: A propensity to be sensitive, courteous and attentive to the needs of patients and a general understanding of their medical care requirements.

Medical practitioners deal with patients who are either suffering from illness or physical injury, who are thus at their most vulnerable and the presence of compassion in medical treatment can foster feelings of comfort and reassurance (Robertson, 2021). The challenge with compassion often lies with the fact that being compassionate is not as simple as flicking on a switch or pressing a button. Compassion, like other mental states (such as gratitude and awe) is transient in nature and impacted by internal and external factors (Fernando et al., 2016). Being a medical practitioner is a complex biopsychosocial activity in that, medical practitioners working in the public sector are faced with the challenge of having to cope with large patient volumes, short consultation times, shortage of staff and equipment (Fernando et al., 2016). Fixed routines and algorithms do not always suffice given the myriad complexities in medical practice, which can leave patients distressed and bemused (De Zulueta, 2013). It is conceivable that due to these challenges a medical practitioner may overlook the importance of embodying a compassionate approach towards patients or even allied professional such as nurses. Moreover, the increased concern for patients' rights and welfare in public healthcare institutions necessitates that medical practitioners should, as best as possible, be equipped with the skill of providing compassionate medical care in order to use it as a tool for effective diagnosis (Visser, 2020; De Zulueta, 2013).

Hypothesis 10: In the proposed structural competency model it is proposed that compassion positively influences effective decision making.

2.3.5 Patience

It is fundamental for medical practitioners to exhibit a substantial amount of patience when working with patients and their families (Robertson, 2021). Being patient allows medical practitioners the opportunity to provide quality health care even in the most stressful situations i.e., dealing with patients who fear receiving medical treatment. PCMB (2018) argues the importance of a present mind and body as a medical practitioner navigates the medical encounter and subsequently attempts to treat illness or disease. As previously stated, medical practice in the public healthcare system is largely affected by contextual factors that limit the ability of medical practitioners to work under preferable conditions. Moreover, these challenges require a substantial amount of patience, where a medical practitioner needs to focus on providing an effective service in the face of excessive stress and fatigue.

5. Patience: To be focused and present in the moment and allow a sufficient amount of time to perform tasks and procedures in order to enhance one's overall judgement.

Being a medical practitioner is a very challenging endeavour in that, medical practitioners work long and unsociable hours dealing with life and death situations and performing medical procedures under intense scrutiny from patients and their families as well as other healthcare professionals (Crosby, 2015). According to Wurzbach (2019), patience in healthcare allows medical practitioners the time needed to reach an optimal solution to a complex medical problem. The viewpoint by Wurzbach (2019) posits that patience can enhance a medical practitioner's competence through its ability to allow a medical practitioner to "step back" and assess a situation calmly and make an effective decision with a sense of security about the long-term effects it may have on the long-term health and well-being of a patient. The absence of patience in medical care can essentially pave the way for many abrupt decisions. The feeling of being rushed when treating a patient can lead a medical practitioner to cut corners

and perform an inaccurate diagnosis that can pose undesirable consequences for the health outcomes of a patient (Crosby, 2015; Wurzbach, 2019).

Hypothesis 11: In the proposed structural competency model it is proposed that patience positively influences coping with pressure.

Hypothesis 12: In the proposed structural competency model it is proposed that patience positively influences being detail conscious.

Hypothesis 13: In the proposed structural competency model it is proposed that patience positively influences effective decision making.

2.3.6 Outspokenness

There has been a significant cultural shift in the structure of the doctor-patient relationship in recent years. The traditional medical model of diagnosis in medicine where the medical practitioner has the sole onus of steering the medical encounter has been replaced by a more dynamic doctor-patient partnership that draws on honest communication and shared decision-making (Medical Protection Society, 2011). Patients now see themselves as consumers and have consumer expectations about their medical care. It is therefore essential to offer an honest and open healthcare service where patients are given accurate information about all medical procedures pertaining to their health.

According to Washburn (2019), patients want their doctor to rip off the band-aid irrespective of whether they themselves are not willing to. In other words, patients expect a medical practitioner to be outspoken with regards to all of their health information and provide facts to the matter (O'Donnell, 2019). This conveys the feeling that a medical practitioner is able to make an educated and calculated decision about the patients' health and well-being and is an active learner when rendering healthcare services.

6. Outspokenness: Maintaining an open and honest relationship with patients and being informative about health processes and procedures.

It is fundamental that medical practitioners adopt an approach that fosters honest communication with their patients. Washburn (2019) argues that patients are more forgiving to a medical practitioner who made mistake and admitted it straight away than who is less forthcoming or provides justification for errors during a medical encounter. What patients want when a medical procedure goes wrong is to be told the truth, in respect of why the error occurred and an apology where that is due (Medical Protection Society, 2011). Poorly handled explanations serve only to compound the emotional distress and loss of trust that has already been experienced by a patient and increases the likelihood of litigation (Medical Protection Society, 2011). Litigation, in this aspect, can be regarded as an outcome facilitated by a lack of or delayed information regarding what happened during a medical procedure and why.

It is based on this premise that trust and communication are now being labelled as fundamental tools for better patient care and satisfaction (Chandra et al., 2018). In a study conducted by the Medical Protection Society (2011), open and honest communication was regarded as the second most important factor when medical errors occur in practice, behind only rectification of the problem. The current study posits that the ability to be outspoken enhances communication and promotes a successful doctor-patient partnership which contributes to the achievement of higher levels of trust, which in turn, can result in positive health behaviours i.e. better response to treatment and optimism about one's general health status (Chandra et al., 2018).

Hypothesis 14: *In the proposed structural competency model it is proposed that outspokenness positively influences communication.*

2.3.7 Socially Confident

When patients are suffering from illness, they are clouded by uncertainty about the future of their health status and, thus, trust on medical practitioners to alleviate that doubt. During a medical encounter patients want to have a sense that a medical practitioner knows what he/she is doing. And whether dispensing treatment or offering general health-related advice, patients want a medical practitioner who inspires confidence (Washburn, 2019). This

reassures patients that they have someone who is capable and more than qualified to be in the driver's seat with regards to their health and well-being.

The notion of being socially confident has a fundamental bearing in this regard, in that it describes someone who is self-assured and relays an attitude that promotes calm in stressful situations (Joubert & Venter, 2013). Confidence describes a quality associated with successful individuals; it is an assurance arising from a belief in your own strengths and abilities. As such, medical practitioners are considered to be members of an above average and confident group of professionals (BMJ, 2005). Therefore, it is reasonably expected of a medical practitioner to possess the level of confidence that alleviates despair and is characterised by a positive effect on other individuals.

7. Socially Confident: Internal resources that allow an individual to display an attitude that promotes assurance and optimism for healthcare and wellbeing.

Effective healthcare is not limited to having a diagnosis or answers at your fingertips, but rather it is an intricate process that includes supporting patients as they share their biggest concerns regarding their health and providing positive, reassuring behaviour along the way. A study by Stone (2006) on qualities that allow patients to convey confidence in a medical practitioner, revealed that consistently trying to see what one can do to make a patient feel better is regarded as a fundamental quality to possess. This not only allows a patient to have a positive outlook on his/her general health and well-being, but it also enhances how they perceive the entire medical encounter. When a medical practitioner is able to convey a level of confidence that restores belief in health care, this can enhance the social well-being of surrounding communities.

Hypothesis 15: *In the proposed structural competency model it is proposed that social confidence positively influences health advocacy.*

Hypothesis 16: *In the proposed structural competency model it is proposed that social confidence positively influences patient satisfaction.*

It can be reasoned that the quality of being socially confident can be viewed as a general competency that a medical practitioner ought to possess and display during their encounter with patients. However, the proposed study seeks to consider this variable in the light of the unique context of South Africa. Medical practitioners in the public health sector often face the pressure of having to perform their duties in sub-standard conditions whilst maintaining the performance standards expected of them. Consequently, this may result in reduced job satisfaction and overall ability to relay confidence in the public health sector in which they serve. Therefore, the proposed study argues that the quality of being socially confident is fundamental in the South African public health sector, in that those medical practitioners who are socially confident can inspire the belief in patients that better health outcomes can be achieved and the overall healthcare of the nation can be improved.

In summary, the above-mentioned person characteristics serve as additional competency potential latent variables in addition to those already identified by Hattingh (2018). It is important to note that in embarking in this endeavour, the research also uncovered that there are potential relationships between the competency potential latent variables themselves. These were subsequently included as further hypothesis in the discussion above. It is important to note that the additional contribution of this study is that it also seeks to investigate the working environment of a medical practitioner in relation to its influence on the performance of medical practitioners. In this light, the following section will provide a discussion on the occupational role of medical practitioners in order to uncover what it constitutes in the South African context in terms of regulatory framework and overall working environment. Ultimately, this will result in the researcher hypothesising situational latent variables (in addition to the competency potential latent variables) stemming from the contextual environment that medical practitioners have to navigate in order to perform their duties in the public health sector. Subsequently, the situational variables will be expanded on the proposed explanatory medical practitioner competency model and serve to answer the overarching substantive research hypothesis of the study.

2.4   The role of Medical Practitioners

Given the complex challenges faced by the South African healthcare system, it is fundamental to unpack what the role of the medical practitioner encompasses, and moreover, to structurally redefine the role of the medical practitioner through the development of a competency model.

According to Frank (2005), the role of medical practitioners is evolving at a hurried rate. Significant changes in the nature of health care delivery, clinical services offered and the manner in which healthcare professionals work together imply that medical practitioners must be competent to serve efficiently and effectively in a continuously changing health system (Black & Craft, 2004). Black and Craft (2004) further argue that the doctor-patient relationship is largely changing as well and will likely continue to do so as members of the public are becoming better informed and confident in their questioning with respect to matters concerning their healthcare.

Though the current study views the role of a medical practitioner through the lens of competency modelling, it is worth noting that the general perspective in which one can view the role of a medical practitioner can be twofold. Firstly, one can view the role of medical practitioners from a healer (therapeutic) standpoint in that patients seek their professional skills for the diagnosis and treatment of medical illness and disease (Thirumoorthy, 2012). Secondly, one can view the role of medical practitioner from a socio-scientific perspective, which according to Thirumoorthy (2012) considers the role of a job holder as the sum of all norms related to a specific task or position. These roles form a circle of expectation around the individual and expectations associated with these roles may be in the form of legislation, regulations, and instructions.

To determine how medical practitioners can remain effective and continue to meet the needs of their patients, Frank (2005) developed a multifaceted framework for medical practitioner competence that included several roles. The distinct roles however were developed for specialist medical practitioners and not general medical practitioners per se.

Frank (2005) summarises the role of the medical practitioner into seven distinct roles.

Table 2.4

The seven key roles of medical practitioners

No	Role	Definition
1	Medical expert	Medical practitioners carefully integrate their knowledge, skills and attributes to diagnose and treat patients' healthcare problems. It is also required that medical practitioners identify and provide solutions to healthcare problems.
2	Communicator	Medical practitioners establish rapport with patients/clients and other collaboration partners to communicate professional problems. Additionally, medical practitioners display mastery in the use of various media such as oral, written and visual media.
3	Collaborator	Medical practitioners are effective leaders and team members that contribute to the overall effectiveness of a healthcare system through patient-related/ interdisciplinary collaboration.
4	Manager	Medical practitioners are effective planners that ensure the continuity of care across departments and sectors, chair meetings, resolve conflicts and ensure patient safety is prioritised in healthcare settings.
5	Health Advocate	Medical practitioners use their expert knowledge to provide guidance and offer support regarding health-promotion initiatives as well as best measures to respond to harmful disease and infections.
6	Scholar	Medical practitioners display a reflective approach to their own practices and that of others, provide evidence-based knowledge and ensure the effective translation of research into practice. Medical practitioners are required to partake in research and development projects and commit to the responsibility of lifelong learning.
7	Professional	Medical practitioners display diligence, are conscientious and respect the autonomy of the patient. Medical practitioners are role models in healthcare settings and are expected to adhere to high standards of professionalism.

Note: This table described seven key roles of medical practitioners which can be used to measure against their job performance.

Adapted from the "CanMEDS 2005 Physician Competency Framework" by J. Frank, 2005, Ottawa, The Royal College of Physicians and Surgeons of Canada, p. 5. Copyright 2005 by the Royal College of Physicians and Surgeons of Canada.

A thorough understanding of the role of a medical practitioner can enhance the ability to monitor and measure the performance of medical practitioners. According to Visser (2020), the process of measuring and monitoring medical practitioner performance can only be achieved once it is made explicitly clear what constitutes medical practitioner performance. Therefore, it is fundamental to form a conceptual grasp on the connotative meaning of the medical practitioner performance construct. According to Fourie (2016), in order to fruitfully formulate a comprehension of what medical practitioner performance consists of, one must thoroughly examine the tasks which are included in the job of a medical practitioner. Medical practitioners require a specific set of competencies to merit the trust of patients and subsequently enhance the therapeutic relationship between practitioner and patient.

The HPCSA assists in this regard by stipulating the acts of the medical profession and by which the performance of medical practitioners is to be judged, as stated in the Health Professions Act of 1974 (Republic of South Africa, 1974, p. 1):

1. "The physical examination of any person;

2. Performance of procedures and/or the prescribing of medicines and managing the health of a patient (prevention, treatment and rehabilitation);

3. Advising any person on his or her physical state;

4. On the ground of information provided by any person or obtained from him or her in any manner whatsoever –

    (a) diagnosing such person's physical state;

    (b) advising such person on his or her physical state;

    (c) administering, selling or prescribing for such person any medicine or 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."

To build knowledge on the occupational role of medical practitioners, it is fundamental to review the environment in which medical practitioners work. The following section will present a discussion on the South African health care system, with respect to its structure and overall influence on the provision of health care in the medical sphere that medical practitioners operate in.

2.5.   Health Professions Council of South Africa

In South Africa, the medical profession is regulated by the Health Professions Act No.56 of 1974 in conjunction with the Health Professions Council of South Africa (HPCSA). The HPCSA

maintains control over the education, training and registration for practising health professions registered under the Health Professions Act, including medical practitioners (HPCSA, 2020).

According to the HPCSA (2020), in order to protect the public and strategically guide professions, it should be ensured that practitioners uphold and maintain high ethical standards within their respective domain. Nel (2019) suggests that the analysis of these standards could assist in providing valuable information that could shed light on the competency requirements to function effectively in the South African healthcare system.

2.6 The South African Health Care System

The role and functions of health systems has increasingly become important due to their enormous contribution to the health and well-being of the general population of a nation. For rich and poor alike, health needs in the modern day are very different compared to those of a century or even a few decades ago. Therefore, better strategies need to be continuously adopted to assist the country to achieve the necessary health outcomes.

In the year 2000, the World Health Organization conducted a study in which it used eight measures to rank all countries around the globe on the efficiency of their health systems, and South Africa was ranked 160th (Comny, 2013). It is thus essential now, more than ever, to reshape the approach and delivery of health care in South Africa. This can be achieved through restructuring the jobs of key role players in the medical field such as medical practitioners and ensure that their jobs are informed by the correct repertoire of competencies needed to cope with the current challenges experienced in the South African healthcare context and provide healthcare services that are tailored to address its current needs.

The South African government spends more money on health care as compared to other countries in the Sub-Saharan African region. And though this may be the case, the distribution of these resources is disproportionate (Comny, 2013). The South African healthcare system is divided into private and public sectors with an uneven allocation of funds to different regions

in the country (Comny, 2013). The section that follows provides a comparative discussion that outlines the current status of private and public healthcare in South Africa.

2.6.1 Private Healthcare

For many citizens across South Africa the term private healthcare is synonymous with high-quality services, patient care and exceptional facilities (Hassim et al., 2007). However, the reality of a divided health system is that only those with a better socio-economic status have the financial resources to gain access to private healthcare. According to Hassim et al. (2007), as prohibitive costs make private health care too expensive for most people (Hassim et al., 2007). While the cost of using private health is one deterrent, the distribution of these facilities is another as they are mainly based in urban and affluent areas, and consequently, this leaves many South Africans with access only to public health care facilities. Most private health care institutions regard their services as a commodity which can be sold for a profit (Hassim et al., 2007). The same perception is echoed by Brand South Africa (2012) who state that the private sector is mostly run on commercial lines and mostly caters to middle- and high-income earners who are members of medical aid schemes.

Despite the factors mentioned above, the quality of healthcare delivery that has been achieved in the private healthcare sector cannot be overlooked. The healthcare outcomes produced by the South African private healthcare sector are akin to that of countries such as Australia, Sweden, Belgium and Ireland (The Monitor Group, 2008, as cited in Econex, 2013). However, it is fundamental to note that like any other business, private healthcare institutions are highly organised medical establishments that follow complex processes through the aid of sufficient manpower. Accordingly, private healthcare institutions consist of a large number of hospital managers and administrators who are usually highly skilled professionals responsible for the cost-effective organisation, coordination, planning, evaluating and controlling of health services for their hospital. It can thus, be reasoned those medical practitioners working in the private sector reap the benefits of working with a vast set of allied professionals which

enhances their overall job satisfaction and the quality of output that they are able to produce on the job.

2.6.2 Public Health Care

The government is compelled to provide access to health care as it is a right in the constitution of South Africa (Hassim et al., 2007). These healthcare services should be paid for by citizens and by the government. However, in contrast to private health care which is mostly profit-driven, public healthcare seeks to promote equity, access, quality and sustainable healthcare (Hassim et al., 2007).

The national Department of Health holds overall responsibility for healthcare with specific responsibility for healthcare in the public sector (Edmeston & Francis, 2012). The vast majority of South Africans rely heavily on the services provided by the public health sector. This implies that in many ways the public health sector is the cornerstone to the South African health system and has a fundamental role to play in improving the socio-economic well-being of the country (Edmeston & Francis, 2012).

The National Treasury (2021) released its annual budget for the country which indicated a budget of R248.8 billion for the 2021/2022 financial year (Table 2.1). The National Treasury (2011) postulates public health care consumes approximately 14% of the government's budget, which is distributed across the nine provinces of the country. However, the distribution of these resources and the quality of health outcomes achieved vary from one province to another. A study by Brand South Africa (2012) revealed that in 2011 the total spend on health care in South Africa amounted to approximately 8.3% of the country's national Gross Domestic Product[3] which is well above the 5% recommended by the World Health Organisation. Despite the substantial influx of funds, health outcomes remain poor across the country and this can

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[3] "Gross domestic product (GDP) is the standard measure of the value of final goods and services produced by a country during a period". Organisation for Economic Co-operation and Development Staff (2009, p.16). The GDP is a critical indicator of the economic growth of a country.

be mostly attributed to the inequities between the private and public sector (Brand South Africa, 2012).

Table 2.5

Consolidated government expenditure by function

R Billion	2020/2021	2021/2021	Average growth 2020/21 – 23/24
	Revised estimate	**Budget estimate**	
Learning and culture	387.2	402.9	2.4
Health	247.0	248.8	-0.3
Social Development	413.3	335.3	-7.7
Community Development	211.5	218.8	4.4
Economic Development	191.9	207.5	4.2
Peace and security	218.6	208.6	-0.8
General public services	62.5	68.4	3.4
Payment for financial assets	87.6	48.2	
Allocated expectation	**1819.6**	**1738.6**	
Debt service cost	232.9	269.7	13.3%
Contingency reserve	-	12.0	
Consolidated expenditure	**2052.5**	**2020.4**	**0.7%**

Note: This table reflects the annual budget allocation for various sectors that represent the public service. Average growth refers to the annual increment of budget allocation to a specific facet of public service.
Adapted from "Budget review 2021". National Treasury Republic of South Africa, 2021, p.9. Copyright 2021 by Communications Directorate National Treasury.

According to Hattingh (2018) factors such as monetary resources, compensation and infrastructure influence the inequity between private and public healthcare. In South Africa, the expenditure on private healthcare serves approximately 17% of the population and amounts to almost the same expenditure on public healthcare which serves approximately 80% of the South African population (Brand South Africa, 2012; Econex, 2013). Moreover, it is worth noting that only half of the budget indicated in figure 2.5 will be allocated to the public health sector, which is currently facing a multitude of health-related challenges in contrast to the private health sector.

In addition to the imbalance on expenditure, the doctor to population ratio is also a fundamental factor to consider. Hattingh (2018) comments that the ratio of patients served in private and public healthcare varies considerably with the public sector being responsible for a substantial number of patients. The doctor to population ratio in South Africa is 0.77 per 1000; however, a significant number of medical practitioners work in the private sector.

Therefore, there is only one medical practitioner for every 4219 people in the public sector (Brand South Africa, 2012).

The factors outlined above provide an argument that the public healthcare sector conveys an image of substandard and strained healthcare services. There are now several indicators that the quality of output produced by these two systems (private and public healthcare) is so vast that the government needs to stage an intervention (Hassim et al, 2007).

It is based on this premise that the proposed study seeks to investigate competency potential latent variables and situational latent variables that influence medical practitioner performance. This will serve to expand the understanding on the dynamic interactions between these variables in order to enhance the ability of medical practitioners to develop the right competencies to function effectively under such challenging complexities.

2.7   National Health Insurance

In an effort to create a shift in the South African health care system that would ultimately foster better access and quality of healthcare delivery, the South African government introduced the National Health Insurance Act of 2013 (NHI). According to Comny (2013), the NHI is a form of social health insurance, in that it seeks to enforce contributions from employers and employees to partially fund the South African health system. According to the South African Health Review (2017), the NHI accentuates the critical need for a centrally coordinated approach to health and workforce planning in South Africa.

The national health insurance was said to be carried out in a three-stage plan, which would span a period of fourteen years (Gerber, 2019).

Phase one (2012-2017) was described as the initial stage and consisted of piloting health systems strengthening initiatives as well as establishing the NHI fund and key institutions that would play a fundamental purpose once the NHI is fully operational.

Phase two (2017-2022) serves to ensure that the NHI fund is functional and ensuring it is supported by the mandatory management and government structures in order to initiate population registration.

Phase three (2022-2026) will serve to signal the introduction of mandatory prepayment and contracting of private hospital and specialist services (Gerber, 2019).

Since the proposed implementation of the NHI there has been much deliberation regarding its practicalities and proposed effectiveness, and what comes to the forefront in this respect is the financial impact it may have on an already burdened South African healthcare system. Erasmus and Fitchen (2010) investigated the financial implications the NHI would impose on the South African healthcare system and observed that the expected additional health expenditure resulting from the implementation of the NHI could approximately range from R9 billion in 2012 to R59 billion by 2025. The burden of the NHI would not be in the initialisation period but when the programme is fully operational, and the implications of the rising annual expenditure would be that a large portion of the funding would need to originate from taxes (Erasmus & Fitchen, 2010). Consequently, increased taxation would impose a resounding national impact on the disposable income of many South African households, to the extent that some individuals may have no option but to forego access to private health care in favour of public health care which may be of lower quality (Erasmus & Fitchen, 2010).

Therefore, it can be deduced that the NHI is a fundamental and active proposal that could provide much promise to a healthcare system plagued by inequality. However, South Africa as a nation has not yet provided substantial answers to account for its sustainability leading one to question the country's readiness for its implementation in the coming years.

2.8   The Covid-19 Pandemic

In 2019 The World Health Organisation office based in China reported a series of an unknown pneumonia which would be later named the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (De Groot & Lemanski, 2021; National Institute for Communicable Disease

(NICD), 2020). According to the European Centre for Disease Prevention and Control (ECDP), 2020) the disease associated with the SARS-CoV-2 is regarded as the novel coronavirus diseases 2019 (Covid-19). According to Wiersinga et al. (2020), COVID-19 is caused by SARS-CoV-2 infection and infected individuals may either be asymptomatic or experience a wide range of symptoms such as upper respiratory tract infection or life-threatening sepsis.

Covid-19 has proceeded to spread rapidly across the globe, to the extent which the WHO has since described as a global pandemic. Inevitably (through its rapid means of transmission) the virus has since found its way within the South African borders. Just as in the past pandemics, stark differences have been noted in the Covid-19 response between developed and developing countries (Burger & Mchenga, 2021). The Covid-19 pandemic has brought intense demands on healthcare systems in resource limited nations (Burger & Mchenga, 2021). Subsequently, this has led to critical shortages with respect to intensive care unit capacity, availability of personal protective equipment (PPE), ventilators available and the number of doctors per person (Burger & Mchenga, 2021; Seifman et al., 2021).

According to Mbunge (2020) the South African health system has been overwhelmed by the Covid-19 pandemic and has faced an ongoing challenge of providing a good health service to patients whilst protecting health staff from infection. The situation is compounded by continued reports of corruption, abuse of funds and lack of PPE from local reprocessing companies that manufacture PPE's (Mbunge, 2020).

The proposed study argues that Covid-19 has had a profound impact on healthcare delivery in South Africa. Moreover, it has served as an additional factor that the National Department of Health needs to take into account within its strategic planning. According to Verhoeven et al. (2020), the Covid-19 pandemic serves as a monumental challenge for medical practitioners as primary care is the first point of contact for patients who are displaying symptoms of the virus. Haq et al. (2021) argue that it is strenuous for medical practitioners who have no infection and are treating Covid-19 patients to adjust to the stressful situations that they encounter on the job.

A study conducted by Gopichandran and Sakthivel (2021) on patient's experiences at a care centre in Chennai revealed that 39% of patients agree that physical distancing lessened the ability of medical practitioners to interact with them appropriately. Moreover, a study by Verhoeven (2020) on the lived experiences of medical practitioners during the pandemic ascribed their experiences of using PPE as a negative factor to running a smooth consultation as they can create communication barriers with patients, for example, displaying empathy or reading non-verbal communication.

According to Haq (2021), medical practitioners have also been experiencing extended consultations due to their attempts to make patients feel comfortable and explain concepts such as self-isolation. It can also be argued that the overall workload of a medical practitioner has increased during the Covid-19 pandemic. According to Verhoeven et al. (2020), medical practitioners are now additionally experiencing an influx of telephone calls and are having to follow the relevant platforms to stay informed and make adjustments to their websites. According to Razu et al. (2021) and Verhoeven et al. (2020), the increased administrative duties in hospitals are becoming burdensome to medical practitioners as they constantly have to ensure that standard operating procedures are being followed by medical staff as defined by the national government (Haq, 2021).The constant change that the pandemic presents in healthcare creates uncertainty for medical practitioners regarding the appropriate line of treatment (Razu et al., 2021). Furthermore, clinical decision-making is also impacted negatively by virtual consultations, in that less information is obtained over a telephone consultation making it difficult for a medical practitioner to treat illness effectively (Verhoeven et al., 2021). Due to increased commitment, medical practitioners are also less able to focus on their own development. According to Laloo et al. (2021) the Covid-19 pandemic has had a profound impact on the training and development of medical doctors globally. This is due to limited exposure to face-to-face training and teaching opportunities in favour of virtual sessions which are not always effective. Laloo et al. (2021) conducted a survey in which they assessed the perceived impact of the Covid-19 pandemic on the training of medical practitioners; in this

study 69.2% of research participants reported that the pandemic has had a negative effect on their training.

The position of the study is that improving what the country has, by upskilling the current and future crop of medical practitioners, could prove to be more economically sustainable in that it is based on investigating how their current resources (competencies) can be expanded to meet the current health challenges that South Africa currently faces. Part of the challenges experienced in healthcare stem from the situational environments that characterise public healthcare institutions. In this regard, the proposed study seeks to investigate the impact of the situational environment on medical practitioner job performance in order to expand a medical practitioner competency model that accounts for not only the human factor of medical practitioner performance but also the environmental factor.

2.9   Situational Variables

The preceding section served to argue that medical practitioners employed in the public health sector face numerous challenges that emanate from their working environments. It is based on this reasoning that the proposed study postulates that the job performance of medical practitioners is not only influenced by the person characteristics of a medical practitioner but also characteristics of the situation in which they work. Consequently, mounting constraints from these challenges may result in negative experiences as well as declined quality of service delivery (Manyisa, 2016). Therefore, it is deemed fundamental to investigate the relationship between the person and the situation as well as the subsequent impact on performance thereof. The situation in which a medical practitioner operates is generally influenced by (as extracted from the literature):

- The health system in which they operate;
- The organisation/hospital that they serve;
- The position which they hold (within the organisation/hospital);
- Colleagues with whom they work;

- Patients that they treat, and

- Home life that they return to after working.

In order to develop a competency model that holistically captures the underlying variables that influence medical practitioner performance, it is important to also consider the contextual factors that arise from the workplace in which medical practitioners have to perform their duties in. While the previous sections focused on discussing the competencies and competency potential latent variables that influence medical practitioner performance. The subsequent section seeks to delve into the situational variables that influence medical practitioner performance and propose possible structural relationships between these and the competencies, competency potential variables and situational variables discussed in the preceding sections.

Based on the factors outlined above, the section that follows provides an elaborated discussion on the proposed situational variables that influence medical practitioner job performance in the public health sector. Subsequently, these variables were expanded on a partial medical practitioner competency model (Figure 2.4) and structurally linked to the variables highlighted in the previous section.

2.9.1 *The extent to which health resources are available*

The provision of quality healthcare entails putting together a considerable number of resources (WHO, 2000). It is fundamental that these resources are dispersed among the many inputs that are used to deliver health services (WHO, 2000). A hospital as an organisation uses a complex network of resources in order to achieve its desired health outcomes.

The challenge with resources lies within defining what they are as they can be different constructs to different individuals. Halbesleben et al. (2014) argue that the concept of identifying and categorising resources is much different and rather less complex than defining what resources are. According to Albrecht et al. (2018) and Nielsen et al. (2017), resources can be regarded as system-sponsored sources of supply and support that can be drawn upon

by individuals to achieve individual, group and organisational level outcomes in the workplace. Other definitions of resources have proved to be broad in nature, such as that of Halbesleben et al. (2014) who define resources as anything that can be used by an employee to assist in attaining his/her goals. In the healthcare context, resources can be defined as all equipment, materials, funds and other additional components that are necessary for achieving effective healthcare delivery. Moreover, it is further important to note that in the medical field, resources may also include health information which can be considered as knowledge, facts and news generated from various sources. These resources are fundamental for optimal clinical care, conducting professional examinations and updating knowledge for research purposes (Nwafor-Orizu & Onwudinjo, 2015).

> 8. Extent to which health resources are available: Availability of medical tools, equipment and other support components that medical practitioners use to conduct their work in public hospitals.

The focus of the research study is on the availability of medical equipment (i.e. ventilators, monitors, glucometer and blood gas machines) as a situational variable that influences medical practitioner performance in the public health context. According to Moyimane et al. (2017), medical equipment refers to fundamental health intervention tools that are used by medical practitioners for the prevention and treatment of illness and disease in patients. In developing countries, access to properly functioning medical equipment remains a challenge. Access to resources alludes to one's ability to access materials, time given to complete tasks, cognitive capacity, supporting staff and suppliers needed to perform the work (Cho et al., 2006, as cited in Manyisa & Van Aswegen, 2017).

According to Manyisa and Van Aswegen (2017), the lack of access to resources in public health institutions reduces their ability to provide quality patient care. A study conducted by Kim et al. (2019) on burnout amongst health care personnel in public hospitals revealed that 71% of respondents believed that they do not have access to adequate resources to provide quality care to patients. In their study, Hurst et al. (2007), measured physicians' perspectives

on resource allocation and discovered that 68% of respondents attributed adverse outcomes experienced on the job as the result of scarce resources. In another study, Moyimane et al. (2017) observed the impact of equipment shortage on hospital functioning and found that the unavailability of medical equipment may compromise a patient's life, in that it may foster negligence and malpractice from the medical staff which can result in inaccurate diagnosis and ultimately lead to a patient losing his/her life. Therefore, it can be argued that the unavailability of medical equipment can impair the ability of a medical practitioner to engage in behaviours that constitute sound medical practice and assist in making an accurate diagnosis.

Hypothesis 17: *In the proposed structural competency model it is proposed that resource availability positively influences medical professionalism.*

Hypothesis 18: *In the proposed competency model it is proposed that resource availability positively influences decision-making.*

A study conducted by Mpaata et al. (2017) on the relationship between hospital resource availability and patient care management found that a significant correlation (0.059) exists between patient care and the availably of resources (i.e. medical equipment). Therefore, one can reason that when there is an abundance of resources in the workplace better care (handling, consideration of needs and overall health service) can be provided to patients.

Hypothesis 19: *In the proposed structural competency model it is proposed that the availability of resources positively influences patient-centredness.*

The availability of resources can play a fundamental role towards achieving the organisational goals of a hospital. Mayalankar et al. (2005) argue that there is a need to ensure that the resources used in public health care institutions are relevant and practical for the setting. According to Mayalankar et al. (2005), highly sophisticated equipment is hard to maintain in rural areas where there is an irregular supply of electricity and maintenance services are non-existent; subsequently this leads to sub-optimal use of equipment and

resources. Moreover, this compounds the issue of spending a substantial amount of revenue with a marginal increase in achieving healthcare delivery standards that would alleviate the general welfare of the population. Therefore, it is critical that context appropriate resources are made available to ensure medical practitioner can perform their job functions with the utmost efficiency and effectiveness (Manyisa & Van Aswegen, 2017).

2.9.2 The degree to which health staff is available

A hospital cannot function without effective cooperation among the people who work within its system. Medical practitioners are expected to collaborate with a vast set of professionals as part of their job requirements. According to Pillai et al. (2019), human resources in healthcare refers to the different kind of clinical and non-clinical staff that are responsible for managing public and individual health interventions. These individuals bring competencies and are thus considered a strategic resource in that they allow an organisation to gain a competitive advantage (Pillai et al., 2019). This study considers the availability of highly trained healthcare staff as a fundamental situational variable that can influence medical practitioner competency.

> 9. Health Staff: Clinical and non-clinical staff who play a vital role in providing health services in public healthcare facilities.

Literature studies have echoed a concern regarding the shortage of healthcare workers in recent years and have attributed the stagnation in health care growth as a primary outcome of this factor (Pillai et al., 2019). According to the National Department of Health (2011), some of the factors that influence medical staff shortage in South Africa include:

- The Inability to retain health professional graduates in the public health sector.
- The imbalanced distribution of clinical staff between public and private health institutions.
- South Africa measures poorly in health professionals per 10 000 when compared to high achieving countries.

According to Richardson (2007), the notion of staff shortage is simple, in that it refers to the inability of an organisation to provide enough employees to meet its strategic demands. Staff shortage occurs when there is an inadequacy in supplying the required levels of employees who are qualified, available and able to work under the proposed circumstances (Shah & Burke, 2003). This definition proves useful, due to the manner in which it shows that staff shortage is not only an organisational factor, but it can also be attributed to the preferences of employees; for example, an unattractive rural hospital may be short staffed because medical practitioners show a lack of desire to work in those conditions.

One of the fundamental tasks in healthcare planning is that of ensuring there is an appropriate supply of medical staff. The overarching objective is to ensure equity of access to skilled health workers for the entire population (National Department of Health, 2011). According to Manyisa and Van Aswegen (2017), in South Africa it is well documented that a vast majority of medical practitioners offer their services to citizens who make use of private healthcare facilities. This results in a shortage of staff in public healthcare facilities that function to serve the vast majority of the population, consequently this leads to adverse effects on the quality of healthcare offered in public health institutions.

When a hospital is understaffed, medical practitioners find themselves burdened by the pressure to attend to too many patients or take on too many cases at once leading to increased medical errors, inefficiencies and incomplete patient care. Ultimately, this leads to a pattern of reduced individual and organisational performance (Bradley et al., 2015; Cheema & Asrar-ul-Haq, 2017).

Hypothesis 20: *In the proposed competency model it is proposed that staff availability positively influences decision-making.*

According to Manyisa and Van Aswegen (2017), in Africa it is not uncommon for medical interns to be left alone to perform procedures that are beyond their abilities. Furthermore, a study conducted by Malelelo-Ndou et al. (2019), analysing the impact of staff shortage on an intensive care unit of a public hospital in South Africa revealed that nurses often have to

perform work that is beyond their scope of practice to save patients' lives. Thus, medical practitioners regularly find themselves in a position where they have had to decide whether or not to endorse a procedure initiated by a nurse in their absence. It can be argued that such instances pose a negative impact on the professionalism of a hospital and further create blurred lines between professional boundaries which would ultimately go against the statutory requirements of the medical board governing the profession (HPCSA).

Hypothesis 21: *In the proposed structural competency model it is proposed that staff availability positively influences medical professionalism.*

Manyisa (2016) suggests that hospitals often rely on retired medical practitioners to relieve the shortage and requesting those that were off duty to work overtime. However, such methods can be questionable with regards to their long-term impact on the health of medical practitioners. As such it is fundamental to devise more practical and sustainable strategies to manage staff in public health institutions.

2.9.3 The extent to which quality infrastructure is available

Quality healthcare delivery can only be achieved when the physical facilities of a hospital are in good working condition to cater for a functional and operational working environment (Erasmus et al., 2012). According to Mavalankar et al. (2005), health infrastructure alludes to the buildings, medical and general furniture, communication instruments, theatres and ambulances which form a critical part in achieving quality health care delivery in health institutions. Infrastructure is a key pillar to supporting the fundamental goal of promoting enhanced patient care and well-being for all patients, in conjunction with a good experience of health care service delivery (Luxon, 2015). The availability, accessibility and quality of health care services in public institutions is highly dependent on the distribution, quality and functionality of a healthcare institution's infrastructure (Mayalankar et al., 2005).

10. Infrastructure: Medical facilities, buildings and instruments that form part of accommodating patients when receiving medical care.

The aspect of poor infrastructure has been a growing concern in public health facilities across the country for some time; many public health facilities are too strained to cope with the demands placed upon them. A study conducted by Manyisa and Van Aswegen (2017) on the conditions of public health institutions in rural areas revealed that in some areas public health facilities lack electricity, running water and communications systems. The same study also revealed that in some hospitals visited there were sections where there was only one toilet for use by both male and female personnel. Though some of these facilities were being refurbished and construction was going on, however, some had been under construction for the past ten years. In their comparative study of healthcare facilities in public and private sectors, Mahomed et al. (2017) found that:

- 92% of floor surfaces in the private sector were smooth, washable, impervious and non-slip as compared to 83% in the public sector.

- 96% of wall surfaces in the private sector were smooth, washable and impervious and non-slip as compared to 50% in the public sector.

- 100% of ceilings were well maintained in the private sector as compared to 83% in the public sector.

It is important to note that in public healthcare institutions, the excess number of patients and long service hours compound the strain on healthcare facilities. Kama (2017) suggests that in public hospitals, patients sit in uncomfortable waiting areas for hours. These areas lack privacy and cleanliness, and their unhygienic environment can lead to hospital-induced infections (Mavalankar, 2005). Furthermore, after spending hours waiting in such areas, patients can then be informed that the medication that has been prescribed for them is unavailable or that they will be unable to see a doctor. Consequently, these poor communication channels only serve to increase complaints and create a negative relationship with clients. When medical practitioners are unable to prescribe treatment and medication to patients or when patients are not able to access a medical practitioner, it is likely that they will be gradually dissatisfied with the medical care they are receiving and experience less

satisfaction with the services offered by a hospital. Therefore, it can be reasoned that the inability to grant patients access and accommodation to hospital facilities is likely to be accompanied by less patient satisfaction.

Hypothesis 22: *In the proposed structural competency model it is proposed that infrastructure positively influences patient satisfaction.*

2.9.4 *The level of workload faced by medical practitioners in the public health sector*

Increasing levels of human involvement in the workplace have influenced newfound interest in health in the workplace (Greenglass et al., 2003). Human resources are the only elements of an organisation that possess feelings and reason that make them determinants and drivers of other resources (Hidayat & Situmorang, 2019). Workload has been identified as one of the most pervasive sources of stress in the workplace which can lead to an array of undesirable workplace outcomes.

Several definitions on the subject of workload have been put forward by experts and has contributed to the allusiveness of a precise definition of workload (Hidayat & Situmorang, 2019). According to Shah et al., (2011) the construct of workload refers to the intensity of job-related tasks. Hidayat and Situmorang (2019) reason that workload refers to activities and tasks that employees must complete within a predetermined period of time. Susiarty et al. (2019) suggest that workload is inclusive of a quantitative and qualitative dimension. The authors state that quantitative workload arises from one experiencing tasks that are too many or too few, whereas qualitative workload arises out of one perceiving that he/she cannot perform a task or that the task does not require his/her skills. The workload of a medical practitioner is an important factor to consider due to the manner in which it can influence individual performance. As previously stated, medical practitioners in the public sector have higher patient volumes and operate in environments that are arguably more strained. Therefore, the proposed study seeks to understand how workload as a situational variable can influence the performance of a medical practitioner in a public hospital.

11. Workload: Tasks that map unto a medical practitioner's job description and that need to be completed within a specified timeframe.

As a discipline, medical practice can be considered as a 24-hour business, and with the challenges that come with technological advancements and the constant changes that are imposed by the contemporary business landscape, the work performed by medical practitioners in public hospitals has become even more intense and stressful (Ahmad et al., 2019). As with other professionals, it is required of medical practitioners to be hard-working to foster the achievement of organisational goals i.e. high quality patient service standards (Ahmad et al., 2019).

As a result of some of the factors discussed in this section, medical practitioners tend to experience a high workload. Furthermore, empirical studies have also indicated that a significant disparity exists between workload in the public and private health sectors. A study conducted by George et al. (2013) on the conditions of employment in private and public health facilities revealed that participants in the public health care sector rated their workload significantly higher than those in private health care. Furthermore, these employees indicated that they experience more stress levels at work as opposed to the counterparts in the private health sector.

According to Manyisa and Van Aswegen (2017), long working hours have a physical and cognitive impact on the health and well-being of health care personnel. Research studies suggest that those who experience higher workloads report more health-related problems as opposed to those with lesser workloads (Manyisa & Van Aswegen, 2017). A high workload has been identified as a primary predictor of burnout, fatigue, emotional exhaustion, lack of involvement as well as the issue of dehumanising patients in public healthcare institutions (Greenglass et al., 2003; Manyisa & Van Aswegen, 2017; Smith & Smith, 2017). A study conducted by Smith and Smith (2017) which investigated the relationship between workload, fatigue and performance revealed that increased workload was associated with fatigue which, in turn, is associated with a higher risk of incidents while performing tasks at work. In another

study, Ahmad et al. (2019) observed that medical practitioners who suffer from fatigue as a result of a high workload are more susceptible to careless mistakes and faced increased chances of questioning their own judgement, subsequently leading to double-checking tasks which would slow them down in the process of performing their job functions. Moreover, when medical practitioners experience a heavy workload, they are more inclined to communicate ineffectively with patients due to personal dissatisfaction with their jobs or time pressure experienced when executing tasks. Moreover, increased workload can result in needless testing, delayed admission or discharging of patients and an inability to discuss treatment solutions with patients and their kin (Xu & Xie, 2016).

Hypothesis 23: In the proposed *structural* competency model it is proposed that workload negatively influences decision-making.

Figure 2.4

Proposed comprehensive South African medical practitioner competency model
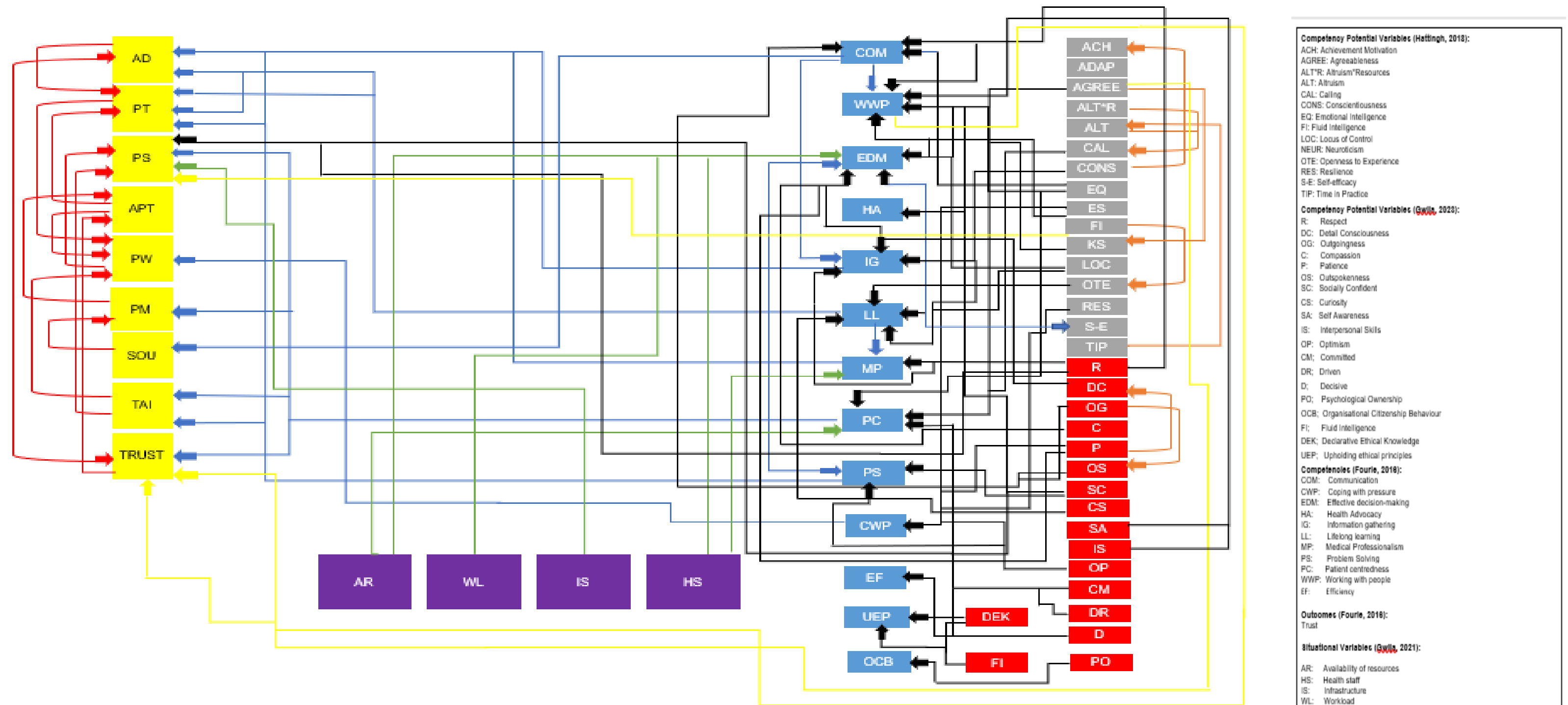
Note: The red and grey squares represent hypothesized competency potential latent variables (Gwija-Hattingh, 2021), the purple squares represent situational variables, the blue squares circles represent competencies (Fourie, 2016), and the yellow squares represents outcomes (Fourie, 2016). The black lines represent hypothesized structural paths between competency potential latent variables and competencies, the blue lines represent hypothesised structural paths between latent competencies and outcomes, the orange lines represent hypothesised structural paths between the competency potential latent variables, the red lines represent hypothesised structural paths between outcomes, the green lines represent hypothesised structural paths between situational variables and competencies, and the yellow lines represent hypothesised structural paths between the situational variables.

Figure 2.5

Proposed adapted partial South African medical practitioner competency model (Specific model for the proposed study)

Competency Potential Variables (Gwija, 2021):
R: Respect
DC: Detail Consciousness
OG: Outgoingness
C: Compassion
P: Patience
OS: Outspokenness
SC: Socially Confident
Competencies (Fourie, 2016):
COM: Communication
CWP: Coping with pressure
EDM: Effective decision-making
HA: Health Advocacy
IG: Information gathering
LL: Lifelong learning
MP: Medical Professionalism
PS: Problem Solving
PC: Patient centredness
WWP: Working with people

Outcomes (Fourie, 2016):
Trust

Situational Variables (Gwija, 2021):

AR: Availability of resources
HS: Health staff
IS: Infrastructure
WL: Workload

Note: The red circles represent hypothesised competency potential latent variables, the purple circles represent situational variables, the blue circles represent competencies, and the yellow circle represents outcomes. The black lines represent hypothesised structural paths between competency potential latent variables and competencies, the orange lines represent hypothesised structural paths between the competency potential latent variables and the green lines represent hypothesised structural paths between situational variables and competencies.

Table 2.6

Summarised definitions of person characteristics and situational variables of partial medical practitioner competency model

Definition of person characteristics
Respect for the patient: A high regard for the rights, needs and cultural beliefs of each patient and oneself. Detail Consciousness: A predisposition to meticulously attend to detail and enhanced cognitive awareness of medical processes. Outgoingness: An enhanced degree of social awareness and the interpersonal skills that allow one to achieve his/her goals. Compassion: A propensity to be sensitive, courteous and attentive to the needs of patients and a general understanding of their medical care requirements. Patience: An individual's ability to be present in the moment and allow a sufficient amount of time for tasks and procedures in order to enhance one's overall judgement. Outspokenness: The quality of being open, honest and informative during the medical encounter and further admitting mistakes that occurred during the medical encounter. Socially Confident: Being self-assured about oneself as a medical practitioner. And possessing the confidence to spark optimism in patients regarding their health recovery.
Definition of situational variables
The extent to which health resources are available: The availability of medical tools, equipment and other support components that medical practitioners use to conduct their work in public hospitals.
The degree to which health staff is available: Clinical and non-clinical staff who play a vital role on providing health services in public healthcare facilities.
The extent to which quality infrastructure is available: Medical facilities, buildings and instruments that form part of accommodating patients when receiving medical care.
The level of workload faced by medical practitioners in the public health sector: The collection of tasks that map an individual's job description and that need to be completed within a specified timeframe.

2.10   Conclusion

Chapter two of this proposed research study explored the relevant literature in order to describe the latest rsearch in respect of the medical practitioner performance construct, the public health context in which medical practitioners perform their work and previous studies on the concept of competency modelling. This would ultimately assist in expanding a medical practitioner competency model that reflects the relevant competency potential latent variables and situational latent variables.

A proposed medical practitioner competency model was then expanded which included seven competency potential latent variables and four situational latent variables. The

competency model explicated a network of relationships between competency potential latent variables, situational latent variables, competencies, and outcomes.

The above literature study echoed the sentiment that the performance of a medical practitioner is influenced by a complex network of variables. Thus, it is fundamental to describe the behavioural anchors of the person characteristics that are necessary for medical practitioners working in public hospitals to succeed. Moreover, it is critical to verify the impact of situational variables on the said success. The following chapter will focus on outlining how the proposed hypothesis will be tested and overall approach for achieving the objectives of the study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1   INTRODUCTION

Chapter one of this study argued the importance of medical practitioners as key role players in the public health care context. It was further argued that the level of job performance of medical practitioners can be instrumental in achieving desirable health outcomes (i.e. patient well-being and promoting general healthcare of a nation). In chapter one of this study, it was proposed that a structural model outlining the structural linkages between competency potential latent variables, competencies, outcomes and situational latent variables is needed as a means to enhance medical practitioner performance. It was reasoned that the discipline of Industrial Psychology could aid the medical field through the construction of a competency model. The said structural model would serve to inform (flow and stock) human resource interventions aimed at monitoring and (proactively and reactively) enhancing medical practitioner performance in the South African public health sector.

In the quest to develop the model described in the introductory chapter, a comprehensive understanding of medical practitioner performance was deemed essential. The second chapter of this study first discussed the Hattingh (2018) conceptualisation of medical practitioner performance in terms of outcomes and competencies that constitute the medical practitioner job performance construct. Subsequently, an attempt was made to answer the research-initiating question by identifying relevant person characteristics and situational variables that were hypothesised as influencers of the level of performance achieved by medical practitioners and by hypothesising the manner in which the competency potential and situational latent variables directly and indirectly affect the latent variables constituting performance. It was deemed important to conduct a qualitative evaluation of the competency model in order to determine whether there are any additional dimensions that need to be accounted for.

A scientific understanding of the world around us should both make theoretical sense and correspond to what we observe (Babbie, 2020). Therefore, chapter three of this study served to outline the research methodology that will be used to conduct the impending research. Babbie (2020) reasons that research methodology is the science of finding out and declaring procedures for a scientific investigation. According to Rajasekar et al., (2013), research methodology can be regarded as a systematic way to overcome a problem. It entails describing, explaining, and predicting phenomena and lays out the procedure by which a researcher will conduct their work and present their findings through the data extracted during the implementation of a study (Sileyew, 2019; Rajasekar, et al., 2013). Moreover, Sileyew (2019) states that the research methodology outlines how the research outcome will be achieved in conjunction with meeting the objectives of the study.

3.2   Research Design

The function of all science is to probe answers to questions about the evolution of an experience or phenomenon through observation (Patton & Cochran, 2002). In this regard, social science facilitates attempts to discover new and different methods of understanding aspects of the everchanging nature of lived social realities (Patton & Cochran, 2002). Thus, in trying to grapple with the concept of what life means to humans, researchers presume there is systematic method behind the apprehension of critical dimensions to problems that confront the social world in which we live (Patton & Cochran, 2002). In virtually all fields, research attempts to uncover and validate new methods to understand reality. The subsequent methods adopted to measure and define aspects of the natural, material and social worlds are largely dependent on the individual researcher's background as well as his or her vocational training and interests (Kielmann et al., 2012).

In the light of the above, the research design was intended to provide an effective framework for the current study. A fundamental decision in the research design process was regarding the appropriate research approach to adopt and use as a framework to extract the relevant data (Aaker et al., 2010, as cited in Sileyew, 2019).

According to Rajasekar et al. (2013), research has to be an active, diligent and strategic process of inquiry that facilitates the discovery, interpretation and revision of facts, events, behaviours and theories. In order to satisfy the objectives of this study it is reasoned that a qualitative research approach should be apprehended in general. Qualitative research can be defined as the nonnumerical examination and interpretation of observations, in an attempt to uncover the meaning and assess patterns and relationships between constructs (Babbie, 2020). Qualitative research is based on the notion that people utilise their senses (what one sees, hears and feels) to make sense of their social experiences (Liamputtong, 2019).

According to Patton and Cochran (2002, p.1) qualitative research strives to generate understanding on certain aspects of the social world, and its methods generate words as opposed to numbers as data for analysis. Hancock et al. (2009) argue that qualitative research is centred on developing social phenomena, in that it seeks to describe why things are the way they are. In contrast to this approach, Babbie (2020) states that quantitative research presents a unique challenge in which a researcher may easily become consumed by the statistical analysis of data and thus lose sight of theory for a period of time. However, in qualitative research, theory, data collection and analysis are all intimately intertwined. Assuming this approach for the proposed study would be beneficial due to the manner in which it seeks to link theory to practice and identify additional variables that may either be attributed to theory or medical practitioners taking part in the study.

According to Kelly (1955), individuals formulate constructs which influence how they view the world of events. As naive behavioural scientists, humans seek to use these constructs to predict and control the course of events around the. The proposed study postulates that a qualitative research method would thus satisfy the research objective by garnering a deeper understanding of the interpretive structures of medical practitioners (as subject matter experts) as to how person-centred latent variables and situational latent variables influence medical practitioner performance in the public health sector.

The initial version of a comprehensive medical practitioner competency model was augmented by not solely relying on theorising on input from scientific research studies published in the literature, but by also tapping into the experiential knowledge of experienced medical practitioners in the public health sector (Pervin et al., 2005). The researcher attempted to construct an explanatory psychological mechanism that he thought ought to be capable of regulating differences in medical practitioner performance based on his theorising with the inputs obtained from the research literature and from the experiential knowledge of experienced medical practitioners. The said model is presented as an explanatory structural model and offered as an overarching substantive research hypothesis on why a variance exists in the performance of medical practitioners.

Behavioural researchers can derive valuable benefit by inviting subject matter experts to share their sense-making interpretive structural models as it pertains to a phenomenon of interest to the behavioural researcher (in this case the performance of medical practitioners). The behavioural researcher essentially uses the input from subject matter experts in their theorising in the same way that they would use input from literature to derive through theorising explanatory hypotheses that they feel are needed to construct a convincing psychological mechanism that regulates medical practitioner performance.

Given the unique social context of South Africa, the study deemed it vital to approach medical practitioners who are considered subject matter experts and, thus, developed hypotheses on the person characteristics and situational variables that allow (or prevent) medical practitioners to perform well in public hospitals in South Africa. It is reasoned that a medical practitioner with exposure to the public health sector in South Africa would have an enhanced understanding of what it takes to achieve an acceptable level of competence in the medical profession. The expansion of a comprehensive medical practitioner competency model was based on an extensive review of the literature and the analysis of the job knowledge of experienced medical practitioners. Gathering inputs from subject matter experts assisted the researcher in his theorising and subsequent presentation of a structural model that serves

as an overarching substantive research hypothesis on why variance in medical practitioner performance exists. The fundamental gain of this endeavour was that it allowed the researcher to gather inputs from SMEs with respect to the influence of situational variables (including the Covid-19 pandemic) that currently play a significant role in the public health sector and the influence of person-centred variables that characterise the medical practitioner. On medical practitioner performance more specifically, the intention was to integrate the insight gained from the experienced medical practitioners with the insight developed by the researcher through the literature study in Chapter 2[4].

The SMEs assisted in explaining the latent variables identified in Chapter 2 in detail and in further determining whether there are not additional latent variables (and/or paths) that should be included in the proposed partial medical practitioner competency model. Therefore, it is important to note that the current study sought to use medical practitioners as co-researchers in the empirical explanation of the aforementioned variables. The successful conceptualisation of the medical practitioner competency model should in part be ascribed to the manner in which it aligns to the interpretive structures of the medical practitioners.

The overarching approach to the design of this study was to gain an enhanced understanding of the interpretive structures that experienced medical practitioners have constructed for themselves to garner an understanding of the level of performance required to be a successful medical practitioner in the public health sector. These interpretive structures can essentially serve as explanatory hypotheses similarly to the medical practitioner competency model with structural paths developed for this study (Fourie, 2016).

It can be reasoned that an experienced medical practitioner would not likely be able to naturally represent the interpretive structure as a path diagram. However, the though objects and tacit rules that make the interpretive structure can nevertheless be represented in a path diagram.

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[4] The insights derived from the SME will be presented in Chapter 4. The final phase of theorising will therefore integrate the explanatory structural models that emerged from the literature study-based theorising (Chapter 2) and the structural model that emerged from the medical practitioners' hypotheses on medical practitioner performance (Chapter 4) in Chapter 5.

According to Fourie (2016), if the knowledge production is seen through the lens of a technological interest (as opposed to an emancipatory interest) (Babbie & Mouton, 2001), the rules that make up the interpretive structure and structural relations that represent the structural model both have to be regarded as hypotheses. Moreover, it is fundamental to note that gaining insight into the hypotheses formulated by subject matter experts can also help to understand the manner in which medical practitioners make sense of why they succeed or fail in their profession and why they respond the way they do to these successes or failures.

3.3 Research Paradigms

The research methodology of a study is largely dependent on the paradigm that guides the research project. According to Kivunja and Kuyini (2017), a research paradigm conceptualises a researcher's worldview, in that it attempts to conceptualise how a researcher views the world around him/her as well as how they interpret and act within this world. Research paradigms are critical and have a profound impact on the decisions made in the research process due to the manner in which they guide beliefs that influence what is to be studied, how it will be studied and how the subsequent results of a study will be interpreted (Kivunja & Kuyini, 2017).

Research paradigms can be organised into three main taxonomies namely: positivist, interpretive/constructionist and critical paradigm.

According to Antwi and Hamza (2015), the positivist paradigm of exploring social reality is based on the philosophical reasoning that observation and reasoning are the best methods to utilise when trying to enhance one's understanding of human behaviour. It is based on a scientific method of inquiry that relies on deductive logic, formulation of hypotheses, extrapolation, and expressions to derive conclusions (Kivunja & Kuyini, 2017). Therefore, it can be said that positivist researchers seek to describe human behaviour by measurable data.

The manner in which humans engage in creative thinking and how they form constructs that underpin their thought processing is an area of inquiry in the study of phenomenology. According to Qutoshi (2018), phenomenology can be defined as an approach to educate our

own vision and define our own position through broadening the way in which we perceive the world around us and study lived experiences on a much deeper level, as such phenomenology is recognized as a constructivist/interpretive paradigm as it holds characteristics of both philosophy and that of a method of inquiry. Moreover, it serves as a powerful tool for gaining a comprehensive understanding of subjective experiences, gaining insight into motives behind human behaviour and cutting through the clutter of assumptions taken for granted through conventional wisdom (Lester, 1999).

Lastly, the critical/transformative paradigm assumes that a reality exists but is largely influenced by political, ethnic, gender and religious factors that interact with each other in a manner that forms a social system (Rehman & Alharthi, 2016). Research in this paradigm seeks to address economic and social issues that lead to oppression, conflict and struggle (Kivunja & Kuyini, 2017). Critical researchers seek to challenge the status quo by introducing transformational change that will liberate society.

This study adopted the stance of the qualitative method embedded in the interpretive/constructivist paradigm to serve the cognitive interest of the positivist paradigm. It can be argued that the outcomes of a study influenced by this approach are to broaden the human mind, improve thought processing and help research foresee the future through an intentional study of lived experiences (Qutoshi, 2018). The purpose of adopting an interpretive approach for this study is based on the unique experience of being a medical practitioner in South Africa and the fundamental responsibility carried by individuals who hold this title. Furthermore, adopting this approach allowed a deeper level understanding on the impact that situational latent variables may have on the way in which medical practitioners are able to carry out their job functions on a daily basis. Subsequently, this leads to an enhanced understanding of the structure and consciousness of individuals who are in this position and assist in hypothesising a competency model that comprehensively conceptualises the competency potential requirements of successful medical practitioners. Moreover, adding an

interpretive dimension to a positivist study enabled it to be used as a basis for practical theory and, thus, aids in informing, supporting and/or challenging policy and action (Qutoshi, 2018).

According to Fourie (2016, p. 62) the philosophical underpinnings of a qualitative study "can be described in terms of the manner in which the phenomenological meta-theoretical interpretation of science interprets the teleological, ontological, epistemological and methodological dimensions of scientific research".

The dimension of epistemology is concerned with the very foundation of knowledge, with respect to its nature, forms and how it can be acquired and communicated to the individuals (Kivunja & Kuyini, 2017). It is formed from the reasoning that knowledge is best derived from sense experiences as well as demonstrable and objective facts that enhance the understanding of the social context under investigation (Kivunja & Kuyini, 2017).

The epistemological and ontological dimensions of industrial psychology originated from diverging psychological theories and multi-disciplinary attempts to solve complex issues related to employee productivity and satisfaction (Fourie, 2016). The ontological roots of industrial psychology can be traced within psychoanalytic, behaviourist and cognitivist theories that served to enhance the understanding of human behaviour at work (Watkins, 2001). Ontology is concerned with the very nature and existence of the social phenomenon under investigation or otherwise the assumptions individuals make in order to conceive that something makes sense or is real.

The dimension of teleology is most commonly used to refer to the idea that certain phenomena are best explained by reference to their purpose. Rather than simply explaining phenomena it rather uses its aims or intentions to explain the process (Harvey, 2019). The teleological dimension in the proposed study represents the meta-theoretical position on the objective and purpose of the research.

It is fundamental to note that the qualitative aspect of this study holds an interpretative stance on the epistemological, ontological and methodological dimensions but with the positivistic interpretation of the teleological dimension.

3.4   Research Participants and Sampling Strategy

To develop an effective answer to the research-initiating question it is fundamental for the researcher to gather data from multiple sources (Taherdoost, 2016). Sampling refers to the selection of data sources from which data will be extracted in order to address the research objectives (Taherdoost, 2016). According to Lopez and Whitehead (2013) the primary purpose of sampling is to select a representative sample from a sampling population (or sampling frame) that covers the target population well with little redundancy so as to ensure that the qualitative insights obtained in the study are representative of the target population. The overarching purpose of qualitative research as it is traditionally used is to serve the teleological interest of the interpretative/phenomenological school to capture something of what it is like to be someone or to experience and observe something. In the current study the qualitative research method is used to serve the teleological interest of the positivistic interpretation of science, namely, to enrich and corroborate hypotheses developed through literature-based theorising with hypotheses derived from the interpretative structures developed by experienced medical practitioners. This is a fundamental concept in sampling as a researcher must be able to employ a sampling technique that will yield results that are representative of the sampling population (Ellis, 2020). A carefully defined sampling technique that makes use of an unbiased and robust sampling frame can yield unbiased and robust results (Wilmot, 2005).

Qualitative research typically uses non-probability sampling, whereby the researcher recruits specific members of the sampling populations to investigate the topic of inquiry and form conclusions (Lopez & Whitehead, 2013; Wilmot, 2005).

The current research study utilised the purposive sampling techniques to select a suitable sample. Purposive sampling is characterised by the process of recruiting research participants based on pre-determined criteria which bear relevance to the research question (Lopez & Whitehead, 2013). It is a method whereby researchers include participants based on the premise that their status, experience and special knowledge on the subject matter of the research warrant their inclusion in the sample (Lopez & Whitehead, 2013; Taherdoost, 2020).

Snowball sampling can be regarded a non-random sampling technique that occurs when a researcher begins gathering information from one or two individuals and uses the opportunity of working with these individuals to gain access to colleagues, relatives or other significant contacts who may be valuable for the study and, thus, encouraging more individuals to take part in the study as well (Lopez & Whitehead, 2013; Taherdoost, 2020).

According to Lopez and Whitehead (2013) research committees at times show a reluctance to grant permission for snowball sampling due to privacy concerns and potential for coercion. The current study sought to combat this issue by ensuring that participants are sent an invitation to partake in the study (Appendix A) and informed consent (Appendix B) is sought thereafter, to ensure that participants are aware that any information derived from the study will be used solely for the purposes of the study (refer to section 3.7). In essence this study therefore utilised a convenience sample by using purposive and snowball sampling techniques.

The use of the non-probability sampling technique precluded the current study from claiming that the selected sample was representative of the sampling population.

The current research study sought to obtain information from the target population of medical practitioners registered with the HPCSA and that practise in the South African public health sector in order to gain accurate descriptions of the person-centred and situational characteristics to which medical practitioners attribute differences in medical practitioner performance and the manner in which determinants affect performance. However, to interview

the entire target population would not be feasible and, thus, a representative sample of ten (10) subject matter experts (SMEs) was used to collect data for this study. The researcher sought to initially expand the sample size but due to limitations in the schedules of the participants of the study and subsequent saturation of data, this was limited to ten participants.

To qualify for inclusion in the proposed study, participants had to comply with the following criteria:

- Must be registered with the HPCSA and actively practising as a medical practitioner.
- Should have a minimum of 3 years working experience in the public health sector (excluding community service and internship service).
- Must be working in the Western Cape and employed by Stellenbosch University or the University of Cape Town.
- It would be preferred that the sample represents a balance of distribution in terms of biographical characteristics (i.e., race and gender, etc).

The proposed study made use of the constructive partnership between the Stellenbosch University Department of Industrial Psychology and the Centre for Health Professions Education in the Faculty of Medicine and Health Sciences. This, inevitably, simplified the issue of accessing the target population.

The above-mentioned criteria collectively define the sampling population. A large and non-ignorable sampling gap between the target population and the sampling population therefore also needed to be acknowledged. This raises the question to what extent the inability of the current study to claim that the sample was representative of the target population should be acknowledged as a methodological limitation. The objective of the qualitative data collection was to collaborate with experienced medical practitioners by having them sharing with the researcher the insights they have developed on what determines medical practitioner performance. The objective was, however, not motivated by the need to obtain a description of the typical explanatory model existing in the target population in medical practitioners'

minds. Rather the objective was motivated by the need to corroborate and strengthen path-specific hypotheses that the researcher derived from the research literature and to suggest additional path-specific hypotheses that the researcher did not extract from the research literature. The current study therefore regarded the inability to claim the research sample to be representative of the target population as not serious limitation that threatened the epistemological ideal of science. The current study in a sense was hoping to select a biased sample in that it hoped to find the rare, atypical, extraordinary reflective and insightful medical practitioners that have developed penetrating and valuable ideas as to what makes a medical practitioner successful (or fail) in the public sector.

3.5   Data Gathering

According to Kabir (2016) data collection can be defined as the process of gathering and measuring information on specified variables of interest. It is executed in a systematic manner that enables a researcher to answer the stated research questions, test hypothesis and evaluate outcomes. Therefore, it aims to capture quality evidence that then translates to rich data analysis and facilitates the ability to build a convincing and credible answer to questions that have been posed (Kabir, 2016). Regardless of the field of study, accurate data collection is of profound relevance to maintaining the integrity of a research study. Therefore, it is imperative to select appropriate data collection instruments and clearly delineated instructions for their correct use to ensure the likelihood of producing errors is reduced (Kabir, 2016).

A prominent data collection instrument in qualitative research is that of the interview. According to Jackson et al. (2007), interviewing entails using a set of techniques for extracting data from individuals and groups using structured, semi-structured and unstructured questioning formats. Kabir (2016) states that interviews can be presented in a variety of formats including individual face to face and group face to face format. According to Patton and Cochran (2002). interviews resemble everyday conversations, though they are based on the researcher's need for data. Therefore, it is also reasonable to infer that interviews differ

markedly from everyday conversations because researchers need to conduct them in the most rigorous way to ensure reliability and validity (Patton & Cochran, 2002).

Patton and Cochran (2002) argue that interviewing should be supported by three fundamental principles:

1. Transparency: Techniques used should be written up in such a manner that respondents and/or readers are able to identify how data was collected and analysed.

2. Strategic: It should be ensured that researchers are not just picking interviewees or data to support their pre-existing ideas about research questions.

3. Credibility: Questions asked and the manner in which they are asked should be reasonable to generate valid accounts of phenomena.

In the context of the current study, a semi-structured interview approach was deemed appropriate as it allowed more flexibility by facilitating an approach that allows for responsiveness to themes which may emerge during the implementation of the study. The notion behind this approach was to extract rich data that accurately reflects medical practitioners' views on the person-centred and situational factors that allow medical practitioners in the South African public health context to succeed or cause them to fail.

It can be argued that public health institutions provide a unique workplace challenge to medical practitioners. Therefore, understanding the social contexts or structures which underpin a public hospital's functioning was of great relevance for the current research study as it assisted in guiding the development of a competency model that encapsulates competency potential latent variables and situational latent variables that are relevant for successful adaptation and enhanced performance in the said environment.

The subsequent section describes specific techniques that were utilised in order to guide the interview sessions for relevant the information. These include the Repertory Grid technique and the Focus Group technique.

3.5.1   Repertory Grid Technique

The notion that man behaves as a naïve behavioural scientist who recognises patterns in and relationships between constructs characterising himself and his surrounding world and that he uses these to explain observations in himself and his environment is not new. In the early twentieth century the American psychologist George Kelly formulated the personal construct theory of personality. The personal construct theory is a psychological theory that sought to explain the differences in how and why individuals have different attitudes towards events that occur in the world (Björklund, 2008). According to Kelly (1995, p. 7) "man looks at his world through transparent patterns or templates which he creates and then attempts to fit over the realities of which the world is composed". One can consider these patterns as constructs, which essentially serve as ways of construing the world. According to Hattingh (2018), constructs may vary from one individual to the other as they are influenced by the subjective experiences of individuals. Kelly (1995) postulates that individuals seek to improve the constructs they form by increasing their repertory, altering them to provide for a better fit or by subsuming them with superordinate constructs.

One technique that is used to determine personal construct systems is the Repertory Grid technique (RGT). According to Björklund (2008), the RGT is an interview technique that seeks to utilise an individual's ability to compare elements in order to elicit attitudes and extract personal tacit knowledge. The RGT contains three essential components namely: elements, constructs and links. Elements refer to objects of the respondent's interpretations, constructs are the labels attributed to the interpretations and links are the ways of relating elements and constructs (Tan & Hunter, 2002). This technique has long been embedded in psychological research, more so when the subjective ways in which individuals interpret and explain their judgement to themselves are the subjects of inquiry (Fransella & Bannister, 1977, as cited in Lambert et al.,1997).

According to Björklund (2008), due to the gains of implementing this technique in qualitative research, its use and applicability have since grown beyond the field of psychology as it is now

used in several other research areas. The RGT lays its primary focus on internal processes and, therefore, it can enhance information gathered during interviewing surpassing the usual structured interviewing methods. The comparisons that individuals make when using this technique propel them to make connections and provide insight on matters that represent meaning perceptions, associated feelings, ideas and intuitions regarding the objectives of the study at hand (Björklund, 2008; Lambert et al., 1997). It is further argued that the technique has proven valuable in minimising the use of industry jargon and social desirability bias in respondent answers to questions (Fourie, 2016). Overall, it can then be reasoned that employing this method can yield rich qualitative responses from individuals.

The current study will utilise the RGT (Appendix D) in the data gathering process in order to gather a deeper understanding of the participant's interpretation of the personal characteristics associated with medical practitioner competency potential and situational variables that define working conditions in the public health sector that affect medical practitioner performance. This process mainly comprised of three phases, namely the introduction which provided an overview of the variables that underpin the study, the RGT exercise constituted the second phase which engaged participants in illustrating relationship between constructs, and, lastly, there was a section for concluding remarks where participants were encouraged to share any additional insights that could prove valuable to the proposed study.

3.5.2 Validation Interview

According to Lindheim (2022), a participant validation interview is a strategy that can be deployed to enhance the trustworthiness of a study. In essence, validation interviews help to address ethical concerns of a study and possibly help to generate new data which can be incorporated into a study.

In the light of the above, the objective of the current study was to conduct validation interviews (Appendix E) with a sample of two participants in order to verify the constructs derived from the original individual interviews with the subject matter experts and obtain a

further opportunity to extract any further valuable data. Furthermore, these interviews were used for triangulation purposes to gain further insights into lived experiences of medical practitioners and allow them to elucidate the medical practitioner competency potential latent variables and situational latent variables expanded by the researcher on the partial medical practitioner competency model. These responses were presented in an uncomplicated structural format using layman's terms and were further supported by direct quotations from the research participants (Rabiee, 2004). The responses of the participants are considered valuable in that during the validation interview participants are more knowledgeable about the purpose/objective of the data gathering sessions and the information required thereof. Moreover, a validation interview allows a researcher to verify whether all possible dimensions of a topic have been included in order to inform further judgement and conclusions.

3.6   Data Analysis

The process of creating a database is not sufficient to conduct a qualitive study. To generate findings that effectively transform raw data into new knowledge, it is essential that researchers engage in an active and exuberant analytic process throughout all phases of the research project (Thorne, 2000). A thorough comprehension of these processes is a fundamental aspect of not only conducting qualitative research but also of reading, interpreting and understanding it (Thorne, 2000).

Qualitative research seeks to uncover the "big picture" about a phenomenon, therefore the idea is to use the data collected to describe, articulate and explain a phenomenon in terms of what it means and how it could be best interpreted. The concept of data analysis refers to the rigorous process that entails summarising the mass of data collected and subsequently presenting the findings in a manner which communicates the most important features (Hancock et al., 2009).

Data collection and analysis are often concurrent and intertwined processes which can be carried out interchangeably. It is therefore fundamental to not look at one process in isolation to the other. It is important to note that the theoretical lens from which the researcher

approaches the phenomenon under study, strategies used to collect or construct data, and the level of comprehension the researcher has about what constitutes as relevant data are all analytic processes (Thorne, 2000).

The following sections outlines the four steps that were followed to analyse the data gathered from the study.

The first step in the analysis process began with a process of familiarisation in which the researcher listens to audio recordings, goes over reading materials, memos and summaries before commencing with the formal analysis of the data (Lacey & Luff, 2007). The familiarisation process is critical as it allowed the researcher to be more conscious of the data collected and, thus, it fostered a more seamless content analysis procedure.

According to Hancock et al. (2009), effective data analysis involves the categorisation of verbal or behavioural data in order to classify, summarise or tabulate the appropriate information in a research study. They posit that the analysis of data can either be descriptive (describing what was said/observed) or interpretive (what was meant/implied by the responses of the respondents).

The current study used thematic analysis to analyse transcripts and identifying themes within the researcher's data set and logically placing these in a structured format as the second step in the process (Burnard et al., 2008). Formulated in the 1970s by philosopher of science Gerard Houlton, thematic analysis is a qualitative data analysis technique that has gradually established itself as a popular method of analysis in modern research. Thematic analysis involves the process of identifying and analysing patterns of themes within a qualitative data set in order to establish its meaning. Consequently, thematic analysis can assist in describing a researcher's data set in rich detail and is essentially driven by the research question of a study (Braun & Clarke, 2008; Liamputtong, 2019; Terry et al., 2017).

According to Crossley (2021), when working with a large data set, thematic analysis is a beneficial strategy as it allows for an easier system of dividing one's data. Furthermore, when

adopting a qualitative approach, thematic analysis fosters a close examination of the subjective information provided by respondents which stem from experiences and opinions.

The current study sought to gain insights from the interpretative structures built by medical practitioners to make sense of why some practitioners perform better than others in the public health sector. Therefore, thematic analysis served as a useful technique for analysis to break down themes generated from the responses in order to compare them against the expanded medical practitioner competency model developed through theorising from the research literature.

After emerging themes and concepts had been identified in the data set, the third step in analysis was to conduct coding.

According to Akinyode and Khan (2018), coding aims to reduce large sets of data through a process that minimises duplication by organising transcripts into meaningful and manageable segments. Coding offers summary statements or phrases for each element that is discussed in the transcripts (Burnard et al., 2008). This allows for easier comparisons and retrieval of motivating sections within the data (Akinyode & Khan, 2018). Coding has another, even more important purpose. As discussed earlier, the aim of data analysis in the current study is the discovery of patterns among the data, patterns that point to medical practitioners' theoretical understandings of why some practitioners are more successful than others in the public health sector. The coding and relating of concepts is critical to this process as it can help identify commonalities amongst the data. Therefore, it is fundamental to ensure that the coding process is well-refined (Babbie, 2020).

Lastly a thematic network was formed which organises the coded themes into basic, organised and global themes. The reasoning behind the said thematic network is that it allowed the researcher to explore the links between the statements and implicit meaning in the respondent's answers (Akinyode & Khan, 2018). Basic themes were those extracted through a process of data saturation whereby the data was organised with respect to the respondents referring to the same theme on a particular subject or topic. The basic themes

were then categorised into organised themes which outline the basic premise of the story they are telling. Subsequently these were re-organised into unifying statements which were then represented by a global theme (Akinyode & Khan, 2018).

3.7   Ensuring the Epistemic Integrity of the Research Study

The quantification of human behaviour is a fundamental aspect of social sciences research, through its ability to use measurement instruments to observe human behaviour (Drost, 2011). With respect to adopting a qualitative research approach, the emphasis is on the reliability and validity of the results extracted. Thus, it is fundamental that the research is able to demonstrate that the methods used are consistent and accurate (Lacey & Luff, 2007). According to Drost (2011, p.106) "reliability is the extent to which measurements are repeatable when different persons perform the measurements, on different occasions, under different conditions with supposedly alternative instruments which measure the same thing". Validity on the other hand is concerned with whether a research instrument measures what it intends to measure (Drost, 2011).

Reliability and validity are critical issues in all research studies including qualitative research. Lacey and Luff (2007) stress that in collecting and analysing qualitative data it is fundamental for research to be able to demonstrate the following:

- Justify why an instrument is appropriate for the context of your study.
- Document the process adopted for gathering themes, concepts and theories from data.
- Validating whether all relevant views have been represented.
- Systematic use of original data to ensure that interpretations reflect the original data collected (Lacey & Luff, 2007).

In conjunction with the above, for the current study it was deemed feasible to adopt the following criteria to ensure the utmost data integrity is maintained.

Triangulation entails the process of collecting and analysing data from multiple sources to gain a comprehensive perspective on the subject of investigation (Lacey & Luff, 2007). In qualitative research, techniques such as interviewing, observations, research literature and other data can all be used to determine the validity of a certain theme (Lewis, 2009).

Credibility refers to the extent to which the research findings and methodology chosen can be justified (Stenfors et al., 2020). Credibility seeks to establish the correctness of the data gathered and whether it is an accurate interpretation of participants; original statements (Korstjens & Moser, 2018).

Confirmability seeks to demonstrate that the research results can be clearly linked to the conclusions generated, in a manner that is a procedural and can be replicated (Moon et al., 2016). Therefore, it ensures that the study reflects the epistemological and ontological positions of the respondents and that research results were concluded based on their perceptions and not on the biased views of the researcher.

Dependability refers to the extent to which the research can be administered under similar conditions and the overall stability of the results (Korstjens & Moser, 2018; Stenfors et al., 2020). The current study took care to delineate clear steps that outline how research outcomes were extracted.

Transferability speaks to the manner in which research findings, conclusions and data are relevant to other contexts and inform management and policy recommendations (Moon et al., 2016). Therefore, it is relevant that the research study is able to contribute to existing theory and practice as well as motivate future research in the field. For example, the research study could provide useful information for public health institutions which could then serve to assist them in achieving their organisational objectives (refer to section 4.1).

3.8   Ethical Considerations

It has become increasingly recognised that professionalism in all fields of practice should be underpinned by ethical behaviour, thus rendering the idea that being "professional" refers to the commitment to and the observance of ethical conduct.

The term ethics refers to a section of philosophy that seeks to address questions of morality and particularly in the research sphere, alludes to the correct rules of conduct necessary when carrying out a research study (McLeod, 2015; Vanclay et al., 2013). In research, ethics can be used as a basis for guiding individual and collective behaviour, assuming a normative function which helps individuals consider how they should behave from a moral standpoint, in other words what they ought to do (Vanclay et al., 2013). It is fundamental for researchers to not overlook the critical responsibility and duty they have with respect to protecting the dignity and rights of research participants. This implies that they must treat research participants with the utmost respect and abide by certain moral principles and rules of conduct during the research process (McLeod, 2015). This is to ensure that, by taking part in the study, research participants do not experience any distress as well as any unjustified physical and mental harm (McLeod, 2015).

The structural application of ethics in a professional context is often expressed in the form of a written code, document or agreement that explicitly stipulates the morally accepted behaviours which individuals within a profession or organisation should abide by (Vanclay et al., 2013). It is fundamental to note that in South Africa, "psychologists are faced with a unique situation of having their ethical code integrally entrenched into the law" (Khumalo & De Klerk, 2008, p.7). Therefore, ethical violations constitute an infringement of the law and may result in disciplinary action by the Health Professions Council of South Africa for those who are registered (Khumalo & De Klerk, 2008). Due to these legal implications, the responsibility to be ethical when conducting psychological research extends beyond the endeavour of creating knowledge, mastering methodology and producing data-driven information (Khumalo & De Klerk, 2008).

It was deemed imperative to guide the current study by sound ethical principles. Consequently, the section that follows describes procedures that were followed to maintain the utmost research ethics throughout the duration of the study.

3.8.1 Ethical clearance

The first steps in ensuring the current study is guided by a proper ethics was to ensure that the relevant ethical clearance was attained. As mentioned, the current study has a sample population of medical practitioner who are employed in the public health sector and hold dual employment with the Western Cape department of health as well as the either the Stellenbosch or University of Cape Town departments of family medicine within the faculty of health sciences. As a result of this, the researcher had to ensure joint ethical clearance from the Stellenbosch and University of Cape Town departments of Family Medicine. The attainment of both ethical clearances then allowed the researcher to approach each departments staff members for potential interviews in which they would share their insights on medical practitioner performance within the public health service.

The researcher regarded it important to inform participants of what they can expect in these interview sessions and their rights thereof. The section that follows outlines measures by the researcher to explain the rights of the participants as well as the methodology that was followed in each of these engagements (which are further highlighted in (Appendix A-C).

3.8.2 Informed Consent

It is fundamental that researchers obtain informed consent from participants prior to embarking on the research. In practice, this implies that it is not sufficient to simply get research participants to say "yes", it is equally critical that research participants know what they are getting into (McLeod, 2015).

In this regard, compliance was ensured by yielding to the requirements of 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). This section stipulates that psychologists

doing research must enter into a mutual agreement with participants with respect to the nature of the research and the responsibilities of both parties (researcher and participant).

According to Annexure 12, the agreement to which the participant provides informed consent must comply with the following requirements (Republic of South Africa, 2006):

(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 subrule (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) (d)   inform the participant of significant factors that may be expected to influence his or her willingness to participate (such as risks, discomfort,

(3) adverse effects or exceptions to the requirement of confidentiality);

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

        (b) 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;

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

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

          i. provide an appropriate explanation;

          ii. obtain the participant's assent; and

iii. obtain appropriate permission from a person legally authorised to give such permission (p. 42).

Prior to the commencement of the current study, it was ensured that informed consent is sought from all prospective research participants. However, it is fundamental to note that though participants may consent to partake in the study, those who wish to not go further with their involvement in the study could do so without suffering any consequences. Furthermore, data collected from these individuals were subsequently not used for the study. In addition to obtaining informed consent, the confidentiality of participants was also a fundamental factor to consider. The anonymity of the research participants was ensured by refraining from using their real names but rather assigning code names (i.e. participant – X). It can be argued that adherence to these ethical measures not only enhanced the credibility of the study but also enhanced the amount and quality of data gathered from participants.

3.8.3 Confidentiality

According to the DESC Guideline (2015), maintaining the confidentiality of information is a factor researchers must take cognisance of throughout the implementation of a study. According to McLeod (2015), the anonymity of research participants and data gathered from them should be protected at all times unless they otherwise give their full consent for disclosure. It is further regarded important for the proposed study to protect the anonymity of participants to ensure that there are no implications from the study that can harm them in future practice in the field.

However, according 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), psychological researchers are obliged 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 for strictly 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 (p. 41).

In addition to these considerations the researcher ensured that the data collected from the interview sessions remained secure at all times and all material collected through the sessions were stored in an encrypted folder which can only be accessed by the researcher.

The proposed study can generally be classified as a low-risk study due to the reasoning that the research participants (Subject Matter Experts) are not a vulnerable research population (DESC Guideline, 2015). However, due to their busy work schedules the proposed study presents discomfort due to the manner in which it requires their time.

Given that South Africa was at the time of the research in the midst of the Covid-19 pandemic, data gathering sessions had to be planned with the possibility of exposure kept in mind and altered if the need arose. In this regard, interview sessions at times had to be conducted using platforms such as Zoom or Microsoft Teams depending on the consensus reached among the researcher and participants. Furthermore, adopting this measure could also enhance the convenience of this study (i.e. time saved from travelling to scheduled venues). In such cases, further invitations were sent to research participants and consent was sought to record the sessions to allow the researcher to be able to access the material for further analysis.

Chapter 4 provides a discussion on the results of this study and summarises how the aforementioned methodology assisted in gathering the results of the study.

CHAPTER 4

INTERPRETATION AND DISCUSSION OF THE RESULTS

4.1   INTRODUCTION

The opening chapter of this study discussed some of the existing challenges that the South African public healthcare system faces. The current study would argue that these challenges by and large are attributable to questionable levels of competence displayed by non-managerial and managerial staff. The building of a workforce, through pro- and reactive human resource interventions, that has the capability to address these challenges is therefore important. To understand how this capability can be built, Chapter 2 explored person characteristics and situational variables that influence medical practitioner performance in the public health sector. Chapter 2 also presented a consolidated view of findings from previous studies that investigated this topic, namely Fourie (2016) and Hattingh (2018). Chapter 3 outlined the methodology that was followed to extract insights from the subject matter experts that were engaged on the topic of this study. A qualitative data gathering process was deemed appropriate for this study as it allowed an opportunity to gain contextual understanding on the personal competency potential as well as the situational constructs that the participants use to understand medical practitioner performance. The motivation behind these engagements was to extract qualitative insights on the determinants of medical practitioner performance that would supplement insights from the literature study. Moreover, it is expected that the latent competency potential characteristics and situational variables that were identified in the literature review will be largely confirmed by the qualitative data gathering sessions. Thereafter, the proposed model based on the literature review will be altered based on input from the subject matter experts. This final proposed competency model can then be tested quantitatively in a recommended subsequent study.

4.2   Description of the Composition of the Sample

A description of the research sample was considered critical to allow a meaningful comparison with the results obtained in previous studies on this same topic. All the participants

in the study were medical practitioners with a dual employment with Stellenbosch University as well as the University of Cape Town and possessed at least three years of experience, post internship and community service. This suggests that they possess a thorough understanding of what is expected to be an effective medical practitioner in the public health sector in South Africa. Table 4.1.1, Table 4.1.2 and Table 4.1.3 below each report respectively on the demographics of the participants of the study.

Table 4.1.1

Distribution by personal identification of the Research Sample

		Frequency	Percentage	Valid
Valid	Male	4	40	40
	Female	6	60	20
	Total	10	100.0	100.0

Table 4.1.2

Race of the Research Sample

		Frequency	Percentage	Valid
Valid	White	10	100	100
	Indian	0	0	0
	Black	0	0	0
	Coloured	0	0	0
	Chinese Other	0	0	0
	Total	0	0	0
		10	100.0	100.0

Table 4.1.3

Registration Category of the Research Sample

		Frequency	Percent	Valid Percent
Valid	Family Medicine	7	70	70
	Emergency Medicine	1	10	20
	Anaesthesiology	2	20	10
	Total	10	100	100

As seen in the tables below, the predominant majority of participants identify as female, are white and practice within family medicine.

4.2 Thematical Data Analysis

As previously stated, the Repertory Grid technique was the chosen method to extract phenomenological qualitative insights from the participants. The fundamental aim behind this was to gain an understanding of the person characteristics of medical practitioners and situational variables that affect performance in the South African public health sector in order to augment any potentially important omissions that resulted from the literature study. Themes that were extracted from the interviews with each participant were captured in Table 4.2.1 – Table 4.2.10 along with a description that captures the essence of each theme as well as supporting statements from the participant under each theme. It is important to note that this research aims to highlight both competency potential latent variables as well as situational latest variables that influence medical practitioner performance in the public health sector. Furthermore, negative experiences highlighted by the participants were represented by a negative indicator (-) at the end of a statement. Following this, it was important to map the themes from the data gathering sessions and determine the degree to which the themes identified by the subject matter experts correspond with the literature study findings overall. Table 4.2.11 outlines the latter comparison.

4.2.1 Participant 1

Participant 1 was a white female with local and international experience in medicine (surgery, paediatrics, emergency and family medicine). Participant 1 shared some heart-warming stories about her career journey in medicine and spoke passionately about how she discovered her niche within palliative medicine. The interview lasted an hour and a half due to her willingness to gain insights in the study and whilst sharing her own experiences. 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	Theme	Description	Supporting Quotes
1	Planning and organising	Planning ahead and not leaving things to last minute.	"She is the best organised planner that I have met my whole life, she will get a roster out on time and manage everybody to get steam despite working terribly long hours".
			"Being organised and planning well is important in the public service and is underrated because it can make everyone's life easy". "Most of the junior doctors including me, is that we are not able to plan and organise as efficiently". (-)
2	Compassion	Willingness to support staff and patients.	"She is so supportive and willing to listen, always making a plan and always willing to advocate". "She knows how to handle conflict and difficult staff whereas, other doctors can be unempathetic when handling difficult staff or students". (-)
3	Leadership	Approachable and willing to build an enabling envrionment.	"She is a person who does not think they are better than you because of their level, does not shout and scream at people. She is willing to engage and not just send emails and those management skills are very important". "He never says anything negative about anyone and very diplomatic in approach". "He did not see the purpose of a family physician, to him they are useless and female doctors cannot cope and leads to a very toxic environment". (-) "He did not practice what he preached, he had a private practice on the side at home and was doing unethical things". (-)

Table 4.2.1 (Continued)

Themes Stemming from Personal Constructs Participant 1

No	Themes	Description	Supporting Quotes
4	Visionary	Able to look ahead and inspire others.	"They are visionary and inspirational".
5	Consistent	To be stable in one's performance over a period of time.	"What made it difficult to work with him was that he was inconsistent, even though he was good at what he does". (-)
6	Applying expertise	Understanding the limitations of one's own expertise and learning from those around you.	"Overestimating your skills and knowledge can be more dangerous". "You must be able to understand that as a doctor you cannot do everything and must learn from your patients and staff". "Doctors that are not aware that they have some gaps which can be teachable that can make life very difficult". (-)
7	Relating	Knowing how to relate and communicate with patients and staff in challenging moments.	"You need to be able to have not just normal communication skills, but you need to be able to handle difficult situations and difficult people". "We meet patients at the worst day of their lives and that of their families and you need to be able to manage that".
8	Resilience	Building a support structure to help you overcome challenges.	"I have been fortunate to work in good hospitals and good clinics, where I was able to get a lot of support. I think that is important". "He was up against so much resistance and kept a positive attitude despite working in some of the most poisonous and detrimental places I've ever worked in".

Table 4.2.1 (Continued)

Themes Stemming from Personal Constructs Participant 1

No	Themes	Description	Supporting Quotes
9	Teamwork	The ability to work in a team and share responsibilities effectively.	"Teamwork is important". "You need a good team to support you otherwise you will get burnt out". (-) "Doctors that are too individualistic, and that's not a good team player, that can make life very difficult for the team". (-)
10	Balancing of workload	The ability to manage a high workload.	"He is fast and efficient." "He can do all this while working full time and working full overtime and while having a successful family, I am slightly jealous of him". "If you can see 60 patients in day then you are a good doctor".
11	Upholds ethical principles	Following appropriate rules and standards as per statutory requirements.	"He taught me how be safe and have a good base of how to do things as risk free as possible". "He would put patients at risk and other doctors at risk". "He lies to patients and colleagues; we have had a couple of those who maybe shouldn't have been doctors". "They would never put a patient at risk, patients come first".
12	Calling	Being aligned with the purpose of why you are in medicine	"You need to know why you are doing what you are doing, otherwise it may be become very difficult to do your work". (-)
13	Continuous learning	Having the curiosity to seek more knowledge in the field	"You need to be a lifelong learner because medicine changes". "You must be curious about your patients so you can find the best way to help them".

4.2.2 Participant 2

Participant 2 was a white male who gained over 15 years of experience working in various hospitals based in rural communities before coming into academia where he has been for the past 6 years. He spoke passionately about how medicine is commonly misconceived especially by junior doctors who consider a career in medicine as a glamorous job. He emphasised the importance of healthcare and how individuals need to assess the reasons that influenced them to choose medicine as a profession as that will be a key determinant behind them thriving in practice. Participant 2 touched on critical elements that speak to having longevity in medicine in South Africa. 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	Description	Supporting Quotes
1	Applying expertise	Seeking knowledge across a range of domains in medicine.	"They are competent across a range of domains". "People who continue to do this work are generalists, there is not space for specialists mostly in rural settings". (-)

Table 4.2.2 (continued)

Themes Stemming from Personal Constructs: Participant 2

No	Themes	Description	Supporting Quotes
2	Committed	Focus on achieving tasks despite challenges.	"Committed to work hard in spite of a lot of work and a lack of resources". "Though the outside world imagines rural life to be quiet. The reality is that in medicine it is often quite hectic because there is always a lack of resources".
3	Compassion	Showing kindness and compassion to others.	"They understand that you must love your neighbour as you love yourself". "They are able to show kindness". "People can treat you but sometimes they have no compassion". (-) "They interactions with staff can be accusatory and approach with patients can be abrasive. There is a way to inject somebody". (-)
4	Innovative	The ability to create solutions that improve the public health system.	"They are optimistic and do not focus on complaining about the system but try to find alternative ways to succeed". "They don't focus on what the system does not provide them to do their work, they look at how the system could be improved".
5	Altruistic	The desire to serve humanity and make a difference.	"If you pick the job with the intention of being a servant in government sector, you are picking yourself a hard job". "The reality is that if you look at the statistics you will find that only 4% of people are still in rural government service after 10 years of practice". "We often misperceive our own altruism, we like to be believe we care much more than we really do".
6	Going the extra mile	The ability to work extended hours when required.	"They ask, how can I find more work for myself, and they have no incentive as far as reward as to what the system will provide them individually, it's an inherent quality they have". "Typically, in medicine it is often hectic, there is a lot of work, and the clinics go on until very late". (-) "Most people try to find as little work as possible".(-)

Table 4.2.2 (continued)

Themes Stemming from Personal Constructs: Participant 2

No	Themes	Description	Supporting Quotes
7	Adapting and responding to change	The ability to function in an unpredictable environment.	"What makes rural practice so challenging for people is the instability of it". (-) "There are too many unpredictable things in a rural context where things aren't controlled or predictably there. One month this drug is not available, the next, this equipment is not there". (-) "You have to be able to function in a system that can be very disorganised". (-)
8	Availability of staff	The degree to which health staff is available.	"There are not enough specialists in the rural contexts". "Sometimes there may not be someone at the referral hospital who may be able to answer your call". (-)

4.2.3 Participant 3

Participant 3 is a white female with 26 years' experience as a medical practitioner with 18 years specifically in palliative care. She spoke of the importance of having a very deep understanding of what one is doing and being able to navigate the challenges that the South African public health service brings. Participant 3 believes that many medical practitioners in South Africa need a lot of development as it pertains to interpersonal skills and how this impacts on their resilience to work in public health care. 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	Description	Supporting Quotes
1	Patient centred	Focused on enhancing the experiences of patients and attend to their specific healthcare needs	"They listen to paitents and take into sonsideration the contextual issues, they hear what the patients are saying". "He is rude, treats the patients like they are a piece of meat". (-) "He is more about impressing other doctors than he is about caring about his patients". (-) "He talks over patients , not taking an effort to hear patients". (-)

Table 4.2.3 Continued

No	Themes	Description	Supporting Quotes
2	Curiosity	Demonstrates a curiosity tolearn new things in practice.	"They are curious and want to continuously learn". "Not motivated to learn new things, focused on getting a degree and not learning". (-)
3	Problem solving	Motivated to establish where the problems are in the system and actively address them.	"They are not focusing on things that are interesting but not problematic, they focus on where the issues are".
4	Altruism	Driven to work in and better the health care system by engaging with their patients and staff.	"Their incentives are not financial". "It's all about what's weird and wonderful to him but not about the problems". "They will say I can't work tonight, I am not getting paid for it". (-)
5	Going the extra mile	The ability to handle the pressure of a high workload.	"Those that wanted to be perfectionists could not handle the pressure". "You have to be in it for the long run and its not an easy run". "Not open to handling an extended workload". (-)
6	Availability of resources	The degree to which resources are available to do the job.	"You have to have the tools to do it, to do your work".
7	Infrastructure	The availability of quality infrastructure.	"You need to take ownership of the environment". "There is never going to be enough resources". "Even in the UK there are infrastructure challengesIf you are not happy with the system then you need to shape and influence the system to make it better".

4.2.4 Participant 4

Participant 4 is a white male with 15 years of experience in medicine. He is very passionate and engaged around the development of medicine in South Africa with a specific focus on academia and exploring gaps in the improvement of academic capacity in medicine. He has collaborated with various entities on exploring various topics in medicine and looks forward to what the future holds. Table 4.2.4 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	Description	Supporting Quotes
1	Committed	The motivation to do what one is doing.	"They believe in what they are doing". "They are very present".
2	Internal locus of control	The belief that one has control over their success in their careers	"They are engaged and have an internal drive to do what they are doing".
3	Resilience	Being persistent and not let frustrations get you down.	"You will find yourself in very abnormal environments and situations relative to the normal human experience all the time. And you need to compartmentalise that from the regular parts of your normal life". "They manage to deliver in spite of their challenges". "They conform to the easy way out; they do not persist when met with a challenge and then give up". (-)

Table 4.2.4 (Continued)

No	Themes	Description	Supporting Quotes
4	Adapting and responding to change	The ability to be agile and responsive to the demands of the environment.	"Someone who would be good at sustained performance in urban public health care would need to 'have high tolerance for frustration and high tolerance for uncertainty". "You have to be able to bridge the world between pragmatism and common-sense".
5	Continuous learning	Maintaining high academic standards while in practice.	"They have an extremely high degree of technical and academic sophistication, but they have not retreated into the sterility of the academic world. They are still in the messiness of the real world and still helping patients". "They combine extremely high academic standards with clinical service". "They haven't maintained their academic and technical relevance". (-)
6	Curiorsity	Being a curious explorer of the environment and turning ideas it into action.	"They translate their curiosity into action". "He'll explore wherever he needs to explore to find what he needs. Sometimes that curiosity is just because something is interesting and maybe could deliver stuff that can be used in problems we don't have or haven't considered yet or sometimes its case specific".

Table 4.2.4 (Continued)

No	Themes	Description	Supporting Quotes
7	Approachable	Being accessible, inclusive and willing to engage to build healthcare quality.	"They are very conscientious and remain very human, approachable and inclusive".
8	Relating to patients	Ability to work with different people within the ecosystem of a health care setting.	"You need to understand how relationships work". "When they try to be human, it just doesn't seem genuine at all". "Relational competency is probably a better predictor of career success and patient outcomes than technical competency because there are very little things that you can do on your own".
9	Teamwork	The ability to work with others in a functional team.	"The ability to work in teams is very important". " There is no place in medicine where it's a one-man sport".
10	Self-awareness	Able to explore the inner self to understand the influence on one's own performance.	"A degree of self of awareness is important because you are going to get challenged, you are going to get sick, and self-awareness can help you manage that". "If you are not self-aware about your own cognitive processes and where you are emotionally. You may be more open to be taken away by the current than to be sailing the wind". (-)
11	Availability of staff	The degree to which there are additional hands-on deck to assist with the work.	"You are going to face challenges; you can be in the service environment and find that you are under capacity, or you can be in the academic environment and find the work is too much".
12	Going the extra mile	The ability to work beyond normal requirements.	'They don't persist in sorting out challenges and then they remain there". "There is way more work than you will ever be able to do on your own". "You get nice and fun lazy people, they are not so much hard workers but we like them there because they are fun to be around". "They will do what is required but no more". (-)
13	Infrastructure	The degree to which there is proper infrastructure in public health institutions.	"In their unit you will find that they have a big problem with overcrowding". "He will look at factory literature, or any other literature to try and address infrastructure problems in his unit".

4.2.5 Participant 5

Participant 5 is a white male with 13 years' experience as a medical practitioner with vast experience in the local but also broader African context. Participant 5 spoke about the importance of using one's experiences in health care as a tool to uplift the community. He emphasised the important of always keeping in mind what one's core responsibilities are as a medical practitioner. 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	Description	Supporting Quotes
1	Communication	Knowing how to speak to patients to elicit the information that will help in caring for them.	"It can be very frustrating if you can't speak to your patient". "Not willing to learn the language of patients as an example which may limit the relationship". (-) "You might communicate with someone and be communicating in the same language as the person you are communicating with, but because they have a different cultural background and maybe it's a situation where you are communicating in either your primary language or their primary language. There can be errors in communication and that can be with patients or other staff members". (-)
2	Resilience	Being able to push forward even when experiencing setbacks.	"It's difficult to manage patients that are beyond your staff's capacity to manage". (-) "There are systems that contribute to burnout". (-) "My experience in the metro within Cape Town is that nurses will put up their hand and say this is beyond their scope, we are not going to do that; we not going to stitch etc". (-)
3	Continuous learning	An eagerness to acquire new information.	"Not being satisfied with the knowledge acquired when one was in medical school". "To be willing to keep on learning and keep on trying things".

Table 4.2.5 (Continued)

No	Themes	Description	Supporting Quotes
4	Compassion	Demonstrating care and humbleness when working with peers or patients.	"This person is down to earth and not somewhere on a high horse, you will meet some professors who will go on about how great they are". "They show care when working with patients or staff".
5	Leadership	The ability to lead by example and be approachable.	"They can be unapproachable, and some people may be afraid of them, but these people are leading a hospital, but are very much approachable and available". (-)
6	Teamwork	Demonstrating an ability to work with the staff.	"You need someone that has a pack mentality".
7	Workload	Openness to work extended hours.	"They can do a lot of work". "You need to look to those around you as a team and help them improve". "In the rural environments, being on call is stressful".
8	Availability of staff	The degree to which additional support is available to do the job.	"In the metro it can be also challenging because you can be unsupported as a doctor". "In the Western Cape, doctors are expected to do everything. From minor to major, whereas my experience in KwaZulu Natal is that there some of the work was nurse led".

4.2.6 Participant 6

Participant 6 is a white female with over 8 years' experience in family medicine. The participant highlighted the important role that senior

doctors have in nurturing young doctors who in turn need to work towards shaping the future of healthcare within the South African public

health context. 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	Description	Supporting Quotes
1	Going the extra mile	A willingness to go the extra mile.	"They will sacrifice a lunch if needed, they are prepared to do what it takes". "They also have good boundaries about taking time off". "They come late to work and leave early". (-)
2	Decisive	The ability to make impactful decisions to ease working processes.	"When a patient needs something, they will do it themselves despite their seniority, and this can make them more relatable to patients". "They lead by example because they get out and do stuff, they can get a lot done in a day". "Doesn't do much himself, a lot of delegation, someone else must do this. Sometimes you are not quite sure what he wants you to do and when you clarify he makes it out as though you do not know what you are doing because you didn't understand him". (-)
3	Emotional Control	The ability to control one's emotions in challenging situations.	"They are not loud but they are consistent and work hard. Also, because their manner is quieter. The way they engage with peope (both patients and colleagues) is less fiery and it is calmer and they come across more in control and more knowledgable because they are not flipping out the whole time". "Can get worked up with patients and staff easily. Staff stop asking for her advice due to not being approachable". (-) "People who are quick to shout do not breed a good team environment". (-)

Table 4.2.6 (Continued)

No	Themes	Description	Supporting Quotes
4	Respect	Accepting and acknowledging patients for who they are.	"You need to respect patients". "People that don't value the person in front of them. And seeing their life as equal to their struggle". "Seeing the patient as an important person despite their background".
5	Teamwork	Eagerness to understand and invest in the team.	"She will invest in some of the things that might be beyond her job, but she knows that someone has to invest in this person, so this helps the team to function better". "She is interested to know the different personalities of the team; she knows that if she does this it will help her work with the team better".
6	Self awareness	Awareness of one's limitations and knowing when to ask questions or reach out to peers.	"Guys that are competent know their strengths and weaknesses and when to leverage their team". "Knowing yourself and your limitations but still trying to improve those limitations is important". "I've seen with the younger doctors who are not asking soon enough and are trying to find the answer themselves". (-)
7	Workload	The ability to manage a high patient load.	"The workload is certainly a lot and people who can stay calm and work consistently hard are likely going to do better". "The burnout level in the public health sector is very high, people struggle to cope in our environment". (-) "Some people understand that they are responsible for more than just a few patients". (-)

4.2.7 Participant 7

Participant 7 is a white female with over 20 years' experience in the public health service, she spoke about her personal passion towards such topics and was very open and engaged in providing insights based on some of her own personal experiences. The participant was very descriptive about what constitutes an ideal culture in a public health care setting. 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

No	Themes	Description	Supporting Quotes
1	Problem Solving	The ability to identify issues and come up with effective solutions.	"When you don't have something, making the plan around it and still getting the job done sufficiently". "Being able to find solutions in the workplace. Not just say if there is a challenge, this can't be managed but rather how can we do this safely with what we've got".
2	Optimism	Maintaining a positive outlook despite negative organisational experiences	"Focusing on the positive aspects of your work environment, and that creates a happy and calm atmosphere that people like to work in". "We know there are a lot of frustrations in the public health sector if we focus only on the negative aspects, it can easily influence a very negative culture in the workplace".
3	Driven	Motivated to develop and grow one's career in medicine.	"They are very motivated and very goal orientated". "They set challenging individual goals and challenges for themselves and work extremely hard to get there". "He remains stationery, not really growing and very happy with staying the same". (-)
4	Planning and organising	Planning effectively in order to improve efficiency.	"They are very organised and structured, planning your week". "They don't waste time; they limit themselves to what they are physically able to do, and they are more focused, and task orientated". "Tries to do too much with little planning and that adds to him being inefficient and not completing tasks". (-)

4.2.7 (Continued)

No	Themes	Description	Supporting Quotes
5	Leadership	Able to guide a team into achieving a shared goal.	"They are able to get a group of people to follow them and agree with them and move forward with them". "Taking a team approach and looking at what everyone brings to the table". "He is too much of a people pleaser and he can't get people to follow him as a whole". (-)
6	Self Belief	Belief in one's own capabilities and how to use these to serve patients effectively.	"They want what is best for patients and colleagues and will work towards enabling that". "Lacks self belief and has doubt by believing she is not good enough, limits herself by having doubts". (-)
7	Curiosity	A desire to seek more knowledge to improve one's understanding of things.	"I think you need the ability to engage with people, to engage not only with patients but also colleagues and your peers but not only from your department but other departments".
8	Respect	Respecting each person for who they are and what they do.	"It's important to acknowledge who other people are and what they bring to the service". "You must have respect". "It's very important to understand and ask why things are done. To understand why people are doing the things they are doing and why things are being done".

4.2.8 Participant 8

Participant 8 is a white female with 5 years' experience in medicine, primarily working in the Western Cape. Participant 5 shared heart-warming stories about her interactions with her patients which include children and adults with special needs. She spoke about the importance of making a difference and contributing to an environment that is conducive to quality healthcare. 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	Description	Supporting Quotes
1	Problem solving	Being able to address limitations in the hospital.	"He can take equipment that's not meant to be used in a certain way and make it work". "Being unable to solve problems gets them down". (-)
2	Self confidence	Inspire patients by being optimistic about their healthcare.	"If you are sure about something then you commit to it and you are sure that you are right". "If you have a confident doctor telling a patient that listen, I don't know what's wrong with you, but we can try this and this. The patients respond better than with a doctor who is not confident with themselves saying I don't know what's wrong with you, the patients can perceive that". "If you are not confident as a doctor people will not listen to you and the patients will not respect you". (-)
3	Communication	Knowing when to pick up cues from patients and seeking further information.	"Communication is important with your consultation with your patients, and it is even more important with your colleagues". "You need to be firm sometimes when there is something important that needs to be communicated".
4	Resilience	Able to focus on the task at hand and not be dejected by experiences of the environment.	"They will not let things get them down". "It's going to happen that you don't get along with everybody, but it doesn't stop them from performing their best at work".

Table 4.2.8 (Continued)

No	Themes	Description	Supporting Quotes
4	Resilience	Able to focus on the task at hand and not be dejected by experiences of the environment.	"They will not let things get them down". "It's going to happen that you don't get along with everybody, but it doesn't stop them from performing their best at work".
5	Planning and organising	To be structured and punctual in one's approach.	"If you work too slowly and aren't organised you will struggle with the patient load given how busy we are". (-) "You need to be punctual; everything in the hospital has to be on time, theatre opens at a certain time and shifts end at a certain time".
6	Teamwork	The ability to work with team members and acknowledging their contributions.	"You have to be a team player to have the system to work at its best". "Experiences conflict with colleagues and patients would likely perceive them as condescending". (-) "If you don't do what they say they will cause a fight and personally insult you. If I had to work with that person I would try to avoid them at all costs and if I had to interact with them I would make it seem like I'm doing exactly what they want". (-)

4.2.9 Participant 9

Participant 9 is a white female with 4 years' experience in public health care. She has gained experience in both rural and urban settings. Participant 9 spoke about the challenges experienced in the rural setting and is passionate about working in the public health care sector. Participant 9 spoke about the injustices that exist in public health care in South Africa and how there is an opportunity to make an improvement through a collective effort. 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	Description	Supporting Quotes
1	Compassion	Able to understand the needs of both patients and staff alike.	"A sense of compassion is very important". "It is your job to take care of the patient coming to casualty, it is not the patient's fault that they are there". "I often ask the junior doctors that if this was a member of your family, would you treat them this way or shout at them?".
2	Communication	The ability to communicate clearly.	"Can be quite aggressive with their interaction with patients and colleagues". (-) "Instead of providing constructive criticism to juniors this doctor will gossip about it in the tearoom". (-)
3	Problem solving	Taking a holistic approach to wellness by uncovering faults and offering solutions.	"They are quite holistic in their approach and can generate positive patient satisfaction because they look at other issues as well, that may be bothering the patient". "They focus only on what's in front of them, not exploring any other issues". (-)

Table 4.2.9 (Continued)

No	Themes	Description	Supporting Quotes
4	Continuous Learning	To be an active learner in the field of medicine and knowing when to appropriately apply that learning.	"They display exceptional knowledge in the field of medicine". "They are good at giving their knowledge over". "She actively tries to better herself; she has furthered herself to be able to do various other things". "He furthers himself through short courses and makes an active effort to keep up with the latest guidelines".
5	Interpersonal skills	The ability to build relationships and work amicably with team members.	"They work with everyone in the team and value each team member". "He is a senior doctor in our department, they are the kind of person that their personal feelings about someone bleeds into their professional interactions. If they personally don't like a colleague, they treat them poorly and ice them out, it's a problem especially with the interns because the interns are there to learn but if they do not like a specific intern then they do not teach that intern." (-).
6	Infrastructure	The availability of infrastructure to accommodate patients,	"Patients in labour have to sit on chairs". "Sometimes you don't always have the power to change the number of beds available, and it can get overwhelming". (-)
7	Adapting and responding to change	The ability to adapt one's treatment approach in accordance with the times	"If you think someone is having a heart attack now, what we do is different to what we did 20 years ago". "This specific doctor uses the old tests that we don't use anymore, and times have moved and now we can't accurately diagnose a heart attack if you use those tests". (-) "He is the type of person that learned what they learned in medical school and goes with that. (-)
8	Resilience	Understanding the challenges of the system and alleviating the strain they present..	"Sometimes you don't always have the power to change the number of beds available, and it can get overwhelming". (-)
9	Going the extra mile	The willingness to put in extra effort to assist one's team	"They make an extra effort with patients and colleagues". "The attitude of a lot of doctors is that they feel burdened by the people coming to the hospital". (-)

4.2.10 Participant 10

Participant 10 is a white male with over 10 years' experience as a family physician. Participant 10 mentioned how he joined medicine late in his career after having embarked on a career in commerce but discovered how his passion actually lies in medicine. Participant 10 spoke about the importance of evaluating the intent that influences one to choose a career in medicine, as it can differ markedly from what is portrayed in the public. 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	Description	Supporting Quotes
1	Resilience	Able to withstand the pressure of the workload.	"Able to care for a vast amount of patients and achieve high quality of work." You must be able to cope with an overwhelming amount of stress". "They don't get through the same amount of work in a day, some days I wonder if people are lazy or is it mental health in a way. In our environment this can place a lot of strain because in the public health sector there is an incredible amount of work". (-)
2	Emotional control	Ability to remain emotionally controlled in stressful situations.	"You need to be calm". "People that don't get anxious quickly will likely do well".
3	Continuous learning	A keen focus on upskilling oneself.	"You need to stay with the latest evidence to provide the best care". "If you are interested in what you do, after three years doctors choose to be where they are. Sometimes they may be too grateful to have a job and may not in the right environment and that can hamper their performance". "Some people are just academically stronger, just have better knowledge and skills than others with the same level of experience".

Table 4.2.10 (Continued)

No	Themes	Description	Supporting Quotes
4	Interpersonal skills	Ability to interact with a diverse group of individuals.	"Working with people and function in a team and relate with patients and use this to attain better outcomes". "People who are able to get along with the team and communicate well". "If you have good relationships with team members its good for morale and people encourage each other".
5	Flexibility	The ability to adapt to the needs of the environment	"You can't be too stuck in your ways because everyday is different". (-) "Some people struggle to adapt to change and that can be quite tricky". (-)
6	Adapting and responding to change	The ability to adapt to the needs of the environment.	"They are able to identify the big picture and how they fit into it". "You can't be too stuck in your ways because everyday is different". (-) "Some people struggle to adapt to change and that can be quite tricky". (-)
7	Calling	Finding a purpose in what one does and viewing one's role as more than just a job.	"They understand their roles, some people find purpose in what they do, and some don't and see it as just a job whereas for some it's a calling". "Some people understand their roles better and that helps, it's like a calling". "For some people it's just a job". "Some people don't come into medicine for the right reasons". (-)

Table 4.2.11

Summary of all the themes identified in the data gathering sessions

Themes	Participants	Frequency	Classification	Included in the Fourie-conceptualisation of performance	Included as competency potential variable in the Hattingh structural model	Competency potential variable extracted in literature study	Additional competency potential variables
Planning and organising	P1, P7 & P8	3	Competency	No[i]			
Compassion	P1, P2, P5 & P9	4	Competency potential		No[ii]	Yes	
Leadership	P1	1	Competency	Yes[iii]			Declarative and procedural medical knowledge
Visionary	P1	1	Competency	No[iv]			
Consistent	P1	1	Competency	No[v]			
Applying expertise	P1	1	Competency	Yes[vi]			
Relating	P1 & P4	2	Competency	Yes[vii]			
Resilience	P1, P4, P5,P8,P9 & P10	6	Competency potential		Yes[viii]		
Teamwork	P1, P4, P5,P6 & P8	5	Competency	Yes[ix]			
Upholds ethical principles	P1	1	Competency	No[x]			Ethical analytical ability
Calling	P1 & 10	2	Competency potential		Yes[xi]		
Continuous learning	P1, P4 & P5	3	Competency	Yes[xii]			
Approachable	P4	1	Competency	Yes			
Curiosity	P3 & P7	2	Competency potential		No	No[xiii]	
Problem solving	P3, P7,P8 & P9	5	Competency	Yes[xiv]			
Self-awareness	P4	1	Competency potential		No	No	
Decisive	P6	1	Competency	No			
Adapting and responding to change	P4	1	Competency	No[xv]			
Flexibility	P10	1	Competency	No[xvi]			
Interpersonal skills[xvii]	9 & 10	2	Competency potential		No	No	
Altruism	P3	1	Competency potential		Yes[xviii]	No	
Patient centred	P3	1	Competency	Yes[xix]			
Emotional control	P6 & P10	2	Competency potential		Yes[xx]	No	
Communication	P2, P5, P8 & P9	4	Competency	Yes[xxi]			
Self-belief	P7	1	Competency potential		Yes[xxii]	No	
Self-Confidence	P8	1	Competency potential		Yes[xxiii]	No	
Optimism	P7	1	Competency potential		No[xxiv]	No	
Driven	P7	1	Competency potential		Yes[xxv]	No	
Innovative	P2	1	Competency	No[xxvi]			
Committed	P2 & P4	2	Competency potential		No	No[xxvii]	
Availability of resources	P3	1	Situational Variable			Yes[xxviii]	
Availability of staff	P2, P4, P5 & P6	4	Situational Variable			Yes	
Internal locus of control	P4	1	Competency potential		No	Yes[xxix]	
Infrastructure	P3, P4 & P9	3	Situational Variable			Yes	
Balancing of workload	P1	1	Competency	Yes[xxx]			
Going the extra mile[xxxi]	P2, P3, P4, P6 & P9	5	Competency	No			Psychological ownership

4.2.11 Summary

Tables 4.2.1 to 4.2.10 represent the themes extracted from each of the individual interviews with the participants.

It is important to note that in the opening chapter it was argued that the overarching objective of the current study is to expand and modify the Hattingh (2018) medical practitioner partial competency model into a comprehensive yet still incomplete competency model. To foster this endeavour, it was deemed critical to collaborate with medical practitioners who serve as subject matter experts in the South African public health service. The objective of this was to invite the medical practitioners to share their theorising on the competency potential and situational variables that influence medical practitioner performance. These insights were derived using the Repertory Grid Technique (Appendix D) where participants were asked to recall their experiences of working in the public health service and further tasked to identify competency potential as well as situational variables that pose an influence on medical practitioner performance in public health care. Despite the intention to guide participants to discuss person-centred and situational determinants of medical practitioner performance, participants at times, nonetheless, referred to medical practitioner competencies when explaining medical practitioner performance. Table 4.2.11 outlines the various themes which were extracted that fell either in the categories of competencies, competency potential latent variables or situational latent variables. Table 4.2.11 further allows a comparative view with the competencies and competency potential variables identified in the Fourie (2016) and Hattingh (2018) studies. It is fundamental to note that this response pattern is not uncommon when considering why an individual may be competent at what they are doing. It is a normal tendency to focus on the competencies a person is competent in when considering why a person is considered competent. The current study did not endeavour to further explore the evidence that one would use to justify why one considers a medical practitioner competent (i.e., to expand the connotative and/or denotative interpretation of the medical practitioner performance construct) but rather sought to explore the person-centred and situational characteristic that allow (or prevent) a medical practitioner to be competent (or from being competent). The failure of the researcher to shepherd the participants on track when straying off on a competency tangent needs to be confessed. The straying off on a competency tangent in the interviews is acknowledged as a methodological weakness of the current study and possibly be the result of two factors:

1. The participants of the study lacking depth in the understanding of medical practitioner competency potential despite the process outlined (Appendix D).

2. The researcher refraining from interfering with how the participants form their own conceptions of medical practitioner competency potential as this would negatively influence the experience of the participants.

It is noted though that some of the themes extracted from the participant interviews did, however, refer to medical practitioner competency potential latent variables. These include namely; *Curiosity, Decisive, Interpersonal skills, Optimism, Driven, Committed and Internal locus of control*. It was also noted that some of the competency potential variables were also identified by Hattingh (2018). These included *Resilience, Calling, Altruism, Emotional control, Communication, Self-belief and Driven.* Furthermore, it was noted that some of the competency potential and situational variables were also identified in the literature-based theorising of the current study. These include; *Compassion, Availability of resources, Availability of staff, and infrastructure*.

Taking the above into consideration it is fundamental to note that not all competency potential latent variables extracted were suggested by the literature-based theorising in the current study nor in the Hattingh (2018) study. The section below presents a discussion on each of these competency potential variables and seeks to develop hypotheses on how each of them influences medical pracitioner performance in the public health sector.

4.3   Curiosity

Medical pracitioners by profession are required to uncover facts which can help them make informed decisions regarding the health and wellness of a patient. Curiosity can be regarded as a critical trait to help medical practitioners enhance their understanding of each patient's unique experience with illness (Dyche & Epstein, 2011). According to Adashi et al., (2019) curiosity has much to offer the medical profession. The authors state that curiosity as a person characteristic is indispensible to any of the analytical efforts formed by medical pracitioners and plays a fundamental role in connecting disparate clinical dots which are absent in a conventional clinical roadmap.

In its essence, curiosity is associated with the desire to learn more and is underpinned by acts of reflection, mindfulness and inquisitiveness. It is conceived as an energising construct which is key for habitual learning, deepening self awareness, enhancing clinical reasoning and aiding advancement in practice (Schattner, 2015).

1. Curiosity: The quality of being inqusitive and being driven to acquire more knowledge in the field of medicine

In publich health care however, it is noted that there are institutional practices that can suppress curiosity; these may for example be factors such as the haste in which doctors are required to treat patients which may then contribute to a passive learning culture (Dyche & Epstein, 2011)..

Participant 3 and 7 echoed in that medical practitioners who are curious about understanding their enviornment and are open to learning more information are those that are able to enjoy a successful career in public health. The following path-specific hypothesis is added to the structural model that emerged from the Fourie (2013) and Hattingh (2018) studies and the literature-based theorising in the current study:

. Hypothesis 24: *In the proposed competency model it is proposed that curiosity positively influences continuous learning.*

4.4 Self-awareness

Due to the nature of their work, medical practitioners have an ongoing responsibility to care for and attend to the healthcare needs of others. Whilst this may be true, it could also be argued that it is equally important that medical practitioners regularly reflect on their own capacity to serve others through self-reflection. According to Siraj et al. (2013), self-reflection is important for the personal and professional development of medical practitioners as it builds the capacity for one to be self-aware. Society expects that medical practitioners stay abreast of advances in the field of medicine and operate solely within the confines of their expertise. To achieve this, it is considered important that doctors assess their own level of competence and performance. According to Siraj et al. (2013) in healthcare, self-awareness encompasses medical practitioners' understanding of how their own personal experiences as well as values, attitudes and biases affect their ability to care for patients. This understanding helps to enhance the ability of medical practitioners to use their emotional responses for their own and their patients benefit (Saunders et al., 2007).

2. Self-awareness: Reflecting on one's unique individual experiences to gain a deeper understanding of one's weaknesses and strengths and an understanding of how these influence patient care and relations with peers.

The notion of training medical practitioners to focus on their self-awareness may help produce more reflective, responsible, motivated and well-balanced medical practitioners who provide better patient care (Saunders et al., 2007; Siraj et al, 2013). The following additional path-specific hypothesis is therefore proposed:

Hypothesis 24: *In the proposed competency model it is proposed that curiosity positively influences working with people.*

4.5   Interpersonal skills[5]

Medical pracitioners operate in a highly interconnected system and have to partner and collaborate with a multitude of stakeholders to care for their patients and further support the attainment of health outcomes for a hospital as an organisation. In this light, it is fundamental that medical pracitioners build a capacity to have well-developed interpersonal skills; this helps to ensure that they are able to work effectively with diverse individuals with diverse knowledge and skills and use these interactions to fruitfuly solve complex health care issues. A skill refers to the ability to do something well. The current study would argue that that ability can be equated to procedural knowledge. Procedural knowledge refers the knowledge how to do something. It is often tacit knowledge that is difficult to articulate. The current study interprets interpersonal skills as procedural knowledhge on how to interpret and amicably respond to other people's words and deeds

3.   Interpersonal skills: tacit procedural knowledge that enables one to build and maintain quality relationships and to work amicably with team members

According to Barakat (2007), interpersonal skills have been increasingly scrutinised and are becoming more of a necessity in the health care sector. The expectations from medical pracitioners stretch far beyond imparting their knowledge of medical facts. Investing in developing the interpersonal skills of medical pracitioners assists in maintaining high clinical standards and has fruitful lon- term benefits for a hospital (Barakat, 2007).

Good interpersonal skills have been shown to help (Barakat, 2007):

- Create a friendly environment for patients and staff
- Increase staff productivity
- Promote fffective time management
- Improve patient care

Hypothesis 24: *In the proposed competency model it is proposed that interpersonal skills positively influence working with people.*

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[5] The researcher found that some of variables identified were expressed as competencies (ie., Interpersonal Skills). However, upon further questioning the researcher found themes emerge that align these competencies to competency potential variables (ie., procedural knowledge).

4.6   Optimism

The South African healthcare system is burdened with enormous challenges which have duly resulted in emotional upheaval in society and clinical staff alike. In the context of such an environment, it is fundamental to recognise that there are human strengths that can reinforce mental strength and create a buffer against stress; one such human strength is the quality of being optimistic (Boldor, 2012). According to participant 7, focusing only on the negative aspects of the public health sector can influence a negative organisational culture and subsequently less effectiveness in responding to the challenges the system is facing. In contrast, the participant states that focusing on the positive aspects can help medical practitioners mould the kind of environment in which they would all like to work in. According to Çavuş and Gökçen (2014, p. 246) optimism can be defined as a "psychological intention and expectation to hope for the best possible and positive outcome."

4. Optimism: A psychological resource capacity that allows people to associate positive expectancies with the goals they pursue and thus allows them to see things in a positive light and maintain a positive outlook in the face of hardships.

Optimism can serve as an important ingredient for assisting medical practitioners to build resilience, Boldor (2012) reasons that optimism is a potentially strengthening personality characteristic in that it can be manipulated to the task at hand and subsequently assist medical practitioners in coping with the various stressors they encounter on the job. Moreover, medical practitioners who demonstrate optimism have been identified to report fewer avoidance strategies and are able to focus on finding solutions to some of the practical problems they encounter.

Hypothesis 26: *In the proposed competency model it is proposed that optimism positively influences problem solving.*

The opinion of the subject matter experts that optimism plays an important role in medical practitioner performance in the public health sector points to potential deficiencies in the medical practitioner competency model that emerged from the literature-based theorising. Optimism is a psychological state that forms part of the higher-order multidimensional construct psychological capital introduced by Luthans et al. (2007). The latent variable resilience, introduced by Hattingh (2018) as in influential medical practitioner competency potential variable also forms part of the psychological capital construct (along with hope and self-efficacy). Luthans et al (2007, p. 542) defined psychological capital as: An individual's positive psychological state of development and is characterised by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making

a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success.

The public health sector in South Africa presents a challenging working environment to medical practitioners. The discussion in the current study's literature study of the situational variables characterising the work environment of medical practitioners in the public health sector attests to this fact. The concern therefore exists that medical practitioners in the public health sector, over time, run the very real risk of developing debilitating stress and burnout conditions that affect their performance.

Fourie (2016) identified 9 medical practitioner outcome latent variables. These outcome latent variables all relate to the patient (e.g., trust in the medical practitioner, adherence to prescribed treatment, patient satisfaction). Fourie (2016) derived the medical practitioner competencies she proposed from these outcomes. Fourie (2016) did not focus on possible outcomes resulting from the daily practitioner-patient interactions that relate to the medical practitioner.

Stress and burnout could possibly be conceptualised as medical practitioner outcome latent variables that, over time, result from an excessive workload combined with poor infrastructure and a lack of resources and a perceived lack of success as inferred from an assessment of the patient outcome latent variable (Fourie, 2016). The current study would interpret outcome latent variables as characteristics of people other than the medical practitioner whose performance is being described and explained (e.g., the patient) and characteristics of the environment that form part of the results that the medical practitioner is tasked to achieve (e.g., market reputation). The current study would therefore argue that stress and burnout should rather be conceptualised as competency potential latent variables that are affected, over time, via feedback loops by the negative working conditions and the perceived lack of success that medical practitioners have to cope with in public hospitals.

Psychological capital, given its definition, can be hypothesised to moderate the feedback loops from the situational variables and the patient-centred outcome variables on stress and burnout. The current study refrained from positing formal hypotheses on the main and interaction effect of psychological capital on medical practitioner performance due to the fact that the partial competency model proposed by the current study still lacks the outcome latent variables proposed by Fourie (2016). It is, however, strongly recommended that future studies extend die structural

model proposed in the current study through the inclusion of the Fourie (2016) medical practitioner outcome latent variables.

4.7   Commitment

For a hospital to run effeciently, it can be reasoned that medical pracittioners need to ensure that they perform effectively and are engaged in their roles. Commitment as a person characteristic can play a fundamental role in driving medical pracitioners to achieve results in spite of the constraints that come with working in the public healtth sector. According to participant 2 and participant 4, those medical pracitioners that are committed are those that believe in what they are doing and are motivated to succeed.

In the literature study, the public health sector as a working environment was extensively explored and challenges that currently exist subsequently outlined. In order to strenghthen public health system, it is fundamental to build a workforce of committed health staff whose goals and ambitions align with that of the system.

5. Committed: To remain engaged in one's role and demonstrate an innate drive to succeed.

According to Indradevi and Veronica (2018), commitment is the psychological binding of an individual to a job and the organisation in which they represent. When a medical pracitioner is engaged they are more likely to care about the goals of a hospital as an organisation and care about their patients and peers (Indradevi & Veronica, 2018). When patients feel cared for, they may likely experience more satisfaction with the health care service they receive. Furthermore, when medical pracitioners demonstrate care for their peers this may help create better working relationships and subsequently improve team performance.

Hypothesis 27: *In the proposed competency model it is proposed that commitment positively influences patient centredness.*

4.8 Driven

Considering some of the contextual challenges in the South African public health care sector it can be reasoned that the practice of medicine is a challenging career path requiring profound dedication and discipline. As a result, it is interesting to understand what are some of the factors that drive individuals to pursue a career in medicine and further succeed in a chaotic, unpredictable and demanding public health care system. According to Halari et al. (2016) embarking on a career in medicine without possessing the necessary drive and enthusiasm will

not suffice to withstand the immense stress that key role players such as medical practitioners are often faced with.

It could be argued that those medical practitioners who are driven to help their organisation achieve its desired healthcare outcomes are those that are motivated to succeed. According to Chmielewska et al. (2020), motivation is the driving force behind the vast majority of organisational success, more especially in the healthcare environment where the performance of individual healthcare units is largely influence by the degree to which the medical practitioners who serve them are driven and dedicated. According to Tokumasu et al. (2022), motivation can be classified from two lenses: firstly, intrinsic motivation which refers to the personal satisfaction one receives from performing a task, and secondly extrinsic, which refers to the performance of a task for attainment of a specific outcome.

In the data gathering sessions, participant 7 echoed that those individuals who are driven are those who are motivated to succeed and set challenging personal goals for themselves. These goals play a fundamental role in shaping successful careers for such individuals in medicine and essentially separates such colleagues from their peers.

6.   Driven: The motivation for growth and advancement in medicine

A study conducted by Halari et al. (2016) on driving factors behind students choosing a career in medicine found that 59.50% of respondent indicated that service to humanity was the greatest motive. This implies that a vast majority of students feel a need to care for their patients. The need to care will likely become a key motivational driver for the students when they are in practice as regards how they care for their patients and how they generally envision their career in medicine.

Hypothesis 28: *In the proposed competency model it is proposed that curiosity positively influences patient centredness.*

4.9 Decisive

In a hospital, medical practitioners constantly make challenging decisions. According to Harris (1983), the day-to-day care of patients involves innumerable decisions around performing or not performing specific tasks and this may influence patients' treatment journeys. Ultimately, the decisions taken can translate into results achieved by a hospital as an organisation. It is fundamental to note that the decision to not act can also be regarded as a decision. According to Harris (1983), if a medical practitioner refrained to take the blood sugar of a patient, and the patient dies as a result, it could be argued that the patient would have died as a result of the

decision of a medical practitioner to not act. To enhance the quality of healthcare in the public health service it is important to recruit medical practitioners who can demonstrate enhanced decision-making skills and ultimately, help a hospital achieve its outcomes (Szymaniec-Mlicka, 2015).

According to Participant 7, those medical practitioners who are decisive are those who are able to act quickly to ensure the needs of patients are served, and over and above this, they are those individuals who are able to get a lot done in a day. Therefore, the ability to make effective decisions and do so timeously can result in a medical practitioner being more efficient in their role.

Hypothesis 29: *In the proposed competency model it is proposed that curiosity positively influences efficiency.*

 Hypothesis 30: *In the proposed competency model it is proposed that curiosity positively influences patient centredness.*

In addition to the abovementioned competency potential latent variables, there were a number of situational variables which were also extracted from the qualitative interviews. All of these situational latent variables also emerged from the literature-based theorising in the current study. Although the subject matter experts did not contribute any novel insights of situational characteristic that facilitate and inhibit the performance of medical practitioners in public hospitals and clinics, they did bolster confidence in the situational latent variables built into the competency model by the literature-based theorising.

Some of the competencies extracted from the qualitative interviews were not included by Fourie (2016) or Hattingh (2018) in their conceptualisation of the medical practitioner performance construct but upon further reflection suggested that their inclusion in the multidimensional medical practitioner performance construct deserves serious consideration. This line of reasoning, in turn, led to the question which person-centred variables would affect performance on these competencies. Two of the competencies proposed by the subject matter experts are outlined below.

4.10   Going the Extra Mile/Organisational Citizenship Behaviour

The job of a medical practitioner encompasses a set of inter-related behavioural tasks, constraints and opportunities in service of a set of outcomes, These job task and outcome expectations, in turn, are imbedded in a hospital or clinic which poses specific contextual behavioural expectations (Myburgh, 2013). The medical practitioner is firstly expected to

voluntarily go the extra mile, to go beyond the call of (scripted) duty and to display organisational citizenship behaviour (OCB). This refers to voluntary behaviour that facilitates the performance of co-workers, that facilitates the task of the medical practitioner's superior (the hospital superintendent) and that benefits the hospital and its patients. The role the medical practitioner should play in the hospital cannot be completely scripted in a job description. It is to the benefit of the hospital and its patients if medical practitioners constructively respond to situations that demand attention even when such a response is not prescribed by their job description[6].

People quite often tend to neglect and not look after things that do not belong to them. Conversely, people generally look after and care for the things they regard as theirs even when they do not formally have ownership of the object, animal or person in question (Pierce et al., 2001; Van Dyne & Pierce, 2004). Pierce et al. (2001) explain the construct of psychological ownership as follows:

Etzioni observes that ownership is a "dual creation, part attitude, part object, part in the mind, part 'real'" (1991: 466). As a state of the mind, psychological ownership (Pierce et al., 1991) is that state in which individuals feel as though the target of ownership (material or immaterial in nature) or a piece of it is "theirs" (i.e., "It is MINE!"). The core of psychological ownership is the feeling of possessiveness and of being psychologically tied to an object. One's possessions are felt as extensions of the self (Belk, 1988; Dittmar, 1992; Furby, 1978a, b) - "what is mine becomes (in my feelings) part of ME" (Isaacs, 1933: 225) - and, thus, the state of psychological ownership emerges. When property is grounded psychologically, it becomes, for the individual, "mine," as the individual finds himself or herself present in it (Kline & France, 1899), and it within the individual. Thus, the target becomes part of the psychological owner's identity. (p. 299)

Van Dyne and Pierce (2004) echo the initial line of reasoning that people tend to look after and protect that which they regard as theirs:

According to Beaglehole (1932) and Furby (1978), possessions and feelings of ownership trigger a sense of responsibility for the entity. For example, Hall (1966) argued that possession causes individuals to protect and defend their ownership rights. The property rights literature also emphasizes protecting and enhancing possessions (Wilpert, 1991). This includes improvements and controlling or limiting access by others. (p. 441)

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[6] A second expectation is to comply with work-related hospital rules and to avoid behaviour that negatively impacts on the hospital, its patients and co-workers. Future research should consider including counterproductive work behaviour as another medical practitioner competency.

It therefore follows that medical practitioners that have taken psychological ownership of their job and their hospital will tend to do what is necessary to protect and look after "their" hospital even if those actions are not part of their formal job description. It is consequently hypothesised that:

Hypothesis 31: *In the proposed competency model it is proposed that psychological ownership towards the hospital positively influences the display of organisational citizenship behaviour.*

4.11   Upholding Ethical Principles

In the previous paragraph it was acknowledged that the hospital or clinic holds behavioural expectations of their medical practitioners that go beyond the formal job description. This not only refers to OCB but also counterproductive work behaviour. Hospitals and clinics not only expect their medical practitioners to go the extra mile and go beyond the call of duty but also to stay out of trouble (Myburgh, 2013). According to Myburgh (2013), counterproductive work behaviour refers to:

Work behaviour refers to a wide spectrum of employee behaviours that have a negative effect on organisational functioning and success. These include but are not limited to theft, unruliness, drug misuse, non-compliance with organisational rules, personal indiscipline, unauthorised absenteeism and social loafing. (p. 66)

A somewhat thorny question to consider is whether counterproductive behaviour should be regarded as synonymous with the upholding of ethical principles? No doubt all counterproductive behaviour is also unethical behaviour. But can all unethical work behaviour be regarded as counterproductive work behaviour? The current study would argue that counterproductive work behaviour and upholding ethical principles should be treated as two qualitatively distinct but related medical practitioner competencies[7].

Medical practitioners are registered with the Health Professions Council of South Africa (HPCSA). As such they are bound by the ethical guidelines of the HPCSA for medical professionals (HPCSA, 2021). In the preamble to the General Ethical Guidelines for the Healthcare Professions (HPCSA, 2021), the central role that upholding of ethical principles plays in the professional life of a medical practitioner is explained:

Good clinical practice is based on a trust relationship between patients and healthcare professionals. Being a good healthcare practitioner requires a life-long commitment to

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[7] The possibility that counterproductive work behaviour and upholding ethical principles should be rather treated as opposite poles on a single continuum cannot altogether be dismissed.

sound professional and ethical practice and an overriding dedication to the interests and wellbeing of one's fellow human beings and society. This makes the practice in the healthcare profession a moral enterprise. It is in this spirit that the HPCSA presents the following ethical guidelines to guide and direct the practice of healthcare practitioners. These guidelines are an integral part of the standards of professional conduct against which professional conduct is evaluated.

 (p. i)

Upholding ethical principles in real life situations is not the application of memorised ethical rules. It requires the active and insightful ethical analysis of the situation at hand based on an internalised understanding of ethical principles. Explaining competence on the upholding ethical principles competency in terms of an ethical analysing ability would, however, only provide a pretence of an explanation. Solving novel ethical problems requires the transfer of crystalised declarative ethical knowledge onto the ethical problem. Fluid intelligence constitutes the cognitive engine behind this transfer (De Goede & Theron, 2010). According to Horn and Cattell (1967, p. 108) fluid intelligence refers to "the ability to perceive relationships independent of previous specific practice or instruction concerning those relationships." Fluid intelligence can, however, not solve ethical problems in a vacuum. It needs to adapt existing crystalised ethical knowledge to apply to the novel problem. Moreover, the distance over which existing knowledge can be adapted and transferred depends on fluid intelligence (De Goede & Theron, 2010). and hence the current study hypothesises:

Hypothesis 32: *In the proposed competency model it is proposed that fluid intelligence positively influences upholding ethical principles.*:

Hypothesis 33: *In the proposed competency model it is proposed that declarative ethical knowledge positively influences upholding ethical principles.*:

Hypothesis 34: *In the proposed competency model it is proposed that declarative ethical knowledge moderates the effect of fluid intelligence on upholding ethical principles.*

4.12   Validation Interviews

The themes highlighted in the previous section (table 4.2.11) were fundamental in formulating an understanding of how medical practitioners interpret the competency potential and situational variables that influence their performance in the public health sector. The intent behind the data gathering sessions was to modify the partial medical practitioner competency model (Figure 2.7)

that emerged in Chapter 2 from the literature-based theorising with themes gathered from the subject matter experts.

It is important to note that the current study right from the outset endeavoured to conduct validation interviews (Appendix E) which ultimately served as an opportunity to verify and reconfirm the themes extracted from the data gathering sessions. Essentially, over a Microsoft Teams meeting, the participants were given an opportunity to review the themes which they shared with the researcher in the original interview and advise whether their statements were reflected accurately and whether they would like to amend or omit statements to further enhance the modified partial medical practitioner competency model.

Validation interviews were conducted with a sample of two of the original ten subject matter sample. This sample size was largely influenced by the limitation of access to medical practitioners as a result of operational requirements of the doctors due to the nature of their work.

In these validation interview sessions, it was noted that participants had no further novel insights to share with the researcher over and above those already captured in the original data gathering sessions. This then allowed the researcher to finalise the variables which would then be explicated in the modified competency model which is described in the section below.

4.13   Elaboration and Modification of the Initial Competency Model

The section above indicates the importance of exploring how the subject matter experts interpret the medical practitioner competency potential and situational variables that influence performance in the public health context and not only drawing insights from the literature. Subsequently, the initial partial Medical Practitioner Competency Model was adapted and modified to include insights gathered from research and insights from the qualitative sessions with the subject matter experts (Figure 5.1). It is important to note that all competency potential and situational latent variables identified in the literature study remained in the in the readapted partial competency model due to their relevance and hypothesised influence on medical practitioner performance in the public health sector. The additional competency potential variables which were identified in the data gathering sessions and not previously mentioned in Fourie (2016) and Hattingh (2018) nor identified in the literature study were subsequently added to the model. This included namely: *Curiosity, Self-awareness, Interpersonal skills (Interpersonal procedural knowledge),* and *Optimism and Commitment.* Two additional medical practitioner competencies were extracted from the qualitative interview sessions (*Going the extra mile/OCB* and *Upholding ethical principles*) that the current study felt warranted inclusion in an expanded conceptualisation

of the competency domain of the medical practitioner performance construct initially proposed by Fourie (2016). Three additional competency potential latent variables were subsequently added to the competency potential domain through further literature-based theorising initiated by the insight unlocked by the two competency suggestions. *Psychological ownership, Fluid intelligence* and *Declarative ethical knowledge* were hypothesised to affect OCB and upholding ethical principles respectively.

The structural paths between these variables and the competencies which they are hypothesised to influence are subsequently highlighted in the model below.

Figure 5.1

Proposed comprehensive South African medical practitioner competency model
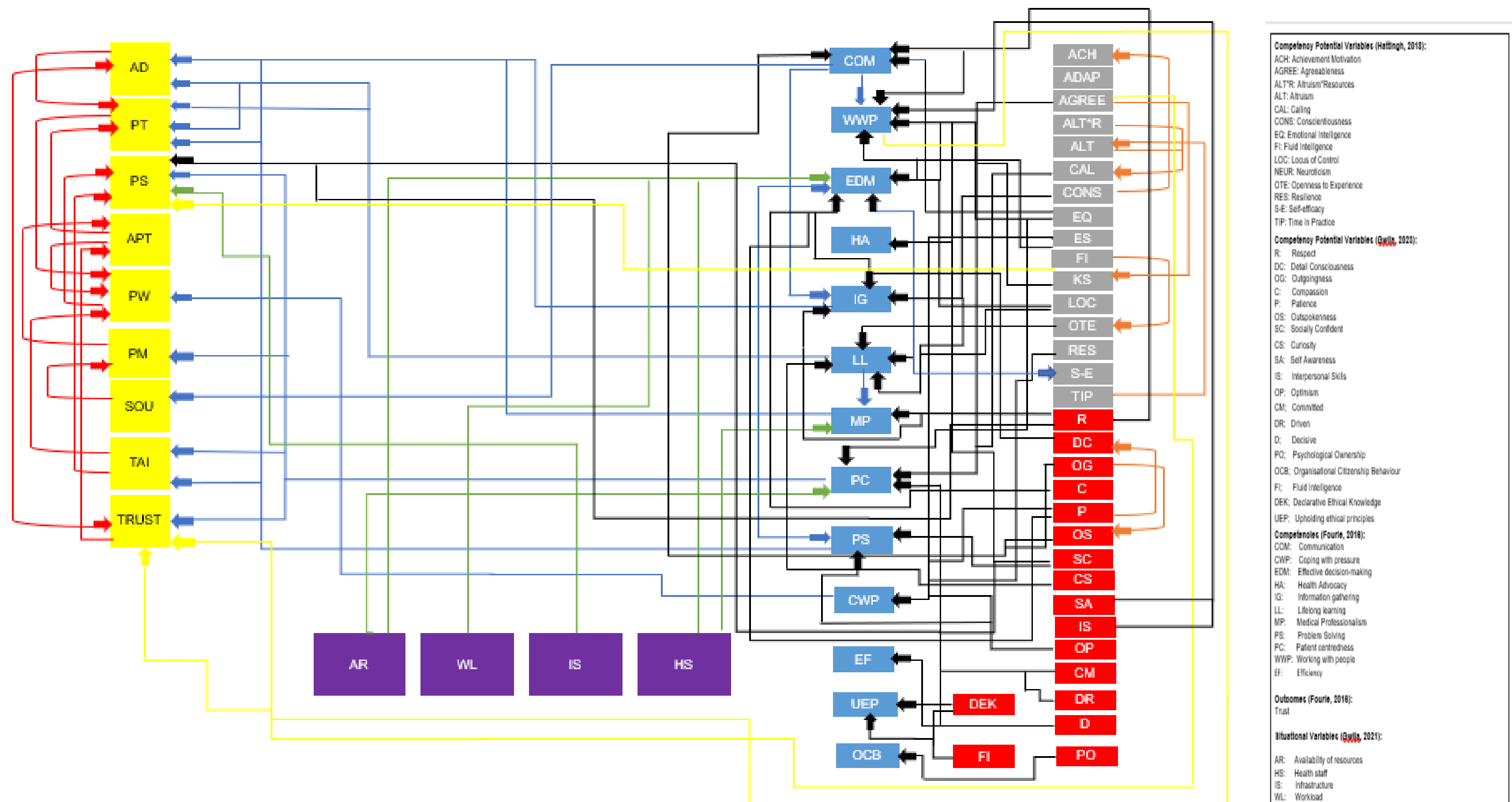
Note: The red and grey squares represent hypothesised competency potential latent variables (Gwija-Hattingh, 2021), the purple squares represent situational variables, the blue square represent competencies (Fourie, 2016), and the yellow square represents outcomes (Fourie, 2016). The black lines represent hypothesised structural paths between competency potential latent variables and competencies, the blue lines represent hypothesised structural paths between latent competencies and outcomes, the orange lines represent hypothesised structural paths between the competency potential latent variables, the red lines represent hypothesised structural paths between outcomes, the green lines represent hypothesised structural paths between situational variables and competencies, and the yellow lines represent hypothesised structural paths between competency potential latent variables and outcomes.

The South African Medical Practitioner Competency Model depicted in Figure 5.1 is a readaptation of the Medical Practitioner Competency Model portrayed in Figure 2.8.

Table 5.3

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

Competency potential variable	Definitions of Newly Added Competency Potential Latent Variables
Curiosity:	The quality of being inquisitive and being driven to acquire more knowledge in the field of medicine.
Self-awareness	Reflecting on one's unique individual experiences and understanding how these may influence patient care and relations with peers.
Interpersonal skills	Building quality relationships and working amicably with team members.
Optimism:	Seeing things in a positive light and maintaining a positive outlook in the face of hardships.
Commitment	Seeing things in a positive light and maintaining a positive outlook in the face of hardships.
Psychological ownership	The feeling that a target object belongs to me
Declarative ethical knowledge	Knowledge about facts that can be verbalised
Fluid intelligence	The ability to think and reason abstractly and solve novel problems.

Table 5.4

Summarised definitions of the situational variables of the modified Partial Medical Practitioner Competency Model as outlined in Figure 5.1

Situational variable	Definition
Availability of resources	The degree to which sufficient tools and equipment are available to do the job as effectively as possible.
Availability of staff	The degree to which sufficient personnel is available to equally distribute the workload within a public health care institution.
Availability of Infrastructure	The degree to which there is an establishment of facilities that are conducive to quality health care.
Workload	The amount of work that medical practitioners are faced with in the public health sector.

4.12   Summary

This chapter reported the thematic analysis based on ten data gathering sessions that were conducted with the subject matter experts. Given the qualitative nature of these sessions, the Repertory Grid Technique (RGT) was used to gather insights on how the SMEs make sense of medical practitioner competency potential as well as the situational variables that they experience on the job. The aim of this exercise was to verify the competency potential and

situational latent variables identified in the literature, as well as determine whether there are additional constructs which could be extracted as themes from these sessions. The themes that emerged from each session were reflected in Table 4.2.1 – 4.2.10 and are a summation of the individual interviews with the participants. Thereafter, it was deemed important to verify the extent to which the themes align with the literature study findings and previous studies by Fourie (2016) and Hattingh (2018). A discussion was expanded based on the abovementioned, to which additional variables were discussed to argue for their relevance and inclusion in the modified partial medical practitioner competency model.

CHAPTER 5

DISCUSSION, SUMMARY, LIMITATIONS AND RECOMMENDATION FOR FUTURE RESEARCH AND RECOMMENDATIONS TO MANAGEMENT

This chapter serves to discuss the summary of the results, the limitations of the study and reviewing possible recommendations for subsequent studies.

5.1   Introduction

The South African public health care system is currently burdened with various systemic challenges. These challenges mandate that a medical workforce is built that will help to alleviate some of these strains. It was proposed that a South African Medical Practitioner Competency Model that shines light on the competency potential and situational variables that influence medical practitioner performance should be developed. The model was further studied to assist in understanding the complexities behind the development of the essential competencies that would help to achieve the desired outcomes in the public health context. Therefore, this research explored in detail the person characteristics that underpin the competency potential of medical practitioners and the situational variables that characterise the working context in which medical practitioners find themselves. Gaining an enhanced understanding of the aforementioned person characteristics can help to shed light on medical practitioner competence development and the achievement of medical practitioner performance outcomes in the South African public health context.

The literature study explored insights into some of the desired medical practitioner competency potential variables as well as the situational variables that currently are influential in the South African public health care context. Subsequently the identified person characteristics were considered over and above those already outlined in a previous study by Hattingh (2018) and were also identified in light of their relationship to some of the situational variables identified from the literature and outlined in Chapter 2. Subsequently, both sets of variables were tied to those competencies outlined in the Partial Medical Competency Model (Fourie, 2016). Relationships between the variables were indicated as pathways between

them. The following competency potential variables were identified as important for medical practitioners working in the public health sector to possess: *Respect, Detail Conscious, Outgoingness, Compassion, Patience, Outspokenness and Socially Confident.*

Furthermore, the following situational variables were identified as having an influence on medical practitioner performance in the public health sector and could be alleviated by the attainment of the situational variables above: *The extent to which health resources are available, the degree to which health staff is available, the extent to which quality infrastructure is available; and the level of workload faced by medical practitioners in the public health context.* In conjunction, these variables were used to elaborate the Partial Medical Practitioner Competency Model of Fourie (2016) and the Partial Medical Practitioner Competency Model of Hattingh (2018).

In Chapter 3, the focus was on outlining the research methodology process to explain the approach to validating and possibly expanding the Partial Medical Practitioner Competency Model through the utilisation of the qualitative research method. Chapter 3 comprised of the following: Qualitative data gathering method, data analysis process, ethical considerations, expected results, possible limitations of the study as well as recommendations for future research regarding the Partial Medical Practitioner Competency Model.

In Chapter 4, a discussion was presented regarding the outcomes of the qualitative data gathering process which was adopted using the Repertory Grid Technique. By adopting this technique, the researcher explored mental models as to how the participants interpret the logic of what constitutes medical practitioner competency potential and how these form relationships with situational variables. To appropriately outline the findings above, it was deemed important to highlight the themes that emerged from the interviews which reflected the interpretive perspectives of the participants as far as how they explained differences in medical practitioner performance in the public health context. In explaining differences in medical practitioner performance subject matter experts at times mobilised medical

practitioner competencies, at times competency potential variables and at times situational variables. Subsequently, the themes that were identified from the interviews were classified as competencies, competency potential variables or situational variables. The competency potential that emerged variables were subsequently compared to those that emerged from the literature-based theorising in the current study and those that were hypothesised by Hattingh (2018). *Curiosity, Self-awareness, Interpersonal skills, Optimism and Commitment, Drive, Decisive, Psychological ownership, Fluid intelligence; and Declarative ethical knowledge* were identified as new competency potential variables that deserved inclusion in the hypothesised partial medical practitioner competency model. The current study subsequently theorised path-specific hypotheses so as to embed the additional competency potential latent variables in the partial medical practitioner competency model.

The competencies that emerged from the qualitative interviews were compared with the competencies identified by Fourie (2016). *Organisational citizenship behaviour* and *upholding ethical principles* emerged as two competencies that were not originally included by Fourie (2016) in her conceptualisation of medical practitioner performance but that for the current study warranted inclusion. Psychological ownership was theorised to act as a direct determinant of organisational citizenship behaviour. *Fluid intelligence* and *Declarative ethical knowledge* were hypothesised to directly affect *Upholding ethical principles* as two separate main effects and in interaction with each other.

The qualitative interviews served a valuable role by flagging *Optimism* as an important medical practitioner competency potential latent variable and *Upholding ethical principles* as an important medical practitioner competency. The flagging of *Optimism* in the qualitative interviews and Hattingh's (2018) nomination of *Resilience* as an important medical practitioner competency potential variable pointed to the relevance of psychological capital as a higher-order multidimensional construct that should be considered for inclusion in the partial competency model. Moreover, subsequent theorising on how *Optimism* and *Resilience* would affect medical practitioner performance pointed to the neglect of the current partial

competency model of negative psychological states like *Stress* and *Burnout* that medical practitioners working in public hospitals run a high risk of developing because of the challenging conditions they have to work under.

The flagging of Upholding ethical principles served the valuable purpose of underlining the importance of ethical conduct in the medical profession that was thus far neglected in the Fourie (2016) conceptualisation of medical practitioner performance and Hattingh's (2018) partial competency model. It also importantly pointed to the need to consider the introduction of Counterproductive work behaviour to the conceptualisation of medical practitioner performance.

5.2   Summary

The current study argues that medical practitioner performance is influenced by a richly interrelated and extensive network of competency potential latent variables that characterise the medical practitioner as well as situational latent variables which characterise the working environment in public health care settings in South Africa. It was proposed that the attainment of the aforementioned competency potential latent variables would likely influence an individual to have a higher propensity to become competent in the South African public health sector. It was noted in both the literature and the explorative sessions with the subject matter experts that, currently, selection processes in tertiary institutions for junior doctors primarily focus on an individual's technical capability when considering suitability for training and development in the profession and overlook the person characteristics which would be equally important in determining one's success in a role. The current study argues that competency potential variables would allow an actuarial prediction of the extent to which a medical practitioner would be competent in the South African public health sector. It is also important to note that in South Africa, medical practitioners are often faced with several challenges due to the circumstances of their working environments and the suggested person characteristics prove to be a lens on which medical practitioners may be likely to not only cope but succeed under these circumstances.

During the data gathering sessions, it was noted that most of the participants did not consider mental ability as the sole predictor of medical practitioner performance. Rather, ability is seen as an important element that should be amalgamated with various person characteristics that aid to overcome the existing situational constraints. Therefore, it is argued that there are competency potential and situational variables that influence medical practitioner competence in the South African public health sector. Figure 5.1 represents a readapted partial medical practitioner competency model that includes paths for the abovementioned variables.

5.3   Limitations of the study

One of the limitations of this study was gaining access to the relevant sample will unequivocally meet all the criteria necessary to warrant inclusion in the study. The literature review of the proposed research expanded the notion that public health care is riddled by high patient volumes. Therefore, gaining access to the study sample and schedule of interviews is noted as a limitation. A further limitation to this study is how the research sample formulates its conception of medical practitioner competency potential (usually referring to as competencies and not competency potential variables) and the failure of the researcher to guide them back on track when straying in the opposite direction.

Another limitation of this study related to the snowball sampling technique. As previously mentioned, snowball sampling poses an ethical concern for confidentiality and coercion. Therefore, it was deemed important for the research to validate whether participants are comfortable with their participation in the study and the manner in which their answers are reflected.

Though the study contained a sample that had both male and female participants, it is considered that demographics is another limitation of the study as it would have been more ideal to have an accurate representation of the demographics of South Africa in the study.

5.4   Recommendations for future research

The current study sought to contribute to a more penetrating explanation of differences in medical practitioner job performance in the public health sector in South Africa. Moreover, it followed up on the previous studies of Fourie (2016) who conceptualised medical practitioner performance and Hattingh (2018) who hypothesised the first partial medical practitioner competency model by theorising person characteristics she thought were important determinants of performance. Through this study additional person characteristics were identified through literature-based theorising namely: *Respect, Detail Consciousness, Outgoingness, Compassion, Patience, Outspokenness,* and *Socially confident*. Furthermore, additional person characteristics were identified through the data gathering sessions with the subject matter experts which included namely: *Curiosity, Self-awareness, Interpersonal skills, Optimism Psychological ownership, Fluid intelligence., Declarative ethical knowledge* and *Commitment*. In addition to those already identified by Hattingh (2018), it also identified situational variables which may influence medical practitioner performance which were namely: *the extent to which health resources are available, the extent to which health staff is available, the extent to which quality infrastructure is available and the level of workload faced by medical practitioners in the public health sector.*

Theorising on the determinants of medical practitioner performance and the development of overarching substantive research hypotheses in the form of partial competency models are important and necessary steps in gaining a penetrating insight into what constitutes performance and what determines medical practitioner performance in the public health sector in South Africa. Such hypotheses can, however, not be used to develop flow and stock interventions to pro- and reactively improve medical practitioner performance. The validity of the hypotheses developed by Hattingh (2018) and in the current study first needs to be empirically investigated. To do so, the medical practitioner performance construct as conceptualised by Fourie (2016) first needs to be operationalised.

This research study provides grounds to deduce that cognitive ability is not the only factor that can lead to success in healthcare and that other person characteristics are just as fundamental in the process of diagnosing illness and treating patients. Therefore, it is recommended that future research investigate the possible incorporation of malleable competency potential in medical education and training. For example, conducting workshops where students are tasked to perform certain tasks under pressure could foster better adaptation to the demands of working in the public health sector as professionals. Hattingh (2018) further argues that devising a selection procedure in the form of a psychometric instrument would prove fruitful in that it could assist medical school selection panels to not only consider technical capability, but also be cognisant of the influence of competency potential (person characteristics) in contributing to the attainment of desired health outcomes in the public health sector. All of these suggestions are, however, dependent of first finding empirical support for the hypothesised partial competency models proposed thus far.

Future research should integrate the outcomes identified by Fourie (2016) with the current partial competency model. In this process the criteria that latent variables have to meet to qualify as legitimate outcome latent variables need to be developed. All the variables that are affected at time 2 by (outstanding or poor) performance at time 1 do not warrant being classified as outcome variables. Some competency potential may not be noticed as influential determinants of performance when theorising on the question why the performance of medical practitioners varies in the public health sector. These competency potential latent variables may, however, more naturally step up to the plate when theorising the question how medical practitioners are affected at time 2 due to performance problems at time 1 due to adverse working conditions. Such a medical practitioner competency model, conditional on empirical support, would eventually allow the adoption of better remedial strategies to mitigate the impact of situational variables on medical practitioner competencies.

As mentioned, the current study had a limitation when considering the ethnicity of the sample group. Future research should look at diversifying the sample group so that it contains

more representation from the different ethnic groups that make up the diverse South African population. Taking this approach would ensure that all voices are encountered for when forming the finalised medical practitioner competency model.

Lastly, a validated medical practitioner competency model would pave the way for the development and evaluation of numerous stock and flow interventions aimed at enhancing medical practitioner performance. This would amongst others include a validated actuarial selection model. Validating such an actuarial selection model will no doubt require a herculean research effort because of the need to validate the criterion inferences made at the time of admission to medical school against criterion measures obtained after a number of years of practice in public hospitals and clinics.

The development and validation of medical practitioner performance based on the expanded conceptualisation of Fourie (2016) could be used for ongoing development purposes (i.e., assess the performance of medical practitioners) and to validate actuarial selection models.

5.5   Concluding Remarks

This study offers potentially valuable insights into the complex psychological mechanism of medical practitioner competency potential and situational variables that regulate differences in the performance of medical practitioners working in the South African public health sector. It is important to note that the current study is interwoven with previous studies examining these constructs with the ultimate purpose of developing a validated South African Medical Practitioner Competency Model, namely Fourie (2016) and Hattingh (2018). It is proposed that the construction of such a model would enhance the understanding of the logic which underpins medical practitioner competency potential and allow for a deeper and meaningful understanding of what constitutes and determines medical practitioner performance In the South African public health sector and how it varies across different contexts. An enhanced understanding of medical practitioner competency potential is proposed to help build more

effective practices behind medical practitioner education and training, which would then allow medical practitioner that come through the system to be well rounded and competent to function in the South Africa Public Health Sector in order to alleviate some of the challenges that already exist.

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APPENDIX A: CONSENT TO PARTICIPATE IN RESEARCH STUDY

STELLENBOSCH UNIVERSITY

CONSENT TO PARTICIPATE IN RESEARCH

Developing Hypotheses on the Extension and Modification of the South African

Medical Practitioner Competency Model: A Qualitative Study

You are requested to participate in the research study conducted by Sakhile Gwija, from the Department of Industrial Psychology at Stellenbosch University. The results of this study will contribute to the Master's Thesis of Sakhile Gwija. You were selected to partake in this study due to your experience as a medical practitioner in the public health sector.

1. Purpose and Background

This research study seeks to extend and modify the existing theoretical model on medical practitioner performance. This research study seeks to investigate the influence of person characteristics on competency development, as well as investigate the influence of situational variables on medical practitioner performance. The purpose of your participation in this study is to help the researcher gather insights with respect to the aforementioned factors.

2. Procedure

Should you agree to participate in this research you will be requested to:

Research Phase 1: Individual Interview

- You will be required to respond to questions as objectively and accurately as possible.
- The session will be conducted in a private room with the researcher and yourself.
- The session will only last between 60-90 minutes.

Research Phase 2: Focus Group Interview

- Should you decide to participate in the Individual interview you may also be requested to participate in a subsequent focus group interview for further clarification on data obtained from the repertory grid interviews.
- The focus group would last about an hour.

3. Potential Risks

A potential risk in partaking in this study is that of being inconvenienced due to time you may need to set aside from your schedule to complete interviews.

4. Confidentiality

Records obtained from this study will be kept confidential. The data will be given codes and pseudonyms will be used to prevent direct identification. Furthermore, only the researcher will have access to the coding information for the pseudonyms.

Please note that the findings from this study will be released as part of a master's thesis. However, you will be provided an opportunity to review transcripts and verify statements before any material is released.

5. Potential Benefits

There are no direct benefits from participating in this study. However, the anticipated benefit of your research in this study is contributing to the scant body of literature on the medical practitioner job performance construct in South Africa.

6. Payment for participation

You will not be receiving remuneration for your participation in this research study.

7. Recording

Your interview will be recorded by means of an audio recorder whilst the interviewer will also take notes during the interview. If you agree that your interview may be recorded, please give your written consent by signing this consent form. It is important to note that the recordings from the interview will be transcribed in electronic format and stored in a password protected file in a password protected computer. The original digital audio voice recordings will be stored in a lockable storage unit at the Department of Industrial Psychology, Stellenbosch University. You will be afforded the opportunity to audit your contribution to the research by reviewing the transcriptions of your interview, if you feel the need to do so. In order to exercise this right, please contact the principal Investigator (contact information available in section 9) should you wish to do so.

8. Voluntary participation

Participation In this study is voluntary. Should you decide to partake in this study, you may withdraw your consent to partake in it at any time without incurring any consequences whatsoever. Moreover, you may choose to not answer questions that you do not feel comfortable answering and still remain in the study.

9. Identification of Investigators

If you require any further information regarding this research, please feel free to contact Sakhile Gwija (xxxxxxxxxxxxx or xxxxxxxxxx) or Dr Michelle Visser (mivs@sun.ac.za or 021 808 2961) at office: BED1037B.

Please note that you may also contact Ms Malene Fouche (mfouche@sun.ac.za or 021 808 4622) should you have any concerns about your rights as a participant in the study.

DECLARATION OF CONSENT BY THE PARTICIPANT

As the participant, I declare that:

- I have read this information and consent form, or it was read to me, and it is written in a language in which I am fluent and with which I am comfortable.

- I have had a chance to ask questions and I am satisfied that all my questions have been answered.

- I understand that taking part in this study is voluntary, and I have not been pressurised to take part.

- I may choose to leave the study at any time and nothing bad will come of it – I will not be penalised or prejudiced in any way.

- I agree that the interview with me can be [video-recorded / audio-recorded].

By signing below, I _____ (name of participant) agree to take part in this research study, as conducted by _____ (name of principal investigator).

_____   _____

Signature of Participant   **Date**

DECLARATION BY RESEARCHER

As the **researcher,** I hereby declare that the information contained in this document has been thoroughly explained to the participant. I also declare that the participant has been encouraged (and has been given ample time) to ask any questions. In addition, I would like to select the following option:

	The conversation with the participant was conducted in a language in which the participant is fluent.

	I did/did not use an interpreter. (If an interpreter is used then the interpreter must sign the declaration below.)

_____   _____

Signature of Researcher   **Date**

APPENDIX B: CONSENT TO PARTICIPATE INDIVIDUAL INTERVIEW

STELLENBOSCH UNIVERSITY

CONSENT TO PARTICIPATE IN INDIVIDUAL INTERVIEW

Developing Hypotheses on the Extension and Modification of the South African

Medical Practitioner Competency Model: A Qualitative Study

You are requested to participate in an individual interview conducted by Sakhile Gwija from the Department of Industrial Psychology at Stellenbosch University. The results of this study will contribute to the Master's Thesis of Sakhile Gwija. You were selected to partake in this study due to your experience as a medical practitioner in the public health sector.

1. Purpose

The objective of the Interview is to expand a discussion on medical practitioner performance. The purpose of your participation in this study is to help the researcher gather insights on and investigate the influence of person characteristics on competency development, as well as investigate the influence of situational variables on medical practitioner performance.

2. Procedure

Should you agree to participate in this focus group interview you will be:

- Required to answer questions that refer to the person characteristics (who and how they are) of a medical practitioner practising in a public hospital.

- To link answers provided to the South African public health care sector.

- Required to reference behavioural incidents and workplace factors that have a direct or indirect effect on one or more of the competencies that a medical practitioner is meant to have.

- The interview would last about 90 minutes.

3. Potential Risks

A potential risk in partaking in this interview is that of being inconvenienced due to time you may need to set aside from your schedule to complete interviews.

4. Confidentiality

Records obtained from the interview will be kept confidential. The data will be given codes and pseudonyms will be used to prevent direct identification. Furthermore, only the researcher will have access to the coding information for the pseudonyms.

Please note that the findings from this interview will be released as part of a master's thesis. However, you will be provided an opportunity to review transcripts and verify statements before any material is released.

5. Potential Benefits

There are no direct benefits from participating in this interview. However, the anticipated benefit of your research in this study is contributing to the scant body of literature on the medical practitioner job performance construct in South Africa.

6. Payment for participation

You will not be receiving remuneration for your participation in this research study.

7. Recording

Your interview will be recorded by means of an audio recorder whilst the interviewer will also take notes during the interview. If you agree that your interview may be recorded, please give your written consent by signing this consent form. It is important to note that the recordings from the interview will be transcribed in electronic format and stored in a password protected file in a password protected computer. The original digital audio voice recordings will be stored in a lockable storage unit at the Department of Industrial Psychology, Stellenbosch University. You will be afforded the opportunity to audit your contribution to the research by reviewing the transcriptions of your interview, if you feel the need to do so. In order to exercise this right, please contact the principal Investigator (contact information available in section 9) should you wish to do so.

8. Voluntary participation

Participation In this Interview is voluntary. Should you decide to partake in this study, you may withdraw your consent to partake in it at any time without incurring any consequences whatsoever. Moreover, you may choose to not answer questions that you do not feel comfortable answering and still remain in the study.

9. Identification of Investigators

If you require any further information regarding this research, please feel free to contact Sakhile Gwija (xxxxxxxxxx or xxxxxxxxxx) or Dr Michelle Visser (mivs@sun.ac.za or 021 808 2961) at office: BED1037B.

Please note that you may also contact Ms Malene Fouche (mfouche@sun.ac.za or 021 808 4622) should you have any concerns about your rights as a participant in the study.

DECLARATION OF CONSENT BY THE PARTICIPANT

As the **participant**, I declare that:

- I have read this information and consent form, or it was read to me, and it is written in a language in which I am fluent and with which I am comfortable.

- I have had a chance to ask questions and I am satisfied that all my questions have been answered.

- I understand that taking part in this study is voluntary, and I have not been pressurised to take part.

- I may choose to leave the study at any time and nothing bad will come of it – I will not be penalised or prejudiced in any way.

- I agree that the interview with me can be [video-recorded / audio-recorded].

By signing below, I _____ (name of participant) agree to take part in this research study, as conducted by _____ (name of principal investigator).

_____   _____

Signature of Participant   **Date**

DECLARATION BY RESEARCHER

As the **researcher,** I hereby declare that the information contained in this document has been thoroughly explained to the participant. I also declare that the participant has been encouraged (and has been given ample time) to ask any questions. In addition, I would like to select the following option:

	The conversation with the participant was conducted in a language in which the participant is fluent.
	I did/did not use an interpreter. (If an interpreter is used then the interpreter must sign the declaration below.)

_____   _____

Signature of Principal Investigator   **Date**

APPENDIX C: CONSENT TO PARTICIPATE IN FOCUS GROUP INTERVIEW

STELLENBOSCH UNIVERSITY

CONSENT TO PARTICIPATE IN FOCUS GROUP INTERVIEW

Developing Hypotheses on the Extension and Modification of the South African

Medical Practitioner Competency Model: A Qualitative Study

You are requested to participate in a focus group interview conducted by Sakhile Gwija, from the Department of Industrial Psychology at Stellenbosch University. The results of this study will contribute to the Master's Thesis of Sakhile Gwija. You were selected to partake in this study due to your experience as a medical practitioner in the public health sector.

1. Purpose

The objective of the focus group Interview is to expand a discussion on medical practitioner performance. The purpose of your participation in this study is to help the researcher gather insights on and investigate the influence of person characteristics on competency development, as well as investigate the influence of situational variables on medical practitioner performance.

2. Procedure

Should you agree to participate in this focus group interview:

- You will be assigned in a group of 4 – 6 individuals, and you will be asked several questions by the researcher who will also be facilitating the discussion.

- Please note that there are no right or wrong answers to the focus group questions. The researcher would value varying viewpoints and for all the participants to share their thoughts. In this light, out of respect, please refrain from interrupting others whilst speaking.

- The focus group would last about an hour.

3. Potential Risks

A potential risk in partaking in this interview is that of being inconvenienced due to time you may need to set aside from your schedule to complete interviews.

4. Confidentiality

Records obtained from the interview will be kept confidential. The data will be given codes and pseudonyms will be used to prevent direct identification. Furthermore, only the researcher will have access to the coding information for the pseudonyms.

Please note that the findings from this interview will be released as part of a master's thesis. However, you will be provided an opportunity to review transcripts and verify statements before any material is released.

5. Potential Benefits

There are no direct benefits from participating in this interview. However, the anticipated benefit of your research in this study is contributing to the scant body of literature on the medical practitioner job performance construct in South Africa.

6. Payment for participation

You will not be receiving remuneration for your participation in this research study.

7. Recording

Your interview will be recorded by means of an audio recorder whilst the interviewer will also take notes during the interview. If you agree that your interview may be recorded, please give your written consent by signing this consent form. It is important to note that the recordings from the interview will be transcribed in electronic format and stored in a password protected file in a password protect computer. The original digital audio voice recordings will be stored in a lockable storage unit at the Department of Industrial Psychology, Stellenbosch University. You will be afforded the opportunity to audit your contribution to the research by reviewing the transcriptions of your interview, if you feel the need to do so. In order to exercise this right, please contact the principal Investigator (contact information available in section 9) should you wish to do so.

8. Voluntary participation

Participation In this Interview is voluntary. Should you decide to partake in this study, you may withdraw your consent to partake in it at any time without incurring any consequences whatsoever. Moreover, you may choose to not answer questions that you do not feel comfortable answering and still remain in the study.

9. Identification of Investigators

If you require any further information regarding this research, please feel free to contact Sakhile Gwija (xxxxxxxxxxxx or xxxxxxxxxx) or Dr Michelle Visser (mivs@sun.ac.za or 021 808 2961) at office: BED1037B.

Please note that you may also contact Ms Malene Fouche (mfouche@sun.ac.za or 021 808 4622) should you have any concerns about your rights as a participant in the study.

DECLARATION OF CONSENT BY THE PARTICIPANT

As the **participant**, I declare that:

- I have read this information and consent form, or it was read to me, and it is written in a language in which I am fluent and with which I am comfortable.

- I have had a chance to ask questions and I am satisfied that all my questions have been answered.

- I understand that taking part in this study is voluntary, and I have not been pressurised to take part.

- I may choose to leave the study at any time and nothing bad will come of it – I will not be penalised or prejudiced in any way.

- I agree that the interview with me can be [video-recorded / audio-recorded].

By signing below, I _____ (name of participant) agree to take part in this research study, as conducted by _____ (name of principal investigator).

_____   _____

Signature of Participant   **Date**

DECLARATION BY RESEARCHER

As the **researcher,** I hereby declare that the information contained in this document has been thoroughly explained to the participant. I also declare that the participant has been encouraged (and has been given ample time) to ask any questions. In addition, I would like to select the following option:

	The conversation with the participant was conducted in a language in which the participant is fluent.
	I did/did not use an interpreter. (If an interpreter is used then the interpreter must sign the declaration below.)

_____   _____

Signature of Principal Investigator   **Date**

APPENDIX D: REPERTORY GRID INTERVIEW GUIDE

STELLENBOSCH UNIVERSITY

INDIVIDUAL INTERVIEW GUIDE

Developing Hypotheses on the Extension and Modification of the South African

Medical Practitioner Competency Model: A Qualitative Study

Phase 1: Introduction

During the introduction stage of the individual interviews, the researcher took time to explain the nature and purpose of the study (gaining insights on the contextual meaning of medical practitioner competency potential and situational factors that influence medical practitioner performance). A brief discussion on the literature study findings was also conducted, with a specific focus on highlighting the competency potential and situational variables extracted from the literature. The guideline below was used to structure the responses of the participants.

The participants were specifically asked to describe:

1. Person characteristics that they deem are important to perform successfully in the South African public health context.

2. Make distinctions between the colleagues whom they've worked with that exhibit these personal characteristics and those that do not (effective and less effective performers) by using the Repertory Grid Table below.

3. Participants were also asked to describe how these personality characteristics help to alleviate some of the situational constraints that medical practitioners experience in the public health sector.

Answers were stressed to refer to the person characteristics (who and how they are) of a medical practitioner practising in a public hospital.

1. Answers should link to the South African public health care sector.

2. The behavioural incidents and workplace factors recalled should 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 was used during the course of the interview, In this phase, the researcher encouraged participants to illustrate constructs and specify the relationships the between them.

- Elements: Participants were tasked to think of three medical practitioners, including two more or less effective performers whom they have worked with or supervised, and one less successful.

- Constructs: Participants were asked to describe the manner in which the two successful medical practitioners are either similar to each other or different from the less successful medical practitioner in terms of their characteristics or the conditions under which they perform their work. These differences may be either good or bad.

Use laddering up and laddering down to clarify constructs and repeat this with other triads.

Elements											Constructs	
No	1	2	3	4	5	6	7	8	9	10	Reason Similar	Reason Different
1												
2												
3												
4												
End												

Phase 3: Offering an opportunity to contribute additional information

Are there any additional comments you would like to contribute, and feel would be helpful towards the purpose of this study?

Thank you for your time and contribution made towards this study.

If you require any further information regarding this research, please feel free to contact xxxxxxxxxxxx

APPENDIX E: VALIDATION INTERVIEW GUIDE

STELLENBOSCH UNIVERSITY

VALIDATION INTERVIEW GUIDE

Developing Hypotheses on the Extension and Modification of the South African

Medical Practitioner Competency Model: A Qualitative Study

Phase 1: Introduction

The validation interviews were used to confirm the findings of the study and establish whether participants were comfortable by the manner in which the researcher expressed their views and whether they wanted to take an opportunity to add or omit themes.

Phase 2: Reflecting back themes extracted.

As previously stated, the repertory grid was used during the course of the individual interview sessions; from this, themes were unpacked and reflected in the table below. The participants were asked to review the table reflecting outcomes from the individual interview sessions with them and verify whether their statements were captured accurately. A discussion then followed on constructs to add/remove from the study.

- Themes: Themes were used to summarise the personal constructs that medical practitioners highlighted during the individual interview sessions.

- Description: The themes above were defined according to the manner in which the participants referenced them in the context of medical practitioner competency potential and/or situational variables.

- Supporting quotes: These were statements made by the participants of the study which were expressed verbatim.

No	Themes from personal constructs	Description	Supporting Quotes
1			

Phase 3: Verifying additional information

Are there any additional comments that you would like to contribute, and feel would be helpful towards the purpose of this study?

Thank you for your time and contribution made towards this study.

If you require any further information regarding this research, please feel free to contact –

RESEARCH ETHICS APPROVED WITH CONDITIONS
REC: Social, Behavioural and Education Research (SBER) - Initial Application Form

9 September 2022

Project number: REC: SBE-2022-24859

Project title: DEVELOPING HYPOTHESES ON THE EXTENSION AND MODIFICATION OF THE SOUTH AFRICAN MEDICAL PRACTITIONER COMPETENCY MODEL: A QUALITATIVE STUDY

Dear Mr S Gwija

Your REC: Social, Behavioural and Education Research (SBER) - Initial Application Form submitted on 08/08/2022 13:29 was reviewed by the Social, Behavioural and Education Research Ethics Committee (REC: SBE) and has been approved with certain conditions.

This conditional approval means that you may proceed with your planned research, provided that you adhere or respond to the stipulations/conditions provided below.

Your research ethics approval is valid for the following period:

Protocol approval date (Humanities)	Protocol expiration date (Humanities)
9 September 2022	8 September 2025

REC STIPULATIONS/CONDITIONS:

The researcher is reminded to obtain permission from the participating organisation(s) before recruitment and/or data collection may commence. Proof of permission should be uploaded to the REC online application once received [ACTION REQUIRED]

How to respond to the REC: SBE's comments/questions:

Click on the links provided below for steps on how to edit your online application to respond to this request for clarification/changes:

Instructional video (See: How to edit your online application)

FAQ guide (See: Form FAQs > How to revise/edit my online form)

Template for response letter (See: Other templates > Response letter template)

INVESTIGATOR RESPONSIBILITIES

1. Please take note of the General Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

2. Your approval is based on the information you provided in your online research ethics application form. If you are required to make amendments to or deviate from the proposal approved by the REC, please contact the REC: SBE office for advice: applyethics@sun.ac.za

3. Always use this project ID number (24859) in all communications with the REC: SBE concerning your project.

4. Please note that the REC has the prerogative and authority to ask further questions, seek additional information, and monitor the conduct of your research and the consent process, where required.

RENEWAL OF RESEARCH BEYOND THE REC EXPIRATION DATE