University of Southern Queensland

Perceptions on the Role and Importance of Soft Skills or relevant Competencies on the Performance of Nurse Managers in Hospitals

A Dissertation submitted by

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ABSTRACT

This is a descriptive and exploratory study aimed at gaining knowledge about the role and importance of soft skills or certain competencies for nursing management in hospitals. The research question was: *what are the perceptions of nurse managers about the role and importance of certain management competencies (soft skills) on performance in Gauteng hospitals?*

Hospitals in Gauteng in South Africa were chosen as a study area. The health sector in South Africa is evolving and faced with challenges that impede efficient health care service delivery. Also, there is a need for professionals to upskill to cope with the changing socio-political, economic and technological landscape as well as the expectations of patients, health professionals, politicians and the citizens of South Africa. Nursing managers are viewed as central in influencing all aspects of the nursing environment and overcoming the challenges or bringing about improvement in health care delivery. It is against the above-stated background that perceptions of nurse managers were sought for the study.

Based on a review of themes and issues within the parent theories of management competencies and leadership, and the two disciplines of team nursing approach and competency-based model, a theoretical framework and five research issues were developed.

In 2014, 203 nurse managers from public and private hospitals participated in the survey. Seven in-depth interviews were also conducted with stakeholders to validate the information gathered from the survey, to acquire better understanding of the factors and to source rich up-to-date data, which cannot be derived from any literature or survey. Key findings from the study included: (a) the development of a list of core requisite management skills and competencies, (b) a list of behaviours of effective nurse managers in hospitals, (c) that human resources practices be improved and effective performance management systems be explored, (d) that nurse managers have not been formally prepared for their leadership and

management role, (e) current leadership and management programs and courses are to be continuously reviewed, improved and implemented in future, using varied modes of delivery, (f) future competency initiatives should include theory and practical components. Further to these findings, major conclusions of the study are as follows: (a) the need for greater clarity about requisite competencies and effective behaviours of nurse managers is extremely important, (b) mere existence of competencies is insufficient. The competencies must be continuously developed, (c) the competencies of those in leadership must be recognized and acknowledged by other team members and hospital hierarchies, (d) a Team Nursing Approach is highly relevant and significant in addressing the challenges in Gauteng public and private hospitals. The findings of the study make a new contribution to the body of knowledge on a Team Nursing Approach and competency development. Also, a Nurse Managers' Competency Survey emerging from the study is a significant contribution to both the scholarly literature and nurse practitioners. The final conceptual model depicts the themes within all five research issues and links them to address the research problem.

The conclusions have important implications for the nursing profession as well as policy and practical improvements. Further research opportunities are presented by these conclusions and the revised conceptual model, which may be explored using other methodologies or alternative research contexts. Finally the researcher made recommendations based on the above findings.

CERTIFICATION OF DISSERTATION

I certify that the ideas, analyses, software and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

Signature of Candidate Date

ENDORSEMENT

Signature of Supervisor Date

Signature of Co-supervisor Date

DEDICATION

This dissertation is dedicated to Botshelo Twala, my daughter, and my late brother, Thabo Seutloadi who was looking forward to my graduation. Their love and confidence in me to complete this Doctorate remained a great inspiration. Also to my parents whose support and humbleness shaped my aspirations and to whom I promised that I would come out the other side regardless of challenges along the journey.

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Thank you is extended to in particular Ms Alice Neely for proofreading the dissertation and Ms Zodwa Zuma for assisting with data capturing. Many thanks, to my other good friends and relatives whom I will not list in this dissertation due to limited space for writing this page. You have always motivated me and given the best advice and suggestions. The research and write-up of the dissertation would

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LIST OF ABBREVIATIONS

BRICS	Britain, Russia, India and South Africa
CPD	Continuous Professional Development
CSPro	Census and Survey Processing System
DBSA	Development Bank of South Africa
DOH	Department of Health
HIV	Human Immunodeficiency Virus
HR	Human Resources
HR	Human Resource Management
IT	Information Technology
ITC	Information Technology and Communications
IPA	Individual Patient Allocation
JIPSA	Joint Initiative on Priority Skills Acquisition
MREC	Medunsa Research Ethics Committee
N/A	Not Applicable
NCHL	National Centre for Healthcare Leadership
NHI	National Health Insurance
NMCS	Nurse Managers' Management Competency Survey
OBE	Outcome-Based-Education
PMDS	Performance Management Development System
SA	South Africa
SANC	South African Nursing Council
SEM	Structural Equation Modelling
SPSS	Statistical Package for Social Sciences
STATS SA	Statistics South Africa
TNA	Team Nursing Approach
UK	United Kingdom
USA	United States of America
USQ	University of Southern Queensland
RQ	Research Question

YRS	Years

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CHAPTER 1- INTRODUCTION

1.1 Background to the research problem

The South African economy is in the process of becoming more service and knowledge-based each year. The health sector in South Africa (SA) as in other countries is evolving and faced with challenges that impede health care service delivery. There is generally a reported decline in nursing care particularly in public health facilities (Erasmus & Breier 2009; Uys & Naidoo 2004) and nursing managers are viewed as central to overcoming some of the challenges in SA because of developing countries' changing socio-political, more complex and dynamic operating environments, economic, international migration phenomenon and technological landscape (Pillay 2010a). A lack of management capacity was identified as the key stumbling block to health care delivery in SA (DOH 2013a; Pillay 2010a). According to Pillay (2010b), overall poor management skills in the health sector has the potential to undermine health care delivery in SA, as well as the ability to improve responsiveness in the delivery of health services. Chakraborty (2009) also indicated that with the emergence of sophisticated service-based sectors and changes in work and industry there is now an urgent need for all professionals to align their professional expertise by acquiring soft skills or relevant management competencies. Over and above a qualification, managers in the health sector must have leadership, entrepreneurial and administrative skills to meet the challenges that the changing socio-political, economic and technological landscape presents, as well as the expectations of patients, health professionals, politicians and the public. Despite some insight into the requisite management competencies and behaviours of effective managers in general, scant knowledge exists on the requisite competencies of nurse managers in hospitals and the importance of those competencies in enabling them to overcome the above-stated challenges. As such, there is no standard list of the requisite management skills and competencies as well as of desired behaviors of effective nurse managers in hospitals.

Most courses or programs studied at institutions of higher learning do not include soft skills (Mitchell, Skinner & White 2010). Consistent with other scholars, educators of business-related programs support the integration of soft skills into technical education curriculum (Mitchell, Skinner & White 2010). Consistent with this view, it was stated that "soft skills are an indispensable requirement at the workplace and its training must be a part of the curriculum during education" (Cosser 2010, p.45). It is indicated that 'equipping the students with soft skills could make the difference in obtaining and retaining the jobs for which they have been prepared (Mitchell, Skinner & White 2010, p. 44). The statement is also supported by Goleman (1997) as cited by Litecky, Arnett and Prabhakar (2004, p.128) who stated "that technical skills and knowledge makes one qualified for a job but that it is one's interpersonal ability that makes one successful on the job". Against this background, it is apparent that competent nurse management in hospitals will play an important role in influencing all aspects of the nursing environment; competent nurse management will drive the improvement of health care service delivery. However, there is little enquiry into the competency development initiatives to enable nurse managers to carry out their expected roles and responsibilities. This brings to the forefront the importance of having efficient nurse management teams with corresponding competence and skills.

The factors that generally influence the performance of nurses, managers and leaders are emphasized in literature (Ma, Samuels & Alexander 2003). However, factors influencing the performance of nurse managers in Gauteng hospitals are not well understood. To date the relevance of Team Nursing Approach in addressing challenges related to performance of nurse managers in hospitals in Gauteng has not been investigated. This research addresses that gap.

This study investigates *the role and importance of nurse managers' soft skills or certain competencies for their performance in hospitals.* Hospitals have been selected as the primary site for the study. The investigation is built on previous studies in the areas of

management competency theories, leadership theories, team nursing approaches (TNA) and competency-based model that are outlined in Chapter 2 of this dissertation.

This chapter presents the background to the research, explains the context of the study, states the research problem and provides justification for the research. Further, the study explains the methodology employed, outline of the dissertation, key definitions and delimitations.

1.2 Context of the study

The following discussion provides a better understanding of the health sector in SA and provides greater clarity about Gauteng Province (Gauteng) hospitals as the context for the study.

South Africa has a population of just over fifty million (51.7m) people. The Gauteng Province (Gauteng) is one of the nine provinces in SA. The majority of people in SA (12.2m) reside in Gauteng (Stats SA 2012). It is the smallest province in terms of land size and yet the most populous province in SA mainly as a result of migration to Gauteng as the economic hub of SA.

According to Bohlmann (2010, p.1) “South Africa faces the dual problem of large inflows of illegal immigrants who are mostly unskilled and outflows of skilled emigrants”. Reportedly neoclassical theory has long been the most common theory used in explaining the international migration phenomenon. According to this theory differences in wage levels, in particular the expected earnings gap, and employment conditions between regions serve as the primary motivation for migration in this model (Bolmann 2010). Consistent with this assertion, Pillay (2010, p.142) explained that the South African nursing profession is characterized by challenges such as migration, staff shortages, high turnover, recruitment and retention difficulties as well as overall disaffection and

dissatisfaction as a result of poor pay and heavy workload. Lack of opportunities for postgraduate training, underfunding of health service facilities, career opportunities, health service management shortcomings and many others have also been cited as causes of migration in developing countries, which has resulted in a shortage of health workers in Africa (Naicker, Plange-Rhule, Tutt & Eastwood 2009). These stated challenges have the propensity to impact on individuals, organizations and quality and safety of health care systems. In a recent development report on the future prospects for SA, it is stated that most stakeholders acknowledge that there is a severe shortage of competent hospital managers, thus middle and senior management posts are filled with insufficiently qualified or experienced people (DBSA 2011).

Also, poor quality of health care was reported at some hospital facilities. Concerns have for example been raised about limited compliance with basic quality standards, long waiting queues, staff attitudes and delays and even cancellations of critical health procedures (DBSA 2011). Therefore, contemporary nurse managers have a "key responsibility to improve the work environment so that it provides a context that is congruent with the aspirations and value systems of nurses, which is more likely to increase the satisfaction of nurses" (Pillay 2010, p.135).

The research objective, research issues and research questions derived for this study have been investigated in public and private hospitals in Gauteng in SA. Gauteng public and private hospitals have been selected as primary sites for the investigation, not to compare the results from public and private sector, but to ensure a range of responses from across the different types of hospitals. There are over thirty (30) hospitals located across Gauteng. The public hospitals serve a large part of the population as they cater for the people of Gauteng and those referred from neighbouring provinces and countries and yet it is widely known that they are under resourced and dysfunctional (Antonie, Francis, Edmeston, Gon, Kenny, Mash, Mtwesi & Nkambule 2012).

Reports on the poor state of affairs and management failures of public hospitals are common and the government has openly admitted a state of crisis and a need for better management (Antonie et al. 2012). For example, it was reported that *Steve Biko Academic hospital*, a referral hospital for other Pretoria hospitals, was on the verge of collapsing because of constant equipment failures, staff shortages and postponed procedures. The hospital had extinguished their supplies for theatre and wards. Further there was apparently significant underutilization of intensive care unit beds because there was no staff to manage them (Gauteng IOL News 2012). *Chris Hani Baragwanath Academic hospital*, one of the largest hospitals in Africa, was reported to be serving patients rotten food. The reason provided for the rotten food scandal was financial constraints (Gauteng IOL News 2012a). Similarly, *Charlotte Maxeke Academic hospital* in Johannesburg, one of the largest academic hospitals in the country was reported to be likely to lose its accreditation as an academic hospital. This was due to shortages of specialists (who are mostly resigning due to cut in salaries) resulting in increased waiting times for patients and surgery at the hospital coming to a near standstill (Star Newspaper 2013).

The private hospitals, though not serving the majority of the people of Gauteng as the public hospitals do, provide access to health care to a sizable number of the population. They are perceived as providing better quality care than public hospitals (Doherty 2013) even though they also have their own problems such as conflict of interest, inefficiencies, corruption and lack of adherence and or implementation of regulations that threaten the way they operate (Antonie et al. 2012).

The literature review on requisite skills and competencies of nurse managers revealed a research gap, which is elaborated on in Section 1.3.

1.3 Justification for the research

This research is justified from theoretical and practical perspectives. From a theoretical perspective, it addresses a major **gap in literature** in the specification of requisite management skills and competencies for nurse managers. Consistent with some authors (for example Doherty 2013; Pillay 2009; Pillay 2010), and from an overview of the literature, it is clear that there is paucity of research that empirically evaluates the perceptions of nurse managers in SA and in Gauteng hospitals in terms of their skills and competencies as well as their training needs. Researchers have not fully explored the development of a standard approach or cluster of management competencies for nurse managers, which could be applicable not only within Gauteng hospitals but also in other hospitals and other developing countries. Much existing literature related to developed countries has provided the focus area for the study. Also there is no empirical research on the perceptions of Gauteng nurse managers' skills and competencies yet the demand for skilled nurse managers is significant in Gauteng.

The gap in the current state of research indicates a need for (a) the development of a standardized approach or cluster of requisite management skills, requisite competencies and practices of nurse managers. The development of management competencies more generally would be invaluable in Gauteng, in SA and ultimately in other developing countries as it would enable the recruitment and selection of appropriately skilled nursing managers along with efficient and effective management of health care facilities, (b) the design or enhancement and delivery of appropriate and relevant competency development frameworks and initiatives for nursing managers resulting in improved nurse management skills or team and individual competencies, (c) better performance management standards for nursing management (d) development of a unique survey instrument such as a Nurse Manager Competency Survey (NMCS) enabling other researchers in the health sector and in other contexts to respond to issues of management competencies.

From a practical perspective, the **research area is important** for the health sector and the findings have potential practical applications in addressing challenges both in public and private hospitals to ensure that the health system functions as expected. There is a belief that enhancing the abilities of nurse managers is a necessary response to the problems in the health sector, which addresses health care service delivery challenges in Gauteng public and private hospitals. Also it is important for closing the skills gaps in SA. It is thus apparent that the findings of the study could be used to ensure development of skills and competencies of nurse managers, which will lead to effective management of public and private hospitals and in turn improve the provision and delivery of health care services by meeting the expectations of patients, health professionals, politicians and the general public.

1.4 Research issue, research objective and research questions

Given the importance of improving health care services in South African hospitals, required nurse manager's skills or competencies should be identified, developed and linked to better performance management standards to ensure the effective management of hospitals.

While attractive at face value, the recruitment of foreign skilled medical or health workers supplementing the skills base should be a short term measure (Kraak 2008; Lewis 2002). Developing countries including SA need, as a long-term strategy, to recruit and select as well as to train and retain its employees rather than opting for importing skills (Kraak 2008; Naicker et al. 2009). Some researchers are of the view that there is a need to prioritize building the skills and training capacity of SA for professional, managerial and technical jobs in order to achieve and sustain economic growth and wider development (McGrath, Badroonien, Kraak & Unwin 2004). Through acquisition of knowledge and skills, the potential of the people of SA would be maximized and they would work productively and competitively (DHET 2010).

Because there is little existing knowledge of the topic of the research, the overall objective of this study is to:

> *Gain knowledge about the role and importance of soft skills or certain competencies for nursing management in hospitals. Further, the goal of the study is to establish a framework by which key competencies required for working in hospitals are reflected in competency development programs that benefit the profession.*

The main research question is:

> *What are the perceptions of nurse managers about the role and importance of certain management competencies (soft skills) on performance in Gauteng hospitals?*

The examination of prior theory in Chapter 2 of this dissertation covers management competency theories and leadership theories. Disciplines of team nursing approach and competency-based model are also covered. In turn, the theoretical research framework (Section 2.4) and research issues presented in Chapter 2 include 5 components. These are (a) requisite competencies, (b) effective behaviour, (c) team nursing approach, (d) competency development and (e) nurse manager performance.

The following questions and null hypotheses are identified arising from the main research questions and are investigated within the theoretical framework:

RQ1 What competencies of nursing management are regarded as important in hospitals?

- H^n_1 For nurse managers, the possession of requisite competencies does not lead to increased nurse manager performance.

- H^n_2 For nurse managers, there is no difference in the perception of the importance of competencies between public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ2 How do specific competencies relate to the behaviour of effective nurse managers?

- H^n_3 There is no relationship between perceptions of requisite competencies and nurse manager behaviour.
- H^n_4 For nurse managers, there is no difference in the perception of effective behaviour of nurse manager between public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ3 What are the factors influencing effective nurse manager performance in hospitals?

- H^n_5 There are multiple factors influencing nurse manager performance.
- H^n_6 There is a positive relationship between requisite competencies, effective behaviour, team nursing approach and nurse managers' performance.
- H^n_7 For nurse managers, there is no difference in the perception of factors influencing effective nurse manager performance in public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ4 Do perceptions on the relevance of team nursing approaches influence perceptions of nurse manager performance?

- H^n_8 There is no relationship between the relevance of team nursing approaches and perceptions of nurse manager performance.
- H^n_9 There is no difference in perceptions of the relevance of team nursing approaches between public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ5 What competency development initiatives have nurse managers been exposed to, to be able to carry out their roles and responsibilities as nurse managers?

- H^n_{10} Competency development for nurse managers is not focused on clinical nursing.
- H^n_{11} Competency development for nurse managers is not focused on generic management skills.
- H^n_{12} Improved nurse managers' performance in hospitals is not a result of clinical and management competency development initiatives.

RQ6 What should future competency development initiatives entail taking into account the moderating variables of type of hospital, age, length of service as a nurse manager and management level of nurse managers?

1.5 Methodology

This section provides an overview of the research methodology, which is further detailed in Chapter 3.

In this research the researcher will adopt a pragmatism paradigm. The research design is descriptive and exploratory in nature. The study is descriptive because there is a paucity of investigation related to the research topic. It is exploratory due to the lack of research literature on the perceptions of the role and importance of nurse managers' competencies on their performance in hospitals. Original data was gathered to determine whether there are interesting patterns in the data. This study is correlational because hypotheses have been formulated and tested.

Against the stated background and the potential importance of the results, both quantitative and qualitative research methods were applied for complementary purposes. The two methods entailed a survey followed by in-depth interviews. Mixed methods research is seen as appropriate in today's increasingly interdisciplinary, complex and

dynamic research world (Johnson & Onwueqhuzi 2004, p.15). On the one hand, proponents of mixed methods research hold that quantitative and qualitative methodologies are compatible and in real-world situations, the methods (quantitative, qualitative or mixed methods) that work best should be used, especially in a viable sequence within the research design. On the other hand, some authors emphasize the incompatibility of qualitative and quantitative approaches. It is argued that "meta-theoretical assumptions underlying the two approaches are so different that any reconciliation would destroy the philosophical foundations of each" (Slevitch 2011, p.77). The fundamental difference between quantitative and qualitative methodologies lies in the ontology (reality) and epistemology (knowledge) (Slevitch 2011, p.75). What is important for this study is that no difference was made between the relative value of the methods; the focus was on the research design and findings as a whole informed by data obtained through data collection methods of both methodologies.

Data entry commenced whilst data collection was in progress. After data was captured electronically, the Statistical Package for Social Sciences (SPSS), version 22 was used to analyze the data.

1.6 Outline of the dissertation

The dissertation is presented in five chapters, which outlines and describes the principal theories and means to explore the main research problem. The introduction chapter (Chapter 1) contextualizes the study and introduces the research problem. It also includes the justification of the research and a broad overview of the study methodology and delimitations of the study.

Chapter 2 outlines the Literature Review and presents the areas of study including discussions and findings on selected theories and the framework for the study. The Methodology chapter (Chapter 3) provides justification for the research paradigm, the

research design and administration of the data. It also explains sources of data, data collection procedures and processes for the dissertation. The chapter also provides explanation about the ethical considerations and limitations of the study. The Findings chapter (Chapter 4) is used to analyse the data. It presents empirical research findings on the perceptions of skills and competencies of nursing managers. The discussions and conclusions chapter (Chapter 5) provides reflective discussions of the study and its findings. This includes discussion on the research questions and their link to theory, contributions of the research and implications for effective management of hospitals and improved health care services.

1.7 Definitions

This section on definitions of key terms explains the use of the main terms referred to in this dissertation, and how these terms will be interpreted for the purpose of this study. These terms include: 'soft skills', 'competency', 'managerial competencies', 'competency development', 'professional development', 'continuous professional development' and 'nurse managers'.

Soft skills are often defined in terms of those skills, abilities, and personal qualities and attributes that can be used within the wide range of working environments (Burström & Jacobsson 2011). They refer to human, conceptual, leadership and interpersonal skills (Laker & Spring 2011). Examples of soft skills include team skills, communication skills, problem solving skills, time-management skills and appreciation for diversity (Mitchell, Skinner & White 2010, p.43).

Different terms are used interchangeably to refer to soft skills. These terms are '*generic skills'* and '*critical skills'*. The Department of Labour (2006) refers to soft skills or generic skills as critical skills and neither technical nor scarce skills. Critical skills as a concept refers to particular capabilities needed within an occupation and includes top-up skills, for

example, problem solving, general management skills, communication and customer handling skills, teamwork skills, and communication technology skills.

Interpersonal and intrapersonal skills are generally referred to as soft skills or generic skills as opposed to hard skills. Technical and academic skills are traditionally referred to as hard skills or scarce skills. Hard skills can be easily defined, measured and observed, while it is difficult to measure soft skills as these are intangible (Chakraborty 2009). The definition for soft skills as it applies to this study is:

> *Soft skills are interpersonal and intrapersonal skills needed by nursing managers to carry out their work effectively.*

Competency is defined as a capability that can be learned by adults. It is referred to as a "set of related but different sets of behaviour organized around an underlying construct called the intent" (Boyatzis 2009, p.751). Competency in the case of health profession is defined as an "observable ability of a health professional, integrating multiple components such as knowledge, skills, values, and attitudes" (Frank et al. 2010, p.641). In addition these components underpin effective performance in a profession in practice settings (South African Nursing Council 2005). The definition of competency as it applies to this study is, therefore, adapted from a definition by the South African Nursing Council (2005), Frank et al. (2010) and Boyatzis (2009), and from a definition by Stuart and Lindsay (1997, p.28) (in bold) cited by Crosthwaite (2010, p.9). *Competency is*

> *"integrated sets of* ***behaviours, knowledge, skills, values and attitudes that can be directed towards effective performance within competence of the occupation".***

A *nursing competency* is referred to as an ability of a practitioner to integrate the professional attributes including, but not limited to, knowledge, skills, judgement, values and beliefs required to perform as a professional nurse or midwife in all situations and practice settings. In addition it includes the understanding of clinical or technical abilities

as well as practice of soft skills such as communication and the ability to solve problems through the use of clinical judgement (Schroeter 2008). A *nurse manager competency* by definition is, therefore, a skill that a nurse manager has to perform and behaviour that is required to perform the role of a nurse with management responsibilities.

Managerial competencies are referred to as "sets of knowledge, skills, behaviours and attitudes that a person needs *to be effective* in a wide range of managerial jobs and various types of organizations" (Pillay 2010, p.135). The following is a definition of nursing managerial competencies as it applies to this study:

> *A set of required management and clinical skills for effective and efficient performance on the job and can be measured against agreed work standards and can be improved by training and on-the-job learning.*

Competency development is defined as: "an important feature of competency management, which encompasses all activities carried out by the organization and the employee to maintain or enhance the employee's functional, learning and career competencies" (De Vos, De Hauw & Willemse 2011, p.6). It is worth noting that the terms 'professional development' and 'staff development' have in some sectors been used to refer to 'competency development' a concept used in this dissertation.

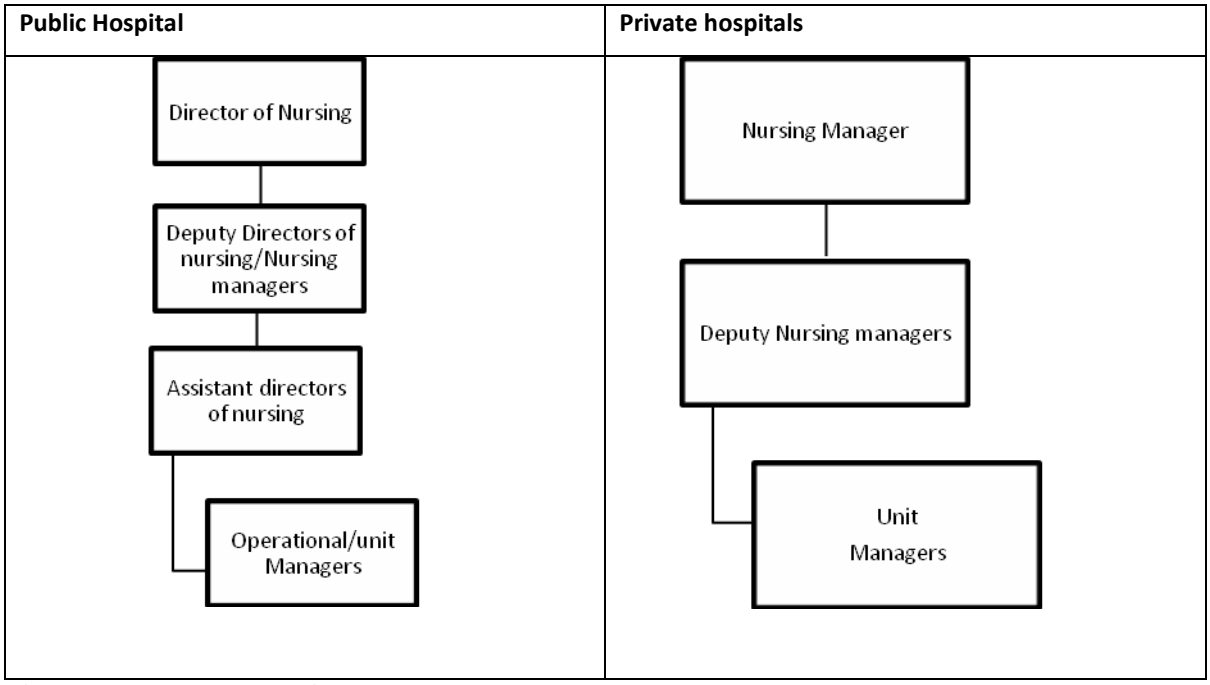
Professional development in the workplace is defined as the process of acquisition of skills and knowledge both for personal and career advancement through access to education and training opportunities (http://www.businessdictionary.com 2013). Due to this perspective and limited resources, competency development in this dissertation will only refer to training and on-the-job learning practices.

Continuous professional development (commonly called CPD) is defined as

> *"the process of developing competencies at the various levels appropriate to the formation of professionals"* (Dingle 1995, p.30).

For this study, **'nurse managers'** refers to nurses who occupy a management position. Notably, the current nursing management structure in public and private hospitals that participated in the study were different as depicted in Figure 1.1 below. A nursing manager in private hospitals is the top level manager.

Figure 1.1 Nurse management structures in public and private hospitals



(Source: Developed for this study).

1.8 Delimitations of scope and key assumptions, with their justifications

This research like other research studies has a number of delimitations. Firstly the study focused only on nurse managers in hospitals and not on other professionals in the health sector such as doctors. This is justified because poor nurse management competencies have been identified as the key stumbling block to attaining the goals of better health for all (Pillay 2010a). Further, public and private hospitals have a role in health care hence it is important to consider the management competencies of nursing managers in both sectors.

Secondly, the investigation is limited to Gauteng hospitals. Gauteng, as already indicated under the context section is the most populous, which justifies the choice of this province. Time and financial constraints did not allow for a national coverage.

Thirdly, the research is limited because it mainly focused on individual competencies and not organizational characteristics that are commonly linked to organizational performance. From the literature review there is no single and standard approach or list of management competencies, which could be tested in the study. There are similarities between management and leadership theories even though nurse managers and nurse leaders serve a different purpose. As a result mainly common individual management and leadership competencies cited in a number of reviewed theories and models were included in the survey.

Fourthly, while leadership theories primarily include transactional and transformational leadership styles, the research focused on transformational leadership, transactional leadership, authentic leadership and positive organizational behaviour. Seminal reviews (for example, DOH 2013; Curtis & O'Connel 2011; Stanley 2011) suggest that transformational leadership is a most suitable choice for nursing management in Gauteng hospitals and therefore, consistent with the research.

In relation to the key assumptions for this study, it was important that:

- Public and private hospitals in Gauteng were accessible for data collection purposes;
- Travel to Gauteng hospitals was possible and less cumbersome for the researcher due to short travel distances to the target population;
- Both public and private hospital authorities would grant permission for the study to be conducted in the sampled hospitals in order to investigate the research questions; and
- Nurse managers were willing to participate and to share their thoughts on the research topic.

1.9 Summary of the chapter

This chapter provided the background and context on which to base the dissertation of this study on the role and importance of soft skills or requisite competencies of nurse managers in hospitals. The background to the research also informed the research issue, research objectives and research questions presented in this chapter. Further, the chapter details the justification for the research and provides an overview of the research methodology. An outline of the dissertation was presented. Key definitions, delimitations of the scope and key assumptions were also explained. The next chapter will explore the literature relevant to this study.

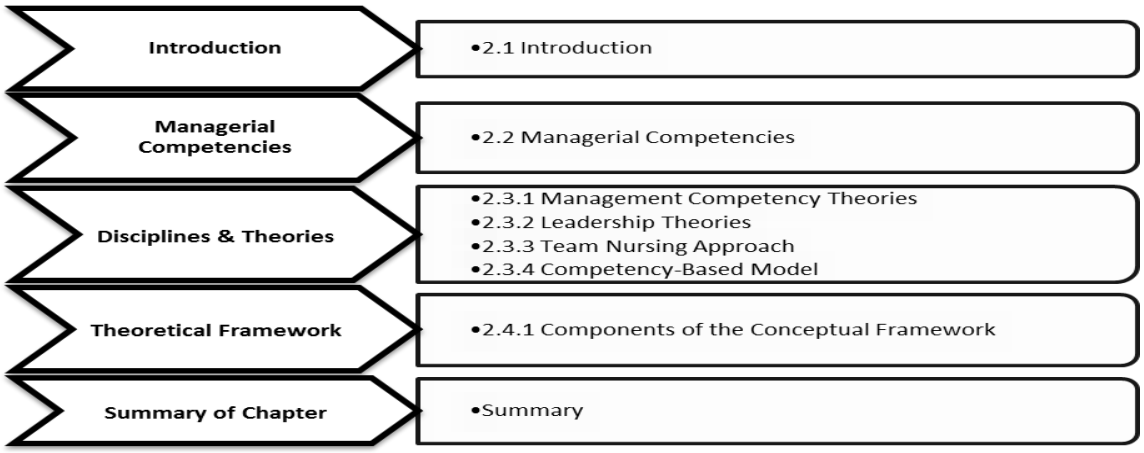
CHAPTER 2 - LITERATURE REVIEW

2.1 Introduction

Following the introductory chapter, this chapter presents the discussions and findings of the disciplines and theories that informed the research objectives and the conceptual framework for the research. The aim is to develop a conceptual framework and explore various theoretical dimensions, to identify gaps in the research and to build a theoretical framework for this study. The chapter also considers literature focusing on nursing management in SA.

This chapter has five sections. The first section is the introduction to the chapter outlining the aim of the literature review and the scope of the chapter. Section 2.2 provides further explanation of managerial competencies. Section 2.3 provides the key disciplines and key theories in which this dissertation is embedded. The interrelationship between the content and context of this study as well as research questions is also explored and provided in Section 2.3. The theoretical framework for this dissertation is then presented in Section 2.4 and a summary of the chapter is presented in Section 2.5. The following diagram, Figure 2.1 presents the structure of the chapter.

Figure 2.1 Outline of the literature review



(Source: Developed for this study).

2.2 Managerial competencies

Generally managerial competencies are also defined as “sets of knowledge, skills, and attitudes that affect a major part of one’s job. These competencies correspond with performance on the job. Such competencies can be measured against well-accepted standards and can be improved by training and development” (Weber, Finley, Crawford & Rivera 2009, p.367). Extant literature indicates that there is lack of or little research on perceived skills and competency levels of nurse managers in SA (Doherty 2013; Pillay 2010). Therefore, for the purpose of this study, the identification of management competencies is important.

Table 2.1 Summary and classification of a range of definitions of 'competencies'

Author	Year	Definition
Bakanauskienė and Martinkienė	2011	It is practical implementation of individual abilities characterised by practical skills and attitudes required to ensure successful professional performance.
Bartrum	2005	Sets of behaviours which are instrumental in the delivery of desired results or outcomes.
Boyatzis	2008	It is a set of related but different sets of behavior organized around an underlying construct. The behaviors are alternate manifestations of the intent, as appropriate in various situations or times.
De Vos, De Hauw and Willimse	2011	Underlying characteristics of an individual that are causally related to criterion-referenced effective and/or superior performance in a job or a situation.
Ford	2001	The demonstrable activities that make an individual employee valuable to the overall success of the organization.
Hanno, Patten and Marlow	2000	The ability to utilize skills and knowledge in a work activity, which can be assessed through performance.
Harerimana and De Beer	2013	The result of integrative learning experiences in which skills, abilities and knowledge interact in relation to the task at hand.
Lucia and Lepsinger	1999	A specific skill, knowledge, or characteristic needed to perform a role effectively and to help a business meet its strategic objectives.
Mackay	2003	The necessary knowledge, skills, experience and attributes to carry out a defined function effectively.
McClelland	1993	Basic personal characteristics that are determining factors for acting successfully in a job or a situation.
MCI in Hanno (2000)	1990	The ability to perform the activities within an occupation or function to the standard expected
NCVQ in Horton (2000)	1997	The ability to apply knowledge, understanding, practical and thinking skills to achieve effective performance to the standards required in employment.
Rodriguez et al. (2002)	2002	A measurable pattern of knowledge, skill, abilities, behaviours, and other characteristics that an individual needs to perform work roles successfully.
SANC, Nursing Act 33 of 2005	2005	Specific knowledge, skills, judgement and personal attributes required for a healthcare professional to practice safely and ethically in a designated role.
Stuart and Lyndsay	1997	Integrated sets of behaviours which can be directed towards successful goal achievement within competence domains.

(Source: Developed for this study using information from various seminal papers cited in this section).

The different definitions of competencies by different practitioners and researchers that have evolved over the years are outlined in Table 2.1 above. This lack of a standard definition of 'competency' informs the need for this study to develop a definition for the concept to be used for this study.

There is generally an awareness that management should possess both technical or 'hard skills' and so called generic or 'soft skills' in order to be successful in technical positions

and professional fields. This view is confirmed by some scholars who believe that for an organization to be successful, employees, in particular those in management, must have a combination of hard skills that are occupation-specific as well as soft skills (Litecky, Arnett & Prabhakar 2004).

The findings of a study with nursing managers in SA by Pillay (2010), indicated that people management and self-management skills, core management skills such as financial management and human resource management (HRM), and skills related to the ability to think strategically were perceived to be more valuable in their job for the efficient and effective management of hospitals than specific skills or knowledge related to health care delivery (Pillay 2010). The need in SA for sufficiently skilled managers with financial and people skills across the spectrum was also emphasized in the literature (Daniels 2007).

There is an "increasing awareness that technical skills, even for technical positions, are insufficient for subsequent success beyond an entry-level position, let alone for professional fields. Success beyond entry levels usually requires proficiency in soft-skill areas such as: leadership, self-management, conflict resolution, communication, emotional intelligence, and so on" (Laker & Powell 2011, p.113). Communication for example is valuable for successful client interactions (Karan 2011). This assertion is confirmed by Muir (2004) who indicated that even positions in hard, task-oriented areas such as accounting (Cole 1999) and information systems (Solomon 2002) require soft skills as well as technical skills. The assertion that good management should have a combination of technical and soft skills is also confirmed in a study conducted by Kar (2011) whereby all participants agreed that soft skills are indeed critical to succeed at the workplace in the twenty-first century. This view was echoed by other authors, who mentioned that in the twenty-first century all managers in every sector need to have soft skills (Chin-Ju, Edwards & Sengupta 2010).

Managers now need to know so much more across a broad front (Skulmoski & Hartman 2010). Every manager must understand the principles and practice of marketing. They must learn to be experts in handling and helping in HRM activities. For example, planning, which used to be the reserve of staff specialists is now a requirement for all line managers (Chin-Ju, Edwards & Sengupta 2010). In traditional organizational practices management was divided into separate compartments even while none of the elements could function adequately alone (Chin-Ju, Edwards & Sengupta 2010). Traditional managers of the past often managed their own Finance, Marketing, HR and Information Technology (IT) functions. Old style selection criteria for managers were based on specific areas of expertise such as technical knowledge and experience and not on the ability to communicate with, motivate and mobilize people (Weber, Finley & Crawford 2009).

In terms of nursing, Gregg (2001) in Harerimana and De Beer (2013) emphasized that every nurse should have a unique composite of competencies that can be performed at different levels of proficiency, as required by an identified role. The lack of management competencies was identified as one of the key stumbling blocks to attaining the goals of health for all in SA (Pillay 2010)**.** Van Niekerk (2002, p.12) indicated that "the development of critical skills (soft skills) is universally important as the hub of most nursing education programs".

Chakraborty (2009) also indicated that with the emergence of sophisticated service-based sectors and changes in work industry, there is now an urgent need for all professionals to align their professional expertise with contemporary practices and the increasing call for soft skills.

According to Chauhan (2011, p.33) "academic degrees are no longer seen as a reliable indication of numerical, reasoning skills, ability to work under pressure and the level of maturity". A study of education and training in Belgium found that formal education and training on its own is insufficient to develop high levels of competencies desired by

organizations. A point worth noting is that functional competencies are mainly achieved through training and on-the-job learning practices *(*De Vos, De Hauw & Willemse 2011*)*.

Atwal and Caldwell (2006) and Dingle (1995) believe that training and on-the-job learning do overlap as organizations realize that most management learning takes place in the organization itself. Training is more of a formal way of competency development that refers to the acquisition of specific skills or knowledge. In nursing education, training relates to "all nursing and critical thinking skills required for the provision of nursing care, and the application of related theory to the practice in hand" (Van Niekerk 2002, p.108). On-the-job learning is an informal way of competency development that happens on the job in an unstructured manner and is as such not captured in an organizations' formal procedure and processes. It entails "learning by observation and learning by trial and error supported by the feedback of colleagues and line managers" (De Vos, De Hauw & Willemse 2011, p.19).

Competency development of nurse managers is a process that includes both formal and informal learning activities relating to role expectations of nurse managers. The South African Nursing Council (SANC) emphasizes that all nursing education including continuous education should focus on the development of the individual nurse on professional and personal levels (Van Niekerk 2002).

2.3 Identifying key disciplines and key theories

Literature searches and review of texts and articles about the research topic clearly drew attention to a number of key discipline areas and theories for this dissertation. An in-depth investigation of the disciplines and theories identified that each could be applied to some aspect of this dissertation regarding the role and importance of soft skills or certain competencies of nurse managers on their performance in hospitals and their role in building teams and towards improving health service delivery. Due to the scope of this dissertation, resources available and sampling requirements, only the following discipline areas and theories emerged as the most applicable to the hospital situation: management

competency theories, competency-based model, leadership theories and team nursing approaches.

2.3.1 Management competency theories

The concept of competency in a health context is defined as “observable, and measurable knowledge and performance that contributes to improving population’s health” Ozkahram and Ozsoy (2011, p.1170). The importance of soft skills is also echoed by Sharma, G and Sharma P (2010). They explained that in the changing scenario after globalization, “most organizations have realized that whichever professional ground a candidate may come from, the need to fill the soft skills gap has become essential to meet expectations of the organization when it comes to interacting or delivering value to their customers” (Sharma G & Sharma P 2010, p.40) and “soft skills have become more important than the study of literature” (Sharma G & Sharma P 2010, p.43).

A snapshot of the clusters of management competencies from literature findings that have contributed to research objectives is presented in Table 2.2 below. Although Table 2.2 represents a range of competencies relevant for managers it is by no means an exhaustive list. The second column on Table 2.2 presents competencies that are necessary for managers for different occupations and the last column presents the competencies that are applicable to nursing managers as identified in the literature.

In foundational work, Boyatzis (1982) cited in Bakanauskienė and Martinkienė (2011) suggested that managerial competencies relate to performance effectiveness irrespective of the organization. He developed six clusters of competencies, which are summarized in Table 2.2 below. There is also the work of Stevens and Campion (1994, 1999) to be considered (Weber et al. 2009). They focused on individual competencies in teamwork and developed five clusters. See Table 2.2 below for details. Bakanauskienė and Martinkienė (2011) explained that managerial competencies are in fact classified into three main clusters. These are outlined in Table 2.2. General management competencies

are classified into eight clusters by Shaw (1998) cited in Bakanauskienė and Martinkienė (2011). These are presented in Table 2.2 below.

Table 2.2 Clusters of management competencies

Authors	**Clusters of management Competencies**	**Identified competencies relevant to nursing managers**
Boyatzis (1982 cited in Bakanauskienė & Martinkienė (2011)	1. Goal and action management 2. Leadership 3. Human resource management 4. Directing subordinates 5. Focus on others 6. Specialized knowledge	1. Leadership 2. Directing subordinates 3. Specialized knowledge
Stevens & Campion (1994; 1999 cited in Weber et al. 2009)	1. Conflict resolution and management 2. Collaborative problem solving 3. Communication 4. Goal setting and performance 5. Planning and task co-ordination	1. Conflict resolution and management 2. Problem solving 3. Communication 4. Planning and task co-ordination
Bakanauskienė & Martinkienė (2011)	1. Professional (application of knowledge and skills) 2. Social (effectiveness of social behaviour, ability to adapt to changes) 3. Personal (combination of self-assessment skills and personal traits).	1. Professional (application of knowledge and skills) 2. Social (effectiveness of social behaviour, ability to adapt to change)
Shaw 1998 cited in Bakanauskienė & Martinkienė (2011)	1. Basic skills 2. Daily-life skills 3. Employment abilities 4. Social related abilities 5. Community-related abilities 6. Broad abilities 7. Management skills 8. Business organization abilities	1. Management skills
Espinoza, Ukleja & Rusch (2011)	1. Flexing 2. Incenting 3. Cultivating 4. Engaging 5. Disarming 6. Self-differentiating 7. Broadening 8. Directing 9. Motivating	1. Directing 2. Motivating

(Source: Developed for this study using information from various seminal papers cited in this section).

It is also acknowledged from literature that there are nine managerial competencies that would help create organizational environments in which knowledge is transferred, ensure success for one another and of the organization. Those nine managerial competencies are also presented in Table 2.2 above (Espinoza, Ukleja & Rusch 2011, p.22).

In view of the list of competencies relevant to nursing managers presented in Table 2.2 above (third column), the most relevant clusters of competencies for nursing managers seem to be those by Boyatzis (1982) as well as Steven (1994) and Campion (1999).
Boyatzis (2009) also noted that *outstanding leaders, managers, advanced professionals* and people in key jobs, seem to require three clusters of behavioural habits as threshold abilities and three clusters of competencies as *distinguishing outstanding performance.*

Those threshold clusters of competencies are:

1. *expertise and experience;*
2. *knowledge (i.e. declarative, procedural, functional and meta-cognitive); and*
3. *an assortment of basic cognitive competencies, such as memory and deductive reasoning.*

The three clusters of competencies that differentiate outstanding from average performers are:

1. *Cognitive competencies*, such as systems thinking and pattern recognition.
2. *Emotional intelligence competencies*, including self-awareness and self-management competencies, such as emotional self-awareness and emotional self-control.
3. *Social intelligence competencies*, including social awareness and relationship management competencies, such as empathy and teamwork (Boyatzis 2009, p.755).

The National Centre for Healthcare Leadership (NCHL) identified three domains comprising twenty-six (26) competencies that encapsulate health management today.

The domains include: transformation (strategic), execution (organizing and controlling) and people (leadership). The American College of Preventive Medicine defined a list of health management competencies and performance indicators related to the delivery of health care, financial management, organizational management, and legal and ethical considerations to assist in the development of training programs in medical management. Competencies related specifically to health care, including clinical preventive skills, were rated relative to generic management competencies (Pillay 2010a).

2.3.1.1 Application to nursing

Leadership in healthcare and the problems associated with it tend to be similar throughout the world. Therefore, it stands to reason that a nurse manager's role in one country will be similar to that in another country. It implies that the same set of skills and competencies could be relevant and appropriate in different hospital environments across the globe (Surakka 2008). The study on the characteristics of the nurse manager's work in different hospital environments during the 1990s and 2000s in one **Finnish** health district's hospitals found that the nurse managers' work largely consists of activities such as organizing, cooperating and communicating (Surakka 2008). However, nurse management literature notes that nurse managers' descriptions of their work vary between university and rural hospitals, between psychiatric and somatic nursing and between wards of different sizes and that the practice setting does have an impact on the nurse manager role (Surakka 2008). Table 2.3 below presents a summary of generally what a nurse manager's work entails as explained by a number of authors.

Table 2.3 Nurse Mangers' role by different authors

Nurse managers' role	**Jones (2007)**	**Pillay (2010a)**	**Surakka (2008)**
Providing guidance to nursing staff			✓
Supervising nursing care			✓
Financial duties	✓		✓
Planning		✓	✓
Liaison with medical staff and other professionals			✓
Quality assurance liaison			✓
Verbal and non-verbal communication in the unit			✓
Allocating working staff (staffing)	✓	✓	✓
Orientation and guidance to staff			✓
Problem solving			✓
Bedside nursing			✓
Day-to-day operations of the unit	✓		
Organizing		✓	
Leading and controlling effectively and efficiently		✓	

(Source: Developed for this study using information from Jones (2007); Pillay (2010a); Surakka (2008)).

A deeper understanding of the nurse manager's work in hospitals would be useful as a starting point in identifying the relationship with the required competencies and skills. An individual carrying out the above-listed activities that form part of the nurse manager's work has to have a particular set of abilities and skills that are necessary for such jobs. From Table 2.3 above, the nurse manager's role as described by the three different authors entails leadership, management and clinical activities. The three main duties cited by more than one author include financial duties, planning and staffing. Specific skills or knowledge related to health care delivery were perceived to be least important as a management skill set (Pillay 2010). Unlike the other two authors, Surakka (2008) perceived clinical activities as important by listing them as part of the nurse manager's role. Surakka (2008) suggested that nurse managers' work is guided by the different leadership and management approaches. The business and general management literature advocates that the functions of all managers, irrespective of the sector are somewhat similar (Pillay 2010a). Therefore, there are standard competencies or specific

soft skills that are needed by all managers irrespective of their field of work. It is however, argued that the health environment is unique as specific competencies are relevant for nursing management. In addition to nurse manager skills, managers require knowledge of transformation (strategic), execution (organizing and controlling), health care operations, patient focus, and management of legal or ethical and medical relationships with colleagues and peers (Pillay 2010a, p.546).

Nursing competencies are categorized into the following four areas: (a) clinical competencies, (b) critical thinking competencies, (c) organizational competencies and (d) human relations skills. It is believed that these competencies define the standard for the required leadership and management skills. In addition it is acknowledged that nurse managers are often less prepared to manage business activities than clinical activities. As such there is a need to develop nurse managers' business knowledge (Jones 2007).

In a survey conducted by Pillay (2010), among 171 senior nursing managers in **SA**, public sector managers perceived themselves as less competent than private sector managers. The largest skills gaps indicated in the public sector are in (a) ethico-legal, (b) task related and (c) controlling skills whilst in the private sector gaps are identified in (a) ethico-legal, (b) health related and (c) task related (Pillay 2010, p.143). Skill sets for optimal performance related to generic management competencies were similarly rated by public and private health managers. This contradicts the commonly held view that there are distinct differences between sectors, which require different competencies. Public sector managers ranked the task-related competencies as third most important compared to sixth most important in the private sector. This suggests that despite their seniority, public sector managers perceive a need for hard management skills such as finance and information systems management as vital since they have a greater responsibility for oversight of all resources (albeit limited) and not just people (Pillay 2010a). This assertion is supported by Cathcart, Greenspan and Quin (2010) that *effective nurse managers* are crucial in achieving *patient care* mission and financial viability. Furthermore this perspective is acknowledged from literature that a nurse manager as a professional

actively participates in the daily patient care and in ensuring cost effectiveness in hospitals (Viitanen, Wiili-Peltola, Tampsi-Jarvala & Lehto 2007).

The issue of cost effectiveness is of importance in hospitals. For example, in **America** the changed role of nurse managers includes financial responsibilities. In **Asia, Africa** and the **Middle East**, nurse managers play a role in saving costs (Surakka 2008). In a study by Ntlabezo, Ehlers and Booyens (2004) on South African nurse managers' perceptions regarding cost containment in public hospitals, considering the escalating costs in public hospitals and ever-shrinking health service budgets, it was concluded that nurse managers should be involved in the planning of the hospital budget and be informed about the hospital's projected capital expenditure. Furthermore they should for example have knowledge about different budgets, including daily expenditures, capital, nurse manpower, supplies and equipment budget, availability and visibility of prices for commonly used items. In addition, the study suggests a number of controls that could be introduced such as control of purchase and maintenance of wheel chairs, control of usage of telephone, control of supplies, equipment and stock losses. It is also recommended that nurse managers should be better prepared for their cost control responsibilities by having continuous education on cost containment because failure to do so could be more costly to hospitals in the long term (Ntlabezo, Ehlers & Booyens 2004).

In a survey conducted among 420 hospital managers in the SA public and private sectors, participants were asked to rate the level of importance of each of the 51 competency items related to their job. Both public and private sector managers rated competencies related to people management, self-management and task-related skills highest followed by strategic planning and health delivery, respectively. Lack of these competencies was identified as a key stumbling block for effectively managing and achieving better health goals for all people in SA (Pillay 2010a)**.**

From the findings of a study conducted in one university hospital district in **Finland** it appears that the competency requirements and professional culture of nurse managers in university hospitals is similar to the requirements in public and private hospitals. For instance, nurse managers are expected to "provide all round help and good care for patients and their managerial work was described as being mostly based on experience and a good hunch, referred to as silent knowledge" (Viitanen et al. 2007, p.117). Here, management training was based around on-the-job learning and not on formal training. The study noted that managerial work consisted of the management of nursing staff and a diverse range of functional roles. Education in clinical evidence/research or in the management field of nursing science was not common even though most of the study participants had received some nurse education at different stages of their nursing careers (Viitanen et al. 2007). Scholars have emphasized the importance of evidence-based nursing practice and that nursing research leads to desired health-care outcomes, cost-efficient and effective best practice (Jones, 2007; Moiden, 2002; Schneider 2003; Viitanen et al. 2007). Evidence-based nursing according to these researchers is essential to the establishment and regulation of the standard of nursing practice.

It is acknowledged by some researchers that nurses in management positions are nurses in the background, promoted among their peers without any formal training in nursing management. While building on their clinical experiences in their new roles, they are expected to develop new competencies to be able to build teams in order to improve performance, conduct strategic process evaluations as part of competence development and to promote efficiency and effectiveness (Viitanen et al. 2007). This is on the back of very little training. By comparison, in **Australia** and **New Zealand,** nurse manager training has been offered since the 1980s (Surakka 2008).

Taken together, much research reflects the reality of the health service environment and the required competencies of nurse managers in varied hospital environments and the need for up-skilling of nurse managers in soft skills or certain competencies. It is

acknowledged that adults can develop competencies that are vital for outstanding performance in management, leadership, and many other occupations and professions (Boyatzis 2009; Erasmus & Breier 2009).

Key competencies according to the reviewed literature are *generic management competencies* such as financial management, organizational management and legal management as well as clinical or health specific delivery skills and competencies. For example, emotional intelligence is one skill that nursing managers should possess so that they are able to demonstrate professional empathy to ensure that the guidance they provide to personnel is based on assessments of emotional and critical thinking processes that contribute to every decision. Further, the ability to "demonstrate professional empathy in caring for patients and in managing organizations and personnel is often a core responsibility of nurse leaders" (Eason 2009, p.185).

On the basis of research discussed thus far related to management competencies and the importance of other competencies, this study should form the basis of a comprehensive list of core soft skills for nursing managers. As discussed, soft skills and relevant competencies are critical and rated highly by nurse managers. Overall and emerging from this literature, the development of appropriate and relevant competency and training framework for nurse managers is a very high priority for the South African health sector particularly within the Gauteng Province hospitals. It is now possible to propose the first two research questions.

From the above discussion the following research questions (RQs) emerge:

RQ1 What competencies of nursing management are regarded as important in hospitals?

- H^{n}_{1} For nurse managers, the possession of requisite competencies does not lead to increased nurse manager performance.

- H^n_2 For nurse managers, there is no difference in the perception of the importance of competencies between public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ2 How do specific competencies relate to the behaviour of effective nurse managers?

- H^n_3 There is no relationship between perceptions of requisite competencies and nurse manager behaviour.
- H^n_4 For nurse managers, there is no difference in the perception of effective behaviour of nurse managers between public or private hospitals, age, length of service as a nurse manager and management level of participants.

2.3.1.2 Summary of management competency theories section

In summary, management competencies are of great importance and relevance in exploring the research objectives. While research is equivocal in respect of a common set of management competency standards the section has indicated the importance of identifying core competencies that relate to the performance effectiveness of nurse managers. Significantly, a lack of appropriate and relevant nurse manager skills and training is at the forefront of more general problems facing the South African public and private hospital system. Accordingly, the development of appropriate and relevant training framework and programs aimed at improving managerial competencies has never been more critical. Next, the review examines leadership theories.

2.3.2 Leadership theories

According to Rafferty (1993), leadership theories vary according to their emphasis on the personal characteristics of the leader and the effect of the leader on organizational functioning, culture and group behaviour (Moiden 2002). It is generally noted that leadership and management are related but different (Jennings, Scalzi, Rogers & Keane

2007). Health leadership was defined as “providing health care through a collaborative and ethical process that uses advocacy to effect change for the benefit of patients” (Carney 2009, p.436). Leaders are often not attached to an organization or position of authority (Cherie & Gebrekidan 2005). While an individual may not hold a management position, she/he can still be a leader on a clinical unit, within a hospital, a community or in the profession/industry (Jones 2007). By comparison, managers are individuals who are appointed by organizations generally for both their technical and management competency skills and are not necessarily leaders. It is however, acknowledged that effective managers have to be good leaders. They have the power and authority to reward or to punish (Cherie & Gebrekidan 2005) whilst managers “focus on maintaining order, planning, organizing, coordinating resources, and attending to rules and details” (Hartman, Conklin & Smith 2007, p.32). Despite the outlined differences in leadership and management, many individuals are able to function as both leaders and managers simultaneously and effectively (Jones 2007).

Leadership theory is used to understand the practices of nurse managers in general and of nurse managers who are team leaders. Similar to competency-based models, leadership theories emphasize the importance of a combination of theory and practice.

The theory of transformational leadership was developed in trying to understand the distinction between leadership and management and to understand why some leaders are able to inspire their followers in different situations. Bass (1985) argues that there are two main styles of leadership: transactional and transformational (Bass, 1985 in Curtis & O’Connell 2011). According to Stanley (2011), management is more associated with transactional leadership and leadership is more associated with transformational leadership. The results of a survey with participants from **China, India and Kenya** on testing the cultural impacts in moderating the influence of transformational leadership on work-related outcomes taking a cross-cultural perspective indicated that transformational leadership might be effective across cultures (Walumbwa & Lawler 2011).

The role of the transactional leader is to focus on the purpose of the organization and to assist people to recognize what needs to be done in order to reach a desired outcome. Further, the transactional leader is task-focused, deals with operational day-to-day transactions, in effect, managing the environment and limiting change (Stanley 2011). Generally, a transactional leader rarely creates any motivating environment to gain extraordinary performance and willingness from her/his followers. Under this leadership style, neither a collective/mutual environment is created, nor are team interactions fostered (Bhat, Verma, Rangnekar & Barua 2012). The transformational leader by comparison, challenges the status quo; she/he is a facilitator of vision creation, motivates the organization behind the vision and rewards those who strive towards its realization (Cherie & Gebrekidan 2005). The transformational leader motivates followers to be self-directed in what they do resulting in their being leaders as opposed to motivating them to work hard for their salary (Jones 2007).

Some scholars such as Avolio and Gibbons (1988) as cited by Hannah, Walumbwa and Fry (2011) recognized the limitation of the charismatic and transformational leadership constructs and applied the concept of authenticity. The theory of authentic leadership has its roots in the work of Bass (1985, 1990 cited in Yammarino et al. 2008) particularly in terms of the focus on the components of transformational and charismatic leadership. Authentic leadership is defined as a positive, genuine, transparent, ethical form of leadership that can help meet today's challenges (Yammarino et al. 2008). It is the authenticity component inclusive of character that differentiates authentic leadership from transformational leadership. Further, it may or may not include charisma signals (Shirey 2006). The primary goal of authentic leaders is helping followers achieve greater levels of authenticity and thereby self-determination, not necessarily leadership nor even transforming them into leaders (Walumbra & Fry 2011; Yammarino et al. 2008).

The findings of a study by Wang H et al. (2014) in **China**, found that authentic leaders exerted their influence through open communication and mutual exchange on their

followers attitudes, behaviour and performance therefore influencing follower's effectiveness. This suggests that an authentic leader can effectively contribute to the development of and have an impact on the follower's individual and team performance (Rego et al. 2012; Walumbwa et al. 2010; Wang H et al. 2014). In a team, leadership roles and responsibilities are in some way shared amongst team leaders including the team leader. The followers are active participants in the process and their authenticity is achieved through positive modelling, subsequently forming more authentic relationships (Hannah, Walumbra & Fry 2011; Luthans et al. 2007). Table 2.4 below indicates key characteristics of authentic leadership and positive organizational behaviour by some scholars (Gardner and Schermerhorn (2004); Luthans et al. 2007; Walumbwa et al. 2010). The table clearly shows that characteristics for authentic leadership and positive organizational behaviour are to some extent similar, thus consistent with the assertion by Gardner and Schermerhorn (2004) that authentic leaders also possess and display positive organizational behaviour features. Taken together, the characteristics depicted on the table deepen understanding on the requisite competencies, skills and behaviours of effective leaders and managers that could be regarded as important in increasing effectiveness of nurse managers in general and of nurse managers who are team leaders. Therefore, these characteristics are to be considered, in the design of future professional development programs and courses as well as performance management systems and focus areas.

Table 2.4: Key characteristics of authentic leadership and positive organizational behaviour

Characteristics and behaviour	**Authentic leadership**	**Positive organizational behaviour**
Accepts other's input	✓	
Balanced processing	✓	
Communicates vision and goals	✓	✓
Confidence	✓	✓
Creativity/innovation/thinking skills	✓	
Disclose personal values, thoughts, motives and sentiments/openness/transparent	✓	
Emotional stability/intelligence		✓
Establishment of clear and achievable goals		
Ethical standards (high)	✓	✓
Genuineness/honesty	✓	
Hope/persevering towards goals	✓	✓
Information/knowledge sharing	✓	✓
Inspires/motivates followers and influences	✓	✓
Internalized moral perspective/solid values	✓	✓
Lead by example/role model	✓	✓
Optimism/attribution	✓	✓
Problem solving skills	✓	✓
Progress monitoring	✓	
Relational transparency	✓	
Resilience to attain success	✓	✓
Self-awareness	✓	✓
Self-discipline	✓	
Self-regulation	✓	
Social judgement	✓	

(Source: Developed for this study using information from various seminal papers cited in this section).

Positive organizational behaviour, introduced and developed by Luthans et al. (2007) building on the work of Seligman (1998), primarily focuses on positive feelings, attitudes, and behaviours of leaders and followers in the workplace (Walumbwa et al. 2010; Wang H et al. 2014). It is defined as the "study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and

effectively managed for performance improvement" (Yammarino et al. 2008, p.59). Positivity relates to organizational behaviour, organizational leadership and HRM necessary to be able to have higher than average performance in the workplace. Positivity also relates with variables such as job satisfaction, organizational commitment, happiness at work, and in-role and extra-role performance (Rego et al. 2012). One's "positive appraisal of circumstances and probability for success based on motivated effort and perseverance" is referred to as psychological capital (Luthans et al. 2007, p.550). It represents an individual's psychological state of development that is characterized by positive psychological resources (Luthans et al. 2007). Further, psychological capital is linked to positive outcomes at an individual and organizational level.

The findings of a study by Story et al. (2013) indicate that the physical distance and frequency of interaction does have a negative effect on their followers however, the quality of their relationship mediates this effect. Also, it was found that leaders with positive psychological capital are more effective at buffering the negative effects of infrequent interactions on the quality of their relationships with their followers. Therefore, an important challenge is to develop and maintain effective, high quality relationships between leaders and followers as well as positive leaders and followers (Story et al. 2013).

Challenges and changes in developed and developing countries such as rapid technological innovations, limited resources, changing customer expectations, changes in workforce demographics and increased international economic activities have increased interest in leadership and management's understanding and ways of motivating workforces (Walumbwa & Lawler 2011). The findings of a study conducted in **Portugal**, on authentic leadership promoting employees' psychological capital and creativity indicate that authentic leadership and positive psychological capital predict employees' creativity and improve organizational effectiveness (Rego et al. 2012). Creativity is the first step in innovation and innovation is crucial for problem solving and ultimately long-term

organizational success. Thus, organizations must take advantage of and facilitate the creativity of their employees (Rego et al. 2012; Yammarino et al. 2008) to bring innovative usable products and services into a challenging and rapidly changing global environment. Leadership plays a pivotal role in the generation of new ideas, services and products and their ability to encourage innovation and creativity is dependent on certain characteristics of the leader (Mumford 2000; Mumford & Licuanan 2004). The characteristics that are required include technical competencies, professional expertise such as planning and sense making skills and cognitive skills that make them effective in innovation, in solving complex problems or formulating a solution framework (Mumford 2000; Mumford et al. 2002). Seemingly, charismatic or transformational leader behaviour may influence creative work through the vision of the organization by directing and motivating subordinates across cultures to be creative, to take on new challenges and be confident in their abilities to succeed (Mumford 2000; Mumford, Connelly & Gaddis 2003; Mumford et al. 2002; Story et al. 2013; Walumbwa & Lawler 2011). It is however, cautioned that following a leader's vision may limit creativity in the sense that it may prevent creative people from forming their own unique ideas and pursuing their own vision of the work (Mumford & Licuanan 2004). Notably, at a group level, transformational leadership may ensure cohesion, which can contribute to idea generation and idea implementation (Mumford & Licuanan 2004). Thus transformational leadership style may be more relevant in group settings particularly when members become involved in generating ideas and turning those ideas into a new product or service.

Psychological capital is also linked to desired behaviour, attitudes and job performance (Luthans et al. 2010). This assertion is supported by the results of a study conducted by Newman et al. (2014) that indicated that there is a positive relationship between psychological capital and job performance in countries such as **China, Portugal** and **Vietnam** (Newman et al. 2004). In global leadership settings, but also in light of the current realities of flat organizational structures, wide spans of controls, electronic communication overload, overworked managers and understaffed business units, positive

psychological capital's contribution to followers' abilities to function and excel confidently and independently is desirable (Luthans et al. 2010).

Positive psychological capital can be learned, enhanced and developed through formal professional development initiatives (theory) or on-the-job interventions (practical) resulting in improved psychological performance of participants and their on-the-job performance (Luthans et al. 2010; Newman et al. 2011; Peterson et al. 2011).

It is acknowledged by some scholars that organizations should consider multiple interventions that take into account the individual, the group, the organization, and the strategic environment when selecting interventions intended to improve positive psychological capital, creativity and influence performance (Mumford 2000; Mumford, Connelly & Gaddis 2003; Peterson et al. 2011; Story et al. 2013). Also, globally there is generally a shift away from building sustainable long-term programs and approaches towards short-term, temporary fixes for organizational effectiveness. This paradigm shift leads to a recognized talent management shift, especially in favour of those who can work independently at a distance, both in meeting continuously changing business goals and in creating and managing their own career paths by constantly recognising new business demands and updating their skill sets accordingly in order to remain useful to their employers, to increase their own effectiveness, but it is equally important to have a contagion effect on their team members (Luthans & Jensen 2005; Luthans et al. 2007; Story et al. 2013).

An underlying premise of all leadership is reward for performance. Bass (1985) suggests that transformational leadership is an extension of transactional leadership where a leader can simultaneously be both or neither (Bucic, Robinson & Ramburuth 2010). However, transformational leadership results in higher levels of employee performance than that produced by transactional leadership (Crosthwaite 2010). While a link between reward and effective performance may exist, a deeper exploration of factors influencing performance of nurse management and or leadership should be applied.

Table 2.5 below indicates the various leadership dimensions and their key elements. For this study, transformational, transactional and authentic leadership styles as well as positive organizational behaviour have been considered. Some researchers (for example Bhat et al. 2012) suggest that effective managers should use both transformational and transactional leadership styles depending on the context they face. Team-based cultures often reflect both. In relation to nurse managers, the literature places much emphasis on the type of leadership styles and little on the team leader competency requirements of nurse managers suggesting an opportunity to explore the requisite competencies of a team leader and which leader styles are more appropriate in nurse management situations.

Table 2.5 Summary of the full-range of leadership theories

Leadership dimensions and key elements	**Definitions**
Transformational Leadership	*The ability to influence others towards achievement of extraordinary goals by changing the beliefs, values and needs of followers. It is about turning personal competencies into organization-wide competencies and it embraces shared accountability, responsibility and power. As such the change or transformation will be at an organizational level and at an individual or team level. She/he operates beyond self-interest, inspires subordinates by leading by example and explaining how to achieve the expected standards*
Idealized influence (attributed)	The socialized charisma of the leader, where the leader is perceived as being confident and powerful, and focusing on higher-order ideals and ethics.
Idealized influence (behaviour)	The charismatic actions of the leader which are centred on values, beliefs and a sense of mission and vision of the organization and, therefore, able to lead her/his team in that direction. Also encouraging a new way of thinking.
Inspirational motivation	The way leaders energize their followers by viewing the future with optimism, stressing the importance of change and that they can accomplish the ambitious goals, projecting an idealized vision, and communicating to followers that the vision is achievable.
Intellectual stimulation	The leader actions that appeal to followers' sense of logic and analysis by challenging followers to think creatively and find solutions to difficult problems.
Individualized consideration	The leader behaviour that contributes to followers' satisfaction by advising, supporting and paying attention to the individual needs of subordinates, and thus allowing them to develop and self-actualize.
Transactional Leadership	*Is the exchange process based on the fulfilment of contractual obligations and is typically implemented by setting objectives, monitoring and controlling outcomes. The emphasis is on structure, routine, tasks and individual's self-interests.*
Contingent reward	The leadership behaviours focused on clarifying role and task requirements. Employees exchange some form of compliance for recognition and reward (psychological and material). This is also referred to as constructive transactions.
Management-by-exception (active)	The active guidance of a leader whose goal is to ensure that standards are met. It is also referred to as active corrective transactions.
Management-by-exception (passive)	This leadership behaviour refers to leaders that only intervene after mistakes have occurred or when particular standards are not upheld.
Non-Transactional Laissez-faire	*Represents the absence of a purposeful interaction between the leader and the subordinates in which the leader avoids making decisions, abdicates responsibility, and does not use her/his authority. It is considered active to the extent the leader 'chooses' to avoid taking action.*
Authentic Leadership	*It is an approach to leadership that emphasizes the leader's legitimacy through honest and transparent relationship with subordinates.*
Positive Organizational behaviour	*It is an approach that brings people within an organization together around shared values, ideals, standards and integrity.*

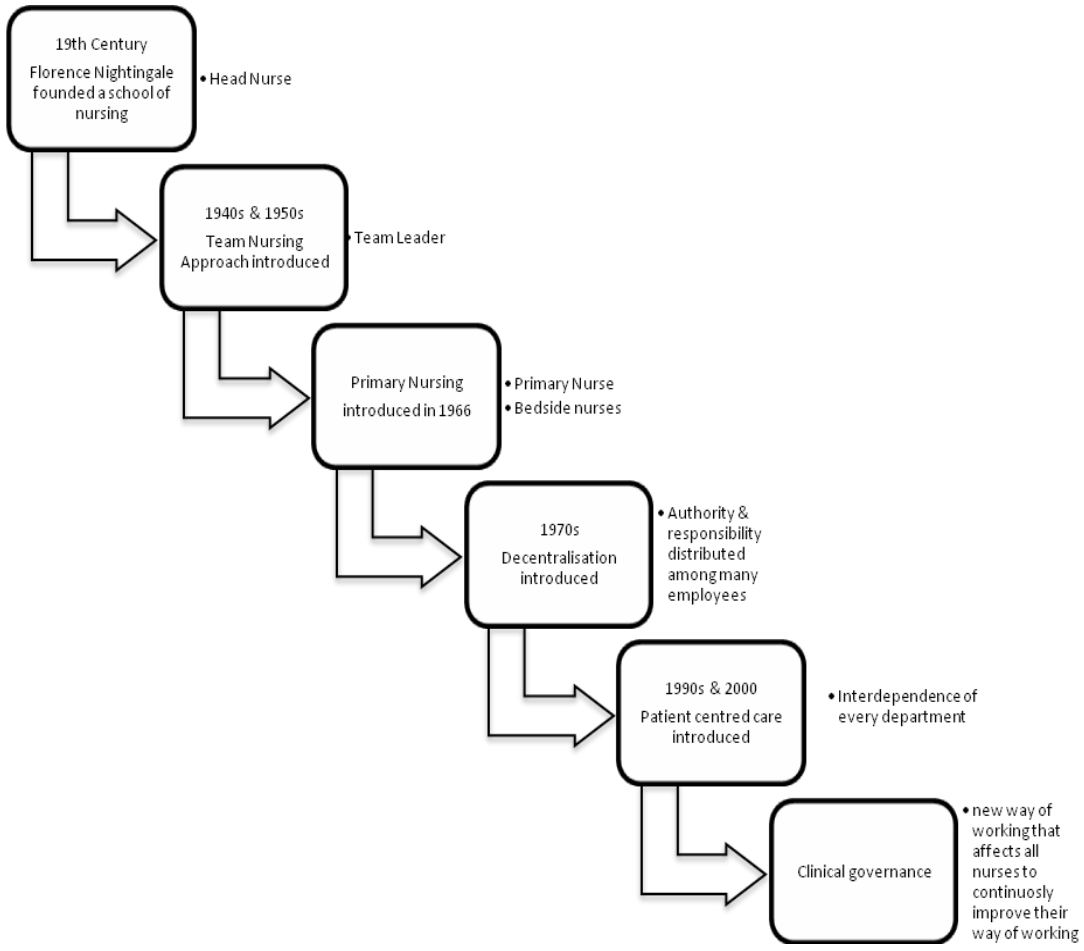
 # Italics indicates the four main leadership dimensions

(Source: Casida & Pinto-Zipp (2008) using information from Bhat et al. (2012); Bucic, Robinson & Ramburuth (2010); Curtis & O'Connel (2011);Hartman, Conklin & Smith (2007); Luthans & Youssef (2007) Murray & Donegan (2003); Stanley (2011) Wang H et al. (2014)).

2.3.2.1 Application to nursing management

A nursing care delivery model as well as leadership and management in nursing practice has evolved due to environmental challenges, skill shortages, high consumer demands, technological and therapeutic advancement. These changes lead to new roles, behaviours, attitudes and competencies that will be needed to carry out the work in the future. Discussing management in nursing has to be placed within its political, managerial and historical context as outlined in the following discussion and diagram, Figure 2.2.

Figure 2.2 Evolving nursing care delivery, leadership and management



(Source: Developed for this study using information from various seminal papers cited in this section).

In the 19th century, nursing had a religious and then a military provenance that resulted in rigid hierarchical structures and rigid leadership style. The leadership in hospitals included emphasis on the practical and domestic aspects of management, on religious ideals and social conscience. Furthermore the leadership style was "autocratic and feminized in which it was understood that the matron would be from a higher social class than the sisters" (Moiden 2002, p.20). Matrons for instance in the **United Kingdom (UK)** were responsible for the organization and administration of nursing service as a whole as well as schools of nursing. They used a top-down management style with centralized control. They supervised the nursing provided on their wards and were responsible for clinical teaching and supervision of nursing students assigned to their area (Moiden 2002).

As noted in Figure 2.2, Florence Nightingale organized nursing and established a school of nursing in the late 19th century. This initiative was a response to the need for "less skilled ancillary personnel and generalized expansion of the hospital systems" (Fairbrother, Jones & Rivas 2010, p.203). Florence Nightingale is mentioned as an ideal example of a transformational leader (Stanley 2011). For clinical nursing, transformational leadership is the most appropriate leadership that is suited to nurse managers and to modern leadership particularly in the general medical or surgical ward setting (Curtis & O'Connel 2011; Murray & Donegan 2003; Stanley 2011). It has gained favour because it is related to the establishment of a vision and adapting to change as well as empowering nurses and supporting them within an organization (Stanley 2011). A transformational leader can, using her/his powers, inspire her/his followers to strive for improved quality of health care (Stanley 2011). It is worth noting that authentic leadership is also regarded as important in creating a healthy work environment in nursing. It is referred to as the "the glue that holds together a healthy work environment" (Shirey 2006 p.257). Florence Nightingale perceived that there were two groups of nurses. These included special nurses and head nurses and superintendents. Special nurses were usually better educated, while head nurses and superintendents were selected from their ranks (Moiden 2002). With this new model, referred to as functional nursing, individual nurses were assigned to give total care to each patient including the necessary medicine and

treatments. The nurses would report to the head nurse. Subsequently, too many people were reporting to the head nurse and as such the head nurse had overextended span of control (Moiden 2002).

As a result of the professional nurse assuming more responsibilities and changing configuration of work group and social upheaval that led to many nurses withdrawing from hospitals, Dr Eleanor Lambertson of Columbia University in **New York and Francis Perkins** of Massachusetts General Hospital developed a new system referred to as team nursing. Team nursing was introduced to deal with the result of the influx of post war workers, the head nurse's overextended span of control and the need for mixed skills in nursing (Cherie & Gebrekidan 2005). Team nursing means working as a team providing health care services under the guidance of a team leader thus changing the structural and organizational framework of nursing units. The teams are comprised of senior registered professional nurses - the most competent registered nurse would be the team leader - registered nurses, licensed practical nurses or vocational nurse and nurse-aides. The team leader assumes the responsibility of the patient care and directs the activities of the team members. She or he for example gives treatments, distributes medicine and supervises the nursing care provided by support staff. With this approach, the head nurse is no longer the centre of communication. She/he decentralizes authority to the team. Problems with team nursing led to the introduction for a new system called primary nursing (Cherie & Gabrekidan 2005). Primary nursing was considered because team nursing was introduced at a time when nursing care was becoming more complex requiring a continual updating of skills and knowledge (Moiden 2002). The main model for primary nursing that was introduced entailed an Individual Patient Allocation (IPA) model even though team nursing remained. This IPA model was said to promote full professional accountability in terms of the allocated patient. The IPA model however, like the Team Nursing model, requires collective planning, co-ordination in terms of the care given to the hospital patient's stay. IPA is still practiced in some hospitals such as Australian acute hospitals (Fairbrother, Jones & Rivas 2010).

A primary nursing philosophy places the responsibility and accountability for the planning, giving, communicating and evaluating of care for a group of patients in the hands of the primary nurse. The primary nurse is expected to be at the bedside providing total care, to establish therapeutic relationships, to plan for 24 hours continuity in nursing, to communicate directly with other members of the health team, and to plan for discharge. The patient's participation is expected in the planning, implementing, and evaluating of her/his care. In primary care there is improved communication provided by the one-on-one relationship between nurse and patient. Associate nurses are involved with this method by caring for patients in the absence of the primary nurse (Cherie & Gabrekidan 2005).

Decentralization was introduced in the UK in the 1970s. With this system, middle layers were reduced or eliminated and the scope of the nurse managers' role was extended. In addition, the allocation of responsibility and authority for management decisions were removed from a few leaders and distributed among the many employees at the frontline of the organization. Flattening of the hierarchical structure resulted in operational cost reduction as fewer administrative layers were required, leading to better staff morale and job satisfaction (Cherie & Gebrekidan 2005). Effective implementation of decentralization called for the need for appropriate leaders who are able to incorporate the changes brought about by the evolving health care (Moiden 2002).

Patient-centred-care was introduced in the **United States of America (USA)** in the early 1990s and in the UK in 2000. This system recognizes the inter-dependence of every department in achieving a quality product or service. With this system, decision-making is delegated to those involved in patient care processes and the lines between management and direct care givers are blurred. Patient-centred-care requires visible management, intense communication, the continuous presence of sisters to encourage nurses to be comfortable with change, innovation and risk taking. Furthermore, it is critical that nurses feel appreciated and valued as integral members of health teams (Moiden 2002). The patient-centred-care system was followed by clinical governance.

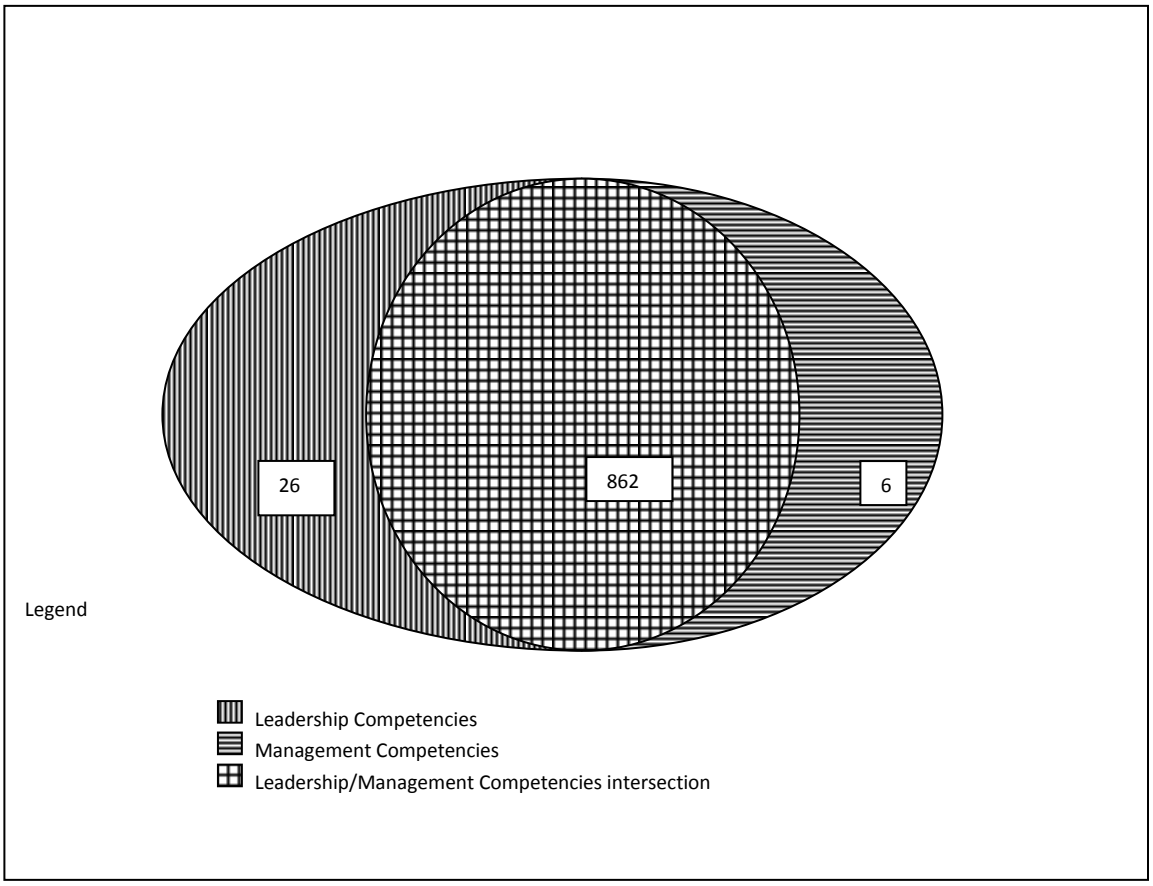
Clinical governance involves a nursing framework that affects all nurses working in any health care setting. It involves clinical audit, risk identification, assessment and management, evidence-based practice when implementing the nursing process, user involvement, clinical supervision, clinical leadership, continuing professional education, management of inadequate performance, reflective practice, team building and peer review (Moiden 2002).

As nursing models and systems evolve, there is a need for new skills, competencies and practices, new roles, a change in emphasis in the education and training and a need to improve the quality of care. In particular there is a need to also focus on the leadership development of nurse managers who are team leaders. If nurse managers who are team leaders do not have the appropriate skills and competence, then nurse manager roles will be less effective (McCallin & Frankson 2010). The Nursing Strategy for South Africa (2008 cited in DOH 2013) articulates that there should be leadership programs for nurses that include (a) mentorship and coaching, (b) succession planning, (c) carefully planned deployments to increase exposure to diverse leadership environments, (d) recognition and reward for expertise and excellence (DOH 2013, p.15). All nurses ought to view themselves as leaders, develop their leadership abilities, lead in patient care settings, share their visions of how patient care can be improved and to learn from other nursing profession leaders in order to accomplish the tasks and achieve maximum quality care (Jones 2007). Also, they need to be committed to the mission and goals of a hospital given the challenges on healthcare sector (Luthans & Jensen 2005).

Knowledge of leadership theory is useful in this study as it indicates *overlaps between leadership and management competencies* (Clarkson 2007; Jennings, Scalzi, Rodgers & Keane 2007; Scholtes 1998). While leadership and management are recognized as two separate issues, changes to one are likely to affect the other. For instance, a newly appointed nurse manager is equally a leader by virtue of the authority attached to the role. The boundaries between nursing leadership and management competencies are said to have narrowed as a result of the changing context of health care (Jennings et al. 2007).

A study conducted by Jennings et al. (2007) to assess the similarities and differences among nursing leadership and nursing management confirms this narrowing. Figure 2.3 illustrates these findings that a large intersection of common competencies (n=862) occurs between management and leaders. Competencies that were viewed to be unique to leadership (n=26) were rated higher than those for management (n=6). Therefore, it is important to identify the competencies unique to leadership and management, as well as areas they share in common, to more appropriately guide professional development efforts.

Figure 2.3 Intersection of management and leadership competencies as applied to nursing



(Source: Adapted from Jennings, Scalzi, Rogers & Keane (2007, p.170)).

In Figure 2.3, the top 10 leadership and management competency categories were based on the frequency counts of the competencies they represented. Most of the competencies common for leaders and managers regardless of the level (746 of the 894), were accounted for in these 10 categories (85%). As shown in Table 2.6 below, out of the ten categories, the frequency with which the competencies were mentioned and their rank order varied between leadership and management. However, most of the competencies were common (n=8 out of 10) for both leadership and management categories. In the leadership category 'personal qualities' (n=147) was rated highly followed by 'interpersonal skills' (n=100) and the least mentioned was 'management skills' (n=21) followed by 'business skills' (n=17) whereas in the management category, 'thinking skills' (n=55) was rated highly, followed by 'personal qualities' (n=54) and the

least identified was 'initiating change' (n=9) and 'information management' (n=9) with the same frequency rating.

Table 2.6 Top 10 competency categories for nursing leadership and management

Rank **Leadership**	**Category (**n)[a] **Management**
1.Personal qualities (147)	***Interpersonal skills (55)***
2. ***Interpersonal skills (100)***	Personal qualities (54)
3. ***Thinking skills (55)***	***Thinking skills* (29)**
4. ***Setting the vision (36)****	Management skills (e.g. planning, organizing) (28)
5. ***Communication skills (33)***	***Communication skills (24)***
6***. Initiating change*** (32)	Business skills (e.g. finance, marketing) (23)
7. ***Developing people*** (25)*	***Health care knowledge (clinical, as a business) (22)***
8. ***Health care knowledge (clinical, as a business) (22)***	***Human resources management*** (17)**
9. Management skills (e.g. planning, organizing) (21)	Initiating change (9)
10. Business skills (e.g. finance, marketing) (17)	Information management (9)**

Notes:

- **a=*Number of times this competency was identified in the reviewed literature.***
- ***Unique to the top 10 Leadership Competencies.***
- ***Unique to the top 10 Management Competencies.***
- ***Competency categories shared by leaders and managers that had lower frequency counts (e.g., high of 12, low of 1)***

(Source: Adapted from Jennings Scalzi, Rogers and Keane 2007, p.171).

Based on the evidence of the review, the researchers noted that nursing administration programs, as currently structured, would not position nurses to be successful leaders and managers in today's health care environment. What was not considered in the study was how competencies might vary by nurse managers' career stage, responsibilities and settings (Jennings et al. 2007). This gap further confirms a need to examine educational programs that would reflect the *competencies* suitable to develop nurse managers who are team leaders and nurse managers in general in hospitals. Additionally, consistent with Jennings et al. (2007) the new educational paradigm needs to ensure that nurse managers are prepared with skills appropriate to the care delivery setting, societal demands, and the career stage of nurses that ultimately influence *effective performance in hospitals*.

Figure 2.4 below indicates an input-process-output model of organizational and individual requisite core competencies to be determined. This is consistent with the overall research purpose of the dissertation to identify nurse manager's skills or competencies and to determine how to link them to better performance management standards and more effective management of hospitals. Figure 2.4 notes specific relationships between constructs that support the discussion related to Figure 2.3.

The process component implies that once competencies and skills are determined there will be a need to review and revise existing learning programs and courses. It will be paramount to ensure that leadership development of nurse managers remains relevant and aligned to the requisite level of knowledge and expertise required. The outputs will lead to updated competency development learning programs and courses for nursing leadership and management. Exposing nurse managers to relevant programs to address skill gaps would result in appropriately skilled leadership and management who would be able to deliver quality health care services desired by patients and their families. Moreover, effective and efficient management of hospitals would lead to improved patient satisfaction, staff retention and motivation that are normal requirements for effective health service delivery.

Figure 2.4 Relationship between constructs in leadership theory

(Source: Developed for this study using information from various seminal papers cited in this section).

2.3.2.2 Summary of leadership theories section

This section discussed leadership theories that were relevant to nurse managers in hospital settings pointing to a number of commonalities between the competencies of leadership and management. The discussions suggest that leadership competency development for nurse managers should be aligned with the requisite competencies of leadership and management upon which future hospital performance depends. Based on the literature findings, some leadership theories e.g., transformational leadership, informs our understanding of the nurse manager role including nursing practices. Transformational leadership however, does not sufficiently explain team leader requirements of nurse managers or indeed throw much light on a team nursing approaches (discussed next).

2.3.3 Team nursing approach

Generally the use of teams in organizations remains a popular and growing design option; how to enhance the success of a team is an important issue for most managers or employers (Trent 2004). Teams are guided by a team leader and there is a correlation between the effectiveness of a team leader and team performance. The lack of qualified leaders for leadership roles can undermine the entire teaming process and consequently the effectiveness of an organization that utilizes a team approach (Trent 2004, p.102). It is important that employers should not assume that individuals with leadership potential necessarily have the knowledge and skill to lead a team (Trent 2004).

Organizations should *evaluate the knowledge and skills that potential team leaders possess or will require once they assume leadership positions* (Trent 2004). Importantly, competency development programs should not only be generic and applicable to a larger group but should also take into account the needs of any one individual (Bergenhenegouwen, Horn & Mooijman 1996; Dingle 1995; Trent 2004). In addition, understanding of team dynamics and behaviours that professionals must acquire to

function effectively as part of a team must form an integral part of continued competency development. This should also be considered in developing a competency development framework (Ferguson & Cioffi 2011).

Given that team leaders are involved in successful planning, delivery and transformation of health services (Eason 2009), scholars suggest they require specific leader skills. Laker and Spring (2011, p.113) for instance note that an "effective leader has to be hard on the issue, soft on the people". These skills are said to be consistent with emerging trends in leadership and they include *behaviour, personality characteristics and abilities* as presented in Table 2.7 below.

Table 2.7 Behaviours, personality characteristics and abilities of effective team leaders

Behaviours, personality and abilities	**Atwal & Caldwell (2006)**	**Hartman, Conklin & Smith (2007)**	**Jennings et al. (2007)**	**Trent (2006)**
Understands multi-disciplinary team concept	✓			
Values each individual's contribution to the team	✓			
Allows members to express their opinions even though their opinions might lead to conflict	✓			
Ability to discipline team members	✓			
Accepts greater responsibility for **supervising juniors** and less skilled staff	✓			
Ability to allow all team members to participate in decision-making	✓			✓
Accepts accountability for team performance	✓			
Recognizes the importance of goal setting				✓
Provides feedback to the teams and its members				✓
Rewards member efforts and achievements				✓
Manages internal and external **conflict**				✓
Facilitates team interaction				✓
Engages in creative and critical thinking				✓
People orientation		✓		
Ethics		✓		
Communication		✓		
Continuing education		✓		
Self-confidence		✓		
Willingness to take on tough assignments		✓		
Ability to **solve problems**		✓		
Develops a conceptual **plan** for directing employees' effort and skill		✓		
Directs people and organization			✓	
Motivates			✓	
Provides visionary inspiration			✓	

 # bold indicates competencies for nurse managers identified under management competency theories

(Source: Developed for this study using information from Atwal & Caldwell (2006), Hartman, Conklin & Smith (2007), Jennings et al. (2007) & Trent (2004)).

As can be seen from Table 2.7 above, the soft skills or management competencies needed for team leaders in general such as communication, good planning, people skills are consistent with those identified for nursing managers as indicated under the management competency theories (Section 2.3.1, Table 2.2) and to some extent those stated under leadership theories (Section 2.3.2, Table 2.4 and Table 2.6). Using the findings of studies by Boyatzis (1982), Stevens and Campion (1994; 1999) and Espinoza, Ukleja and Rusch (2011), seven clusters of soft skills (those in bold in Table 2.7 above) for leaders were identified as relevant for TNA team leaders. At least three out of the seven clusters of soft skills; communication, problem solving and motivating subordinates were also highlighted by Gardner and Schermerhorn (2004); Luthans et al. 2007 and Walumbwa et al. 2010 as important for authentic leadership and positive organizational behaviour.

The competencies cited by Hartman, Conklin and Smith (2007) were most similar to those identified by Stevens and Campion (1994; 1999) thus further supporting their relevance for nursing managers and for those nursing managers who are team leaders. Skills in directing subordinates (juniors and less skilled) are important because they will aid in helping individuals, teams and organizations accomplish goals (Weber et al. 2009, p.356). Notably, communication skills are also identified as critical for team leaders and managers in this literature review under competency categories for nursing leadership and management by Jennings et al. (2007) as well as under key characteristics of authentic leaders and of positive organizational behaviours (Section 2.3.2, Table 2.4 and Table 2.6). Communication skills are associated with listening, presenting, cognisance of the emotions of others as well as verbal and non-verbal skills. Karan (2011) notes, that people spend most of the time communicating with others, so it is paramount that people learn how to communicate effectively irrespective of the field or profession. Hartman, Conklin and Smith (2007) as well as Passarelli (2011) cite communication skill as a competency important for effective leadership and leadership development. It is the main tool used to promote self-confidence and inspire trust. Cognitive skills and

knowledge such as solving problems within the workplace are regarded as one of the most vital life skills for leaders to be able to make clinical judgements in complex health care practice areas (Karan 2011; Terzioglu 2006; Weber et al. 2009) and to be innovative and creative in the generation of viable new products and new ideas (Mumford & Licuanan 2004).

Furthermore, it is important to note that even though different authors use different words, the competencies of effective team leaders identified in Table 2.7 are to a large extent consistent with transformational leadership elements as indicated under leadership theories (Section 2.3.2, Table 2.5). Behaviours such as 'recognizing the importance of goals', 'providing visionary inspiration', 'motivating others' are characteristics of transformational leaders. Teams that have clear goals and are committed to the goals are likely to prevent and manage conflict more effectively (Pazos 2012). If teams are more actively involved in conflict resolution they are more likely to achieve higher performance and satisfaction with team processes and outcomes. Ability to 'manage internal and external conflict' is important for team leaders because individuals in teams are from different cultures they therefore differ in the ways that they experience and handle conflict within their teams.

The characteristics of a nursing manager *impact on the work environment* (Duffield, Rocha, Blay & Stasa 2010). Nurse leaders play an important role in creating and sustaining a positive work environment for nursing practice, which increases staff retention and satisfaction that results in quality outcomes and savings for the organization (Duffield 2010; Shirey 2006) and help build stronger hospitals (Luthans & Jensen 2005). The findings of studies by Peterson et al. (2011) and Walumbwa et al. (2010) indicate the impact of the work environment on the employees. It was established that the relationship between psychological capital and performance was stronger when employees' perceptions of service climate were high (Peterson et al. 2011; Walumbwa et al. 2010). Walumbwa et al. (2010) investigated the relationship among leader and follower psychological capital and job performance. It was found that positive

psychological capital of leaders can improve follower psychological capital and performance by enhancing an individual's overall motivation and perseverance. Accordingly, leaders who possess high moral standards characterized by fairness, honesty, and integrity in dealing with followers, a variety of positive states or traits such as emotional stability, extroversion, agreeable and openness to experience, goals, values, and character strengths are able to positively influence followers' states, behaviour, performance and to stimulate values shared by their followers (Luthans et al. 2007; Luthans & Youssef 2007; Walumbwa et al. 2010; Wang H et al. 2014). A key assumption is that leaders influence and serve as credible role models for their followers. The result is that followers are motivated to exhibit positive behaviours and have a sense of self-worth and obligation to reciprocate (Walumbwa et al. 2010; Wang H et al. 2014).

Furthermore team processes adopted by a good team leader have an operational effect on the development of learning within the team and in the organization. The good leader stimulates and influences the members to enhance learning at organizational level (Bhat et al. 2012). Furthermore, team leaders' *personality type* might have an effect on nursing management team (Nieszczezewski 1996).

There is a wide range of *leadership styles* that can be used by team leaders in different situations. However, most team leaders do have a primary style that they adopt, which is not necessarily in unison with the maturity level of their team members (Alves & Canilho 2010). Successful leadership requires flexible leaders who are able to select and use a variety of leadership styles depending on the situation presented to them (Alves & Canilho 2010). Flexibility in managerial style is necessary to encourage quality and productivity of nursing services. The leadership style affects team cohesion, perception of learning and learning related performance (Trent 2004). The *leader's role in the team* depends on the skill and the level of development of the team and the type of interactions within the team. The team leader may choose a directive controlling function, a guiding function or a participative function, and the communication style will

vary with the chosen leadership role (Husting 1996). For example, in working with a novice team with minimal critical thinking skills, the leader may opt for an autocratic or consultative type of leadership. As the group gains knowledge, skill and confidence, the team leader will alter his or her leadership style, moving from director to coach and teacher, and eventually to an advisory or supportive role to better encourage team decisions (Husting 1996). In addition, the team leader must engage situation appropriate leadership behaviour while maintaining a positive flow-on to subordinate teams (Husting 1996; Moiden 2002).

It is important that *factors that may negatively impact on the development of the team* be considered by the team leader. These factors include (a) addition of new members or loss of old ones, (b) altered work schedules, (c) sudden shifts in management structure and design and (d) lack of support, recognition and interest amongst leadership (Husting 1996).

2.3.3.1 Application to nursing

In trying to understand the competence of nurse management, it is important to consider behaviour, clinical and team skills that nurses possess individually and as a team in order to improve the quality and safety of patients that could for example be endangered by adverse events during medical treatment (Murray & Donegan 2003). Furthermore, it is important to draw on the competence, experience and knowledge of team members (Fairbrother, Jones & Rivas 2010).

As indicated under Section 2.3.2 on leadership theory, TNA was developed in the 1950's mainly as a response to a functional nursing model that was introduced during World War II. In countries such as **USA, UK and Australia,** the "1960s and 1970s were the golden age of team nursing" (Fairbrother, Jones & Rivas 2010, p.203). The team approach to patient care entails more than just reorganization or restructuring of nursing services. It is instead

a philosophy of nursing and a method of organising patient care (Cherie & Gebrekidan 2005).

Extant research suggests that team nursing is a response to the shortage of experienced nursing staff, workplace retention problems, inadequate supervision of less experienced staff by senior staff, social and technological pressures (among others). For example, hospitals across **New England** and the **USA** introduced variations to TNA years earlier because they were struggling to find enough registered nurses despite rising salaries and other non-wage incentives (Gleason 1996). The introduction of a reactive approach to TNA placed greater numbers of less qualified nurses and licensed practical nurses at bedside, while registered nurses co-ordinated care. This approach to TNA resulted in job dissatisfaction and high turnover levels (Gleason 1996). Gradually, most hospitals acknowledged the problem. One of the earliest to abandon team nursing was Beth Israel Hospital in **Boston**. By the mid-'80s, Beth Israel had restructured to a primary nursing approach that assigned each patient a single registered nurse (IPA model) responsible for all aspects of care. Patient contact, and greater control over care, restored a sense of professionalism to the registered nurse position. Greater job satisfaction helped Beth Israel attract nurses during the shortage, and the reorganization became a model for other area hospitals (Gleason 1996).

Although IPA is still practiced in some hospitals, it is worth noting that in the 2000s there was a shift again back to TNA in acute care hospitals in Australia and across the Western World. In a recent pilot study conducted at Prince of Wales Hospital in two acute medical inpatient units, and a teaching hospital in **South-Eastern Sydney**, it was mentioned that some nursing unit managers called for the re-introduction of a Team Nursing model as opposed to IPA. This was largely due to problems associated with nursing shortages and inadequate supervision of less experienced staff by senior staff that resulted in poor quality of care, inability to function effectively and nurse retention (Fairbrother, Jones & Rivas 2010). Reportedly there was a shift in approach in the pilot wards in terms of allocation of tasks to nurses within a team structure based on the complexity and area of specialization of the nurses. Accordingly, this encouraged shared responsibility in some

tasks to a number of patients as opposed to allocation of individual patients to nurses. It is acknowledged that individual responsibility for patient care was retained. There were noticeable benefits in the shift to TNA as there was improvement in the quality of support given to patients, staff satisfaction and retention levels (Fairbrother, Jones & Rivas 2010).

The findings of a study on nurse managers' perceptions in public and private hospitals in Gauteng in SA on retention of professional nurses does confirm that a combination of poor working conditions, long and inconvenient working hours, uncompetitive rewards, lack of competency development opportunities and poor relationships at work makes it difficult or almost impossible to retain professional nurses. Nurses who left SA to work in foreign countries cited poor working conditions and heavy workloads as their major reasons for leaving. Lack of retention of nurses further results in staff shortages, which can hamper in-service education and on-the-job training, particularly in terms of orientation and induction programs for newly appointed and newly qualified nurses. Despite nursing shortages, increased workloads and poor working conditions there is evidence that some hospitals, specifically in developed countries, are successful in their recruitment and retention of nurses (Mokoka, Oosthuizen & Ehler 2010).

It is important that nursing team leaders are selected for their leadership skills as opposed to status, hierarchy or availability. While all teams require competent leaders, TNA leaders need staff development and support to enhance their management skills and clinical leadership skill in order for them to manage the additional responsibilities of leading teams in acute care settings (Fairbrother, Jones & Rivas 2010). Over and above the clinical content area, team leaders in particular require training in team skills for enhanced team performance and better competency to collaborate (Atwal & Caldwell 2006; Fairbrother, Jones & Rivas 2010) and to learn other management skills such as emotional skills, social skills, value orientation and identity. If team leaders are empowered, they feel they are part of the team and believe they are making a significant contribution to the success of the team and of the organization.

There are many proponents of TNA who focus on its advantages. The benefits of TNA primarily relate to patients and staff as depicted in Table 2.8 below. The table also lists criticisms of TNA as noted by various authors.

Table 2.8 Summary of benefits and criticisms of team nursing approaches

Benefits of TNA		**Identified Authors**
Patient benefits	Improved planning More clinically effective services More responsible and patient focused services Greater potential to co-ordinate Improved patient outcomes More satisfied patients and their relatives Provision of comprehensive care Increased cost effectiveness	Atwal & Caldwell (2006); Cherie & Gabrekidan (2005)
Nurses benefits	More satisfying roles for health care professionals (increased job satisfaction) Improved staff morale and motivation to deliver high quality care Better coverage during breaks More independence in staff and positioning in the team to accept greater responsibility for supervising juniors and less skilled nurses Increased learning opportunities Provides a complete picture of all patients Fewer mistakes	Atwal & Caldwell (2006); Berg (2010); Boekholdt & Kanters (1978); Cherie & Gabrekidan (2005); Ferguson & Cioffi (2011); Gleason (1996); Miller, Riley & Davis (2009)
Criticisms of TNA		**Identified Authors**
Staff-related concerns	Added responsibilities and greater number of patients allocated to a team. Reluctance of colleagues to solve problems as they emerged and personalization of problems. Conflict among team members that limited collaboration. New leadership roles that managers have to take in leading teams. Managing and supporting interdisciplinary teams without possessing the requisite knowledge and skills. Different perceptions of teamwork. Different levels of skills acquisitions to function as a team member. Dominance of medical power that influence interaction in teams.	Atwal & Caldwell (2006); Fairbrother, Jones & Rivas (2010).
Patient care-related concerns	Decreases personal contact with clients or patients as a result of the nurse's absence from the bedside. Limits continuity of care. Working practices of different professional groups.	Cherie & Gabrekidan (2005)

(Source: Developed for this study using information from Atwal & Caldwell (2006); Berg (2010); Boekholdt & Kanters (1978); Cherie & Gabrekidan (2005); (Fairbrother, Jones & Rivas 2010); Ferguson & Cioffi (2011); Gleason (1996); Miller, Riley & Davis (2009)).

As depicted in Table 2.8 above, some authors outlined benefits to patients (for example Atwal & Caldwell (2006); Cherie & Gabrekidan (2005) and benefits to staff (for example Atwal & Caldwell (2006); Berg (2010); Boekholdt & Kanters (1978); Cherie & Gabrekidan (2005); Ferguson & Cioffi (2011); Gleason (1996); Miller, Riley & Davis (2009) of the successful implementation of TNA which result in improved quality and safety of patient care (Miller, Riley & Davis 2009). The outcomes of successful implementation of TNA were identified as important for bringing about improvement in health care service delivery and best patient and staff outcomes in SA, particularly in Gauteng hospitals. For example, it is noted that hospitals are faced with different types of risks such as policy risks, operational risks, financial risks, HR risks and technological risks that can endanger patient safety during medical treatment. In such a context, TNA could be adopted as a strategy to minimize such risks as it appears to result in 'fewer mistakes'. It is therefore suggested that an integrated risk management approach that can benefit the hospital and patients should be in place (Berg 2010) and linked to TNA. In addition, the identification, assessment and management of risks across a hospital will go a long way in revealing the importance of the whole, the sum of the risks and interdependence of the parts (Berg 2010).

Effective leadership is associated with more ethical behaviour and it results in patient satisfaction and effective care delivery. These skills are those needed to negotiate with others, to participate in a team environment, to provide service to clients or customers or peers and to resolve conflict (Carney 2009; Weber et al. 2009; Zakari, Khamis & Hamadi 2010). The importance of conflict management is echoed by some researchers (for example Pazos 2012; Trent 2004). They are of the view that nursing education in conflict management is greatly needed for nurse managers as they are expected in line with their role to create a work environment that supports professionalism and minimizes conflict that might negatively impact on the provision and co-ordination of care (Zakari, Khamis & Hamadi 2010) A disjuncture in values, norms and behaviour amongst nurses may create conflict. For example, in a study in South African hospitals, nurse managers reported that

there was a difference in perception and beliefs on how younger and older nurses viewed their positions, responsibilities and commitment to their organization. While older nurses emphasized rank, age and job responsibilities such as being in charge of a unit, younger nurses were more interested in getting the job done within the shortest time possible, disregarding rank and seeking permission from older, senior, more experienced nurses. It is the responsibility of nurse managers to understand multigenerational workforce differences in order that they may better serve their patients and clients (Mokoka, Oosthuizen & Ehlers 2010).

Challenges of successfully implementing TNA are more related to team skills and patient care. Some authors, for example, Atwal and Caldwell (2006) as well as Fairbrother, Jones and Rivas (2010) mentioned staff-related concerns that are more about team skills challenges as presented in Table 2.8 above. Cherie and Gabrekidan (2005) cited patient care-related concerns. Communication is viewed as a fundamental element of care at every level of nursing practice that is useful in addressing some of the noted challenges of TNA. Through communication, managers in their position can effect change in hospitals by influencing policy and standards, drawing nurses' attention to areas that need improvement, conflict resolution and by formally and informally role modelling good communication skills (Timmins 2011; Uys & Naidoo 2004). Managers who have good communication skills and maintain effective communication lines amongst nurses, between nurses and all other categories of health care workers, with patients and their visitors “create a good working atmosphere that ultimately improve nurses' confidence, motivation, morale and the development of good nurse-patient relationships and many elements of care delivery” (Timmins 2011, p.34). It is nurse manager’s role to ensure that critical information is shared so as to ensure effective team performance (Miller, Riley & Davis 2009). For example, regular monitoring and feedback to nursing teams and monitoring meetings in the format of perinatal mortality review meetings could contribute to improving the quality of nursing care in SA. It is believed that the lack of clear interdisciplinary communication can result in serious patient harm (Uys & Naidoo

2004). In addition, teams require inter-professional trust and respect to ensure that there is open, safe and reflective participation of team members (Simpson 2007).

The importance of good planning, consultation with staff, clear definition of the team nursing model, clear operating procedures, and the expected roles and responsibilities of all team members prior to the implementation of the team nursing model of care was emphasized (Ferguson & Cioffi 2011) and would address some of the challenges or rather concerns raised about TNA.

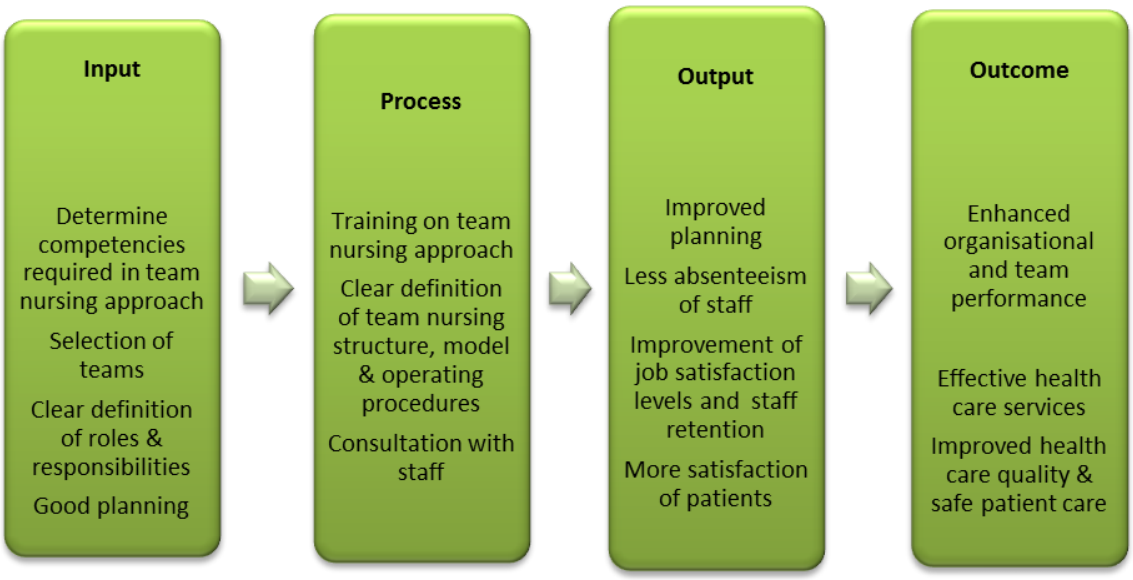
The proposition of this study in Figure 2.5 below indicates that the competencies required by teams and team leaders in particular need to be determined. There is a need to focus on the specialization work and a need to adopt a holistic approach in addressing the fundamentals of care in TNA (Kitson, Silverston, Wiechula, Zeitz, Marcoionni & Rage 2011). The importance of these skill types will be investigated in this research study. In addition, allocation of members to teams has to be carefully considered, and there should be clear definition of roles amongst team members, and good planning.

As depicted in Figure 2.5 the process component implies that the link between effective nurse manager's performance and clear definition of the TNA model and its operating procedures, consultation with staff and training on the approach should be investigated. The outputs to be enhanced include team performance, quality care, improved safety of patients, improved planning and more clinically effective services and higher job satisfaction levels. Taken together, this will lead to improved patient care, fewer staff sick days and decreased attrition (Cherie & Gebrekidan 2005). Understanding further the competencies required in TNA to provide the link with their effects on quality care, patient safety and effective management by nurse managers in Gauteng hospitals will shed more light in determining the soft skills or requisite management competencies for nursing management in hospitals.

Nurse managers can use various sources of power that they possess to reward performance, to inspire team members' obedience and loyalty to effect change at the unit, organizational and at a professional level. The use of some degree of legitimate power benefits patients and subordinates as well as authority to carry out organizational decisions and goals (Cherie & Gebrekidan 2005).

As discussed, appropriate leadership skills will be able to successfully motivate and develop staff. Motivated nurse managers will in turn be able to achieve high standards of patient care, perform proper fiscal planning and contain hospital costs, motivate nurses, ensure staff retention and increase patient satisfaction levels (Curtis & O'Connell 2011) (Figure 2.5).

Figure 2.5 Relationships between the constructs in the team nursing approach



(Source: Developed for this study using information from various seminal papers cited in this section).

From the above discussion the following research questions emerges:

RQ3 What are the factors influencing effective nurse manager performance in hospitals?

- H^{n}_{5} There are multiple factors influencing nurse manager performance.

- H^n_6 There is a positive relationship between requisite competencies, effective behaviour, team nursing approach and nurse managers' performance.
- H^n_7 For nurse managers, there is no difference in the perception of factors influencing effective nurse manager performance in public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ4 Do perceptions on the relevance of team nursing approaches influence perceptions of nurse manager performance?

- H^n_8 There is no relationship between the relevance of team nursing approaches and perceptions of nurse manager performance.
- H^n_9 There is no difference in perceptions of the relevance of team nursing approaches between public or private hospitals, age, length of service as a nurse manager and management level of participants.

2.3.3.2 Summary of team nursing approach section

This section of the chapter focused on the relevance of TNA in improving nurse managers' performance in hospitals. The evolving nursing profession and the need for mixed skills to be able to deal with the challenges in the health sector brings to the forefront team skills. It is plausible that better teamwork generally will lead to higher levels of performance, optimal patient and staff outcomes. The teams should be guided by excellent leaders who are knowledgeable in terms of clinical content, leadership and management skills. The management skills and competencies required by nursing managers who are also team leaders such as communication, problem solving, good planning, conflict management, are consistent with scholarly research. Taken together, such competencies should be considered in developing a competency development framework for nurse managers as team leaders. The next section is on competency-based model.

2.3.4 A competency-based model

The competency-based model is an approach to determine the optimum combination of skills and behaviours required for each position in an organization. This approach creates an opportunity to optimize human resources by identifying potential flexibility in job boundaries, utilizing multi-tasking, and promoting creative teamwork (Dubois 2004). Although the competency-based approach to competency development has its origins in the Scientific Management era when Taylor emphasized the importance of task analysis and work flows, it gained prominence after the success of the Outcome-Based-Educational (OBE) approach of the 1980s. The model was subsequently widely embraced to facilitate educational and competency development initiatives. The OBE approach entails the student being active, applying their knowledge and skills, as opposed to being passive in the learning process. That is, it signals a shift from tutor-centred, textbook-based perspectives to a student-centred outcomes-based approach (Van Niekerk 2002).

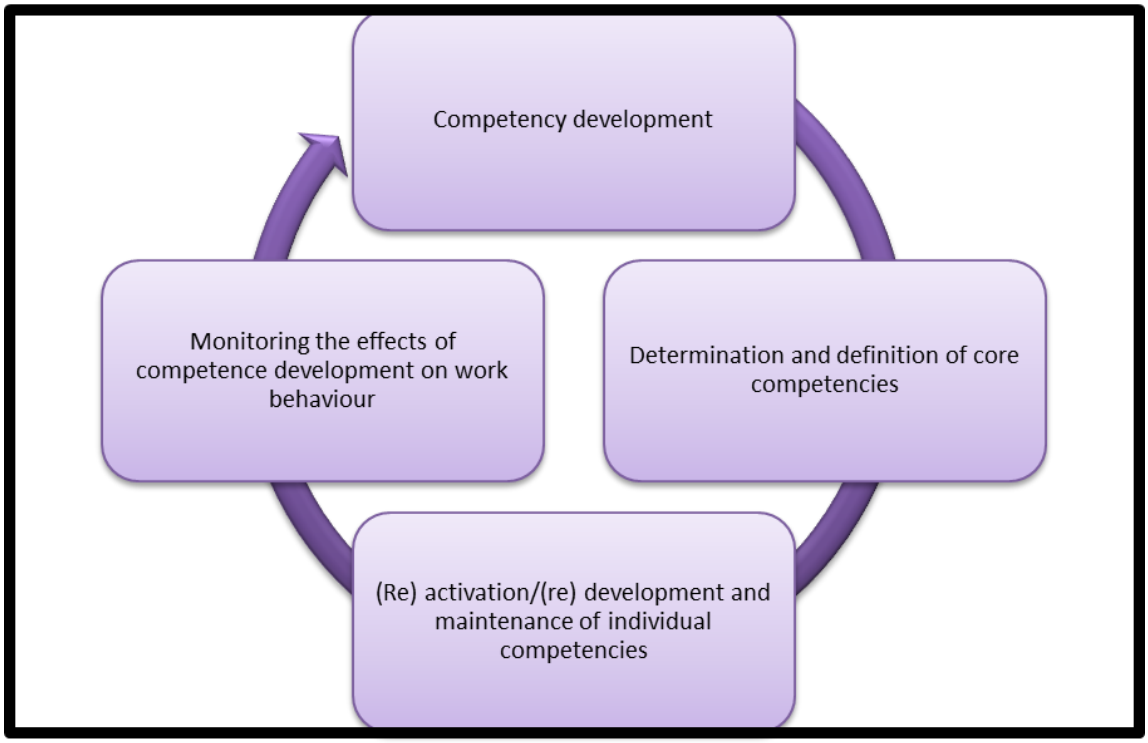
The competency-based model integrates both theory and practice and uses case-based experiential learning. It emphasizes the need to start by establishing job descriptions, that is, what the job entails before determining learning objectives. Required competencies and responsibilities are outlined in job descriptions. By using job descriptions it becomes possible for employers and others to assess the employee's competencies against those required for current or future roles within the organization (Pillay 2010a). After employee strengths and areas for development have been defined, it becomes possible to develop individual and team learning plans targeted to particular learning needs or the development of specific competencies (Bergenhenegouwen, Horn & Mooijman 1996).

In accordance with OBE approach, once an organization has explicitly defined current and future competency requirements for individuals, groups, areas, or the whole organization, this enables the organization to achieve a level of excellence in its operations. Accordingly, it becomes possible to develop: (a) an appropriate competency model, (b) measuring standards for measuring employee performance and capabilities, (c)

learning strategies targeted to close major gaps in organizational competencies and to (d) focus training frameworks that identify learning options or curriculum or programs to meet employee and organizational needs. Lastly, to develop (e) learning requirements and plans on the business goals and strategic direction for the organization (Dubois 2004, p154) aimed at improving the performance of nurse managers.

Figure 2.6 below, provides a summary of a cycle of competency development. An organization that has adopted a competency-based model should have as an initial step a set of tools that will be used to identify and describe the competencies. This will enable successful performance of the organization and effective management of performance. Identified competencies (and competency gaps) can form the basis for developing appropriate training interventions and programs that enable skills to be mobilized, reactivated, enhanced and maintained. The effect of individual competencies on work behaviour has to be measured. Monitoring the effects of competence development on work behaviour provides the effort for the revision of training if necessary and "further matching of the competencies of the employees to the organization's competencies. If it emerges that the match is inadequate, the competencies can be redefined and reactivated" (Bergenhenegouwen, Horn & Mooijman 1996, p.33).

Figure 2.6 Cycle of competency development



(Source: Adapted from Bergenhenegouwen, Horn & Mooijman 1996, p.33).

In Figure 2.6, the decision in an organization to follow a competency development model, leads to the determination of specific competencies that are characteristic of high performance and success in nursing management. It also leads to the determination of which competency development practices should be carried out by an organization and an employee to maintain or enhance the employee's functional, learning and occupational competencies to improve their performance.

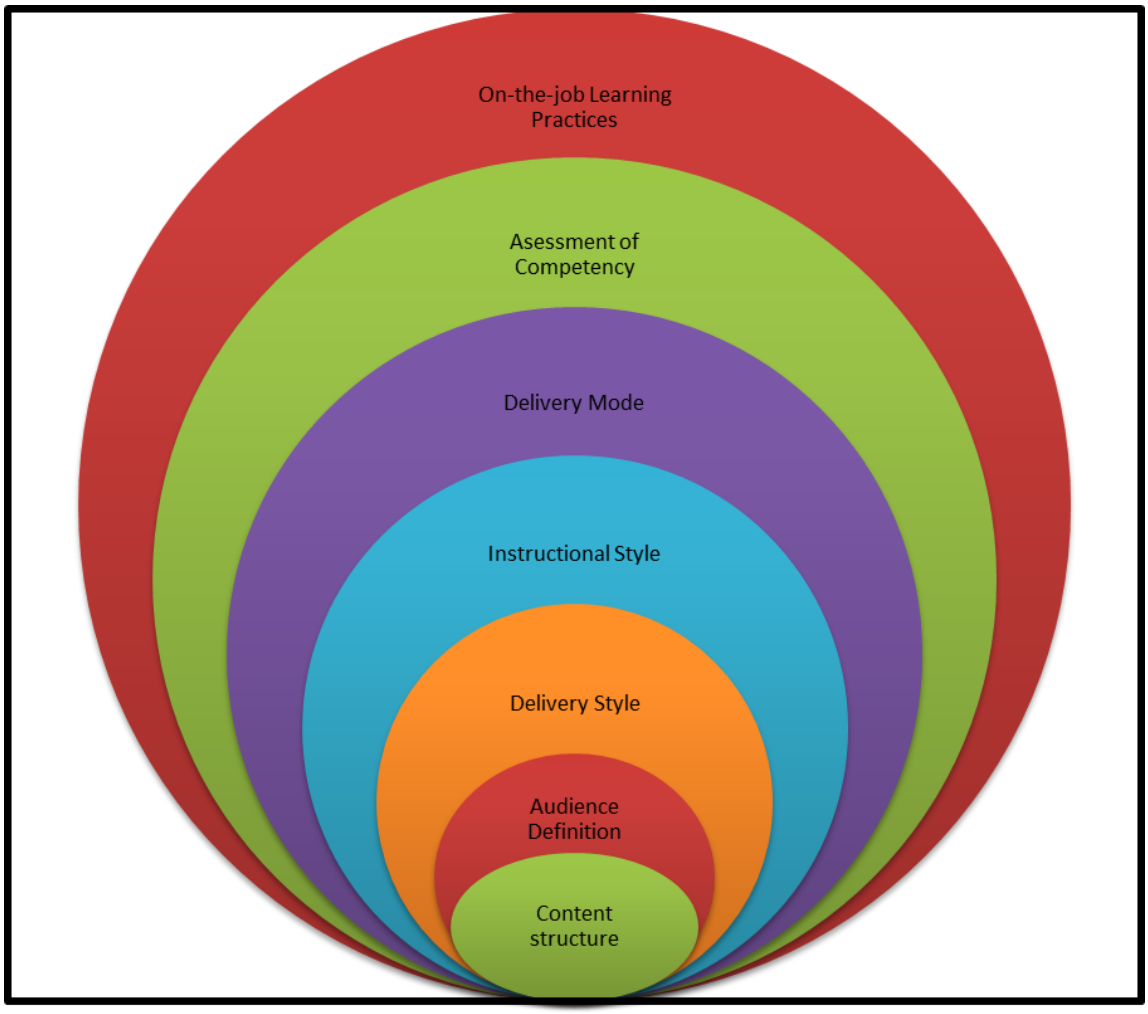
The challenges associated with competency-based model, mentioned by Bergenhenegouwen, Horn and Mooijman (1996) include; (a) developing tools and techniques for identifying and describing core competencies and personal competencies, (b) developing personal development plans for employees, (c) developing and implementing competence based methods and instruments in the recruitment and selection of staff, appraisal and remuneration, training and development and career development, and (d) coordinating and establishing relationships between objectives, the business strategy, organizational structure, work procedures and core competencies of

the organization on the one hand and on the other hand competencies of the individual employee (Bergenhenegouwen, Horn and Mooijman 1996, p.35).

Competency-based models rely on measurable assessment of learned or developed competencies. Unlike traditional education, assessment is carried out by those that are external to the learning process that employ assessment strategies that are based on smaller units of analysis that are clearly defined and known to all and not based on examination questions. It should be noted that in this model if one or two competencies have not been mastered they can be repeated, unlike traditional courses where one would have to redo the entire course. Ideally competencies would build on other competencies. Competencies that have been identified for roles within the organization can serve as the standards or criteria for determining the level of success of learning interventions. This approach is particularly powerful because assessments based on competencies provide the organization with evidence of how employee workplace behaviour has improved. Based on this, the organization can determine whether the learning investments are paying off and, as appropriate, what changes need to be made to address performance gaps (Dingle 1995).

Figure 2.7 below, provides an overview of the generic elements of a competency development framework.

Figure 2.7 Competency development framework



(Source: Developed for this study using information from Joni 2009 & Jones 2007).

As depicted in Figure 2.7 above, preparation of nurses for the management role should include both formal and informal strategies. These include academic training, on-the-job learning experiences through mentors or through other avenues, observing expert leaders and working closely with them as well as receiving constructive feedback on their performance (Jones 2007). Next, acquisition of competencies can be measured utilizing a variety of mechanisms such as videotaping, development of portfolio of competence, nurse manager's self-assessment of competence and utilization of the hospital intranet (Jones 2007).

Often curriculum is presented in *mixed delivery modes* and the choice of learning options is often connected to convenience. The delivery mode component could include both face-to-face instructor-led, online instruction and the use of workbooks. In instructor-led mode, instructors that deliver the curriculum are more engaged as they deliver it in person. The main disadvantage of this delivery mode is that it has to be scheduled at a convenient time for participants. In contrast, online instruction allows for flexibility in terms of the delivery of materials and varied time schedules and locations of instructors and participants and can, therefore, suit individuals who cannot take up full-time studies because of work and family commitments. Interaction can be through video conferencing or social networking tools. Online courses require an instructor to monitor student progress, upload discussion questions and to provide tutoring when needed. The main disadvantage of online instruction is that participants must have computer access and be computer literate to participate, lack of communication by body language and high capital outlay costs towards online curriculum development. Workbooks can deliver content without the need for an instructor or timeline. Workbooks are often used in distance education offerings particularly when it is not cost effective to develop an online course for a limited number of participants. Unlike face-to-face instructor-led and online instruction, workbooks do not allow for participant interaction.

The *instructional style* could be self-paced or instructor led. In terms of self-paced style, students set the pace for the learning. There is typically no set timeline for completion of content. An assigned instructor is usually only to be a tutor.

The *delivery style* could include interactive group work (e.g. discussions, games, brainstorming and simulations carried out in pairs or larger groups), lecture (instructor-led information sharing), demonstration (instructor demonstrates process in front of participants) and individual work (e.g. work sheets, research papers, readings for individual participants).

Audience definition is key in informing what has to be covered in the content or modules for training. For example content may have to be varied for different levels of nurse managers and departments given their different roles and levels of responsibilities. Content structure includes the determination of curricula or module themes based on common competencies and role specific competencies as well as determining the sequence of content or module. Sequencing of content is an important step in determining the outline of the content structure (Joni 2009).

2.3.4.1 Application to nursing management

A competency-based model for nursing management is based on the notion that there are competencies that are most valuable for effective management (Bergenhenegouwen, Horn & Mooijman 1996). The implementation of this model contributes to strengthened HR practices, improved organizational effectiveness, streamlined costs, better job satisfaction and increased productivity (Dubois 2004). In particular it ensures improved selection, training and development, appraisal and succession planning as it plainly clarifies the skills and knowledge characteristics required for the role. Further the model in nursing is beneficial because it facilitates (a) communication across institutions and programme lines, (b) career growth across health professions and career stages (c) the development of standards for best practice (d) clarity of learning direction (e) opportunities for assessment of performance by self and peers (Pillay 2010a, p.546).

According to Trent (2004) most team leaders would benefit from competency development initiatives directed at improving specific knowledge and skill areas given that most team leaders work at a demanding operational level. Investment in the development of competencies of nurse managers is important because they will (a) acquire the skills to develop their leadership capacities, (b) seek to know their team better, (c) adopt strategies that are different from the ones that they currently use in order to make better use of human potential (Alves & Canilho 2010; Bucic, Robinson & Ramburuth 2010).

Using a competency-based model and building on management competency theories will provide answers for the development of critical nursing managers' competencies required for effective management of hospitals and for improved provision and delivery of health care services. Appropriate training and development programs based on the critical competencies needed for success in the job and organization, personal needs and experiences of nursing managers can be put in place to train nurse managers to provide leadership and to ensure a sustainable improvement in the work context of nurse managers and hence on the quality of care and health of the communities their hospitals serve (Nursing Strategy for South Africa 2008).

A study by Mokoka, Oosthuizen and Ehlers (2010) found that improving professional practice and enhancing nurse managers' clinical competence through on-going education may increase retention and job satisfaction and help ensure a stable workforce. The overall feeling of nurse managers was that in-service training was insufficient to provide exceptional management skills required in the current South African health care environment, and that the curricula of nurse management programs and in-service training might be out-dated and irrelevant. Further, maximum performance of a person's capability or talent is consistent with the needs of job demands and the organization (Weber et al. 2009).

Training as an intervention is not an end in itself, but is a means for accomplishing a more powerful objective. By strengthening the training of nurse managers and ensuring that training is responsive to the needs of the profession is critical. As well, enhancing the skills and capacities of hospital nurse managers, would help deal with a full range of challenges or demands associated with their occupation or workplace (JIPSA 2010). Having better skilled nurse managers would not only improve workplace performance but would result in a ripple effect on improved management of hospitals. The health sector as a whole would be more efficient and effective in its delivery of services.

Survey findings on the quality of nursing care in SA in three health districts in KwaZulu-Natal found a high degree of patient dissatisfaction levels (43% on the long scale and 16% on the short scale) (Uys & Naidoo 2004, p.6). The results are a cause for concern and action for SA nursing. More specifically, there were problems in the quality of care given by nurses such as poor quality of record keeping and availability of essential drugs (Uys & Naidoo 2004). Poor quality of nursing in hospitals results in poor service and high rates of dissatisfaction amongst patients. The researchers suggested that education and training as well as the introduction of special incentives for higher quality might be the solution for effective management, improved service delivery and patient satisfaction levels (Uys & Naidoo 2004). This suggestion is consistent with the assertion by the National Human Resource Development Policy of the Department of Health in SA that emphasizes the need for education and training programs in SA in order to develop skilled personnel able to respond competently to the health needs of South African communities (Van Niekerk 2002). National and Provincial Departments of Health, South African Nursing Council (SANC), Nursing Educational Institutions and Professional Associations are responsible for making sure that leadership in nursing is developed, nurtured and enhanced (Nursing Strategy for South Africa 2008).

Based on the evidence of SA nursing outcomes, nursing managers will be required to possess leadership and management skills in order to meet the challenges brought about by the changing socio-political, economic and technological landscape as well as the expectations of patients, health professionals, politicians and the public. Further, the changed role of nurse managers in SA, as in other countries, necessitates an emerging nursing framework, a much broader understanding of the social and health systems. Similarly, a competency framework should also encompass efficient teams and strong management and leadership capabilities. In a study by Mokoka, Oosthuizen and Ehlers (2010) nurse managers agreed that the health care environment requires managers who are also leaders. This supports the changing nature of nurse manager roles from nurses to nurse leaders. In contemporary nurse environments, nurse managers are advised to address their shortcomings by taking on managerial and leadership roles that support

quality care services (Mokoka, Oosthuizen & Ehlers 2010). The paradox of this for some scholars is that nurse managers are expected to focus on their management role rather than their leadership or nursing skills (Surakka 2008). For instance, problem solving skills are increasingly relevant.

It is generally agreed that nurse managers should possess clinical skills, leadership and management competencies. For the purpose of this dissertation, the most frequently cited leadership and management competencies from the scholarly literature on leadership theory, management competency theories and different team nursing approaches is clustered into five (5) groups. These groupings are explained in Table 2.9 below. This table will allow for a thorough understanding and test of the type of knowledge, practical skills and behaviour needed for ensuring the desired outcomes in terms of nursing managers' performance in hospitals.

Table 2.9 Expected outcomes for competency development programs of nurse managers

Group	Competency	Expected Outcomes for Nurse Managers' Competency Development Programme
1	Judgement Decision making Problem solving Conflict resolution and management skills Clear goals and commitment to goals	Confronts conflict directly and objectively with a goal of resolution for all. Effectively prevents and manages conflict. Demonstrates skill at formulating solutions to difficult/complex issues by recognising opportunities. Creates an environment that supports professionalism. Uses creativity and innovation in achieving organizational objectives.
2	Management skills Planning or task co-ordination and Organizing skills	Identifies, prioritizes and meets established deadlines. Exercises emotional self-awareness and self-control.
3.	Communication Negotiation and influencing skills	Promotes open information sharing across organizational boundaries. Listens effectively to others. Presents ideas and complex material clearly, logically and concisely.
4.	Practitioner expertise Clinical Knowledge of health care environment	Demonstrates clinical proficiency or know how.
5	Supervision Team leadership Team building Motivation Relationship skills Delegation	Motivates nurses to reach their highest performance potential in a team and as individuals. Supervises the nursing care provided by support staff. Encourages higher performance levels and satisfaction with team processes and outcomes. Accomplishes work through delegation. Provides honest, timely feedback about day-to-day projects and employee performance. Builds internal or external interaction as a means to meet team goals. Ensures that individual or team goals are not met at the expense of others. Commits to the vision, goal and objectives of the organization Supports development of competency of team members. Encourages good open communication between members of the various teams and between teams.

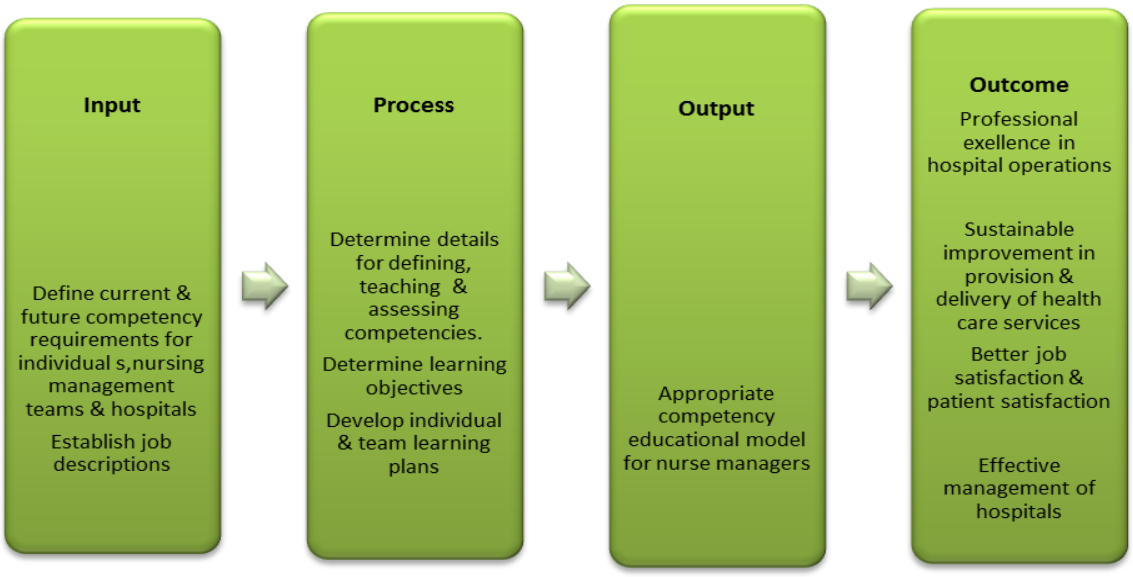
(Source: Developed for this study using information from Atwal & Caldwell (2006); Eason (2009); Ferguson & Cioffi (2011); Hartman, Conklin & Smith (2007); Jennings, Scalzi, Rogers & Keane (2007); Laker & Powell (2011); Timmins (2011); Weber et al. 2009; Pazos (2012)).

This dissertation is expected to provide information on elements of competency development framework and strategies necessary for the development of a competency

educational model that will ensure professional excellence of nursing managers in hospitals. It will be particularly valuable in the future development of modules to be studied, delivery modes and learning outcomes and standards. This is based on the assumption that formal and informal training and learning in relevant modules can improve knowledge and competencies of nurse managers.

The input component in Figure 2.8 below indicates that the current and future requisite competencies of nurse managers in hospitals should be investigated. This will be relevant for nurse managers in general as well as for nurse managers who are team leaders; component inputs will also be important to identify job descriptions for nursing managers and leaders. The process component details various competency development programs, from learning objectives and expected outcomes, learning plans, content for learning programs and courses, modes of delivery, and management level of participants. These processes will assist in addressing current competency gaps and required future competencies. The output component in Figure 2.8 illustrates that identified requisite skills and competencies form the basis for the refinement or development of an appropriate competency development framework for nurse managers.

Figure 2.8 Relationship of constructs in a competency-based model in this study



(Source: Developed for this study using information from various seminal papers cited in this section).

The following research questions emerge from the above discussions:

RQ5 What competency development initiatives have nurse managers been exposed to, to enable them to carry out their roles and responsibilities as nurse managers?

- H^n_{10} Competency development for nurse managers is not focused on clinical nursing.
- H^n_{11} Competency development for nurse managers is not focused on generic management skills.
- H^n_{12} Improved nurse managers' performance in hospitals is not a result of clinical and management competency development initiatives.

RQ6 What should future competency development initiatives entail taking into account the moderating variables of type of hospital, age, length of service as a nurse manager and management level of nurse managers?

2.3.4.2 Summary of competency-based approaches

This section has established the importance of both theoretical training and practice in the workplace. It has provided context for the development or refinement of a competency development model for nurse managers that ensure excellence in the performance of nurse managers and continuous improvement of service delivery. The competency-based model was presented as a means to identify the various skills and abilities e.g., communication skills, that are to be included in a future competency framework. Consistent with the overall research objective, the latter will help to significantly improve the performance of nurse managers. The next section is a summary of the key theories and concepts identified in the dissertation.

2.3.5 Summary of key disciplines and theories

Table 2.10 is a summary of key theories, supporting and secondary literature plus various competency models.

Table 2.10 Summary of selected theories and model for this dissertation

Theories & Disciplines	Key scholarly contributions	Major descriptions
Management Competency Theories	Explains that clinical skills are insufficient for the success of nurse managers. Emphasizes the importance of identifying and developing requisite competencies to ensure effective performance	• Focuses on closing the gap between theory and practice by introducing competency-based education to ensure performance effectiveness. • Presents theoretical background for examining conceptual issues and debates around managerial competencies in general and in health context. • Presents different lists of requisite competencies and their importance, therefore it is reasonable to use a combination of lists for this study because they play complementary roles in examining the nurse competency phenomena. • Identified clusters of competencies relevant to nursing managers to be considered for the determination of curricula or content for future training framework and nursing managers' competency development programs.
Leadership Theories	Confirms the need for future competency development initiatives to focus on both leadership and management skills and competencies as well as clinical knowledge for nurse managers to excel in their work.	• Emphasizes the need of a combination of theory and practice. • Outlines similarities between leadership and management competencies and the differences in both roles. • Stresses the need for flexibility in leadership and managerial style due to the unpredictable nature of the health care system. • Mentions factors which could influence performance of leadership and management that could indirectly address some of the challenges in the SA health sector and in Gauteng hospitals. • Identifies the key characteristics, behaviours and skills of effective leaders
Team Based Nursing Approach	Identifies TNA as a solution to health care service delivery challenges in Gauteng hospitals. Identifies clinical content, leadership and management competencies and skills that are necessary for team leaders which should be considered for competency development initiatives for nurse managers as team leaders	• Emphasizes the need for multidisciplinary skills of team members to ensure effective health care services. • The key benefit of successful implementation of TNA is improved quality and safety of patient care. • Mentions a need for nursing leadership and management skills and competencies for team leaders to be able to effectively lead nursing teams. • Competency development programs should include team leadership skills and team collaboration skills for the members of the entire team. • Mentions factors that should be considered for successful implementation of TNA.
Competency-Based Model	Explains that formal and informal ways of learning should be considered in future competency development initiatives. Continuous review and revision of competency development model is necessary to ensure excellent performance.	• Emphasizes OBE approach for educational and competency development. • There is flexibility, and options to be considered in future competency development systems and models (e.g. varied modes of delivery and learning styles). • Management competency training curricula should cover commonalities among leadership and management competencies. • Job description, requisite skills and specific organizational or sector goals and demands are to be defined and they should inform learning objectives, programs and courses.

(Source: Developed for this study using information from various seminal papers cited in this section).

The following discussion draws the various sub-sections together in respect of the main competency approaches, justifies the theoretical framework and provides a basis for exploring the research questions and null hypotheses.

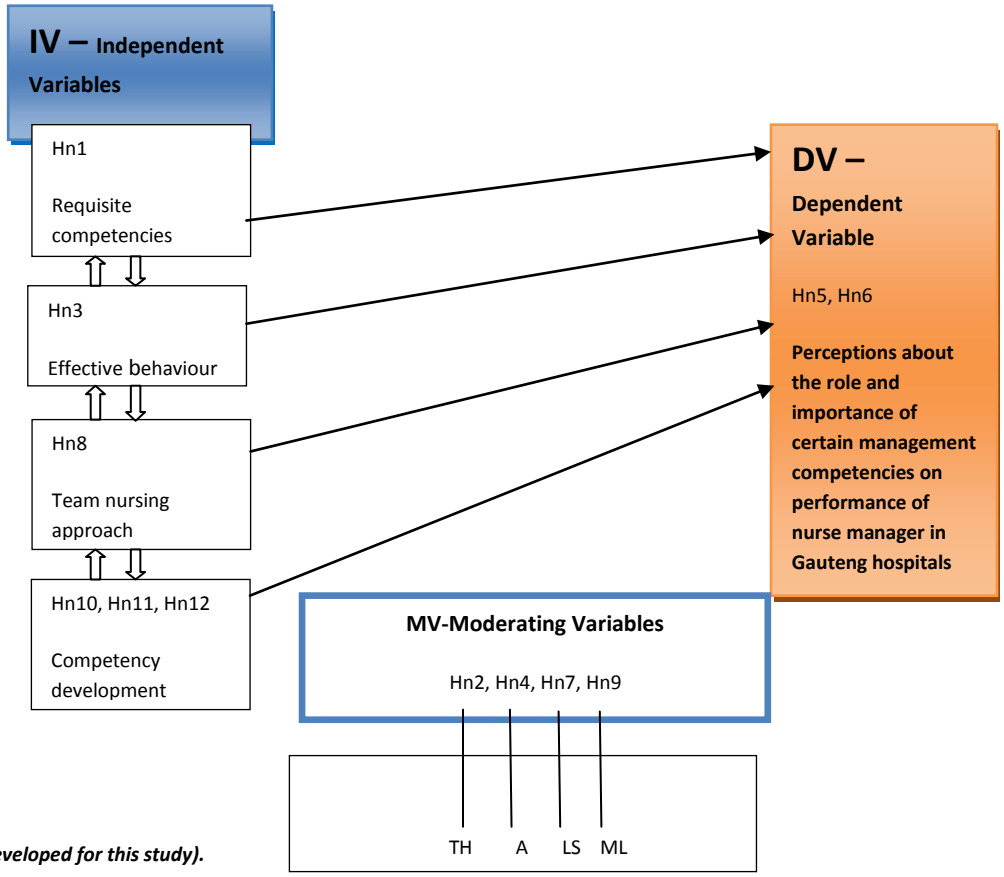
2.4 Theoretical Framework

The components of the conceptual framework are explained and presented in Figure 2.9.

2.4.1 Components of the conceptual framework

The conceptual model (Figure 2.9) emerges from an analysis of key scholarly contributions (Table 2.10). Figure 2.9 presents the components of the conceptual framework.

Figure 2.9 Components of a conceptual framework



(Source: Developed for this study).

2.4.1.1 Independent variables: requisite nurse manager's competencies and relevance of team nursing approach

Four important Independent Variables (**IV**) were identified in the literature as playing a critical role in the performance of nurse managers in hospitals. These variables include 'requisite nurse managers' competencies,' 'effective nurse managers' behaviour', 'team nursing approach' and 'competency development'.

2.4.1.1.1 Requisite competencies

From the reviewed literature, there is no single and standard list of management competencies for nurse managers. Various categories of generic management competencies are cited by various scholars as indicated in Table 2.2. The literature indicates that in SA, improved service delivery in hospitals and patient satisfaction levels depends on nurse managers' knowledge of requisite competencies (Kraak 2010, Mokoka, Oosthuizen & Ehlers 2010, Uys & Naidoo 2004). In brief, identified competencies relevant to nursing managers include: 'leadership', 'directing subordinates', 'specialized knowledge', 'conflict resolution and management', 'problem solving', 'communication', 'planning and task co-ordination', 'professional', 'social', 'management skills', 'directing' and 'motivating'.

2.4.1.1.2 Team nursing approach

A team nursing approach enables team members to draw on the collective competencies, experiences and knowledge of others in contributing to the effective management of hospitals. The successful implementation of TNA influences nurse managers' performance. Moreover, more effective teams contribute to high performance; assist towards creating effective and efficient hospitals as well as satisfied staff and patients. Accordingly, it was deemed important to investigate the relationship between the implementation of TNA and performance effectiveness in this dissertation.

2.4.1.1.3 Competency development

The competency development of nurse managers was identified as an important variable for ensuring that nurse managers develop the skills required to respond appropriately to the health needs of the South African people. A thorough understanding of the details of current learning programs and courses in competency development initiatives is necessary. The literature notes that often nurse managers have been promoted to management positions without any formal training in nurse management. In the past, knowledge to carry out their new role has only been related to on-the-job learning (Viitanen et al. 2007). It was determined that this dissertation should indicate whether future competency development initiatives should focus on clinical knowledge or management skills (or both). In addition, it was deemed important to consider the elements of a competency development framework consisting of the various sub-sections aforementioned and summarised in Table 2.8. Accordingly, the relationships between leadership and management competencies and their influence on nurse management performance will be investigated. The findings of the dissertation should enable the development of a new competency development framework.

2.4.1.2 Dependent variable: effective nurse manager's performance in hospitals

The Dependent Variable (**DV**) is what the researcher will be trying to predict and relates to the main research goal. This is now restated as follows:

> *What are the perceptions of nurse managers about the role and importance of certain management competencies (soft skills) on performance in Gauteng hospitals?*

In relation to the conceptual model (or research design) Figure 2.9 earlier, the independent variables (IV) lead to the dependent variable (DV). Here, what will be explored is nurse managers' perceptions on the role and importance of certain competencies, behaviour relevant to nurse managers, the relevance of the

implementation of a TNA and the development of requisite competencies and their effects on nurse managers' performance in hospitals. Taken together, the model encapsulates the key points of the literature review and explores the relationships between the variables.

2.4.1.3 Moderator variables: Demographics

The conceptual framework will be tested to determine whether the relationship between the independent variables and dependent variables is varied when taking into account the Moderator Variables **(MV)** listed in Figure 2.9 above. The relationships between the nurse managers' perception of requisite core competencies, effective practices of nurse managers, relevance of implementation of TNA and development of requisite competencies as well as their perception of factors that could influence nurse managers' performance could be influenced by demographic factors hence the need to investigate the impact of the demographic factors on the relationship between independent and dependent variables.

The inclusion of these moderator variables is based on the literature findings which indicated that their presence may have some effect on the independent and dependent variables. The following discussion explains in detail the demographic variables selected for this study, their application in previous studies, which is relevant for this dissertation, and how they may impact on the independent and dependent variable relationship.

2.4.1.3.1 Type of hospital (TH in Figure 2.9) - The type of hospital was included as a moderator variable because differences might emerge in perceptions of nurse managers in different hospital settings or different environments. For example the study by Surakka (2008) discusses the differences in perceptions and characteristics of nurse mangers in rural and *university hospitals*, and between psychiatric and somatic nursing. Further to this, there is a commonly held view that there are distinct differences between public and

private hospitals that require different competencies. In a study by Pillay (2010) *public sector* nursing managers assessed themselves as less competent when compared to their peers in the *private sector.* This dissertation will investigate the effect of perceptions of nurse managers' employed in different types of public and private hospitals including general public hospitals, specialist public hospitals, academic public hospitals, general private hospitals and specialist hospitals. The rationale for choosing these settings or environments is that significant variations such as competency development programs that they have been exposed to, nursing approaches and factors influencing performance and professional culture of a nurse manager in different environments could be found. Therefore, requisite competencies and practices and future competency development frameworks might have to reflect differences in accordance with clinical settings.

2.4.1.3.2 Age (A in Figure 2.9) - Age was included as a moderator variable because the literature has identified age-related differences in perceptions of nurse managers in terms of position and job responsibilities and levels of commitment to the organization. In a study of nurse managers in South African hospitals, younger nurses viewed their positions, responsibilities and commitment to an organization differently from older nurses. Older nurses viewed rank, age and some job responsibilities as important while younger nurses were more interested in getting the job done within the shortest time possible (Mokoka, Oosthuizen & Ehlers 2010). Therefore, useful information could emerge from this study that a particular age group of nurse managers view competencies, behaviour, relevance of implementation of TNA and competency development differently.

2.4.1.3.3 Length of service (LS in Figure 2.9) - Length of service was included in this study as a moderator variable because of changes in health care over many years. Nurse managers over time would have witnessed changes in the quality of nursing care, the changing role of nurse managers and changing competency requirements of nurse managers. Further to this, nurse managers with longer service might be more cognisant of the appropriateness of team nursing for effective performance in hospitals. In addition,

long serving nurse managers could also be knowledgeable about factors influencing effective nurse manager performance. They may also be cognisant of current and future competency development needs and considerations. As well, nurse managers with more years of experience could be more knowledgeable about managing hospital wards and departments (Ntlabezo, Ethlers & Booyens 2004).

2.4.1.3.4 Management Level (ML in Figure 2.9) - The responsibilities of nurse managers in hospitals vary according to their management level. While nurse managers are all in one way or another committed to the running and effective management of hospitals, their different roles and responsibilities may lead to different perspectives on how to best achieve this. Therefore, it was important to investigate whether there would be differences on views on the requisite skills and behaviour, relevance of the implementation of TNA, factors that influence nurse manager performance, current and future competency development initiatives.

2.4.1.4 The three models to explore the relationships

The three models presented in the conceptual framework were designed to explore the independent and dependent relationships and to determine whether there was an effect on this relationship as a result of the moderating variables. All these components are illustrated in Figure 2.9 above, which represents the conceptual framework for this dissertation. It is also noted that theoretical justification must not be neglected when analysing and interpreting results and drawing conclusions. Collectively, the research questions to explore the research problem plus supporting null hypotheses are now restated.

RQ1 What competencies of nursing management are regarded as important in hospitals?

- H^n_1 For nurse managers, the possession of requisite competencies does not lead to increased nurse manager performance.

- H^n_2 For nurse managers, there is no difference in the perception of the importance of competencies between public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ2 How do specific competencies relate to the behaviour of effective nurse managers?

- H^n_3 There is no relationship between perceptions of requisite competencies and nurse manager behaviour.
- H^n_4 For nurse managers, there is no difference in the perception of effective behaviour of nurse manager between public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ3 What are the factors influencing effective nurse manager performance in hospitals?

- H^n_5 There are multiple factors influencing nurse manager performance.
- H^n_6 There is a positive relationship between requisite competencies, effective behaviour, team nursing approach and nurse managers' performance.
- H^n_7 For nurse managers, there is no difference in the perception of factors influencing effective nurse manager performance in public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ4 Do perceptions of the relevance of team nursing approaches influence perceptions of nurse manager performance?

- H^n_8 There is no relationship between the relevance of team nursing approaches and perceptions of nurse manager performance.
- H^n_9 There is no difference in perceptions of the relevance of team nursing approaches between public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ5 What competency development initiatives have nurse managers been exposed to, to be able to carry out their roles and responsibilities as nurse managers?

- H^n_{10} Competency development for nurse managers is not focused on clinical nursing.
- H^n_{11} Competency development for nurse managers is not focused on generic management skills.
- H^n_{12} Improved nurse managers' performance in hospitals is not a result of clinical and management competency development initiatives.

RQ6 What should future competency development initiatives entail taking into account the moderating variables of type of hospital, age, length of service as a nurse manager and management level of nurse managers?

2.5 Summary of the chapter

This literature review chapter presented the context, arguments and rationale for the dissertation based on an extensive literature review. The chapter firstly provided detailed definitions of the core concepts then a discussion on each of the key theories and discipline areas was undertaken. A number of research gaps were identified in relation to the competencies of nursing managers in hospitals. These are presented as research issues in each of the relevant sections. Thereafter an explanation of the conceptual framework for this dissertation is provided. The chapter concludes with the key research issue and objective, as follows:

Research issue

What are the perceptions of nurse managers about the role and importance of certain management competencies (soft skills) on performance in Gauteng hospitals?

Research objective

The overall objective of the proposed study is to:

> *Gain new knowledge about the role and importance of soft skills or requisite competencies for nursing management in hospitals. Further, the goal of this dissertation is to establish a framework by which key competencies required for working in hospitals are reflected in competency development programs that benefit the profession.*

The methodology employed in this study is presented in Chapter 3.

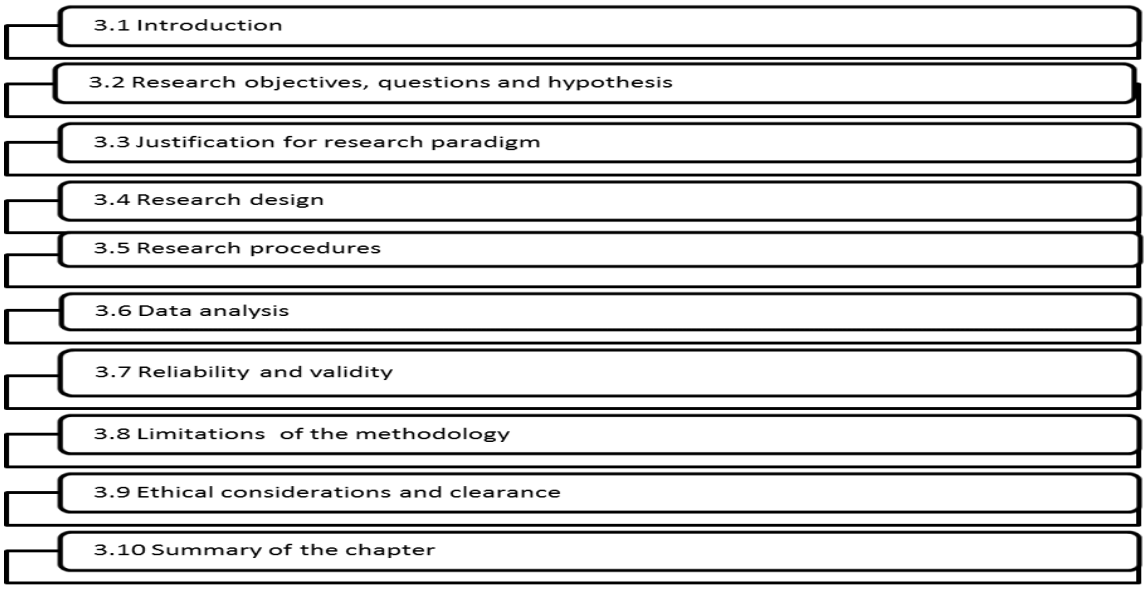
CHAPTER 3 - METHODOLOGY

3.1 Introduction

Chapter two presented and discussed the relevant literature for the dissertation. Taken together, various theoretical perspectives and issues highlighted the importance of having nurse managers with appropriate skills or relevant competencies in order for them to perform efficiently in hospitals.

Accordingly, this chapter documents the research methodology. It starts by reiterating the research objective, research questions and hypotheses. It then provides justification for the research paradigm and research design. Next, it explains the sampling strategies and recruitment of participants as well as data collection stages, research instruments used and collection procedures. The data analysis strategies and processes are also detailed including the limitations of the methodology and ethical considerations of the study. The following diagram, Figure 3.1 presents the structure of the chapter.

Figure 3.1 Outline of the methodology chapter



(Source: Developed for this study).

3.2 Research objective, questions and hypotheses

The research objective stated in Chapter 2 Literature Review is to:

> *Gain new knowledge about the role and importance of soft skills or certain competencies for nursing management in hospitals. Further, the goal of the study is to establish a framework by which key competencies required for working in hospitals are reflected in competency development programs that benefit the profession.*

This section reiterates the research questions and presents the null hypotheses developed to inform the above-stated research objective. Consequently, the research questions and null hypotheses formulated to inform the research objective are:

RQ1 What competencies of nursing management are regarded as important in hospitals?

- H^n_1 For nurse managers, the possession of requisite competencies does not lead to increased nurse manager performance.
- H^n_2 For nurse managers, there is no difference in the perception of the importance of competencies between public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ2 How do specific competencies relate to the behaviour of effective nurse managers?

- H^n_3 There is no relationship between perceptions of requisite competencies and nurse manager behaviour.
- H^n_4 For nurse managers, there is no difference in the perception of effective behaviour of nurse managers between public or private hospitals, age, length of service as a nurse manager and management level of participants.

RQ3 What are the factors influencing effective nurse manager performance in hospitals?

- H^n_5 There are multiple factors influencing nurse manager performance.
- H^n_6 There is a positive relationship between requisite competencies, effective behaviour, team nursing approach and nurse managers' performance.
- H^n_7 For nurse managers, there is no difference in the perception of factors influencing effective nurse manager performance in public or private hospitals, age, length of service as a nurse manager and management level of participants.

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- H^n_8 There is no relationship between the relevance of team nursing approaches and perceptions of nurse manager performance.
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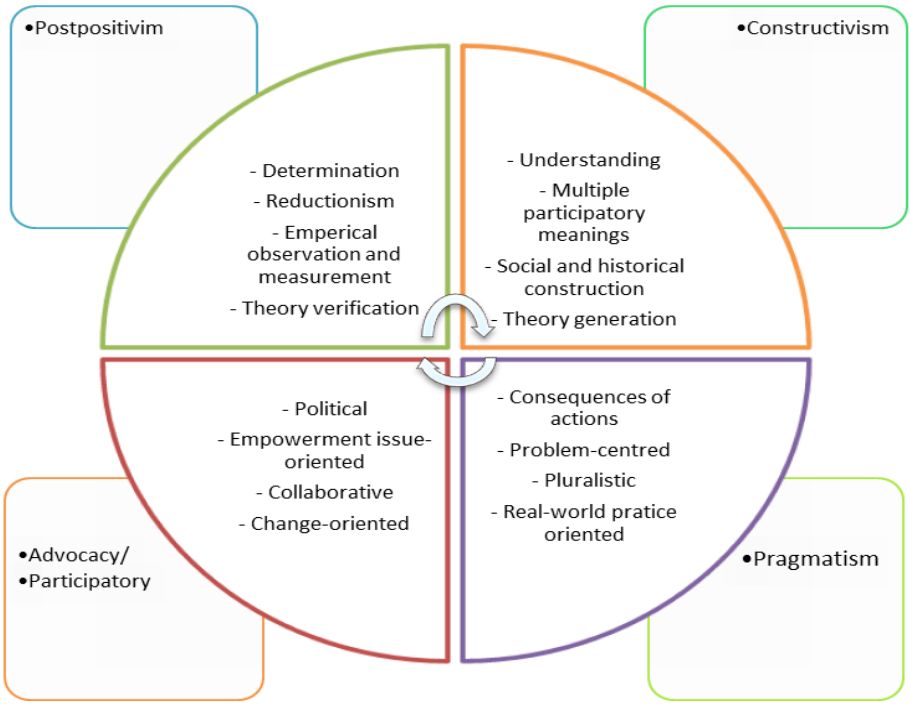
- H^n_{11} Competency development for nurse managers is not focused on generic management skills.
- H^n_{12} Improved nurse managers' performance in hospitals is not a result of clinical and management competency development initiatives.

RQ6 What should future competency development initiatives entail, taking into account the moderating variables of type of hospital, age, length of service as a nurse manager and management level of nurse managers?

3.3 Justification for Research Paradigm

There are four different research paradigms that guide the research action. These include post-positivism, constructivism, advocacy/participatory and pragmatism. A summary of the major elements of the four paradigms is presented in Figure 3.2 below.

Figure 3.2 Research paradigm



(Source: Adapted for this study from Creswell 2009).

After a review of the four paradigms and reviewing the information in Figure 3.2, the most appropriate research paradigm chosen for this study is pragmatism. In the case of pragmatism, researchers focus more on the research problem rather than on methods and solutions to problems. As such they would use all approaches available to collect and analyze data (Andrew & Halcomb 2006; Creswell 2009). As noted in Figure 3.2, this philosophy arises out of actions, situations and consequences. In this study, the researcher assesses whether certain competencies lead to certain performance of nurse

management. There is an acknowledgement that the study primarily applied a quantitative methodology within a positivist paradigm. Further, to follow-up on the emerging themes, interviews (qualitative methodology) were conducted to provide more insight and deeper understanding of the research problem. It is apparent from the processes by which hypotheses are derived that this study follows principles of deductive logic. Therefore, the analytical approach for the study is deductive reasoning (Mouton 1996).

3.4 Research design

Having determined the research paradigm, the next section of the discussion focuses on the research design for the investigation. A research design is a plan or framework for the collection and analysis of data of a study (Limpanitgul 2009; Mouton 1996). As well, it specifies what type of evidence is required and what methodologies need to be employed in order to address the research question in a manner such that the ultimate results are valid. A good design is one that fits the circumstances while yielding credible and useful answers to the questions that motivate it. The selection of a design affects the credibility of the research, its usefulness and its feasibility (Hendrick, Brickman & Rog 1993). The choice reflects decisions about the priority being given to a range of dimensions of the research process such as sampling, instruments to be used, and administration of NMCS (Limpanitgul 2009).

There are three types of research designs, namely, quantitative, qualitative and mixed methods. However, the two main approaches are quantitative and qualitative research designs. Quantitative is primarily used to evaluate objective numeric data to either confirm or disprove hypotheses. The focus is usually on the causal aspects of behavior and the collection of reliable and valid data. Furthermore, the researcher tries to understand the facts from an outsider perspective. On the other hand, qualitative methods are ideally suited to explore attitudes, opinions, thoughts, reactions and feelings of the subject. The researcher tries to achieve an insider's view of the environment in a

subjective way (Welman, Kruger & Mitchell 2005). Against the stated background and the potential importance of the results, both quantitative and qualitative research methods are applied for complementary purposes, with quantitative methods being the primary method used in this dissertation. The qualitative method is used simply to support the quantitative part of the study (Creswell 2009).

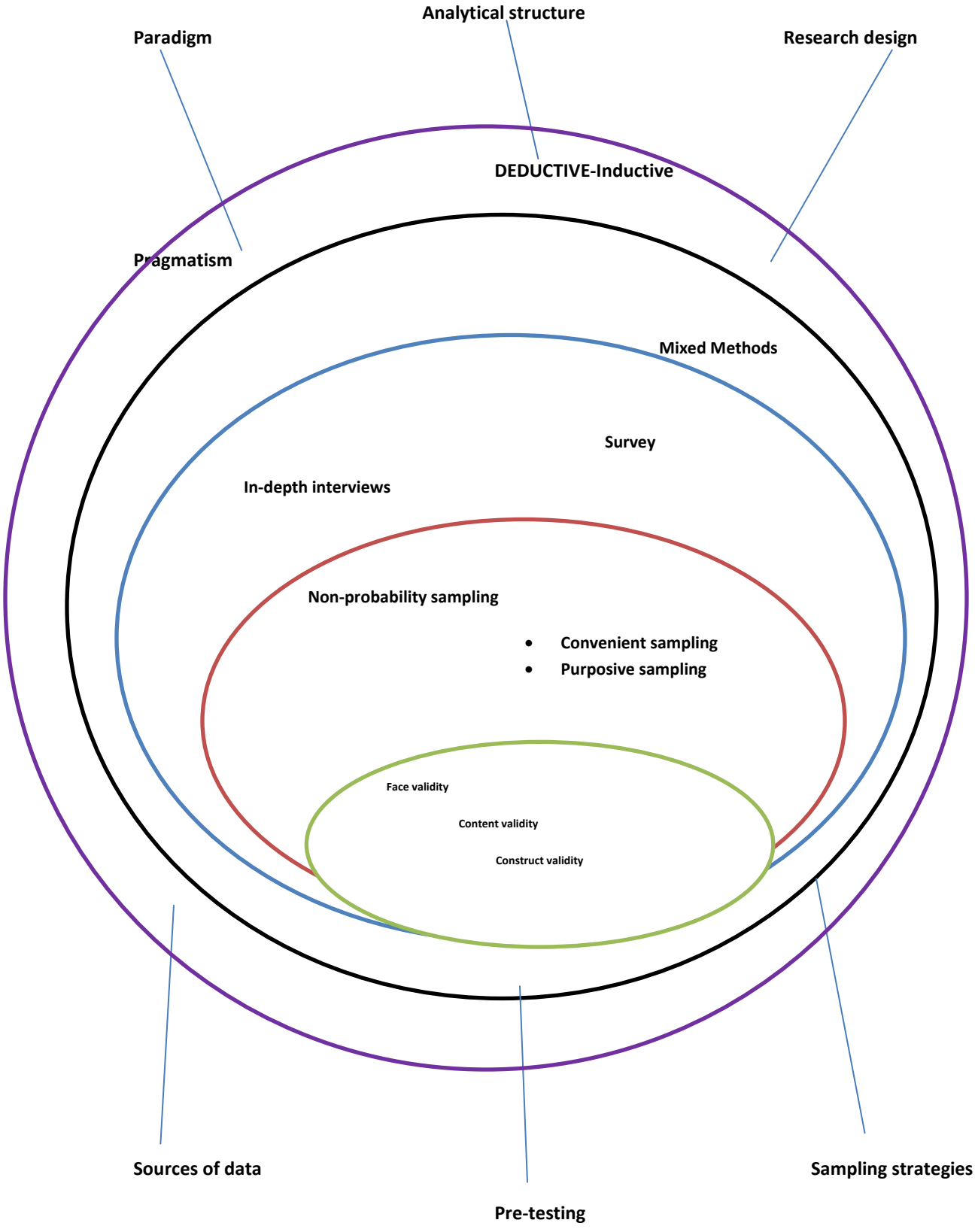
There is an assertion that mixed method research provides the answer to today's increasingly interdisciplinary, complex and dynamic research world (Johnson & Onwueqhuzi 2004, p.15). On the other hand proponents of mixed methods research hold that quantitative and qualitative methodologies are compatible and in real-world situations the methods (quantitative, qualitative or mixed methods) that work best should be used, especially in a viable sequence within the research design (Slevitch 2011). It is believed that the use of mixed methods is not a source of incompatibility; instead it promotes flexibility in data collection and knowledge generation (Reichardt & Rallis 1994) and improves the quality of research (Mouton 1996). However, some authors emphasize the incompatibility of qualitative and quantitative approaches. It is argued that in terms of the qualitative paradigm, knowledge is subject to continuous scrutiny and refinement. In contrast, those who believe in the quantitative paradigm are of the view that knowledge is definitive and that the truth is absolute (Reichardt & Rallis 1994). The fundamental difference between quantitative and qualitative methodologies lies in the ontology (reality) and epistemology (knowledge) (Slevitch 2011). Ontology is concerned with the nature of reality. Epistemology provides the philosophical underpinning and focuses on what constitutes acceptable knowledge in an area of study. It is also argued that "meta-theoretical assumptions underlying the two approaches are so different that any reconciliation would destroy the philosophical foundations of each hence the two cannot be combined in a single study" (Slevitch 2011, p.77). Pragmatists reject the incompatible premise as they are of the view that a single study can have mixed methods because the research question drives the study not the methodology or the paradigm. Their perspective is that both qualitative and quantitative methods can be used in a single

study if these methods will provide the most appropriate means to answer the research question (Andrew & Halcomb 2006).

These criticisms are noted and duly acknowledged. What is important to be noted for this dissertation, is that no difference will be made between the relative value of the methods, as the researcher will focus on the findings as a whole, informed by data obtained through methods of both methodologies and these methodologies will be used in a particular sequence for complementary purposes and enhancement of significant findings. Furthermore, the mixed methods approach is viewed as relevant for this study because “nursing like many other disciplines increasingly accepts mixed methods as a valid research design” (Andrew & Halcomb 2006 p.145).

Figure 3.3 below presents aspects of the research design and a summary of the choices for this study.

Figure 3.3 Summary of methodological choices



(Source: Developed for this study).

3.5 Research procedures

The research methodology for this study consists of two main stages. Stage one (1) was a survey which was followed by in-depth interviews, referred to herein as stage two (2) of the research. The stages consist of the following six (6) steps: development of research instruments, sampling strategies and selection, recruitment of participants for the research, pre-testing and data collection procedures. The next section explains each of the steps in detail.

3.5.1 Development of research instruments

3.5.1.1 Stage 1: Survey

The quantitative technique used for this research is a semi-structured instrument, comprising closed-ended statements and open-ended questions. Participation in the survey involved answering a number of questions in a *unique Nurse Managers' Competency Survey (NMCS)* instrument compiled by the researcher, Appendix I. The survey was compiled for this study as there was no existing survey from the literature which could have been adapted for this study. The questions on NMCS were designed on the basis of the literature noted in Chapter 2, health sector expert input, supervisor's input, researchers' consulting experience, and input from people in the nursing profession.

3.5.1.1.1 Survey layout

NMCS comprised of six parts which were structured around the following areas of investigation:

Part 1: Participant profile (designed with assistance from experts in Australia and SA).

Part 2: Identifying management competencies of nurse managers in this hospital (based mainly on Chapter 2 Section 2.3.1 and Section 2.3.2)

Part 3: Behaviours of effective nurse managers in general (based mainly on Chapter 2 Section 2.3.1 and Section 2.3.2)

Part 4: Relevance of team nursing approach in this hospital (based mainly on Chapter 2 Section 2.3.3)

Part 5: Factors influencing performance in this hospital (based mainly on Chapter 2 Section 2.3.1 and Section 2.3.2)

Part 6: Competency development for nurse managers in this hospital (based mainly on Chapter 2 Section 2.3.4)

Part 1 of the NMCS sought demographic details of the participants of the NMCS. It asked questions about gender, age, length of service, race, management level, type of hospital, department/ward, number of staff and working in a team. This information was more useful for investigating the effect of moderation variables on the performance of nurse managers in relation to the various factors of the study.

Part 2 was used to investigate the requisite management competencies of nurse managers in hospitals. Participants were requested to indicate the degree of the importance of various management competencies. The section also included a few open-ended questions which were meant to validate the data from closed-ended questions. This section provided the data source for RQ1.

Part 3 of the NMCS requested participants to indicate the extent to which they agreed or disagreed with the statements on effective behaviours of nurse managers in hospitals. The section also included an open-ended question for participants to provide any input

on effective behaviours of nurse managers. This section provided the data source for RQ2.

Part 4 the relevance of Team Nursing Approach asked participants to indicate how strongly they agreed or disagreed with statements about the benefits of TNA and the attributes and characteristics of effective team leaders. The section also included an open-ended question for participants to provide any input on the relevance of TNA. This section provided the data source for RQ4.

Part 5 factors influencing the performance of nurse managers asked participants to indicate if they agreed or disagreed with statements about factors and sub-factors that influence the performance of nurse managers. The section also included an open-ended question for participants to provide any input on the factors influencing the effectiveness of their hospitals. This section provided the data source for RQ3.

Part 6 was used to investigate the extent to which participants agreed or disagreed with statements about current and future competency development initiatives and programs. This section also included a few open-ended questions on input on competency development of nurse managers and on leadership and management courses provided in their hospitals. This section provided the data source for RQ5 & RQ6.

A sample of NMCS questionnaire is attached in Appendix I. The main advantage of this survey is that it may be repeated in the future or in different settings to allow comparisons to be made or to the benefit of other sectors. The main disadvantage is that the data provided snapshots of facts or views at a particular time rather than the underlying processes and changes.

3.5.1.1.2 Measures

The NMCS designed for this study uses scaling to measure the investigated variables. The variables were measured using scales taken and modified from the existing literature and

adapted for this study. The researcher used the usual five-point Likert scale items to measure the importance of variables (Part 2 of the NMCS) and how strongly participants agreed or disagreed with statements on the different variables (Part 3-6 of the NMCS). Five-point Likert-style rating scale was selected because (a) it is the most commonly used and time-tested scale, (b) it is relatively simple to construct and thus likely to produce a highly reliable scale, (c) the Australian and South African experts evaluated and recommended adaptations to the scaling and items, and (d) it is also easier for participants to read and complete than other scales. However, a limitation is that participants may avoid extreme response categories and may agree with statements in order to please a researcher (Blanche, Durrheim & Painter 2006). For Part 1 on the participant profile, a dichotomous scale was used on some of the items for the participant to provide details. The section also used category scale and interval scales for selections to be made regarding various factors such as length of service, age and management level. All items in the survey that used dichotomous, category and interval scales were considered closed questions. In addressing the possible weaknesses of using a Likert-style rating, the questionnaire has a few open-ended questions. Participants were offered the opportunity to answer the open-ended questions and the responses were edited and categorized for subsequent data analysis. Table 3.1 below presents the sections of the NMCS, relevant question numbers and the measurement scales that were used.

Table 3.1 NMCS - item measures

Survey	Question number	Measure	
Part 1 Participant profile	q1.1 q1.10 q1.12 q1.13	Dichotomous scale	Male or female Yes or No
	q1.2-q1.8	Category scale	age, length service, race, management length, type of hospital, dept./ward
	q1.8j q1.9 q1.11 q1.13f	Open-ended	Edited and categorized for data analysis
Part 2 Requisite competencies	q2.1-q2.27	Interval scale	1=not important at all; 2=somewhat important; 3=important; 4=very important; 5=extremely important
	q2.28.1-q2.28.3, q2.29	Open-ended	Edited and categorized for data analysis
Part 3 Effective behaviour	q3.1-q3.24	Interval scale	1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
	q3.25	Open-ended	Edited and categorized for data analysis
Part 4 Team Nursing Approach	q4.1-q4.12	Interval scale	1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
	q4.13	Open-ended	Edited and categorized for data analysis
Part 5 Nurse Manager performance	q5.1-q5.30	Interval scale	1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
	q5.31	Open-ended	Edited and categorized for data analysis
Part 6 Competency development	q6.1-q6.12; q6.18-q6.28	Interval scale	1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
	q6.13	Category scale	Courses attended
	q6.15, q6.16	Dichotomous scale	Yes or No
	q6.14; q6.17; q6.29	Open-ended	Edited and categorized for data analysis

(Source: Developed for this study).

The procedures for completion of NMCS are discussed in Section 3.5.5

3.5.1.2 Stage 2: In-depth interviews

The qualitative techniques used for the research included in-depth interviews. These were used mainly to confirm validity of the information gathered from the NMCS and to source rich up-to-date data, which could not be derived from the literature or survey. The aim of conducting interviews was to acquire a better understanding of the phenomena or

NMCS factors from the point of view of the identified interview participants. One in-depth interview per external stakeholder was conducted. An in-depth interview protocol was developed after emerging themes and gaps were identified from the survey responses. The protocol was used to guide the interviews. Further probing or discussion occurred outside of the range of questions identified in the protocol. Participants provided insight into what skills and competencies are regarded as important for nurse managers. They also provided information on factors influencing performance in their hospitals and the relevance of a team nursing approach in their hospitals. In addition, they contributed in identifying competency development needs and in supporting and expanding input on future competency development interventions and framework. The procedures for conducting the interviews are discussed in Section 3. 5.5.

3.5.2 Sampling strategies and selection

This section focuses population, sample strategies and sample size selected as appropriate for this study.

3.5.2.1 Population

Stage 1: For the NMCS, the target population consisted of all nurses (operational managers/unit managers, assistant nurse managers as well as directors and deputy directors) occupying managerial posts in public and private hospitals in the Gauteng Province in SA excluding those who had participated in the pre-test study. That implies that in each of the Gauteng hospitals, all levels of nurse managers were eligible to participate. A number of hospitals required the researcher to also complete their formal ethics approval processes – see Section 3.9.

A total of 27 public and private hospitals in Gauteng were approached for access. Only 13 hospitals responded positively. Some of the hospitals just (a) did not respond to the email requests sent or (b) they did not know the person that should be responding to the requests or (c) they kept promising to revert back to the researcher and never did or (d)

referred the researcher to their ethics committees and indicated that they would only engage further with the researcher after ethical clearance. In addition, a written expression of interest from the hospital was obtained prior to ethical clearance. A written expression of interest from authorities was sufficient in some hospitals. They did not require additional ethical clearance. One was an outright refusal stating that they were not interested in participating while another indicated that their hospital was too small and did not have managers available to participate. See Appendix V for access approval process in the various hospitals.

Stage 2: Professionals stakeholders and experts in the health and nursing profession were targeted for in-depth interviews.

3.5.2.2 Sample strategies

Nonprobability sampling was the preferred method for this dissertation due to budgetary and time constraints. That implies that the selection of possible participants was not determined by statistical principles of randomness.

Stage 1: Due to the demanding schedule of potential participants, that is nurse managers, the researcher used convenience sampling technique, which focuses on the prospective participants who volunteered or were available to participate in the research (Welman, Kruger & Mitchell 2005).

Stage 2: For in-depth interviews, purposive sampling was applicable. In the case of purposive sampling, the sampling does not only depend on availability and willingness to participate, but that cases that are typical of the requisite population are selected (Blanche, Durrheim & Painter 2006; Welman, Kruger & Mitchell 2005). The researcher, with the assistance of the authorities from the hospitals and associated organizations, identified and recruited interesting cases. She gave authorities a criterion for targeted participants that would be able to provide rich data because of their management role in hospitals or in the nursing profession or in the health sector. The external stakeholders

had to be from organizations that dealt directly and indirectly with nurse managers and or hospitals in Gauteng. The two external stakeholders that participated were referred to the researcher by the organizations that they belonged to at the time of the study. In terms of the internal stakeholders, nurse managers from participating hospitals who had not completed the survey (stage 1) and had at least five (5) years in the position were requested to participate. Interviews were conducted with those that satisfied the criteria and were interested and available to participate.

3.5.2.3 Sample size

Stage 1: About 230 nurse managers from public and private hospitals were invited to take part in the NMCS to ensure the researcher achieved a target of 200 participants. A large number of possible participants ensured that possible 'no' or incomplete responses did not adversely affect the total sample size (Slevitch 2011).

Stage 2: The number of participants for in-depth interviews was informed by the need to expand the data, the availability of targeted interview participants and their ability to provide important and rich information. A total of ten (10) internal and external stakeholders were requested to take part in interviews. Of the ten that were requested only seven (7) were interviewed. These comprised *two external professional stakeholders* in the health sector, including a medical doctor working in a number of public and private hospitals (E-001) and a manager from a nursing trade union focusing on both trade union and professional development of nurses (E-002). Five *internal stakeholders* were interviewed. These included (a) one junior nurse manager from a private hospital, (b) a hospital matron from a private hospital, (c) one senior nurse manager from a public academic hospital, (d) one junior nurse manager from a public academic hospital and (e) one senior manager from a public district hospital. After interviewing the seven participants, the researcher did not pursue more participants because all the questions arising from the quantitative data were clarified and issues that were not clear from the

survey data were elaborated on. In addition, data saturation was reached as no new information was gathered especially from the last two interviews.

3.5.3 Recruitment of participants of the research

Stage 1: At the initial stage of NMCS data collection, the relevant senior hospital executives and administrators, receptionists, gate-keepers, heads of wards or departments, senior managers involved in the management of nurse managers were approached to request permission to solicit information from nurse managers in hospitals. The purpose of the initial correspondence was to explain the purpose of the study, method of data collection and to assist in identifying key contact staff in the selected hospitals.

The researcher sent introductory emails to administration and some hospital executives at a number of hospitals in October 2013 to establish their interest in participating (see Appendix II –A). The researcher used telephonic, email and face-to-face follow-ups in February to March 2014. Participants showing interest in the study were sent copies of the Ethics Approval from USQ, the final NMCS instrument and a participant information sheet. The researcher also made telephone calls, sent emails and used face-to-face visits in February to March 2014 to hospitals that were not contacted in October 2013. Meetings were held with organizations that wanted them prior to granting access to the hospital, and their purpose was to further explain the study and to respond to queries raised. Key issues raised were discussed with the supervisor via email for advice. It should be noted that some hospitals required further ethics approvals - see Section 3.9 for more details.

The heads of nursing, some nurse managers, and HR managers where applicable, were involved in the recruitment of contact staff and NMCS participants. Recruitment of contact staff and participants in the various hospitals was through verbal communication,

either in person and or by telephone. The contact staff was also chosen by professionals in the nursing profession. The role of the contact staff was in some instances to distribute the questionnaire packages to potential participants of nurse managers who were absent or working night shift when the researcher was at the hospital to distribute the NMCS packages. In many instances, contact staff referred and introduced the researcher to the relevant authorities and coordinated meetings with heads of nursing and nurse managers. They also gave the researcher the documentation to be completed for approval purposes then passed this to relevant authorities.

In some hospitals, the researcher was invited to management meetings of nurse managers. At these meetings, the researcher made a brief presentation about the study to the potential participants. Those nurse managers who were interested in completing the NMCS questionnaire were then given time during the meeting to complete the NMCS immediately in the presence of the researcher.

Stage 2: For in-depth interviews, a 'participant information sheet' (invitation letter) was emailed by the researcher to potential participants (see attached sample of correspondence in Appendix II - C). The initial email was sent and where necessary followed-up by a telephone call and personal visits to where it was convenient for the potential participants. After an interest to participate was expressed, a second email and or telephone calls were made to secure an appointment.

3.5.4 Pre-testing the survey

Prior to a survey being disseminated, a pre-test of the NMCS instrument was done to identify and detect possible flaws in the measurement and recognise unclear or ambiguous formulated items. Pre-tests chosen for this survey included face validity, content validity and construct validity. The main survey was conducted using the final and the latest questionnaire.

3.5.4.1 Face validity of the NMCS

Face validity is one of the most important validity tests that should be carried out prior to any other validity tests (Hair, Black, Babin, Anderson & Tatham 2010a). In this study, a total of seven (7) professionals were requested to comment on the NMCS instrument. The instrument was initially given to five experts to ensure that it possessed face validity. Three of those were University of Southern Queensland (USQ) nursing academics and two were an official from Queensland Health and one from Southwest Medical in Australia. Each participant was met separately. Refer to the following table, Table 3.2 for a list of Australian experts.

Table 3.2 List of Australian experts

Expert	**Position**
AUS Expert 1	Chief Investigator School of Health, Nursing and Midwifery, USQ
AUS Expert 2	Director Centre for Rural & Remote Area Health, USQ
AUS Expert 3	Lecturer School of Nursing and Midwifery, USQ
AUS Expert 4	Manager Darling Downs Southwest Medical, Queensland
AUS Expert 5	Deputy Director Queensland Health, Australia

 # Numbers were used instead of names of participants to ensure confidentiality and anonymity

(Source: Developed for this study).

After incorporating input from the five experts from Australia (see Appendix III, Face validity feedback), the NMCS was also pretested with potential NMCS participants because it was acknowledged that the language and terminology used by nurse managers in a South African context may be different. These included two nurse managers from George Mukhari hospital in Gauteng, in SA. The potential participants were also separately approached to provide feedback on the draft questionnaire. The aim of engaging face validity was to get feedback on (a) relevance of questions (b) clarity of

questions, (c) layout and design of the questionnaire, (d) length of questionnaire (e) feasibility of data collection, (f) any concerns with the NMCS that should be considered (Belbin 2011; Crosthwaite 2010). Based on feedback, adjustments were made to the NMCS where necessary. The feedback from the seven participants is presented in Appendix III, face validity interview feedback.

3.5.4.2 Content validity of the NMCS

This pre-test relates to the representativeness of the NMCS regarding the factors under study (Belbin 2011; Crosthwaite 2010). During the development of the NMCS instruments, the forms were given to Australian experts and South African participants in the field to advise on the relevance of the questions, clarity and ease of understanding of the questions, clarity of instructions and layout and design of the questionnaire. Feedback was considered in the development of the final NMCS instruments. As a result some items on the questionnaire were eliminated as being duplicated whilst others were added as being critical to include. Some items were rephrased to clarify the questions. Furthermore some of the questions were restructured to reduce potential ambiguities.

3.5.4.3 Construct validity of the NMCS

Construct validity of the scores obtained on a measuring instrument was conducted to ensure that the instrument measure the intended construct rather than irrelevant constructs or measurement error (Crosthwaite 2010; Kane 2012; Welman, Kruger & Mitchell 2005). As indicated in the literature review chapter there is no commonly accepted item construct or scale for management competencies or nurse management competencies. Therefore, lists of competencies were selected from previous studies on generic management competencies (Chapter 2). This implies that some of the items on the questionnaire have been tested and accepted to be valid by other researchers. Construct validity was therefore carried out to further assess the validity of the constructs

selected from literature addressed in this dissertation. Expert opinion elicited from the seven Australian and South African experts who did not participate in the actual research indicated that the list of management competencies was relevant and some added more items to the list. Some questionnaire items were identified as irrelevant to the research topic and some questions required rephrasing. As a result some items were reduced and refined to incorporate experts' input.

3.5.5 Data collection procedures

Quantitative data collection using NMCS was undertaken before qualitative data collection involving a few in-depth interviews was undertaken. The NMCS was used to gather data from the participants who are nurse managers in order to gather original data to determine whether there were interesting patterns in the data. Questionnaires could be used because all the participants were educated professional nurses who could read and interpret the questionnaire items in English, obviating the need to translate the questionnaire.

Potential participants were asked the same questions and a range of possible answers was provided for most of the questions. The NMCS instrument was self-administered and took approximately thirty minutes to complete.

3.5.5.1 Invitation to participate

Stage 1: After permission was granted to conduct the research at a hospital, potential participants were invited to participate. They were briefed about the study. The short briefing in the main covered the purpose of the research, what their participation would entail and how long it would take, how their anonymity would be protected and their right to refuse to participate or to withdraw their participation. After the briefing, potential participants were asked if they had any questions and if they were interested in

participating in the research. All interested participants were given NMCS packages and told to firstly read a 'survey participant information sheet' prior to completion of the NMCS. The NMCS package, contained a survey questionnaire, participant information sheet, copy of USQ ethics clearance and where applicable any other ethical clearance requested by the hospital and a copy of approval letter from the hospital. The participant information sheet explained the purpose of the study and the procedures of data collection (see example in Appendix II - B). The sheet also indicated that the approached participants reserved their right to refuse to participate or even to withdraw at any given time. Issues of confidentiality and researchers' contact details and details of an independent party in case of queries or complaints about any aspect of the NMCS or study were included in the letter. The participants were informed that their names would not be on the dissertation and any publications. The information sheet also stated that consent to participate was assumed by completion of the NMCS, thus serving as their authorization.

Stage 2: An 'in-depth participant information sheet' (See Appendix II - C) explaining the purpose of the study and the procedures of data collection was prepared and sent to the potential participant prior to the interview. The letter indicated that the approached participants reserved their right to refuse to participate or even to withdraw at any given time. Issues of confidentiality and researchers' contact details and details of an independent party in case of queries or complaints about any aspect of the NMCS or study were also included on the letter. A consent form which confirmed their agreement to participate was also attached (see example in Appendix IV).

3.5.5.2 Distribution and collection of surveys

The distribution and collection of NMCS was carried out between 09 April 2014 and 07 August 2014. Dissemination of the NMCS required carefully planned use of limited human resources. Access processes at various hospitals resulted in delays in starting data

collection. The dates of access and collection as well as actions and processes for distribution and collection of NMCS differed slightly from hospital to hospital due to time constraints of nurse managers at various hospitals (Refer to Appendix V for details and See Table 3.3a below for details). Three main strategies were followed and these included:

- As presented in Table 3.3a below, in seven (7) out of the thirteen (13) hospitals that granted access, the researcher did a brief presentation to potential participants, distributed the survey packages herself to a group of interested nurse managers in a classroom setting and waited for them to complete the surveys and hand them back immediately to the researcher. The contact person invited the possible participants to the room.

- In the other five (5) hospitals that gave access, the researcher gave the surveys to the contact staff member. Nurse Managers completed the NMCs at their own time and gave completed NMCS in sealed envelopes to the contact person. The researcher collected the completed NMCS on an agreed date. In some instances a number of trips had to be made to a hospital to obtain the completed questionnaires.

- At another hospital, the head of nursing briefed the nurse managers about the study at their management meeting, scheduled a number of days for the researcher to go to the hospital, sit in a room and wait for interested participants to come over to the room to complete the NMCS instrument. The researcher gave the contact person surveys for those who were absent on the day when others completed the survey. The completed NMCS were put in sealed envelopes and were later given to the contact person to hand over to the researcher. At the same hospital, the researcher approached some nurse managers individually in the wards and left surveys for them to complete at a time convenient to them. The surveys were collected by the researcher on agreed dates.

Table 3.3a Summary of data collection steps and actions: NMCS

Step	Hospital	Action	Reference-Examples
1	All	An introductory email sent to hospital authorities/administrators/gate- keepers	Appendix II – A
2	All	NMCS packages were prepared.	See various
3	PDH1, PSH PAH1	An approval from hospital & research commenced.	Appendix VII - B correspondence
4	NGH2 PDH2	An introductory meeting held with head of nursing at the hospital - approval granted.	N/A
5	MGH 1&2 NGH1-6, PDH2, PAH2	A submission made to relevant hospital research approval committee - approval granted.	Appendix VII – B
6	All	An entry meeting held at the hospital with contact person nominated by hospital authorities.	N/A
7	PAH 1(some) MGH1, NGH1 (some), NGH4, PAH2	Data collection - distribution and given to the contact person to hand over to the researcher.	N/A
8	MGH 2 NGH1-6, NGH2, NGH5, NGH6, NGH3	Data collection - a group immediately completed the NMCS in a group set-up.	N/A
9	PAH 1(some)	Data collection - researcher distributed & collected from ward-to-ward (nurse managers)	N/A
10	PSH1 ,PDH1, NGH1	Data collection - researcher distributed & collected from a box put in contact person's office which was used by nurse managers to deposit completed surveys.	N/A
11	PAH 1(some) MGH1, NGH1 (some), NGH4, PAH2	Follow-up call made to the contact person to confirm collection date of completed NMCS.	N/A
12	PAH 1(some)	Collect completed NMCS from NMCS and where necessary another collection date was set for collecting outstanding surveys.	N/A

(Source: Developed for this study).

All NMCS questionnaires and envelopes were numbered in a sequence for ease of retrieval and auditing purposes. Where applicable, a record of the numbers left at a hospital was given to the contact staff member and the researcher also kept a record. The researcher monitored progress after five working days by contacting the contact staff member to see if she had received any envelopes and to assess how many were still outstanding. On the eleventh day after delivery, the researcher picked up the sealed envelopes with completed NMCS from the contact staff member at those hospitals where NMCS were left with the contact staff member. In some instances the contact staff member phoned the researcher to collect within a few days after distribution. Other completed NMCS were handed directly to the researcher when she went to collect. More details on the distribution and collection are captured in Appendix V.

The researcher kept a record of completed NMCS as they were received directly from nurse managers and the contact staff members for the duration of the study. The completed NMCS were stored in a lockable filing cabinet for the duration of the research.

3.5.5.3 Process for conducting in-depth interviews

One-on-one in-depth interviews were only conducted after surveys were completed, captured electronically and after an initial run of frequencies. At that stage the researcher was able to pick up issues from the survey that needed to be followed up in the interviews.

The interviews were conducted between 18 September and 21 October 2014 at the venue and time most preferred by the participants. Prior to the interview, the researcher checked whether the participant had read and understood the contents of the participant information sheet and of the consent form. The researcher thereafter asked the participant to sign the consent form, which confirmed their agreement to participate in this research. The researcher took notes during the interview. Each interview lasted about

an hour and thirty minutes. Table 3.3b below, outlines steps and actions that were followed with regard to in-depth interviews.

Table 3.3b Summary of data collection steps and actions in the research: in-depth interviews

Step	Action	Reference Example
1	In-depth interview protocol was developed	Appendix VI
2	An introductory letter sent to professionals	Appendix II – A correspondence
3	An introductory letter was followed up by a telephone call/email to confirm interest in participation	Appendix II - A correspondence
4	If interest was expressed, a participant information sheet and consent form was forwarded to potential participant	N/A
5	Interview date and venue secured	N/A
6	An interview was conducted at an agreed date and time	N/A

(Source: Developed for this study).

3.5.5.4 Maximizing the return rate

Stage 1: A copy of the executive summary of the study was offered as an incentive to participate.

In an initial run, two hundred (200) NMCS instruments were printed, with an additional fifty (50) printed later and distributed because there were insufficient responses to make sure that the researcher ended up with at least the targeted number of (two hundred) completed NMCS. Although a total of two hundred and fifty (250) NMCS were printed, eventually only 230 of the 250 of those printed were distributed to potential participants. Out of the 230 NMCS that were distributed, 203 NMCS *were adequately completed and returned* so there was no need to distribute the remaining 20 printed NMCS.

Participants were promised anonymity and confidentiality and were made aware of their right to withdraw at any given stage. Potential participants were requested to return their completed NMCS questionnaires in sealed envelopes with no names written on the NMCS nor the envelopes. In some of the cases in which NMCS were not completed immediately in the presence of the researcher, a number of visits and phone calls were made to the hospital to the contact person for her to remind the nurse managers to complete the NMCS. Due to the anonymity of the responses, it was not possible to identify and directly follow up those participants who took the NMCS and did not return them.

The basic strategy that maximized response rate was when nurse managers were given time in a group during their management meetings to complete NMCS and to hand them over to the researcher immediately. Once an agreement was reached that the hospital facility was happy to participate in the study, face-to-face entry meetings with heads of nursing or designated contact staff members also helped in establishing rapport with contact staff members. It also helped in obtaining advice from them on strategies that would be most acceptable to the hospital authorities and maximize participation of nurse managers.

Stage 2: To maximize participation level, a reminder of the appointment was sent to potential interview participant two days prior to conducting the interview.

The next major step was data analysis.

3.6 Data Analysis

This section outlines basic assumptions and data analysis processes that were used.

3.6.1 Justification of the basic assumptions used in the data analysis process

An investigation of research hypotheses was done using SPSS to run statistical tests. The researcher decided on SPSS as she has access to SPSS software and is familiar with its application thus minimizing application errors in data analysis. The hypotheses were first transformed into statistical hypotheses to be tested. The first basic assumption made was that tests of significance were to be conducted to investigate the various relationships as there is little information in the area of study. Conventionally significance level for testing the hypotheses is five percent (5%) level. For this study, the acceptable effect sizes that were used were: highly significant, $p < 0.01$ and very highly significant, $p < 0.001$ (Blanche, Durrheim & Painter 2006).

For quantitative data analysis, *t*-tests, correlation, factor analysis and regression analysis techniques were used for hypotheses testing. Refer to Table 3.4 below for details.

For qualitative data analysis, emerging themes were used to report key findings. Refer to Section 3.6.2.3.3 below for the data analysis process that was followed.

Conclusions and recommendations outlined in Chapter 5 of this dissertation were made on the basis of the information from the literature review, NMCS findings and in-depth interview findings. They can be applied to develop and enhance the future performance of health care services globally in hospitals.

3.6.2 Data analysis process

This section focuses on the data analysis process. The steps include preparing the data for analysis, getting a feel for the data, checking the goodness-of-fit of the data, and then testing hypotheses.

3.6.2.1 Preparing the data

3.6.2.1.1 Checking for correct data input and treating missing data

Before conversion from data source to data file, all envelopes were opened and all returned surveys were checked for blanks and incomplete sections.

Treating blank responses - It is nearly always the case that some participants will fail to completely fill in the survey or leave a few missing entries. Whatever the reason these surveys need to be sorted out carefully before data can be coded and analyzed. This is because "missing data, where valid responses of one or more variables are not available for analysis, can pose problems in data analysis" (Hair et al. 2010, p.41; Mouton 2001a). It was found that five (5) surveys were completely blank and put in sealed envelopes. Unfortunately it was not possible for the researcher to follow up those participants who sent blank responses given that as per the design of the NMCS, the questionnaires were put in envelopes, sealed and no names were written either on the envelope or the questionnaire. Therefore, the 5 completely blank surveys were immediately discarded from further analysis. After eliminating NMCS instruments with missing data, there were 203 usable responses.

Treating missing data - Completed NMCS were also checked for any unclear responses, omissions, inconsistencies or errors. Descriptive analysis through SPSS provided an excellent opportunity to analyze the data for possible errors and missing codes. After examining the dataset of this study, it was revealed that data was deemed to be missing at random. Missing data for the 5 research factors ranged between 3 and 9 cases per section of the questionnaire (4% maximum). It was only for Part 6B (q6.13, q5.15, q6.16) on competency development that had been completed at their hospital that there was a high level (28-30 cases/15% maximum) of missing values. Question 1.9 of Part 1 of the NMCS was also poorly responded to. Participants gave a wide range of responses, and

there was a percentage of missing values provided for the number of staff employed in some departments (refer to Table 4.2b). This relatively higher missing value rate for item q1.9 can be attributed to the fact that in big hospitals, nurse managers did not readily have updated records of staff breakdown. Due to the low missing value rate, missing data were unlikely to be an issue in this study as it was not exhibited on key variables of the study. As such no replacement of missing values was done.

Data coding and categorizing - The open-ended responses from the surveys were categorized and coded before being captured electronically. *Coding* is about the allocation of unique numeric code which was made for each of the items on the survey. This ensured that every item from every case entered in to the dataset could be tracked back to the original survey questionnaire for ease of cross checking and for audit purposes. A code page to explain each code was developed. The coding of the qualitative data was done whilst developing themes. *The variables were also categorized* so that items measuring a concept were grouped together (Coakes & Steed 2007). For qualitative data, the hand written notes compiled during in-depth interviews were written out clearly and captured electronically. Data, in particular open-ended data was categorized according to the study variables. Separate coding and themes were used to classify and tabulate data collected from the survey and that from in-depth interview participants.

Data entry - Data was entered in Census and Survey Processing System (CSPro) 5.0 software package for data capturing and editing purposes using the numerical codes written on the survey. A database was designed on CSPro using the NMCS instrument. The database included all necessary field restrictions and skip patterns as necessary to improve the quality of the data. Once the data was verified for any anomalies, quantitative data was converted to SPSS with variable and value labels. These software packages were selected mainly because of their popularity in analyzing data in social sciences.

3.6.2.1.2 Response rate

Considering 203 returned questionnaire sample (i.e. 208 minus 5 that were not completed but put in sealed envelopes) surveys completed, 203 responses indicate a response rate of 88 percent. This response rate is high especially considering that the survey was for study purposes and that healthcare professionals often have time constraints.

3.6.2.2 Description of data and data display

The description of data and data display allows for a good understanding of the data obtained from the survey. Activities that were carried out to check the data included testing for normality, skewness, kurtosis and obtaining descriptive statistics.

3.6.2.2.1 Normality testing and skewness and kurtosis testing

Assessment of normality was conducted by exploring the data through descriptive statistics. The data were also explored for normality by histograms, skewness and kurtosis. From the tests, in terms of normality testing, the distribution was found to be normal. Skewness and kurtosis was within acceptable range for both independent and dependent variables (refer to Section 4.5.2 for details). The normal distribution allowed the researcher to make fairly precise probability statements regarding the variables of the research (Blanche, Durrheim & Painter 2006).

3.6.2.2.2 Descriptive statistics

Descriptive statistics were conducted using SPSS. Quantitative data for independent and dependent variables was summarized using frequency distributions on each item, central tendency (mean) and dispersions. These frequency distributions gave a picture of how

participants answered the survey items on the questionnaire. Refer to Section 4.8 for frequency distributions for the various factors of NMCS.

3.6.2.3 Testing goodness of fit

Testing the goodness of fit of data was achieved by submitting the data from sections of the NMCS instrument for factor analysis. The procedures that were engaged in this part of the analysis include: factor analysis and testing the relationship of the variables, research questions and hypotheses.

3.6.2.3.1 Factor analysis

Factor analysis using principal components analysis method was to extract factors from each section of the NMCS, for example, all competency items on the questionnaire. Factor analysis is a "statistical technique that is used to identify a relatively small number of factors in order to represent the relationship among sets of interrelated variables" (Blanche, Durrheim & Painter 2006, p.248) and it was conducted on independent and dependent variables. The following variables were explored using exploratory factor analysis: (a) independent variables, 'requisite competencies', 'effective behaviour', 'team nursing approach' and 'competency development' (b) dependent variable including, 'nurse managers' performance'. The results of the factor analysis were used to confirm whether or not the theorized dimensions as noted in Figure 2.9 were present (Belbin 2011). Refer to Section 4.3.1, Table 4.3 for exhibitions of factor analysis for the various variables.

3.6.2.3.2 Obtaining Cronbach's Alpha

After having done a descriptive analysis, some visual displays of frequencies as tables are included in Chapter 4. Cronbach's alpha was used to measure internal consistency of the

independent and dependent variables (Belbin 2011). See Table 4.6 below, for results of Cronbach's Alpha.

3.6.2.3.3 Qualitative data analysis

In the case of qualitative data, the researcher analysed the recordings directly from her notes. Having conducted the in-depth interviews and searching the preliminary findings of the quantitative data, the researcher already had a preliminary understanding of the meaning of the data by the time it was analysed. This included the kinds of interpretation that were likely or unlikely to be supported by the data. The following data analysis process was employed:

- After being electronically captured, content analysis was carried out to identify emerging themes and to determine the categories.
- The frequency with which certain themes occurred was considered. The number of times a theme occurred in the data was taken as an indicator of its significance.
- Comparisons and contrasts of findings were made.
- Common and unusual patterns were selected.
- The key findings were then interpreted using thematic categories and were written-up under headings and sub-headings developed for the study. The researcher used her discretion on input that was new and that added value to the research. Refer to Section 4.8 below for qualitative data analysis.

3.6.2.3.4 Relationship of variables, research questions and hypotheses testing

Relationship of variables - Correlation and regression was conducted on variables to obtain an indication of how closely the independent and dependent variables under investigation were related (Belbin 2011; Saunders, Lewis & Thornhill 2009). Refer to Section 4.6.1 for outputs of correlation.

Once all of the background work was completed on the preparation and preliminary analysis of the data, the next stage was to focus on investigating the research questions and null hypotheses.

3.6.2.4 Research questions and hypothesis testing

The next most important application in the research *was investigating the research questions and the testing of hypothesis.* Table 3.4 below indicates the type of tests used for testing the twelve (12) null hypotheses of the study.

Table 3.4 Summary of tests used per hypothesis

Research Questions	Tests conducted	Data source
RQ1 What competencies of nursing management are regarded as important in hospitals?		
• H^n_1 For nurse managers, the possession of requisite competencies does not lead to increased nurse manager performance.	Multiple regression	Survey Part 2 Requisite competencies
• H^n_2 For nurse managers, there is no difference in the perception of the importance of competencies between public or private hospitals, age, length of service as a nurse manager and management level of participants.	Moderated multiple regression	Survey Part 2 & 1 Participant profile q1.3; q1.4;q1.6;q1.7
RQ2 How do specific competencies relate to the behaviour of effective nurse managers?		
• H^n_3 There is no relationship between perceptions of requisite competencies and nurse manager behaviour.	Pearson product-moment correlation coefficient 2-tailed test	Survey Part 3: Effective behaviour
• H^n_4 For nurse managers, there is no difference in the perception of effective behaviour of nurse manager between public or private hospitals, age, length of service as a nurse manager and management level of participants.	Moderated multiple regression	Survey Part 3 & 1 Participant profile q1.3; q1.4;q1.6;q1.7
RQ3 What are the factors influencing effective nurse manager performance in hospitals?		
• H^n_5 There are multiple factors influencing nurse manager performance.	Factor analysis	Survey Part 5
• H^n_6 There is a positive relationship between requisite competencies, effective behaviour, team nursing approach and nurse managers' performance.	Multiple regression	
• H^n_7 For nurse managers, there is no difference in the perception of factors influencing effective nurse manager performance in public or private hospitals, age, length of service as a nurse manager and management level of participants.	Moderated multiple regression	Survey Part 5 & 1 Participant profile q1.3; q1.4;q1.6;q1.7
RQ4 Do perceptions on the relevance of team nursing approaches influence perceptions of nurse manager performance?		
• H^n_8 There is no relationship between the relevance of team nursing approaches and perceptions of nurse manager performance.	Pearson product-moment correlation coefficient correlation 2-tailed test	Survey Part 4 Team Nursing Approach
• H^n_9 There is no difference in perceptions of the relevance of team nursing approaches between public or private hospitals, age, length of service as a nurse manager and management level of participants.	Moderated multiple regression	Survey Part 4 & 1 Participant profile q1.3; q1.4;q1.6;q1.7
RQ5 What competency development initiatives have nurse managers been exposed to, to be able to carry out their roles and responsibilities as nurse managers?		
• H^n_{10} Competency development for nurse managers is not focused on clinical nursing.	Factor analysis	Survey Part 6A Competency development
• H^n_{11} Competency development for nurse managers is not focused on generic management skills.	Factor analysis	
• H^n_{12} Improved nurse managers performance in hospitals is not a result of clinical and management competency development initiatives.	Pearson product-moment correlation coefficient 2-tailed test	
RQ6 What should future competency development initiatives entail taking into account the moderating variables of type of hospital, age, length of service as a nurse manager and management level of nurse managers?	No hypothesis testing	Survey Part 6C Competency development Survey Part 6C & 1 Participant profile q1.3; q1.4;q1.6;q1.7

(Source: Developed for this study).

Hypothesis testing is applied to nominal, ordinal, interval and ratio data (Blanche, Durrheim & Painter 2006). To answer research questions, tests on the various variables were done using SPSS.

For RQ6, as indicated in Table 3.4 above, there is no hypothesis testing. Only an analysis of qualitative data was done and the results are fully explained in Chapter 4 Results and Analysis and they are further outlined and discussed in Chapter 5 Conclusions and Implications.

The next section concentrates on reliability and validity of the research project.

3.7 Reliability and validity

This section refers to the reliability and validity of the research as a whole and not only of NMCS instruments used.

3.7.1 Reliability of the NMCS data

It was the researcher's aim to produce the highest degree of reliability possible. Reliability is about producing the same results using a particular instrument such as the NMCS regardless of who does the research and when or where it occurs (Blanche, Durrheim & Painter 2006).

In this research, attempts were made to ensure that there was reliability of the research project in its entirety by adopting the following strategies: (a) in the design phase Australian and South African experts provided extensive feedback on the instrument - See Appendix III for details. (b) In the pretesting phase, the participants were asked to identify ambiguity of questions and problems of comprehension which could occur, (c) a participant information sheet explaining the purpose of the research was attached to all surveys, (d) a detailed record of data collection actions and processes in all hospitals and data analysis procedures was kept, (e) the construction of measures was carried out using

findings of seminal review (f) in order to assist participants to be as honest and objective as possible in their answers to the questionnaire items, completed surveys were put in sealed envelopes which no person other than the researcher would open (g) findings from the survey were verified and extended in-depth interviews and (h) the preliminary findings from the study were informally discussed with experts in the profession as well as with supervisors.

3.7.2 Internal and external validity

Internal validity on the one hand concerns causality and it refers to the extent to which findings can only be attributed to the experimental treatment rather than any flaws in the research design. For example, incomprehensible and ambiguous survey questions might pose a threat to internal validity. External validity on the other hand refers to the extent to which research findings can legitimately be generalized to other similar contexts (Scandura & Williams 2002; Skadiang 2009). The sampling strategies adopted for this research, that is, convenient and purposive sampling, might pose a challenge to external validity in particular in terms of generalizing the findings to the nurse managers in the entire Gauteng province. To address possible internal and external validity concerns, the following strategies were adopted:

The NMCS was clearly and carefully designed and developed. The NMCS questionnaire was tested prior to dissemination and unclear questions were either excluded from the final questionnaire or refined. Triangulation of the data also enhanced its validity of data because of the inclusion of multiple sources of data collection in this research (Blanche, Durrheim & Painter 2006; Mouton 1996). It also improved the researcher's ability to draw conclusions; as such recommendations made in the study were made with great clarity and confidence (Scandura & Williams 2002). In this instance qualitative data from the in-depth interviews and information from literature overview was a way of triangulating quantitative data from the survey. The items on the survey questionnaire and the in-depth interview protocol were guided by themes from the identified discipline areas and theories.

As informed by the researcher, with a sticker put on each envelope, completed NMCS were returned in sealed envelopes to ensure that the survey responses were not contaminated. Further, the researcher delivered and collected the surveys herself from the various hospitals.

3.8 Limitations of the methodology

This research methodology like others has a number of limitations. It is worth noting that the limitations outlined in this section had been identified prior to the research and, therefore, precautionary measures were taken in advance to maintain control and integrity of the research process or to minimize their effect.

Firstly the study did, due to time and financial constraints, target only two-hundred (200) nurse managers in the Gauteng Province and not all the managers in the entire province. The realized sample size was 203 surveys which is a large enough sample to investigate the research questions and to meet the objectives of the study.

Secondly, convenience sampling and purposive sampling as opposed to stratified random sampling in accordance with a number of attributes of Gauteng nurse managers was used to invite potential participants to participate. Therefore, the results cannot be generalized to the Gauteng population of nurse managers or to other provinces. The data from the survey and interviews was rich enough to be able to draw conclusions on the factors, gain theoretical insights and to make a contribution to the theories related to competencies of nurse managers.

Thirdly, the surveys were self-administered. Self-administration was in the main chosen for convenience for potential participants. In addition, it was due to time and financial constraints. Furthermore self-administration also seemed appropriate because

participants were likely to be completely honest in their responses as they were not under any pressure to answer to please the researcher or to provide socially desirable responses (Saunders, Lewis & Thornhill 2009). The researcher was aware that the managers could ask someone to complete surveys on their behalf. Therefore, she did, in a few instances, ask who had answered the questions at collection. Also, some of the NMCSs were completed in the presence of the researcher.

3.9 Ethical considerations and clearance

An application for ethical clearance following USQ ethical procedures (http://www.usq.edu.au/research) was made with the USQ, ethics committee and it was approved in November 2013, approval number H13REA240, expiring November 2016 (see Appendix VII - A). Ethical considerations came into play when participants were recruited, during data collection and in the results of the research. Other ethical practices that were adopted included:

(a) As stated previously a number of hospitals required the researcher to also complete their ethics approval processes, either with a university they are linked to or Department of Health or their head office for a group of hospitals. Refer to Appendix VII – B for an example. As previously mentioned, these requests resulted in delays in gaining access at some of the hospitals and of completion of data collection process of the research. Consequently, ethical clearance was also granted by three other ethics committees in SA.

(b) Permission to conduct the research in hospitals was also sought from the hospital executives or heads of nursing.

(c) Participants were under no circumstances whatsoever pressured into participating by the researcher.

(d) For the survey, return of the NMCS indicated consent. Those that participated in in-depth interviews signed consent forms.

(e) The participants were informed that data pertaining to the results of the research would only be used towards completion of the Doctorate and may be published in journals and relevant conferences.

(f) Numbers were used instead of names of participants and of hospitals to ensure confidentiality and anonymity.

(g) Participants were told that participation was voluntary and that they had the right to refuse to participate or withdraw from the study at any time if they so wished without any resultant penalties.

(h) The dataset is stored by the researcher and will remain in safekeeping for five years after the completion of the research in case of any academic enquiry.

3.10 Summary of the chapter

This chapter began with presenting the research objective, questions and hypotheses before presenting the justification for the choice of research paradigm. The research design and the step-by-step research procedure were explained. Other important sections included data analysis, the reliability and validity, limitations of the methodology and ethical considerations and ethical clearance for the study.

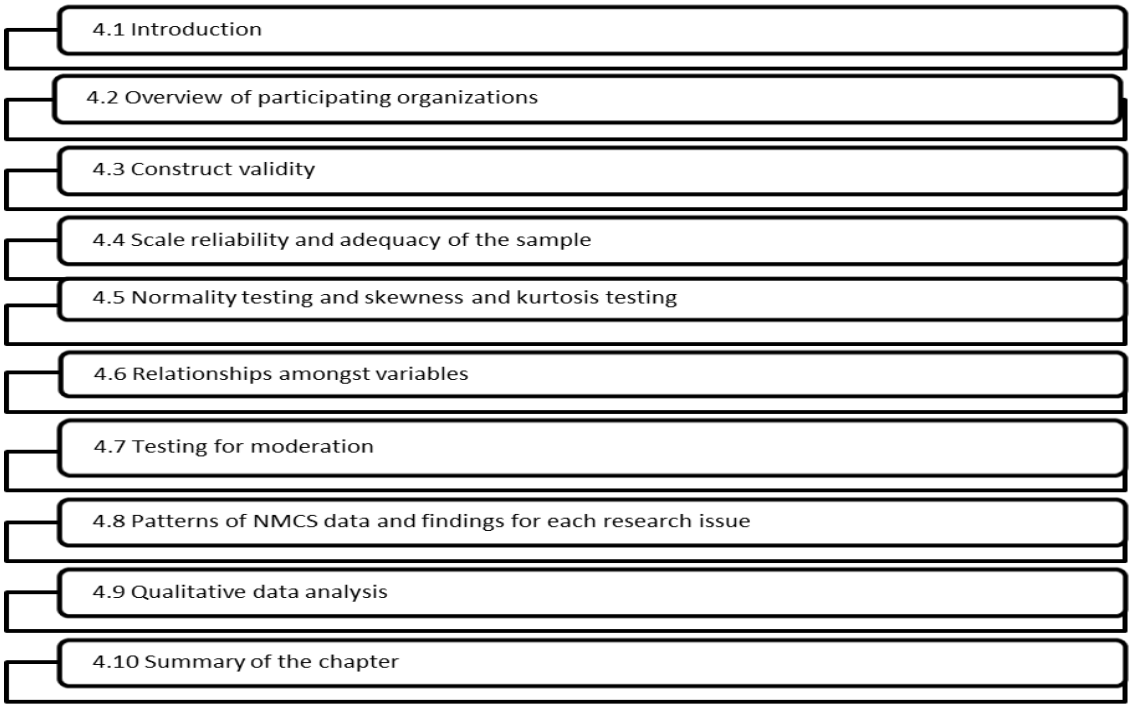
CHAPTER 4 - RESULTS AND ANALYSIS

4.1 Introduction

The previous Chapter covered the research methodology of this study. The objective of this chapter is to analyze the collected data to identify patterns and themes emerging from the five research issues and their supporting propositions. Further, the chapter contains references to the literature concerning methodologies used. The conclusions and implications drawn from the findings of data are then discussed in Chapter 5 within the context of the literature.

This Chapter consists of 10 parts. Firstly, the background of the participating hospitals is discussed as an overview of participating organizations and then the profile of participants is presented as demographic profile of participants (Section 4.2). Construct validity is discussed (Section 4.3), followed by scale reliability and adequacy of sample (Section 4.4), normality testing (Section 4.5) and relationships amongst variables (Section 4.6) Next, the data are reduced into relevant sections based on the six research issues and the survey described in Chapter 3 (Section 4.7). The data are presented in summarized and tabulated form to demonstrate the emerging patterns in the data. An analysis of data against each research issue is presented. That is the (a) descriptive statistical analysis (b) hypothesis testing including (i) factor analysis and (ii) regression models, and (iii) correlations. All tests are conducted using SPSS. The discussion on the results is further supported by input from qualitative in-depth interview participants (Section 4.8). Finally, the chapter summary is presented (Section 4.9). The following diagram, Figure 4.1 presents the structure of the chapter.

Figure 4.1 Outline of results and analysis



(Source: Developed for this study).

4.2 Overview of participating organizations

For the purpose of this study, survey participants were drawn from thirteen hospitals in the Gauteng province. Each of the hospitals offers a distinct difference in the type of organization. Details of the selection of each of the hospitals and their characteristics have been provided in Chapter 3. A broad description of the variation of the hospitals is presented below for ease of reference.

Table 4.1 Variation in the type of hospitals

Code	Public hospitals	Code	Private Hospitals
PAH	2 Academic hospitals	MGH	2 group of private hospitals
PDH	2 District hospitals	NGH	6 group of private hospitals
PSH	1 Specialized hospital		

Types of hospital are allocated a code that is made up of an alphabetical letter and a number for reporting purposes in this Chapter to preserve confidentiality.

(Source: Developed for this study).

Next is the summary and description of the data primarily obtained from the survey, by firstly presenting the frequency distributions of the demographic variables. The frequency distributions of the demographic variables provide a profile of the participants of the NMCS. Where necessary, measures of central tendencies and dispersions are also presented to provide a more complete picture of the profile of participants. As explained in Chapter 3, there were missing values on some cases and as a result the frequencies in the various demographic variables might not all add up to the total of 203 cases.

4.2.1 Demographic profile of NMCS participants

In this part, data collected on the profile of the nurses who are at management level as participants are presented. The frequency distributions for the demographic variables are presented by number and percentage in the following tables, Table 4.2a, 4.2b and 4.2c. The relevant data were gathered from nurse managers using Part 1 of NMCS.

Table 4.2a Demographic profile of nurse managers who participated in the survey

	N	%		N	%
1.1 Gender			**1.2 Length of service as a nurse (in years)**		
a. Female	185	92.5	a. 0-4	6	3.0
b. Male	15	7.4	b. 4-10	13	6.5
			c. 10-15	18	9.0
			d. 15-20	38	18.9
			e. Over 20	126	62.7
1.3 Age			**1.4 Length of service as a nurse manager (in years)**		
a. Less than 25	3	1.5	a.0-4	66	33.2
b. 26-35	6	3.0	b. 4-10	80	40.2
c. 36-45	63	31.3	c. 10-15	23	11.6
d. 46-55	76	37.8	d. 15-20	15	7.5
e. 55+	53	26.4	e. over 20	15	7.5
1.5 Race			**1.6 Management level**		
			a. First level manager (registered nurse managers o	140	72.5
a. Black	139	69.5	deputies in charge of nursing units: Operational		
b. Indian	9	4.5	manager/unit managers).		
c. Coloured	9	4.5	b. Middle level manager (chief professional nurses		
d. White	43	21.5	engaged in nurse supervisory activities in hospital	44	22.8
			departments and wards: Assistant Nurse Manager)		
			c. Top level manager (chief professional nurses		
			involved in decision-making and hospital policy		
			formulations: Directors & Deputy Directors).	9	4.7

 # A manager is known as a nurse who is at management level within hospitals in Gauteng in SA.

(Source: Developed for this study using Part 1 of NMCS).

In Table 4.2a above, an overwhelming majority of the participants (92.5%) were females. This is indicative of the reality of the domination of females in the nursing profession. Only three out of 203 participants did not reveal their gender. The representation of male managers in the survey indicates that males are neither precluded from nor over-represented in management.

Hospitals, like other large organizations, are comprised of people of many ages. Most of the NMCS participants (approximately 38%) were aged between 46-55yrs. It is also noted that there was a high percentage (26%) of nurse managers over the age 55yrs. The maturity of the participants represented a useful insight demonstrated in the survey responses received.

As presented in Table 4.2a above, consistent with the SA demographics, the majority of NMCS participants (approximately 70%) were black. The majority of participants were operational/unit managers (72%), followed by those referred to as *deputy directors* and *assistant directors* in public hospitals and *deputy nursing managers* in private hospitals (23%). Very few (5%) directors of nursing or those referred to as nursing managers in the private hospitals participated in the survey. This indicates that most of the participants were junior managers. The predominance of junior managers should not be viewed negatively in this survey because excellent or effective nurse managers are needed at every level in hospitals. Nonetheless the responses to levels of management (q1.7) were recorded as junior and senior managers because the researcher was made aware during an entry meeting that in private hospitals there are only three levels of management and not four like in the public sector. Junior members reported to operational managers/unit managers. These were managers at the frontline of patient care. All the other managers have broad spans of control and hold a senior hierarchical position within the hospital or ward hence labelled senior level in this study.

Positively, most survey participants had worked for more than 20 years as nurses (approximately 63%) and even though only for a range of between 4-10 years in management positions (40%) as operational or unit managers. Long-serving staff members possess adequate experience, greater knowledge and understanding of what would be necessary for effective management of hospitals. Furthermore, it provides a good indication that the survey participants possess adequate knowledge and experience

in the nursing profession to be able to convey an accurate view on the items in the survey.

Survey participants worked in a wide variety of departments/wards. Table 4.2b below, shows that, most participants worked in surgical departments (approximately 14%), intensive care units (ICU) (approximately 12%), medical (approximately 10%), paediatric (approximately 9%), mental health (approximately 7%) and casualty departments/wards (just over 5%). The category 'others' refer to those who worked in for example clinics, theatre, psychiatric, spinal, gynaecology, infection control. This spread across vast clinical areas of representation in the sample indicates that the distribution of NMCS participants from the departments/wards is not skewed towards nurse managers in a particular department/ward. Therefore, the conclusions and recommendations from the study are not only relevant for nurse managers in particular departments/wards.

Table 4.2b Demographic profile of nurse managers who participated in the survey

	N	%		N	%
1.7 Type of hospital participants worked in			**1.8 Department/ward participants are working in**		
			a. Surgical	27	13.6
			b. Paediatric	18	8.9
a. General hospital/public hospital	24	11.8	c. Mental health	14	6.9
			d. Medical	20	9.9
b. Private hospital	58	28.6	e. ICU	24	11.8
c. Specialist hospital	32	15.8	f. Casualty	11	5.4
d. Specialist public hospital	14	6.9	g. Orthopaedic	10	4.9
e. Academic public hospital	75	36.9	h. Neonatal	2	1.0
			i. Maternity	9	4.4
			j. Other:_____	64	31.5
1.9 Number of staff that are currently employed in a department					
a. Nurses:					
b. Administration staff				1-561	
c. Ward aid/general assistants				1-995	
d. Student nurses:				1-418	
e. Ward clerks: non-medical staff:				1-80	
f. Other:----------				0-20	

(Source: Developed for this study using Part 1 of NMCS).

In relation to the type of hospital in which participants worked, it seemed there was some confusion with the options that were provided on the questionnaire (see below Table 4.2b, q1.7). Therefore, as indicated in Chapter 3, the responses provided in question 1.7 were recoded to be public and private hospitals, and also aligned to the type of hospitals as indicated on completed questionnaires and input from hospital management. Nonetheless the demographic profile of NMCS participants summarized in Table 4.2b below shows that just over half of NMCS participants were from public hospitals (n=113, approximately 56%) and the rest were from private hospitals (n=90, 44.%). The difference

between the number of participants in public and private hospitals is minimal. Therefore, there cannot be bias towards a particular grouping. Notably, most participants are from the two public academic hospitals (n=70, 34.5%) that participated in the study. This variance is expected considering that public academic hospitals (PAHs) are big in size, have many patients and large staff complements. Therefore, if the performance of nurse managers is improved in academic hospitals or large hospitals, then more citizens and more nurse managers are likely to be satisfied as opposed to small hospitals that have fewer managers and cater for fewer patients.

The question about the number of staff employed 'in one's department' gives an indication of the size of the organization and of the number of people that a manager is in charge of. In this survey, there is a wide range in terms of the number of staff in the various levels currently employed in their departments, as presented in Table 4.2b above. Generally the question (q1.9) on the number of staff members in a department/ward was also poorly responded to.

Survey participants mostly worked in a group setting and the statistics shows a wide variation in the number of staff in their teams. In Table 4.4c below, significantly, just over a third (78%, n=145 out of 187 participants) of participants indicated whether they work in a team setting or not. When asked how many were in a team, 141 out of the 145 indicated they were working in a team. There is a great variation in the responses provided on the number of staff in a team. The responses to the question on how many were in a team setting ranged from zero (5 of the 203 participants) to 90 members in a team. Clearly the five participants answered q1.10 or q1.11 incorrectly. Measures of central tendency and dispersion including the mean, median, standard deviation and range were conducted to give a clearer picture of the variability in responses to the question on how many are they in a team. The mean value is 11 (10.69) team members and median value 8. It is worth mentioning that during data collection, most participants, especially in big hospitals, had difficulty responding to questions on the number of staff in

a team and or in the departments as they did not have the records with them and the records were, in some instances, outdated or not readily available. As a result the response rate for indicating the number of team members and number of varied staff members in the departments is low and in some instances it seems to have been an approximate number.

As depicted in Table 4.4c below, the majority of participants (approximately 73%) have all the staff in their departments or wards reporting directly to them and most of those who do not report directly to them report to unit managers.

Table 4.2c: Demographic profile of nurse managers who participated in the survey

	N	%
1.10 Working in a team setting		
a. Yes	145	77.5
b. No	42	22.5
1.11 Number in a team	0-90	
1. 12 Having staff in the department/ward reporting directly to the participant		
a. Yes	141	72.7
b. No	26.1	27.3
1.13 If no, who they report to:		
a. Matron		
b. Unit manager		
c. Deputy director of nursing	3	6.5
d. Other: (e.g. administration, admin supervisor, clinical education, hospital management,	27	58.7
outpatient, night supervisor, programme coordinator, acting matron, shift leader, supervisor	1	2.2
of porters, cleaning supervisors, technical staff supervisor)	15	7.4

(Source: Developed for this study using Part 1 of NMCS).

The next section focuses on evaluating the validity of the constructs.

4.3 Construct validity

4.3.1 Construct validity: factor analysis

The validity of the constructs in this study was determined by executing factor analysis for each construct. The principal component method of factor extraction was carried out using SPSS to produce a more manageable set of variables or factors, but still being representative of a larger group. Linearity and outliers were considered prior to conducting factor analysis. Factor analysis was conducted on independent variables: requisite nurse management competencies (Part 2 of NMCS), effective nurse managers' behaviour (Part 3 of NMCS), team nursing approach (Part 4 of NMCS) and competency development (Part 6 of NMCS) as well as on the dependent variable: nurse management performance in hospitals (Part 5 of NMCS) with the assumption being that the factors were correlated. Factor analysis results show that all factors are retained in the measure as they are all loaded on the rotated component matrix with values that are above the recommended limit of 0.40 (Coakes & Steel 2007). The factors are henceforth referred to as Factors 1 to 5. The following parts of this section provide further detail on the results of each factor analysis that was conducted.

Table 4.3 Factor analysis conducted on variables – requisite management competencies for nurse managers, part 2 of NMCS, behaviours of effective nurse managers, part 3 of NMCS, team nursing approach, part 4 of NMCS *

Table 4.3a Pattern matrix: requisite competencies components

	Sub-Factor 1.1	**Sub-Factor 1.2**	**Sub-Factor 1.3**
q2.1			.695
q2.2			**.703**
q2.3			**.766**
q2.4			.603
q2.5	*.522*		*.413*
q2.6	.628		
q2.7	.529		
q.2.8	.588		
q2.9	**.771**		
q2.10	**.811**		
q2.11	**.743**		
q2.12	.660		
q2.13		**.876**	
q2.14		**.907**	
q2.15		**.882**	
q2.16	.438		
q2.17	.504		
q2.18	.615		
q2.19	**.737**		
q2.20	**.746**		
q2.21	**.783**		
q2.22	.634		
q2.23	*.402*	*.480*	
q2.24	**.711**		
q2.25	**.803**		
q2.26		.471	
q2.27	.620		

Extraction Method: Principal Component Analysis, Rotation Method: Oblimin with Kaiser Normalization, Rotation converged in 9 iterations.

Table 4.3b Pattern matrix: effective behaviours components

	Sub-Factor 2.1	**Sub-Factor 2.2**
q3.1		.652
q3.2		**.806**
q3.3		.628
q3.4	*.424*	*.507*
q3.5		.519
q3.6		.566
q3.7		.595
q3.8	*.474*	*.425*
q3.9	.614	
q3.10	.627	
q3.11	**.746**	
q3.12	.674	
q3.13	.691	
q3.14	**.728**	
q3.15	.695	
q3.16	.669	
q3.17	**.869**	
q3.18	**.886**	
q3.19	**.805**	
q3.20	**.902**	
q3.21	**.809**	
q3.22	.506	
q3.23	**.927**	
q3.24	**.921**	

Extraction Method: Principal Component Analysis, Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 13 iterations.

Table 4.3c Rotated matrix: team nursing approach components

	Sub-Factor 3.1	**Sub-Factor 3.2**
q4.1	**.746**	
q4.2	**.830**	
q4.3	**.779**	
q4.4	**.798**	
q4.5	**.807**	
q4.6	.639	
q4.7	**.708**	
q4.8		**.732**
q4.9		.673
q4.10		**.800**
q4.11		**.743**
q4.12		**.833**

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 3 iterations.

**** Bold indicates high factor loadings, italics indicates leakages***
(Source: Developed for this study).

4.3.1.1 Factor analysis results of Independent Variable - Requisite Nurse Management Competencies, Part 2 of the NMCS

A principal component factor analysis of the 27 variables of requisite nurse management competencies (Part 2 of NMCS) was conducted. The initial computation had five components with Eigen values greater than one. To produce a set of factors which could be interpreted by using theories in Chapter 2, the extraction was fixed to three factors. For the coefficient display format, the values less than 0.40 are suppressed. Missing values were excluded list wise. An Orthogonal factor rotation (Varimax factor rotation with Kaiser Normalization) was executed to make the structure more interpretable (Coakes & Steel 2007, p.122). However, the initial rotated component matrix still represented a number of dual factor loadings higher than 0.40. An Oblique factor rotation (Direct Oblimin with Kaiser Normalization) was then applied with greater success giving only three components with loadings and a structure, which is more interpretable (Coakes & Steel 2007, p.122).

As depicted in Table 4.3a above, the rotated pattern matrix yielded three components or sub-factors, which explained 57.6% of the total variance. Sub-Factor 1.1 explained 41.2% of the variance, Sub-Factor 1.2 explained 9.1% of the variance and Sub-Factor 1.3 explained 7.2% of the variance.

Sub-Factor 1.1 has 19 out of a total of 27 factor items that are acceptable in that group because they had a factor loading higher than 0.40 and, therefore, considered to have adequate construct validity. The eight that loaded less than 0.40 included: the two items under communication competencies (q2.1 and q2.2) and the first two under competencies (q2.3 and q2.4), three research-related items under management competencies (q2.13-q2.15) as well as q2.26, still under management competencies. In addition Sub-Factor 1.1 has eight items that loaded highly above 0.70. These included items under management competencies, namely: q2.9-q2.11 and q2.19-q2.21, q24 and

q2.25. Furthermore, Sub-Factor 1.1 has a leakage in two items; one of those is the one that refers to leading teams (q2.5) which is loaded on both Sub-Factor 1.1 and Sub-Factor 1.3 as well as financial planning and budgetary control (q2.23) which loaded on both Sub-Factor 1.1 and Sub-Factor 1.2.

Sub-Factor 1.2, only has five items that have factor loadings that are higher than 0.40 and 22 that loaded below 0.40. Further, the three research-related items (q2.13. q2.4 and q2.15) that were excluded on Sub-Factor 1.1 are highly loaded on Sub-Factor 1.2. The item on demonstrating computer literacy (q26) is also exhibited in Sub-Factor **1.2.**

For **Sub-Factor 1.3**, also only has five items that are loaded. These included factors relating to communication competencies (q2.1 and q2.2) and leadership competencies (q2.3-q2.5). In addition Factor 3 has two items (q2.2 and 2.3) that loaded highly above 0.70. Overall, estimates of the requisite nurse management competencies construct are suggested to have adequate construct validity.

4.3.1.2 Factor analysis results of Independent Variable - Behaviours of Effective Nurse Managers, Part 3 of the NMCS

A principal component factor analysis of the 24 variables of behaviours of effective nurse managers (Part 3 of NMCS) was used with the loading set at 0.40 to ascertain construct validity. Missing values were excluded list wise. Initially an Orthogonal factor rotation (Varimax factor rotation with Kaiser Normalization) was conducted to make the structure more interpretable (Coakes & Steel 2007, p.122). However, the initial rotated component matrix still represented a number of dual factor loadings higher than 0.40. An oblique factor rotation (Direct Oblimin with Kaiser Normalization) was then applied with greater success giving only two components with dual loadings and a structure which is more readily interpreted (Coakes & Steel 2007, p.122).

As presented in Table 4.3b above, the pattern matrix yielded two components or groups, which explained 67.7% of the total variance. Sub-Factor 2.1 explained 62.5% of the variance and Sub-Factor 2.2 explained 5.2% of the variance.

As presented in Table 4.3b, all factors are acceptable on the measure as they are all loaded on the pattern matrix with factor loadings higher than 0.40. For Sub-Factor 2.1, most of the items (18 out of 27 factor items) are acceptable because they had a factor loading higher than the recommended 0.40 limit. The six items that are excluded are all three items (q3.1-q3.3) that relate to aspects on communication and another three items that relate to leadership (q3.5-q3.7). In addition, Sub-Factor 2.1 exhibited some leakage in the sense that only two items (q3.4 and q3.8) loaded on both factors. Furthermore Sub-Factor 2.1 encompassed mainly items that loaded highly on aspects related to human resource (HR) process/management. Nine of them exhibited extremely high loadings that are higher than 0.70. Sub-Factor 2.2 only included eight items, q3.1 to q3.8 that are higher than 0.40. Seven of those items are on aspects related to communication and leadership. In addition, only one item (q3.8) is loaded on aspects related to HR process/management. Furthermore one of the items (q3.2) has the highest factor loading of 0.81. Overall the items on the variable of behaviours of effective nurse managers are considered to have adequate construct validity.

4.3.1.3 Factor analysis results of Independent Variable - Team Nursing Approach, Part 4 of the NMCS

A principal component factor analysis of the 12 variables of Team Nursing Approach (Part 4 of NMCS) was used with the loading set at 0.40 to ascertain construct validity. Missing values were excluded list wise. For the coefficient display format, the values less than 0.40 are suppressed. An Orthogonal factor rotation (Varimax factor rotation with Kaiser Normalization) was executed to make the structure more interpretable (Coakes & Steel 2007, p.122).

As presented in Table 4.3c above, the rotated component matrix yielded two components or groups, which explained 65.2% of the total variance. Sub-Factor 3.1 explained 36.5% of the variance and Sub-Factor 3.2 explained 28.7% of the variance.

In Table 4.3c, both Factors are acceptable as they are all loaded on the rotated matrix with values above the recommended limit of 0.40. Sub-Factor 3.1 has 7 items (q4.1-q4.7) out of the total of 12 factor items that are acceptable because they had a factor loading higher than 0.40 and therefore considered to have adequate construct validity.

Further, Sub-Factor 3.1 encompassed mainly of items that loaded highly, above 0.70 on aspects related to the benefits of Team Nursing Approach. Sub-Factor 3.2 has five items (q4.8-q4.12) that exhibited factor loadings that are above 0.40. In addition, Sub-Factor 3.2 consisted mainly of items originally classified as pertaining to "nursing team leaders" as per the survey. Furthermore four items out of the five that exhibited factor loadings are loaded highly with values higher than 0.70. Overall, estimates of the variable Team Nursing Approach suggested having adequate construct validity.

4.3.1.4 Factor analysis results of Dependent Variable - Factors influencing Nurse Manager Performance, Part 5 of the NMCS

A principal component factor analysis of the 30 variables of factors influencing performance of nurse managers in hospitals (Part 5 of NMCS) was used with the loading set at 0.40 to ascertain construct validity. The initial computation had seven components with Eigen values greater than one. To produce a set of factors, which could be interpreted by using theories in Chapter 2, the extraction was fixed to three factors. Missing values were excluded list wise. For the coefficient display format, the values less than 0.40 are suppressed. An Orthogonal factor rotation (Varimax factor rotation with Kaiser Normalization) was executed to make the structure more

interpretable (Coakes & Steel 2007, p.122). However, the initial rotated component matrix still represented a number of dual factor loadings higher than 0.40. An oblique factor rotation (Direct Oblimin) was then applied with greater success giving only three components with loadings and structure much less complex to interpret (Coakes & Steel 2007, p.122).

In Table 4.4a below, the rotated pattern matrix yielded three components or groups, which explained 48.8% of the total variance. Sub-Factor 4.1 explained 27.6% of the variance, Sub-Factor 4.2 explained 11.1% of the variance and Sub-Factor 4.3 explained 10.1% of the variance.

Table 4.4 Factor analysis conducted on the variables of factors influencing nurse manager performance, part 5 of NMCS and competency development, part 6 of NMCS*

Table 4.4a Pattern matrix: factors influencing nurse manager performance components

	Sub-Factor 4.1	**Sub-Factor 4.2**	**Sub-Factor 4.3**
q5.1	.634		
q5.2	**.810**		
q5.3	.654		
q5.4	.620		
q5.5	.671		
q5.6	**.747**		
q5.7	.639		
q.5.8	.478		
q5.9	.514		
q5.10	.689		
q5.11	.525		
q5.12	.635		
q5.13	.634		
q5.14	.616		
q5.15	.418		
q5.16		.664	
q5.17	.577		
q5.18	.502		
q5.19			**.707**
q5.20			.637
q5.21	.472		
q5.22		.506	
q5.23	**.776**		
q5.24	**.801**		
q5.25		.490	
q5.26		.533	
q5.27		**.907**	
q5.28		**.904**	
q5.29	.699		
q5.30	.593		

Extraction Method: Principal Component Analysis, Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 7 iterations.

Table 4.4b Pattern matrix: competency development components

	Sub-Factor 5.1	**Sub-Factor 5.2**	**Sub-Factor 5.3**
q6.1	**.767**		
q6.2	**.776**		
q6.3			.535
q6.4	**.803**		
q6.5	**.779**		
q6.6	**.715**		
q6.7	.506		
q6.8	.679		
q6.9			.614
q6.10	**.746**		
q6.11	**.723**		
q6.12	**.814**		
q6.18			.688
q6.19	***.765***	***.765***	
q6.20		*.635*	*.413*
q6.21		.551	
q6.22			.540
q6.23			.571
q6.24		.593	
q6.25		**.720**	
q6.26		**.803**	
q6.27		.674	
q6.28		.698	

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, Rotation converged in 5 iterations.

**** Bold indicates high factor loadings, italics indicates leakage***

(Source: Developed for this study).

As presented in Table 4.4a above, all factors are acceptable as they are all loaded on the rotated component matrix with values that are above the recommended limit. For Sub-Factor 4.1 most (22 out of a total of 30) of the items are acceptable because they are exhibited with a loading higher than 0.40 and therefore considered to have adequate construct validity. The eight items that are excluded are comprised of items concerning aspects related to HR practice (q5.16, q5.19 and q5.20), education and training (q5.22) and management competencies (q5.25-q5.28). In addition, four items are loaded highly with a loading higher than 0.70. These items consisted of two items that are classified as leadership (q5.2, q5.6) and another two items that are classified as education and training (q5.23 to q5.24). Sub-Factor 4.2 only included six items with loadings higher than 0.40. These exhibited loadings consist of the six out of the eight loadings that have been excluded in Sub-Factor 4.1. These are q5.16 related to HR practices, q5.22 on education and training aspects and q25-q28 related to management competencies aspects. Notably, q5.27 and q5.28 are highly loaded with factor loadings greater than 0.70. Sub-Factor 4.3 exhibited only two loadings that were above 0.40. These loadings are of items classified as pertaining to HR practices (q5.19 and 5.20). In addition one of the two items loaded (q5.19) has a value over 0.70. Overall, estimates of the factors influencing *Nurse manager performance* in the hospitals construct was considered to have adequate construct validity.

4.3.1.5 Factor analysis results of Independent Variable - Competency Development, Part 6 of the NMCS

A principal component factor analysis of the 22 variables of factors competency development for nurse managers in hospitals (Part 6A & 6C of the NMCS) was used with the loading set at 0.40 to ascertain construct validity. The initial computation had five components with Eigen values greater than one. To produce a set of factors, which could be interpreted by using theories in Chapter 2 the extraction was fixed to three factors. Missing values were excluded list wise. For the coefficient display format, the values less than 0.40 are suppressed. An Orthogonal

factor rotation (Varimax factor rotation with Kaiser Normalization) was then executed to make the structure more interpretable (Coakes & Steel 2007, p.122).

In Table 4.4b above, the rotated component matrix yielded three components or groups, which explained 52% of the total variance. Sub-Factor 5.1 explained 24.6% of the variance, Sub-Factor 5. 2 explained 17.49% of the variance and Sub-Factor 5.3 explained 9.9% of the variance.

As presented in Table 4.4b all factors are acceptable as they are all loaded on the rotated component matrix. For Sub-Factor 5.1 only 10 out of 22 factor items are acceptable because they are exhibited with a loading higher than 0.40 and therefore considered to have adequate construct validity at individual level. The 10 exhibited loadings are of items related to clinical nursing skills (q 6.1 and q6.2, q6.4-q6.6) and those related to generic management skills (q6.7, q6.8 and q6.10-12). In addition, 8 of the 10 have loading values above 0.70. Sub-Factor 5.2 only has eight loadings that are higher than 0.40. All eight of those factors were not exhibited in Sub-Factor 5.1. However, Sub-Factor 5.2 exhibited a leakage in the sense that q6.20 also loaded on Sub-Factor 5.3. Three of the eight items (q6.19-q6.21) are related to varied delivery modes of future competency development initiatives and the other five relate (q6.24-q6.28) to an increase in management competencies. In addition three of the eight items (q6.19, q6.25 and q6.26) have values over 0.70. Sub-Factor 5.3 included only six acceptable loadings with a value greater than 0.40. The six loadings are on aspects related to clinical nursing skills aspects (q6.3), generic management (q6.9) and varied modes of delivery (q6.18, q6.20, q6.22 and q6.23). Overall, competency development construct was considered to have adequate construct validity.

4.3.2 Labelling the factors

Once factor analysis was conducted and the groupings identified, descriptive labels were then prescribed to each factor group. The tables below present further details

on the grouping results determined by factor analysis per variable and are labelled as indicated below.

4.3.2.1 Independent Variable: Requisite Competencies - Part 2 of the NMCS

As presented in Table 4.5a below, this group of factor items mainly focuses on various types of management competencies that survey participants perceived as important for nurse management to possess or acquire and was, therefore, labelled as *practical management competencies* (Sub-Factor 1.1*)*. It is worth noting that q2.23 that had leaked to component 2 (Sub-Factor 1.2-research related), was deemed to be more appropriate in component 1 (Sub-Factor 1.1-practical management competencies) and was, therefore, placed in that factor group as informed by theories in Chapter 2.

Table 4.5a Factor analysis output and descriptive labels for independent variables – requisite management competencies, part 2 of NMCS

Factor 1 – Requisite Competencies **Factor Items #**	**NMCS classification label**	**New classification label**
q2.6 Understanding and managing self and others.		
q2.7 Exercising emotional self-awareness and self-control.		
q2.8 Building team skills		
q2.9 Problem solving skills to be able to make accurate clinical judgements and decisions.		
q2.10 Ability to identify a solution when conflict occurs between nurses.		
q2.11 Monitoring and managing individual performance of team members.		
q2.12 Managing collective performance and processes of team members.		
q2.16 Managing introduced bureaucratic changes.		
q2.17 Managing the reaction of staff to the introduced bureaucratic changes.	**Management competencies**	**Practical Management competencies (Sub-Factor 1.1)**
q2.18 Managing collaboratively with departments/wards and other areas at the hospital.		
q2.19 Designing, planning and task co-ordination.		
q2.20 Knowing the regulations and standards of practice		
q2.21 Managing time effectively		
q2.22 Using stress management skills		
q2.24 Building trust amongst staff		
q.2.25 Appropriately staffing and scheduling nurses.		
q2.27 Improving clinical knowledge as a resource for clinicians	**Education and Training**	
q2.23 Financial planning and budgetary control	**Management competencies**	

 # Italics indicates leakage to another factor, # bold indicates high factor loaded items

(Source: Developed for this study).

As presented in Table 4.5b below, accessing, analyzing and utilizing research data are critical elements of research skills and for this reason the group was labelled *research-related competencies (Sub-Factor 1.2)*.

Table 4.5b Factor analysis output and descriptive labels for independent variable - requisite management competencies, part 2 of NMCS

Factor 1 –Requisite Competencies **Factor Items #**	**NMCS classification label**	**New classification label**
q 2.13 Accessing relevant research data	Management competencies	**Research-related competencies (Sub-Factor 1.2)**
q 2.14 Analyzing relevant research data		
q 2.15 Utilizing relevant research data		
q.2.26 Demonstrating computer literacy		

 # Italics indicates leakage to another factor, # bold indicates high factor loaded items

(Source: Developed for this study).

In Table 4.4c, the factor group was based around key leadership and communication related competencies that nurse managers in a hospital must possess and was, therefore, labelled *leadership and communication competencies (Sub-Factor 1.3)*.

Table 4.5c Factor analysis output and descriptive labels for independent variable – requisite management competencies, part 2 of NMCS

Factor 1 –Requisite Competencies **Factor Items #**	**NMCS classification label**	**New classification label**
q2.1 Communicating a vision, goal and objectives of the hospital.	**Communication competencies**	**Leadership and communication competencies (Sub-Factor 1.3)**
q2.2 Understanding of multigenerational workforce differences.		
q2.3 Developing a vision, goal and objectives of the hospital.		
q.2.4 Developing and designing individual and team competency development plans.		
q2.5 Leading teams	***Leadership competencies***	

 # Italics indicates leakage to another factor, # bold indicates high factor loaded items

(Source: Developed for this study).

As per Table 4.5c above, on the output of requisite competencies factor analysis, there is a leakage for item q2.5. The researcher deemed it appropriate to group this

item in leadership and communication competencies Sub-Factor 1.3 of requisite competencies as informed by theories in Chapter 2.

4.3.2.2 Independent Variable: Behaviours of Effective Nurse Managers -Part 3 of the NMCS

As presented in Table 4.5d below, the group of items is on factors that are mainly on HR practices by effective nurse mangers in hospitals and so was labelled as *effective human resources practices (Sub-Factor 2.1).*

Table 4.5d Factor analysis output and descriptive labels for independent variables – behaviours of effective nurse managers, part 3 of NMCS

Factor 2– Effective Behaviour Factor Items #	**NMCS classification label**	**New classification label**
q3.9 Act responsibly by personally maintaining codes of conduct and ethics.	**Human resource process/management**	**Effective human resource practices (Sub-Factor 2.1)**
q3.10 Act as role model for other nurses and members of the health care team.		
q3.11 Deal with problems and conflict that affect a team.		
q3.12 Ensure a safe working environment.		
q3.13 Report unsafe or unprofessional practice behaviour that she/he observes.		
q3.14 Investigate the causes of unsafe or unprofessional clinical practice.		
q3.15 Follow-up on the results of risk analysis that has been performed.		
q3.16 Build trust amongst nurses in the department and ward.		
q3.17 Have the ability to conduct a performance appraisal and review of their team members.		
q3.18 Provide constructive feedback to nurses in their work group about their clinical practice.		
q3.19 Maintain collaborative working relationships with other members of the health care team		
q3.20 Actively participates in performance improvement activities.		
q3.21 Collect and examine information to improve the quality of nursing.		
q3.22 Implement budgetary control measures that save their hospital large amounts of money		
q3.23 Provide on-the-job training or mentoring to meet any skills gaps causing unprofessional clinical practice.	**Education and training**	
q3.24 Provide continuous education or guidance to nurses within their team or department		
q3.4 Demonstrate professional leadership at all times.	***Leadership***	
q3.8 Always strives for achieving high standards of patient care.	***Human resource process/management***	

 # Italics indicates leakage to another factor, # bold indicates high factor loaded items
(Source: Developed for this study).

As per Table 4.5d above, on the output of effective behaviour factor analysis, there is a leakage for items q3.4 and q3.8. The researcher deemed it appropriate to group

these items in effective human resource practices sub-factor of requisite competencies as informed by theories in Chapter 2.

As presented in Table 4.5e below, this grouping was concerned with communication-related factors for nurse managers who are effective leaders and was, therefore, labelled *effective leadership communication* (Sub-Factor 2.2).

Table 4.5e Factor analysis output and descriptive labels for independent variable – behaviours of effective nurse managers, part 3 of NMCS

Factor 2 – Effective behaviour **Factor Items #**	**NMCS classification label**	**New classification label**
q3.1 Communicate regularly with nurses and other health care professionals in her/his department or team	**Communication**	**Effective leadership communication (Sub-Factor 2.2)**
q3.2 Use computers for communication and documentation		
q3.3 Communicate effectively		
q3.5 Contribute to the implementation of appropriate competency development plans with under-performing nurses.	**Leadership**	
q3.6 Are committed to the vision of the hospital.		
q3.7 Can see the big picture.		

 # Italics indicates leakage to another factor, # bold indicates high factor loaded items

(Source: Developed for this study).

4.3.2.3 Independent Variable: Team Nursing Approach - Part 4 of the NMCS

As presented in Table 4.5f below, this group of items was based on benefits of team nursing approaches in hospitals and was, therefore, labelled as *benefits of team nursing approach (Sub-Factor 3.1).*

Table 4.5f Factor analysis output and descriptive labels for independent variable – team nursing approach, part 4 of NMCS

Factor 3- Team Nursing Approach **Factor Items #**	**NMCS classification label**	**New classification label**
q4.1 Team nursing results in optimal risk management across this hospital.	**Benefits of team nursing approach**	**Benefits of team nursing approach (Sub-Factor 3.1)**
q4.2 Team nursing provides an extra role model for clinicians.		
q4.3 Team nursing results in improvement in the quality of care and support given to patients.		
q4.4 Team nursing enhances the nurses' ability to provide consistent high quality of care to patients allocated to a team.		
q4.5 Team nursing ensures improvement in staff satisfaction levels.		
q4.6 Team nursing reduces the effects of nursing staff shortages		
q4.7 Team nursing enhances the supervision of less experienced staff		

 # bold indicates high factor loaded items

(Source: Developed for this study).

As presented in Table 4.5g below, in the main this group of items focuses on various factors that relate to the behaviour and skills that effective team leaders should demonstrate and or possess and was, therefore, labelled *effective team leaders (Sub-Factor 3.2).*

Table 4.5g Factor analysis output and descriptive labels for independent variable – part 4 of NMCS

Factor 3- Team Nursing Approach **Factor Items #**	**NMCS classification label**	**New classification label**
q4.8 Nurse managers, who are team leaders, should communicate effectively with other nurses and health professionals in a team.	**Nursing team leaders**	**Effective team leadership (Sub-Factor 3.2)**
q4.9 Nurse managers who are team leaders are selected for their leadership skills as opposed to their availability.		
q4.10 Nurse managers who are team leaders should have access to staff development programs to enhance their clinical leadership skill.		
q4.11 Nurse managers who are team leaders encourage team members to work towards the attainment of the vision of the hospital.		
q4.12 The nurse manager who is a team leader should encourage other nurses to take advantage of learning opportunities.		

 # bold indicates highly factor loadings

(Source: Developed for this study).

4.3.2.4 Dependent Variable: Nurse Manager Performance - Part 5 of the NMCS

As depicted in Table 4.5h below, this group of items focuses around factors that refer to performance management in hospitals and was, therefore, labelled *performance of management in hospitals* ***(Sub-Factor 4.1).***

Table 4.5h Factor analysis output and descriptive labels for dependent variable – nurse manager performance, part 5 of NMCS

Factor 4- *Nurse manager performance* Factor Items #	**NMCS classification label**	**New classification label**
q5. 1 Clear performance outcomes ensure excellence and high quality services.	**Leadership**	**Performance management in hospitals (Sub-Factor 4.1)**
q5.2 In this hospital there are regular constructive and supportive discussions about role expectations and behaviour.		
q5.3 Hospital administrators set team performance goals for nursing teams to achieve.		
q5.4 There are clear operating procedures for team nursing in this hospital.		
q5.5 Team nursing in this hospital ensures better provision of health care services.		
q5.6 The hospital frequently measures the performance of nurses working in a team or department.		
q5.7 Appropriate nursing management skills are vital for ensuring that teams accomplish goals.		
q5.8 Each nurse takes full professional accountability in terms of the allocated patient(s).		
q5.9 All nurse managers have access to information about the required standards of performance and behaviour.	**Communication**	
q5.10 In this hospital there is consensus on patient care standards.	**Performance standards**	
q5.11 This hospital should encourage evidence-based nursing practice to maintain high standards of nursing practice.		
q5.12 This hospital does benchmark its services with that of other hospitals so as to stay up-date with the changes in health care provision.		
q5.13 This hospital allows on-going feedback on ways to improve processes in departments as well as the hospital as a whole.	**Human resource practices**	
q5.14 Performance appraisal of nurse managers is an on-going process.		
q5.15 Recognition and reward for expertise and excellence will result in improved health care service delivery.		
q5.17 The hospital ensures that the capabilities of nurse managers are consistent with the SA Nursing Council set standards.		
q5.18 Risk management is considered in this hospital's strategy to increase patient safety.		
q5.21 Improving professional practice through on-going training will help ensure efficient delivery of services.	**Education and training**	
q5.23 In this hospital there are formal procedures and policies to promote competency development of nurse managers.		
q5.24 Current competency development initiatives in this hospital do improve nurse managers' performance on the job.		
q5.29 This hospital has identified specific competencies that are characteristic of high performance and success in nursing management.	**Management competencies**	
q5.30 Hospital managers in this hospital have the competencies needed to ensure effective performance of the hospital.		

 # bold indicates high factor loading
(Source: Developed for this study).

In the computation in Table 4.5i below, the group of items includes factors that refer to better management of resources, which will result in improved staff retention and higher patient satisfaction levels. This group was, therefore, labelled *management of resources (Sub-Factor 4.2)*. It should be noted that item q5.22 on up-skilling nurse managers was discovered during data analysis to be ambiguous and was, therefore, dropped from further analysis.

Table 4.5i Factor analysis output and descriptive labels for independent variable – nurse manager performance, part 5 of NMCS

Factor 4- ***Nurse manager performance*** **Factor Items #**	**NMCS classification label**	**New classification label**
q5.16 This hospital needs to have better management of staff.	**Human resource practices**	**Management of resources (Sub-Factor 4.2)**
q5.22 In this hospital there is a need to up-skill all nurse managers with no management training.	**Education and training**	
q5.25 Effective management of hospitals will result in higher patient satisfaction levels.	**Management competencies**	
q5.26 Enhancing competence of nurse managers will increase staff retention in this hospital.		
q5.27 This hospital needs to have better management of resources.		
q5.28 This hospital needs to have better management of clinical supplies.		

 # bold indicates high factor loadings

(Source: Developed for this study).

As represented in Table 4.5j below, the group included factors related to budgetary control measures and was, therefore, labelled budgetary control measures (Sub-Factor 4.3).

Table 4.5j Factor analysis output and descriptive labels for independent variable – nurse manager performance, part 5 of NMCS

Factor 4- ***Nurse manager performance*** **Factor Items #**	**NMCS classification label**	**New classification label**
q5.19 Hospital administrators view effective implementation of budgetary control measures as enhancing cost containment efforts.	**Human resource practices**	**Budgetary control measures (Sub-Factor 4.3)**
q5.20 Nurse managers view effective implementation of budgetary control measures as enhancing cost containment efforts.		

 # bold indicates high factor loadings

(Source: Developed for this study).

4.3.2.5 Independent Variable: Competency Development - Part 6 of the NMCS

As presented in Table 4.5k below, the group items included mainly factors that relate to clinical and generic management competency development practices in hospitals and therefore it was labelled *current clinical and generic management competency development* (Sub-Factor 5.1).

Table 4.5k Factor analysis output and descriptive labels for independent variable – competency development, part 6 of NMCS

Factor 5- Competency Development **Factor Items #**	**NMCS classification label**	**New classification label**
q6.1 There is staff development and support for nurse managers to enhance their clinical leadership skill.	**Clinical nursing skills**	**Current Clinical and generic management competency development (Sub-Factor 5.1)**
q6.2 Our hospital creates a clinical learning environment for nurse managers.		
q6.4 Our hospital provides adequate on-the-job learning opportunities for nurse managers.		
q6.5 The current clinical course curriculum helps learners acquire the management competencies they need.		
q6.6 Competency development programs are monitored to ensure best practice in accordance with nursing regulations		
q6.7 Management skills training is of equal importance to clinical training.	**Generic management**	
q6.8 The formal training that nurse managers receive includes generic management competencies.		
q6.10 Our hospital exposes new nurse managers to formal training on nursing management.		
q6.11 Individual management competencies are always determined prior to any competency development intervention.		
q6.12 The competency development course content includes leadership skills of nurse managers.		

 # bold indicates high factor loadings

(Source: Developed for this study).

As presented in Table 4.5l below, the group items included factors based around the content focus areas and delivery modes that should be considered for future competency development initiatives for nurse managers in hospitals and was, therefore, labelled *future competency development initiatives (Sub-Factor 5.2).*

Table 4.5l Factor analysis output and descriptive labels for independent variable – competency development, part 6 of NMCS

Factor 5-Competency development **Factor Items #**	**NMCS classification label**	**New classification label**
q6.19 Competency development of nurse managers should include on-the-job learning and formal training.	**Varied delivery modes**	
6.21 Nurse educators should use a variety of delivery styles such as case studies, group discussions, role playing.		
q6.24 Competency development initiatives for nurse managers should focus on the development of the individual nurse on professional and personal levels.		**Future competency development initiatives (Sub-Factor 5.2)**
q6.25 The course outline for nurse manager training has to be aligned with their requisite core management competencies.	**Increase in management competencies**	
q6.26 Course curricula for nurse managers should also include risk management		
q6.27 Training and orientation of nurse managers about cost containment issues should be improved.		
q6.28 Management competencies should be taught as an integral part of basic nursing course units.		

 # bold indicates highly factor loadings

(Source: Developed for this study).

As presented in Table 4.5m below, the group of items included factors that relate to suggested delivery modes that should be considered for future competency development initiatives for nurse managers in hospitals. This group was, therefore, labelled *future delivery modes, Sub-Factor 5.3.* There is a leakage for item q6.20. The researcher deemed it appropriate to group this item in future delivery modes sub-factor of competency development as informed by theories in Chapter 2.

Table 4.5m Factor analysis output and descriptive labels for independent variable – competency development, part 6 of NMCS

Factor 5- Competency Development Factor Items #	**NMCS classification label**	**New classification label**
q 6.3 The formal training that nurse managers receive focuses only on clinical nursing theory.	**Clinical nursing skills**	
q 6.9 Nurse managers only learn their management role by observation, experience and by trial and error.	**Generic management**	
q6.18 Competency development for nurse managers should be purely in on-line mode.	**Varied delivery modes**	**Future delivery modes (Sub-Factor 5.3)**
q 6.20 The hospital should provide more opportunities for on-the-job learning.		
q6.22 Assessment of nurse managers' after competency development interventions should be based on an examination.		
q 6.23 Conventional face-to-face lecture method should be used to teach requisite nurse management skills		

 # Italics indicates leakage to another factor

(Source: Developed for this study).

The next section focuses on evaluating scale reliability and adequacy of the NMCS sample.

4.4 Scale reliability and adequacy of the sample

This section presents the results of evaluating the reliability of the scale and the adequacy of the NMCS sample size. Reliability analysis was conducted to assess the degree of consistency in the factors and was determined using Cronbach's Alpha on SPSS. "Generally higher than 0.70 is considered acceptable. However, it may decrease to 0.60 in exploratory research" (Hair, Black, Babin, Anderson & Tatham 2006, p.102 & p.137).

As presented in Table 4.6 below, the results of Cronbach's Alpha indicated that the internal consistency reliability of the five measures (Part 2-6) was acceptable as it

yielded high reliability values all exceeding 0.70 and therefore suggests good reliability. The high reliability scores are as a result of extensive literature review to generate items on the scale. Feedback from health sector experts in Australia and SA as well as from the two supervisors that the researcher worked closely with face-to-face on campus in Australia for about three months prior to data collection contributed to high reliability.

Table 4.6 Cronbach's reliability test and adequacy of sample tests: Kaiser – Meyer – Oklin and Barlett's test

Survey Questionnaire	**No of items**	**Survey Sections**	**Reliability Cronbach's Alpha**	**Kaiser Meyer Oklin**	**Barlett's test**
Part 2: Requisite management competencies in hospitals	27	q2.1-q2.27	0.941	0.920	3238.485
Part 3: Behaviours of effective nurse managers in hospitals	24	q3.1-q3.24	0.973	0.957	4358.372
Part 4: Relevance of team nursing approach	12	q4.1-q4.12	0.912	0.898	1440.278
Part 5: Factors influencing nurse manager performance in the hospital	30	q5.1-q5.30	0.922	0.876	2823.832
Part 6: Competency development for nurse managers in hospitals	23	q6.1-q6.12 & q6.18-q6.28	0.860	0.838	1800.270

(Source: Developed for this study).

Tests for adequacy of the sample were done using Kaiser-Meyer-Oklin measure of sampling adequacy and Barlett's test of Sphericity. These tests were done on SPSS. The results of the tests as shown on Table 4.6 above indicate that the sample size met the requirements for factor analysis.

The next section focuses on normality testing, skewness and kurtosis testing.

4.5. Normality testing and skewness and kurtosis testing

This section presents the results of normality testing and of the investigation of the relationships amongst the variables.

Due to limited sample size composite scores were used to represent the variables. The composite scores were calculated using SPSS. The composite scores compared to items, (a) result in fewer parameters to be estimated, and thus appropriate for small sample sizes, (b) are more likely to be normally distributed, and thus likely to violate the normality assumption, and (c) minimize issues associated with shared error variances among items, and thus produce more stable estimates (Coffman & MacCallum 2005, p242)

Accordingly the response items from each variable per participant were combined using *compute variable* command on SPSS into subsets referred to as new variables labels. For example for Part 2 of NMCS, the sum of q2.1-q2.27/person resulted in a creation of a new variable referred to as requisite competencies. The new variables were labelled as follows (Table 4.7):

Table 4.7 Labels for composite score variables

Survey	**Questions**	**New variable label**
Part 2: Identification of management competencies of nurse managers	q2.1-q2.12 q2.14-q2.25, q2.27	Requisite competencies2(IV)
Part 3: Behaviour of effective nurse managers	q3.1- q3.24	Effective behaviour (IV)
Part 4: Relevance of Team Nursing Approach	q4.1- q4.12	Team Lead (IV)
Part 5: Factors influencing nurse manager performance in hospitals	q5.1-q5.15, q5.17-q5.21 & q5.23-30	TotalLead3(DV)
Part 6: Competency development for nurse managers	q6.1-q12 & q6.18-28	Competency dev (IV)

(Source: Developed for this study using headings for different sections of the NMCS).

It should be noted that factor items q5.16, q5.22 q2.13 and q2.26 were dropped from analysis because they did not show any positive correlation with other variables. Therefore, they were omitted from the composite scores of performance

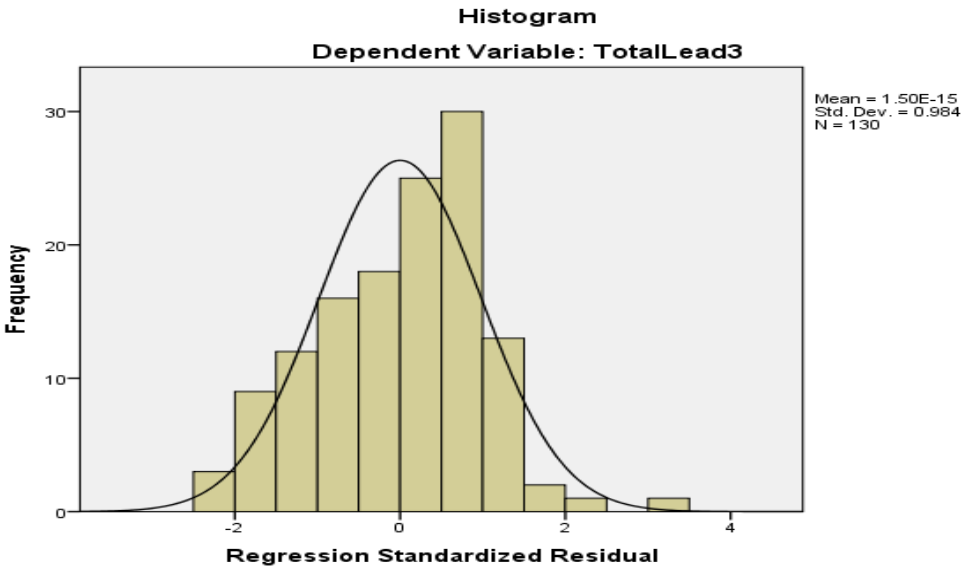
of management (q5.16 & q5.22) and requisite competencies (q2.13 & q2.26). See Section 4.6.1 for further details.

4.5.1 Normality testing

Assessment of normality was done by exploring the data through descriptive statistics. The data was explored for normality by histogram, skewness and kurtosis. For descriptive statistics, frequency distributions and measures of central tendencies and dispersions were specifically done for demographic variables using SPSS.

In addition, a histogram of dependent variable composite score was created. The survey data was scanned and as presented in Figure 4.2 below, the distribution was found to be symmetrical or normal.

Figure 4.2 Histogram of DV composite score with fitted normal curve



(Source: Developed for this study).

4.5.2 Results of skewness and kurtosis for Independent and Dependent Variables

Skewness measures the departure from a symmetrical or balanced distribution, implying that the mean, median and mode are in the same location. When the distribution is symmetrical the skewness is zero (Hair et al. 2006). From the statistical analysis, the skewness for the independent and dependent variables was within the acceptable range - less than 3. It is found to be negatively skewed for requisitecomptencies2, effective beh, team Lead and TotalLead3 as the skewness values are less than -1 though it indicates that it is not a substantially skewed distribution. For competency dev the skewness value is 0.30, therefore, slightly positively skewed.

Kurtosis was found to be positive for all independent variables (requisitecompetencies2, effective beh, Team Lead, competency dev and dependent variable (TotalLead3) as it was within the acceptable range - less than 10. For a normal curve the value of kurtosis is zero. “A large positive value means the distribution is too peaked; however, a curve is too peaked when the kurtosis exceeds +3” (Hair, Babine, Money & Samuel 2003, p.244).

It should be noted that skewness and kurtosis tests were done twice. Initially it was before some factor items (q5.16, q5.22, q2.13 and q2.26) were dropped as they were later found not to have positive correlations with other variables (see Section 4.6.1 for details). The results show that the skewness and kurtosis of all independent variables and dependent variable remained within the acceptable ranges even after dropping the four factor items.

4.6 Relationships amongst variables

This section presents the results of the investigation of the relationships amongst the variables. To investigate the relationships, correlation and multiple regression were executed on SPSS.

4.6.1 Correlation

Correlation matrixes were done on SPSS to establish how related the various variables were. The output of the tests indicated that there was a positive correlation amongst most of the variables. Refer to Appendix VIII – A, about the results of testing the relationship between perceptions of competency development (Part 6 of NMCS) and perceptions of nurse manager performance (Part 5 of NMCS) for a sample of items that did correlate. Two other questions (q2.13 and q2.26) that also did not correlate with other variables were found in another test, about testing the relationship ($H^n_{3)}$ between perceptions of requisite competencies (Part 2 of NMCS) and nurse manager behaviour (Part 3 of NMCS). See Appendix VIII - B for correlation matrix output. See Appendix VIII - C, about the results of testing the relationship ($H^n_{8)}$ between the relevance of team nursing approach (Part 4 of NMCS) and perceptions of nurse manager performance (Part 5 of NMCS), two questions (q5.16 and q5.22) that did not correlate with other variables were found. The key concern was q5.22, which was poorly constructed as it was found to be open to different interpretations.

The four questions were omitted from the composite scores of nurse manager performance (TotalLead3) and requisite competencies (Requistecompetencies2) and there was a positive increase in *R*-square and in factor total variance explained.

4.6.2 Regression

As per the conceptual framework (Figure 2.9), three models were designed to explore the independent and dependent relationship and to determine whether there was an effect on this relationship as a result of the moderating variables. Model 1 includes the independent and dependent variables. Model 2 includes the independent and dependent variables as well as the moderating variables. Model 3 includes the independent variables, dependent variable, moderating variables and interaction terms. The interaction terms were added to be able to quantify the

effect of a moderating variable in multiple regression analysis. These models were tested using moderated multiple regression on SPSS, which is fully explained below.

Moderation enables a more precise explanation of the variance in a dependent variable (Y), not only how one predictor variable (X) relates to another variable (Y), but also under what circumstances the relationship changes depending on a moderating variable (Z) (Hair et al. 2010). This study tested the moderator effects of the four demographic variables on the independent variables (requisite competencies, effective behaviour, team nursing approach and competency development) and dependent variable (nurse manager performance). The moderator effect is the effect in which a third independent variable, referred to as the moderator causes the relationship between a dependent/independent pair to change depending on the value of the moderator variable (Hair et al. 2006). This is also known as the interactive effect (Hair et al. 2006). The demographic variables included: type of hospital (TH), age of participant (A), length of service as a nurse manager (LS) and management level of participants (ML). TH, A, LS and ML were chosen as moderating variables based on the literature review as reported in Chapter 2 of this dissertation, where they have been found to moderate the relationship between the independent and dependent variables in certain previous studies.

In order to estimate the influence of TH, A, LS and ML on the above-specified relationships, the demographic variables were regrouped to have reasonable power in each group to be able to detect the effect. Notably, even though frequently used, multiple regression analyses are typically conducted at low levels of statistical power (Aguinis & Pierce 1999 in Belbin 2011). See the Table 4.8 below for new groups that were created.

Table 4.8 New demographic variable groups for moderation testing

Variable	Original groups	New groups
Age (A)	a. less than 25 b. 26-35 c.36-45 d.46-55 e. 55+	1. less than 35 2. 36-45 3. 46-55 4. above 55
Length of service as nurses manager(LS)	a. 0-4 b. 4-10 c.10-15 d. 15-20 e. Over 20	1. 0-4 2. 4-10 3.10-15 4. over 15
Management level(ML)	a. First level manager (registered nurse managers or deputies in charge of nursing units: Operational manager/unit managers). b. Middle level manager (chief professional nurses engaged in nurse supervisory activities in hospital departments and wards: Assistant Nurse Manager) c. Top level manager (chief professional nurses involved in decision-making and hospital policy formulations: Directors & Deputy Directors).	1. Junior level 2. Senior level
Type of hospital (TH)	a. General hospital/public hospital b. Private hospital c. Specialist private hospital d. Specialist public hospital e. Academic public hospital (Level 1 hospital)	1. Public hospital 2. Private hospital

(Source: Developed for this study using information from Part 1 of NMCS).

Correlation coefficients between variables can adequately represent the relationship between variables and therefore suggests one-dimensional relationship (Hair et al. 2006). The computation in Table 4.9 below shows the results of coefficients of the perceptions between independent variables and the dependent variable. Based on the above discussion and extant literature (Hair et al. 2010), the criterion used to evaluate the three models entailed noting changes in the beta coefficients and in *R*-square and taking into account the significance of the change where $p < 0.05$. Generally, a model is supported if it shows good fit and if the hypothesized relationships are significant in the direction hypothesized (i.e. positive or negative) (Hair et al. 2010).

Cautionary note to researchers: Cavana, Delahaye & Sekaran (2001 p.436) pointed out that the adjusted *R*-square is technically the more correct measure to use in regression analysis. However, it is generally not as widely used as the *R*-square measure. Therefore, in this study the *R*-square was used as a measure.

Analysis of the three models as presented in the following table, indicated that the proposed moderating variables, TH, A, LS and ML did not significantly moderate the relationship between the independent variables, competency development, requisiteCompetencies2, effective behaviour and team lead and the dependent variable, TotalLead3.

Table 4.9 Results of moderated multiple regression for moderating variables; type of hospital, age, length of service and management level

Model Summary			**ANOVA**			**Coefficients**		
	R-square	**R-square change**	**F**	**Sig**	**Independent variable**	**Beta**	**t**	***p*-value**
Model 1	.666	.666	62.191	.000	Requisitecomp2	**.150**	**2.539**	**.012****
					Effectivebeh	**.174**	**2.725**	**.007****
					Teamlead	**.324**	**4.671**	**.000****
					Competencydev	**.376**	**5.731**	**.000****
Model 2	.652	.652	26.283	.000	Requisitecomp2	.134	2.088	**.039****
					Effectivebeh	**.188**	**2.754**	**.007****
					Teamlead	**.331**	**4.448**	**.000****
					Competencydev	**.354**	**4.973**	**.000****
					Type Hospital	-.031	-.512	.609
					Age	.035	.556	.579
					Length Service	-.072	-1.143	.256
					Management Level	.053	.894	.373
Model 3	.657	.657	17.243	.000	Requisitecomp2	.181	1.911	.059
					Effectivebeh	.279	2.106	**.038****
					Teamlead	**.398**	**3.436**	**.001****
					Competencydev	**.443**	**3.222**	**.002****
					Type Hospital	-.047	-.260	.795
					Age	.121	.835	.406
					Length Service	-.087	-.508	.613
					Management Level	.130	.817	.416
					TH x RequisiteComp2x Effectivebehxteamleadxcomptencydev	.036	.149	.882
					A x RequisiteComp2x Effectivebehxteamleadxcomptencydev	-.209	-.684	.495
					LS x RequisiteComp2x Effectivebehxteamleadxcomptencydev	.041	.200	.842
					ML x RequisiteComp2x Effectivebehxteamleadxcomptencydev	-.123	-.596	.553

Dependent variable: TotalLead3 (effective nurse manager performance)
Model 1: Predictors (Constant); RequisiteCompetencies, EffectiveBeh; TeamLead, Competencydev.
Model 2: Predictors (Constant); RequisiteCompetencies2, EffectiveBeh, TeamLead, Competencydev, type of hospital, age, length of service, management level.
Model 3: Predictors(Constant); RequisiteCompetencies2, EffectiveBeh, TeamLead, Competencydev ; type of hospital, age, length of service, management level, TH x RequisiteCompetencies2 x EffectiveBeh x TeamLead x Competencydev, LS x RequisiteCompetencies2 x EffectiveBeh x TeamLead x Competencydev, ML x RequisiteCompetencies2 x EffectiveBeh x TeamLead x Competencydev.
*****: p < 0.05***
 # bold cells indicate the statistically significant results.
(Source: Developed for this study using data from the survey).

As presented in Table 4.9 above, Model 1 summary indicated that all independent variables together (excluding moderating variables) explained 67 % of the variance in the dependent variable TotalLead3 (*R*-square) significant at $p < 0.05$. That is the

independent variables, competency development, requisiteCompetencies2, effective behaviour and team lead explained more than half (67%) of the variance for the dependent variable TotalLead3. It is better than that of Model 2 (65%) and Model 3(66%). With the addition of interaction items, *R*-square improved in Model 3 (66%) but still not better than Model 1(67%). Therefore, Model 1 is the best fit of the data. Further, only team nursing approach (teamlead) and competency development (competencydev) were statistically significant $p < 0.05$ in all three models. Also, in all 3 models β-values presented in Table 4.9 suggest that the team nursing approach (teamlead) and competency development (competencydev) have a large effect on effective nurse manager performance (TotalLead3). Therefore, the results show that team nursing approach (TotalLead3) and competency development (competencydev) are major contributors to the determination of effective nurse manager performance in hospitals. Of the four moderating variables, type of hospital (TH), age of participants (A), length of service (LS) and management level (ML), type of hospital had the most weak effect $p < 0.05$ for Model 2 (*t*-values ranged from -0.51 to 0.89) and Model 3(*t*-values ranged from -0.68 to 0.84). Individually all the moderating variables (TH, A, LS and ML) were not significantly and uniquely contributing to the predictor of effective performance (TotalLead3) $p < 0.05$. Overall, as depicted in Table 4.9 above, there seems to be no significant difference on how nurse managers perceive the effect of each of the independent variables on the dependent variable. From the above-stated it is implied that nurse managers in hospitals predict nurse manager performance in hospitals as a function of four independent variables - requisite competencies, effective behaviour, team nursing approach and competency development.

For further exploration, the researcher also conducted stepwise regression and hierarchical regression to see the contribution of each independent variable made to the variance of the dependent variable or rather to assess the best predictor and whether the relationships make theoretical sense (Coakes & Steed 2003; Hair et al. 2006). Guidelines for SPSS were used to plan the hierarchical regression analysis; as such five different approaches were explored by entering the independent variables in different sequences (Coakes & Steed 2003). In all five approaches, the cluster of

competency development and team nursing approach were more significant predictors when they were entered in the equation as in the first and second steps. Stepwise and hierarchical regression tables are available for inspection by examiners.

The same trends in the results of the different approaches were obtained when the requisite competencies clusters were entered. When requisite competencies (Part 2 of NMCS) and effective behaviours (Part 3 of NMCS) were entered they were a less significant predictor in the regression equation. When multiple regression was executed, the *R*-square value indicated that the model with all the independent variables explained 81% of the dependent variable. However, when a stepwise regression and hierarchical regression models were conducted, the *R*-square stayed at 0.67 when all four predictors were entered and the impact on nurse manager performance (TotalLead3) did not change.

Minor changes in the results were noted when the four 'poor questions' were dropped from the survey. For example, when only q5.22 was dropped from the composite score of nurse manager performance the *R*-square value increased from 659 to 663. When the other three factor items were dropped from composite scores of requisite competencies (q2.13 and q2.26) and nurse manager performance (q5.16) respectively, the *R*-square increased from 663 to 666. The significance level loading for effective behaviour and requisite competencies also changed slightly, from 0.03 to 0.01 for requisite competencies and 0.01 to 0.01 for effective behaviour, both still significant at $p < 0.05$. It therefore shows that the four questions did have some impact on the relationship between independent and dependent variables even though there are no significant changes brought about by their omission.

The results for hypotheses testing are presented in the next section (Section 4.7) on the survey results and analysis under the relevant research issues.

This section has provided a description and summary of the data from the survey. After calculating the descriptive statistics, conducting factor analysis and regression, the next section focuses on the patterns of NMCS data and results with regards to the five research issues.

4.7. Patterns of NMCS data and findings for each Research Issue

Turning from the demographic profile of participants of the study, the researcher presents the patterns of results of the five research issues. Firstly, frequency summary tables of results are presented for readers to easily see patterns in the data presented in this chapter. It is important to recognize that these tables offer only a general indication of perceptions and not intended to be a precise measure of importance. In addition, hypothesis test results are presented to assess whether the null hypotheses are rejected or supported.

4.7.1 Findings related to Research Issue 1: Perceptions on Requisite Management Competencies of nurse managers in Hospitals, Part 2 of the NMCS

The **First Research Issue (RQ1)** was**:**

> *What competencies of nursing management are regarded as important in hospitals?*

Survey participants indicated the level of importance of the key requisite competencies of nurse managers identified in the literature. The items on the survey investigated perceptions on communication competencies, followed by leadership competencies, then management competencies and education and training. Frequency analysis was conducted on SPSS. It should be noted that the survey results below are presented under the new classification labels determined after factor analysis was conducted. Hence the table in Part 2 of NMCS is also split into three parts. See Section 4.3.2 above on labelling of factors.

4.7.1.1 Frequency distributions for Research Issue 1, requisite nurse management competencies

4.7.1.1.1 Practical management competencies (Sub-Factor 1.1)

In terms of practical management competencies, Table 4.10 below, shows that most of the factor items listed in this group (10 out of 16) were perceived by a vast majority of participants (90% and above) as extremely important and very important. The top five identified competencies in order of highest frequency include: a) q2.6 understanding and managing self and others (96%), b) q2.24 building trust amongst staff (approximately 96%), c) q2.25 appropriately staffing and scheduling nurses (95%), d) q2.20 knowing the regulations and standards of practice (approximately 95%) and e) q2.9 problem solving skills to be able to make accurate clinical judgements and decisions (94%).

Table 4.10a NMCS part 2 - practical management competencies sub-factor 1.1 (cohort analysis)

Competencies		Not important at all	Somewhat important	Important	Very important#	Extremely Important#
2.6	Understanding and managing self and others.	0%	0.5%	3.5%	29.0%	67.0%
2.7	Exercising emotional self- awareness and self-control.	0%	1.5%	10.0%	35.8%	52.7%
2.8	Building team skills	0%	0.5%	7.5%	34.3%	57.7%
2.9	**Problem solving skills to be able to make accurate clinical judgements and decisions**	**0.5%**	**0%**	**5.5%**	**28.9%**	**65.2%**
2.10	**Ability to identify a solution when conflict occurs between nurses.**	**0.5%**	**0%**	**7.5%**	**32.8%**	**59.2%**
2.11	**Monitoring and managing individual performance of team members.**	**0.5%**	**0.5%**	**6.5%**	**39.5%**	**53.0%**
2.12	Managing collective performance and processes of team members.	0.5%	0%	9.6%	42.6%	47.2%
2.17	Managing the reaction of staff to the introduced bureaucratic changes.	2.5%	3.5%	22.3%	46.0%	25.7%
2.18	Managing collaboratively with departments/wards and other areas at the hospital.	0.5%	1.0%	19.6%	39.2%	39.7%
2.19	**Designing, planning and task co-ordination.**	**0.5%**	**0.5%**	**11.9%**	**36.8%**	**50.2%**
2.20	**Knowing the regulations and standards of practice**	**0%**	**0%**	**5.5%**	**22.4%**	**72.1%**
2.21	**Managing time effectively**	**0.5%**	**0.5%**	**5.9%**	**27.2%**	**65.8%**
2.22	Using stress management skills	0.5%	1.5%	10.9%	37.6%	49.5%
2.23	Financial planning and budgetary control	0%	2.5%	13.4%	29.2%	55.0%
2.24	**Building trust amongst staff**	**0.5%**	**0%**	**4.0%**	**29.7%**	**65.8%**
2.25	**Appropriately staffing and scheduling nurses.**	**1.0%**	**1.0%**	**3.0%**	**26.2%**	**68.8%**
2.27	Improving clinical knowledge as a resource for clinicians.	2.0%	0.5%	13.1%	32.3%	52.0%

 # bold indicates high factor loadings

(Source: Developed for this study from data supplied in Part 2 of NMCS).

To explore the frequency analysis further, only the scores under the extremely important column in Table 4.10b above were considered to see if there would be any clear differences in the competencies perceived as important for nurse managers in the hospitals. Further exploration of the output of the frequency analysis for this factor grouping was carried out because the researcher believed that there were still many competencies that were deemed to be important under this factor grouping and, therefore, wanted to confirm the ones that could be regarded as critical. Table 4.10b below, shows that if the scores for extremely important for the five highly-rated (as stated above) competencies are considered there is a slight change in the order of highest frequency. However, those competencies still remain in the top five highly-rated requisite competencies. Therefore, hospitals should consider these competencies in future competency development initiatives and or during recruitment and placement of nurses in management positions in order to ensure that hospitals are staffed by high performing leaders.

Table 4.10b Frequency order of perceived top extremely important and very important practical management competencies, sub-factor 1.1

Competencies	**Extremely important %**	**Highest frequency order**	**Very important & extremely Important %**	**Highest frequency order**
q.2.20 Knowing the regulations and standards of practice	72%	1	94.5%	4
q.2.25 Appropriately staffing and scheduling nurses	68.8%	2	95%	3
q.2.6 Understanding and managing self and others	67%	3	96%	1
q.2.24 Building trust amongst staff	65.8%	4	95.5%	2
q.2.9 Problem solving skills to be able to make accurate clinical judgements and decisions	65.2%	5	94.1%	5

(Source: Developed for this study from frequency distribution analysis of Part 2 of NMCS).

4.7.1.1.2 Research-related competencies (Sub-Factor 1.2)

In terms of research-related competencies, Table 4.10c below, shows that utilizing relevant research data was perceived by many survey participants (approximately 71%) as extremely important and very important. Utilizing research data is critical for nurse managers to be able to exercise evidence-based nursing practice by being able to choose the best intervention designed to meet the patient's care need and to justify the selection based on valid, reliable research. Ultimately the use of evidence based nursing could contribute to the development or refinement of nursing standards if the outcomes are shared widely in the nursing profession.

Table 4.10c NMCS part 2 – research-related competencies sub-factor 1.2 (cohort analysis)

Competencies		Not important at all	Somewhat important	Important	Very important #	Extremely Important #
2.14	**Analyzing relevant research data**	**1.0%**	**5.5%**	**26.6%**	**41.7%**	**25.1%**
2.15	**Utilizing relevant research data**	**1.0%**	**5.0%**	**23.4%**	**45.3%**	**25.4%**

 # bold indicates high factor loadings

(Source: Developed for this study from data supplied in Part 2 of NMCS).

Again, it should be noted that factor item q2.13 and q2.26 were dropped from analysis because they did not show any positive correlation with other variables.

4.7.1.1.3 Leadership and communication competencies (Sub-Factor 1.3)

In terms of leadership and communication competencies, a frequency analysis of the perceptions of nurse managers indicate that none of the participants perceived communication related competencies and leadership related competencies stated on the questionnaire as 'not important at all'. Table 4.10d below, shows that most of the items listed in this group (four out of five) were perceived by the majority of NMCS participants (higher than 90%) as extremely important and very important.

Leading teams (q2.5) was rated the highest (91.4%) followed by q.2.1 communicating a vision, goal and objectives (91.1%) then q.2.3 develop a vision, goal and objectives of the hospital (90.6%) and equally, developing and designing individual and team competency development plans. If nurse managers as leaders contribute to the development of the vision, goal objectives of the hospitals they are then able to share the big picture of the hospital with their teams and are in a better position to design appropriate individual and team competency development plans that are aligned or informed by the vision, goal and objectives of their hospitals.

Table 4.10d NMCS part 2 - leadership and communication competencies factor 2.3 (cohort analysis)

Competencies		**Not important at all**	**Some-what important**	**Important**	**Very important**	**Extremely Important**
2.1	Communicating a vision, goal and objectives of the hospital.	0%	0.5%	8.5%	21.4%	69.7%
2.2	Understanding of multigenerational workforce differences.	0%	1.0%	14.0%	35.5%	49.5%
2.3	Developing a vision, goal and objectives of the hospital.	0%	1.0%	8.5%	28.9%	61.7%
2.4	Developing and designing individual and team competency development plans.	0%	1.0%	8.5%	28.9%	61.7%
2.5	Leading teams	0%	1.0%	7.6%	31.8%	59.6%

(Source: Developed for this study from data supplied in Part 2 of NMCS).

Part 2 of NMCS also included two open-ended questions. The first question (q2.28) was for confirming the perceptions of NMCS participants on the skills they viewed as important from the above-stated list of factors (q2.1-q2.27). When asked to state the three competencies that they think are most critical out of the list and to provide reasons for their perception, those that responded mainly selected factors that are part of the practical management competencies Sub-factor 2.1. The researcher would like to mention that the phrasing of the question (q2.28) might have been limiting to some extent because it referred to the above-listed and after the printing of the questionnaire the above-listed (i.e. on the same page) were only from q2.16-q2.27. As such some participants may have not turned over to once

more peruse the entire list. Nonetheless the results in an open-ended question confirmed the analysis from the frequency distribution analysis. These results are tabulated below - see Table 4.11. Building trust and appropriately staffing and scheduling were amongst the top five highly-rated competencies. Even though time management was not included in the list of the top five it is the sixth most highly rated competency in terms of the frequency distribution analysis. Some of the cited reasons for perceiving the selected competencies as important are also quoted in Table 4.11. A number of other reasons were provided and are not recorded below simply because they did not fit with the listed items that were perceived as important. However, they were not completely disregarded as they were used to develop guidelines for in-depth interview discussions and for the researcher to be able probe appropriately.

Table 4.11 Three most critical competencies as stated by NMBCS participants

Competencies	**% Of Participants**	**Reasons**
q 2.24 Building trust amongst staff	12.4%	"To avoid conflict" "To ensure a good work environment" " To be able to trust staff to do what they are supposed to do"
q 2.25 Appropriately staffing and scheduling nurses	11.2%	"To make sure that tasks are done accurately"
q 2.21 Managing time effectively	10.3%	"To ensure all areas of work especially projects are completed within scheduled time" "To organize finances on time" "To ensure achievement of results" "To prevent problems"

(Source: Developed for this study using responses from question 2.28 of NMCS).

The second question asked survey participants to state any other competencies that they would like to add to the provided list. Additional competencies were also stated even though not all captured in this Chapter. These included, "building a working relationship with organized labour"; "conflict mediation between nurses"; "strategic planning"; "mentorship"; "listening skills"; "communicating with patients and their families"; "effective communication within the team"; "management of absenteeism and leave plans" and "telephone etiquette". These additional

competencies all primarily form part of practical management competencies Sub-Factor 2.1 and leadership and communication competencies Sub-Factor 1.3.

The list of competencies identified by survey participants as important points to requisite managerial and or leadership competencies for nurse managers in hospitals to be able to provide quality nursing care. Most of these competencies are well known requirements for nurse managers. The identified list of competencies can be used to inform, supplement or to review existing skills audit tools and competency development models in hospitals.

4.7.1.2 Findings concerning Research Issue 1 - Part 2 of the NMCS

The two hypotheses for this research issue as stated in Chapter 2 on literature review include:

- *H^n_1 For nurse managers, the possession of requisite competencies does not lead to increased nurse manager performance.*
- *H^n_2 For nurse managers, there is no difference in the perception of the importance of competencies between public or private hospitals, age, length of service as a nurse manager and management level of participants.*

4.7.1.2.1 Hypothesis H^n_1 for Research Issue 1

As depicted in Table 4.9 above, the statistics in Model 1 indicate that there is a positive and significant relationship between requisite competencies and nurse manager performance $p < 0.05$ (0.01),t = 2.54 and β = 0.15. Therefore, the model for **H^n_1 is rejected** and the alternative hypothesis is accepted. This implies that even though there is a relationship between the possession of requisite competencies and nurse manager performance, the relationship has a low effect.

4.7.1.2.2 Hypothesis H^n_2 Research Issue 1

The exploration of the moderating effects of the null hypothesis **H^n_2**, of the variables was conducted to determine whether there were differences in perceptions of requisite competencies for nurse managers between public and private hospital participants (TH), age of participants (A) and length of service as a nurse manager (LS). The moderation relationship was considered to be significant if the *p*-values associated with variable were significant (< 0.05) (Hair et al. 2010).

H^n_2 is designed to investigate whether type of hospital (TH), age of nurse managers (A), length of service (LS) and managerial level (ML) vary the relationship between the independent variable – requisite competencies, and the dependent variable – effective performance of nurse managers.

From the analysis of the output (Table 4.9) of the **moderated multiple regression,** there was **no** difference in Model 2 between perceptions of public hospital survey participants and of private hospital participants, age of participants, length of service as nurse managers and level of management of participants (as per the various groups that were created - See above Table 4.9) in relation to requisite competencies for nurse managers. However, with the addition of interaction items (Model 3), requisite competencies was no longer significant $p < 0.05$ (0.06). Even though the β-value and *t*-value (0.18 and 1.91 respectively) for requisite competencies was positive, it showed a low effect in the relationship. There is a probability that the change of values was due to chance alone. Therefore, the null hypothesis, **H^n_2 is supported.** A detailed discussion on these relationships is presented in Chapter 5.

4.7.2 Findings regarding Research Issue 2: Behaviours of Effective nurse managers in Hospitals, Part 3 of the NMCS

Survey participants indicated whether they agreed or not with the statements related to behaviours of effective nurse managers identified in the literature. The

statements were as per the questionnaire in relation to communication aspects, followed by leadership, then HR process/management and education and training. Frequency analysis was conducted on SPSS. It should be noted that the results of the NMCS are presented below, under new classification labels determined after factor analysis was conducted. Hence the table in Part 3 of NMCS is also split into two parts. See Section 4.3.2 above on labelling of factors.

The **Second Research Issue (RQ2)** was:

> *How do specific competencies relate to the behaviour of effective nurse managers?*

4.7.2.1 Frequency distributions for behaviours of effective nurse managers

4.7.2.1.1 Effective human resource practices (Sub-Factor 2.1)

In terms of the effective human resource practices Sub-Factor, as presented in Table 4.13a below, a frequency analysis of perceptions of participants indicates that in the majority (more than 80%) of NMCS participants strongly agreed and agreed that effective nurse managers (in order of highest frequency) a) q3.8 always strive to achieve high standards of patient care (88.4%), b) q3.9 act responsibly by personally maintaining codes of conduct and ethics (85%), c) q3.17 have the ability to conduct a performance appraisal review of their team (82%), d) q3.12 ensure a safe working environment (approximately 82%) and e) investigate the causes of unsafe or unprofessional clinical practice.

It therefore seems that these above-listed practices by nurse managers in hospitals would or do result in improved staff and patient satisfaction and ultimately improved quality of nursing care.

Table 4.12a NMCS part 3 - effective human resources practices sub-factor-factor 2.1 (cohort analysis)

	Statement	Strongly Disagree	Disagree	Neutral	Agree#	Strongly Agree#
3.4	Demonstrate professional leadership at all times.	1.5%	6.0%	21.5%	31.5%	39.5%
3.8	Always strive for achieving high standards of patient care.	0.5%	2.0%	9.1%	41.4%	47.0%
3.9	Act responsibly by personally maintaining codes o conduct and ethics.	1.5%	2.5%	10.7%	43.7%	41.6%
3.10	Act as role model for other nurses and members of the health care team.	2.0%	3.5%	14.6%	39.4%	40.4%
3.11	**Deal with problems and conflict that affect a team.**	**2.5%**	**3.0%**	**18.7%**	**41.4%**	**34.3%**
3.12	Ensure a safe working environment.	3.0%	2.0%	13.1%	43.4%	38.4%
3.13	Report unsafe or unprofessional practice behaviour that she/he observes.	3.0%	3.5%	14.1%	43.7%	35.7%
3.14	**Investigate the causes of unsafe or unprofessional clinical practice.**	**1.5%**	**4.0%**	**14.0%**	**39.0%**	**41.5%**
3.15	Follow-up on the results of risk analysis that has been performed.	1.5%	6.5%	18.6%	39.2%	34.2%
3.16	Build trust amongst nurses in the department and ward.	1.0%	6.0%	20.6%	38.7%	33.7%
3.17	**Have the ability to conduct a performance appraisal and review of their team members.**	**0.5%**	**2.5%**	**15.0%**	**47.5%**	**34.5%**
3.18	**Provide constructive feedback to nurses in their work group about their clinical practice.**	**1.5%**	**3.0%**	**15.6%**	**49.2%**	**30.7%**
3.19	**Maintain collaborative working relationships with other members of the health care team**	**1.5%**	**2.0%**	**17.1%**	**46.2%**	**33.2%**
3.20	**Actively participates in performance improvement activities.**	**1.0%**	**3.0%**	**19.6%**	**45.7%**	**30.7%**
3.21	**Collect and examine information to improve the quality of nursing.**	**0.5%**	**3.5%**	**19.0%**	**46.5%**	**30.5%**
3.22	Implement budgetary control measures that save their hospital large amounts of money	2.0%	7.0%	22.0%	41.0%	28.0%
3.23	**Provide on- the-job training or mentoring to meet any skills gaps causing unprofessional clinical practice.**	**1.0%**	**5.6%**	**18.2%**	**45.5%**	**29.8%**
3.24	**Provide continuous education or guidance to nurses within their team or department**	**0.5%**	**5.0%**	**17.6%**	**45.2%**	**31.7%**

 # bold indicates high factor loadings

(Source: Developed for this study from data supplied in Part 3 of NMCS).

4.7.2.1.2 Effective leadership communication (Sub-Factor 2.2)

Frequency analysis of effective leadership communication Sub-Factor 2.2 indicates that the majority of the participants (82%) equally strongly agreed and agreed that (q3.1) in their hospitals effective nurse managers regularly communicate with nurses and other health care professionals in a department and (q3.6) are committed to the vision of the hospital. Additionally, the frequency analysis indicates that effective nurse managers in hospitals do use computers as a tool for communicating with nurses and other healthcare professionals and for preparing documentation which is shared with colleagues. The results are tabulated below - see Table 4.13b. Sharing of information can contribute towards minimizing patient care errors, which could result in the achievement of high standards of patient care in hospitals.

Table 4.12b NMCS part 3 - effective leadership communication sub-factor 2.2 (cohort analysis)

	Statement	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree #**	**Strongly Agree #**
3.1	Communicate regularly with nurses and other health care professionals in her/his department or team	1.5%	6.5%	10.0%	42.0%	40.0%
3.2	**Use computers for communication and documentation**	**3.5%**	**10.1%**	**17.2%**	**43.4%**	**25.8%**
3.3	Communicate effectively	2.5%	9.6%	19.3%	34.5%	34.0%
3.5	Contribute to the implementation of appropriate competency development plans with under-performing nurses.	2.0%	9.5%	17.1%	43.2%	28.1%
3.6	Are committed to the vision of the hospital.	1.0%	3.5%	13.5%	40.5%	41.5%
3.7	Can see the big picture.	2.0%	3.0%	20.6%	38.7%	35.7%

 # bold indicates high factor loadings

(Source: Developed for this study from data supplied in Part 3 of NMCS).

Part 3 of NMCS also included an open-ended question. Survey participants were to state any other comments on behaviours of effective nurse managers that they would like to add to the provided list of factors (question 3.1-3.24). In responding to

the question (those that responded) participants added behaviours that primarily form part of effective human resource practices (Sub-Factor 2.1) and effective leadership communication (Sub-Factor 2.2). Some of those comments included: "nurse managers should communicate with directors in terms of requisite resource to enable quality care"; "nurse managers must act as a role model for juniors and educate them to be able to meet unit objectives"; "team building sessions should be held with subordinates"; "should always strive to improve the standard of the hospital and the units"; "nurse managers must be able to build a good relationship with other team members"; "can do attitude"; "good listening skills" and "should not become too friendly with others".

A number of barriers to effective nursing practice and being an effective manager and leader were also stated even though not all captured on this Chapter. These included comments such as: "there is no proper support for unit managers who end up providing more nursing care duties than management duties"; "there is no time for teaching and in-service training in units because of shortage of staff"; "budget constraints do not allow for maintenance of equipment. Existing structures are also becoming dilapidated"; "poor attendance of meetings by nurse managers" and "support from other departments such as procurement is zero".

4.7.2.2 Findings about <u>Research Issue 2</u>: Behaviours of Effective Nurse Managers - Part 3 of the NMCS

- H^n_3 *There is no relationship between the perceptions of requisite competencies and nurse manager behaviour.*
- H^n_4 *For nurse managers, there is no difference in the perception of effective behaviour of nurse manager between public or private hospitals, age, length of service as a nurse manager and management level of participants.*

4.7.2.2.1 Hypothesis H^n_3 for <u>Research Issue</u> 2

To explore hypothesis **H^n_3, a Pearson product-moment correlation coefficient 2-tailed test** was computed using SPSS to determine the relationship between

perceptions of requisite competencies (Part 2 of NMCS) and effective nurse manager behaviour (Part 3 of NMCS). Even though normality of composite scores was carried out, the researcher started by checking whether there was a linear relationship between the two variables by creating a histogram using SPSS. The data showed no violation of normality.

The results of the correlation coefficient test indicate that there was correlation between the two variables in relation to perceptions of requisite competencies and effective nurse manager behaviour. The positive correlation relationships are as follows: a) The scores of leadership and communication factor (Part 2 of NMCS) are positively correlated with the scores of effective leadership communication factor (Part 3 of NMCS), b) leadership and communication factor (Part 2 of NMCS) are positively correlated with effective human resource practices (Part 3 of NMCS), c) leadership and communication factor scores (Part 2 of NMCS) are positively correlated with practical management competencies, d) practical management factor scores are positively correlated with effective leadership and e) communication and research related competencies are positively correlated with effective human resource practices. Notably, there was only one item of research-related factor under requisite competencies (Part 2 of NMCS) that showed a positive correlation with only one factor of effective nurse manager behaviour (Part 3 of NMCS) and that was related competencies. These items are: utilizing relevant research data (q2.15) and implement budgetary control measures that save their hospital lots of money (q3.22). It should also be noted that there were two items (q2.13 and q2.26), which had no correlation with other variables on the matrix. These two items were, therefore, dropped from further analysis.

Reviewing the questionnaire (Part 2 and Part 3) the essence of those items cannot be related. The results are tabulated on Appendix VIII - B. Traditionally managers are responsible for the control of resources. Therefore, knowing how to use research data that is related to financial control measures or aspects can result in saving of financial resources in hospitals or can contribute to meeting organizational needs. Overall the outcomes of the study show that there was strong correlation

between perceptions of requisite competencies and effective nurse manager behaviour. Therefore, the null hypothesis, **H^n_3 is rejected** and the alternative is hypothesis accepted. The results are discussed in more detail in Chapter 5.

4.7.2.2.2 Hypothesis H^n_4 for Research Issue 2

The exploration of the moderating effects of the null hypothesis **H^n_4**, of the variables was conducted to determine whether there were differences in perceptions of effective behaviour of nurse managers between public and private hospital participants (TH), age of participants (A) and length of service as a nurse manager (LS). The moderation relationship was considered to be significant if the *p*-values associated with variable were significant (< 0.05) (Hair et al. 2010).

H^n_4 is designed to investigate if type of hospital (TH), age of nurse managers (A), length of service (LS) and managerial level (ML) vary the relationship between the independent variable – effective behaviour, and the dependent variable – effective performance of nurse managers.

From the analysis of the output (Table 4.9) of the **moderated multiple regression,** the addition of interaction items does to some extent have an effect for effective behaviour. However, the relationship between effective behaviour and effective performance remains positive and significant $p < 0.05$ (0.04), $t = 2.11$ and $\beta = 0.28$ as there are no substantive statistically significant differences. Therefore, the null hypothesis, **H^n_4** is **supported.** A detailed discussion on these relationships is presented in Chapter 5.

4.7.3 Findings with reference to Research Issue 3: Factors Influencing Performance in Hospitals, Part 5 of the NMCS

The **Third Research Issue (RQ3)** was:

What are the factors influencing effective nurse manager performance in hospitals?

To respond to this **RQ3,** the researcher firstly analyzed frequency distributions of nurse manager's views on factors influencing effective nurse managers' performance in hospitals. Secondly, the researcher tested the hypotheses by conducting a factor analysis of all the composite scores of the independent (requisite competencies, effective behaviour, team nursing approach and competency development) and dependent variable (nurse manager performance). Thirdly a multiple regression with composite scores of requisite competencies (Part 2), effective behaviour (Part 3), team nursing approach (Part 4) - independent variables and nurse manager performance (Part 5) - dependent variable as well as explored moderator effect of the selected demographic variables on the independent/dependent variable relationship by comparing mean scores using Independent Samples *t*-test. All tests were conducted on SPSS.

4.7.3.1 Frequency distributions for Factors Influencing nurse manager Performance

4.7.3.1.1 Performance management in hospitals (Sub-Factor 4.1)

As depicted in Table 4.15a below, a frequency analysis of perceptions of participants on factors related to performance management in hospitals, shows that there are very strong agreements and agreements (more than 90%) on especially four of the listed items. Namely, that q5.21 improving professional practice through on-going training would help ensure efficient delivery of services (93%), followed by that (q5.17) the hospital ensures that the capabilities of nurse managers are consistent with the SA Nursing Council Standards (92%) and equally

that (q5.18) risk management is considered in their hospital's strategy to increase patient safety and (q5.11) their hospital should encourage evidence-based nursing practice to maintain high standards of nursing practice (approximately 92%). There was slightly less agreement amongst participants though still significantly high (over 85%) that nurses (q5.9) have access to information about the required standards of performance and behaviour (approximately 88%), (q5.7) appropriate nursing management skills are vital for ensuring that teams accomplish goals and equally (q5.14) that performance appraisal of nurse managers is an on-going process in their hospitals (approximately 86%) and that clear performance outcomes ensures excellence and high quality services (q5.1). It should be noted that factor items (q5.16, q5.22) were dropped from analysis because they did not show any positive correlation with other variables.

Table 4.13a NMCS part 5 - performance management in hospitals sub-factor 4.1 (cohort analysis)

	Statement	Strongly disagree	Disagree	Neutral	Agree #	Strongly Agree #
5.1	Clear performance outcomes ensure excellence and high quality services.	1.0%	2.0%	11.1%	48.2%	37.7%
5.2	**In this hospital there are regular constructive and supportive discussions about role expectations and behaviour**	**1.0%**	**10.1%**	**25.1%**	**43.2%**	**20.6%**
5.3	Hospital administrators set team performance goals for nursing teams to achieve.	1.0%	8.0%	19.1%	48.7%	23.1%
5.4	There are clear operating procedures for team nursing in this hospital.	0.5%	5.5%	25.6%	47.7%	20.6%
5.5	Team nursing in this hospital ensures better provision of health care services.	1.5%	3.5%	17.7%	56.1%	21.2%
5.6	**The hospital frequently measures the performance of nurses working in a team or department.**	**2.0%**	**6.6%**	**20.3%**	**50.3%**	**20.8%**
5.7	Appropriate nursing management skills are vital for ensuring that teams accomplish goals.	0.5%	1.5%	11.1%	49.5%	37.4%
5.8	Each nurse takes full professional accountability in terms of the allocated patient(s).	1.5%	8.0%	18.1%	47.2%	25.1%
5.9	All nurse mangers have access to information about the required standards of performance and behaviour	0.5%	1.5%	10.1%	51.5%	36.4%
5.10	In this hospital there is consensus on patient care standards.	1.5%	2.0%	11.7%	46.7%	38.1%
5.11	This hospital should encourage evidence-based nursing practice to maintain high standards of nursing practice.	2.0%	0%	6.6%	44.2%	47.2%
5.12	This hospital does benchmark its services with that of other hospitals so as to stay up-date with the changes in health care provision.	1.5%	2.5%	14.1%	38.7%	43.2%
5.13	This hospital allows on-going feedback on ways to improve processes in departments as well as the hospital as a whole.	2.0%	7.1%	17.7%	44.4%	28.8%
5.14	Performance appraisal of nurse managers is an on-going process	2.0%	3.0%	9.1%	49.0%	36.9%
5.15	Recognition and reward for expertise and excellence will result in improved health care service delivery.	1.0%	4.0%	13.1%	44.7%	37.2%
5.17	The hospital ensures that the capabilities of nurse managers are consistent with the SA Nursing Council set standards.	1.0%	0.5%	6.5%	50.8%	41.2%
5.18	Risk management is considered in this hospital's strategy to increase patient safety.	1.0%	1.5%	6.1%	45.5%	46.0%
5.19	Hospital administrators view effective implementation of budgetary control measures as enhancing cost containment efforts.	2.0%	2.5%	14.6%	46.5%	34.3%
5.20	Nurse managers view effective implementation of budgetary control measures as enhancing cost containment efforts.	0%	1.0%	14.6%	54.3%	30.2%
5.21	Improving professional practice through on-going training will help ensure efficient delivery of services.	0.5%	0.5%	6.0%	42.2%	50.8%
5.24	**Current competency development initiatives in this hospital do improve nurse managers' performance on the job.**	**1.5%**	**7.1%**	**21.7%**	**44.9%**	**24.7%**
5.29	This hospital has identified specific competencies that are characteristic of high performance and success in nursing	1.0%	3.5%	21.2%	51.0 %	23.2%
5.30	Hospital managers in this hospital have the competencies needed to ensure effective performance of the hospital.	2.0%	3.5%	19.6%	48.2%	26.6%

 # bold indicates high factor loadings
(Source: Developed for this study from data supplied in Part 5 of the NMCS).

Generally, in participants' hospitals there were clear standards of best practice, performance procedures and policies and a fair performance measurement practice. Nurse managers received regular feedback and support about role expectations and behaviour as well as exposure to competency development initiatives in order to continuously improve weak performance areas identified

during performance appraisals and ultimately for hospitals to render more efficient and effective services. In SA, the nursing practice is regulated by the government for the benefit of nursing and health for all. The purpose of regulations and standards of nursing practice is about protecting the public through a defined nursing practice, but also regulating nursing education and overseeing the competence of nurses.

4.7.3.1.2 Management of resources (Sub-Factor 4.2)

In Table 4.15b below, a frequency analysis of perceptions on management of resources in hospitals shows that more than 85% of participants strongly agreed and agreed that (q5.25) effective management of hospitals will result in higher patient satisfaction (94%) levels and that q5.26 enhancing competence of nurse managers will increase staff retention in their hospitals (87%). There were also a high percentage of NMCS participants (approximately 75%) who strongly agreed and agreed that (q5.28) there is a need to have better management of clinical supplies.

Table 4.13b NMCS part 5 - management of resources sub-factor 4.2 (cohort analysis)

	Statement	**Strongly disagree**	**Disagree**	**Neutral**	**Agree #**	**Strongly Agree #**
5.25	Effective management of hospitals will result in higher patient satisfaction levels.	0%	1.0%	5.0%	37.7%	56.3%
5.26	Enhancing competence of nurse managers will increase staff retention in this hospital.	0%	1.5%	11.5%	36.0%	51.0%
5.27	**This hospital needs to have better management of resources.**	**3.0%**	**5.1%**	**17.8%**	**36.0%**	**38.1%**
5.28	**This hospital needs to have better management of clinical supplies.**	**2.1%**	**6.8%**	**16.7%**	**35.4%**	**39.1%**

 # bold indicates high factor loadings

(Source: Developed for this study from data supplied in Part 5 of NMCS).

4.7.3.1.3 Budgetary control measures (Sub-Factor 4.3)

In terms of budgetary control measures, as depicted in Table 4.15c below, many nurse managers were in agreement that (q5.20) nurse managers view effective implementation of budgetary control measures as enhancing cost containment efforts(approximately 85%)and that hospital administrators view effective implementation of budgetary control measures as enhancing cost containment efforts (approximately 81%).

Table 4.13c NMCS part 5 - budgetary control measures sub-factor 4.3 (cohort analysis)

	Statement	**Strongly disagree**	**Disagree**	**Neutral**	**Agree #**	**Strongly Agree #**
5.19	**Hospital administrators view effective implementation of budgetary control measures as enhancing cost containment efforts.**	**2.0%**	**2.5%**	**14.6%**	**46.5%**	**34.3%**
5.20	Nurse managers view effective implementation of budgetary control measures as enhancing cost containment efforts.	0%	1.0%	14.6%	54.3%	30.2%

 # bold indicates high factor loadings

(Source: Developed for this study using Part 5 of NMCS).

Part 5 of NMCS also included an open-ended question. Survey participants were asked to state any other comments on factors influencing performance in their hospitals that they would like to add to the provided list of factors (q5.1- q5.30). In responding to the question, those participants that responded stated issues such as the following: “better communication and effective management results in patient satisfaction”; “proper placement of nurse managers”; “we are always striving for excellence” and “staff motivation will improve professional practice and management”. These additional factors all form part of performance management in hospitals Sub-Factor 4.1. In addition other comments were “material resources are not managed properly in wards and clinics”; “lack of equipment and supplies affects the effectiveness of the hospital”; “resources from the hospital limits effective management of the hospital”, and these form part of management of resources Sub-Factor 4.2. One other comment was that “the management is money

driven that it compromises provision of quality care" relates to budgetary control measures Sub-Factor 4.3.

A number of challenges nurse managers experienced as making it difficult for them to perform excellently were also stated though not all were captured in this Chapter. These included comments such as: "busy auditing tenders offered to small companies"; "experienced and matured staff resigns from the hospital before they are even developed"; "union activities are at times opposing management activities".

4.7.3.2 Findings about Research Issue 3: Factors Influencing Nurse Manager Performance Part 5 of the NMCS

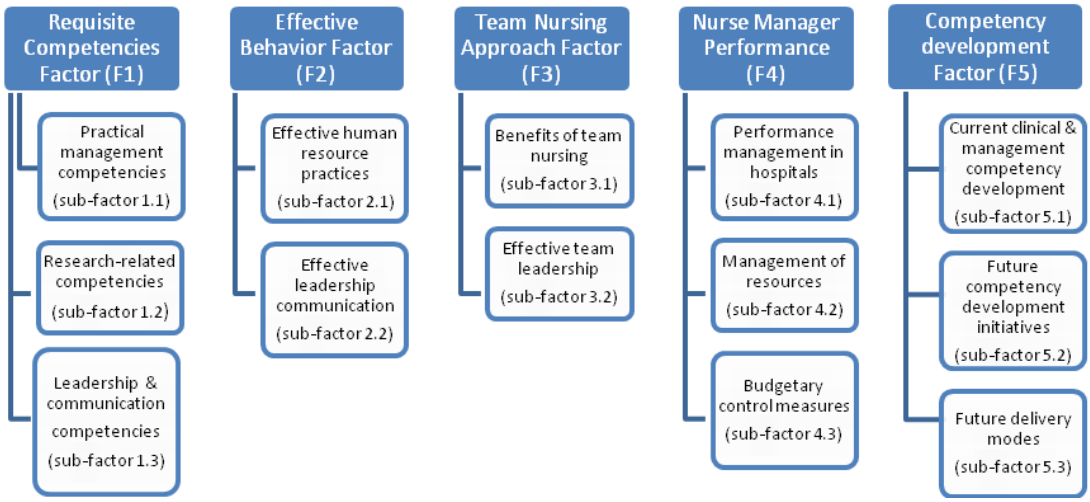
- *H^n_5 There are multiple factors influencing nurse manager performance.*
- *H^n_6 There is a positive relationship between requisite competencies, effective behaviour, team nursing approach and nurse managers' performance.*
- *H^n_7 For nurse managers, there is no difference in the perception of factors influencing effective nurse manager performance in public or private hospitals, age, and length of service as a nurse manager and management level of participants.*

4.7.3.2.1 Hypothesis H^n_5 for Research Issue 3

For examining $\mathbf{H^n_5}$, a factor analysis of all the composite scores of the four independent variables and one dependent variable was run on SPSS. One factor was produced, which represented 62.6% of the total variance.

As explained in Section 4.3 on construct validity, there were five major independent factors each with sub-factors. The factors and their exhibited sub-factors are represented in Figure 4.3 below.

Figure 4.3 List of factors and sub-factors of the study



(Source: Developed for this study).

Therefore, clearly the model is supported because there are multiple factors influencing nurse manager performance. Therefore, the null hypothesis, $\mathbf{H^n_5}$ is **supported.**

4.7.3.2.2 Hypothesis H^n_6 for Research Issue 3

For $\mathbf{H^n_6}$ **of RQ3**, as noted in Section 4.6.2 **multiple moderated regression** of all the composite scores was run on SPSS (See Table 4.9 for output-Model 1), to determine whether there was a positive relationship between requisite competencies, effective behaviour, relevance of team nursing approaches (independent variables) and nurse managers' performance (dependent variable). Evidently, all the independent variables used together were significantly related to the dependent variable ($p < 0.05$). Therefore, it can be concluded that the multiple correlation coefficients are significant ($p < 0.05$, t-values range from 2.54 to 5.73 and β-values range from 0.15 to 0.38) and there is a positive relationship between the independent variables and the dependent variable. As a result, the null hypothesis, $\mathbf{H^n_6}$ **is supported.**

4.7.3.2.3 Hypothesis H^n_7 for Research Issue 3

H^n_7 is designed to determine whether there were differences in the perceptions of factors influencing nurse manager performance in hospitals. Generally, from the analysis of the **moderated multiple regression** output (Table 4.9), the addition of moderators did to some extent have an effect on factors influencing performance. In Model 2, the relationships remained statistically significant $p < 0.05$. It should however be noted that in Model 3, as stated above (Section 4.7.1.2.2), contrary to the initial conceptual model, requisite competencies was no longer statistically significant $p > 0.05$ *(*$p = 0.06$*,* $\beta = 0.18$ and $t = 1.91$*)* when interaction items were added. Evidently, the β-values and *t*-values suggested that there was a positive effect though statistically insignificant *(*$p > 0.05$ for all*)*, between factors influencing nurse manager performance and age ($\beta = 0.12$, $t = 0.84$) as well as management level of participants ($\beta = 0.13$, $t = 0.82$). Length of service of as nurse manager ($\beta = -0.09$, $t = -0.51$) and type of hospital provided no unique contribution to the regression equation ($\beta = -0.05$, $t = -0.26$). Overall, the null hypothesis is **supported.** A detailed discussion on these relationships is presented in Chapter 5.

4.7.4 Findings related to Research Issue 4: Relevance of Team Nursing Approach

Survey participants indicated whether they agreed or not with the statements related to factors on the benefits of a team nursing approach and effective team leadership as identified in the literature. It should be noted that the results of the NMCS are presented below under the new classification labels determined after factor analysis was conducted. Hence the table in Part 4 of NMCS is also split into three parts. See Section 4.3.2 above on labelling of factors.

The **Fourth Research Issue (RQ4)** was**:**

> *Do perceptions on the relevance of team nursing approaches influence perceptions of nurse manager performance?*

To respond to **RQ4**, the researcher firstly analyzed frequency distributions of nurse managers' views on the requisite competencies for effective nurse managers in hospitals, thereafter tested the hypotheses by conducting correlation matrix on the scores for team nursing approach (independent variable - Part 4 of NMCS) and nurse manager performance dependent variable - Part 5 of NMCS) as well as explored moderator effect of the selected demographic variables on the independent/dependent variable relationship by comparing mean scores using independent sample *t*-test. All the tests were conducted on SPSS.

4.7.4.1 Frequency distributions for Team Nursing Approach, Part 4 of NMCS

4.7.4.1.1 Benefits of team nursing approach (Sub-Factor 3.1)

As depicted in Table 4.14a below, a frequency analysis of the perceptions of nurse managers indicates that more than 70% of NMCS participants strongly agreed or agreed that the team nursing approach in their hospitals resulted in (in order of highest frequency) a) q4.4 enhanced nurses' ability to provide consistent high quality care and support given to patients allocated to a team (approximately 89%), b) q4.3 improvement in the quality of care and support given to patients (approximately 87%), c) q4.7 enhanced supervision of less experienced staff (84%), d) q4.5 improvement in staff satisfaction levels (approximately 80%), e) q4.1 optimal risk management (approximately 78%), f) q4.2 provision of an extra role model for clinicians (approximately 74%) and g) reduces the effects of nursing staff shortages (72%).

Table 4.14a NMCS part 4 - benefits of team nursing approach sub-factor 3.1 (cohort analysis)

	Statement In this hospital	Strongly disagree	Disagree	Neutral	Agree #	Strongly Agree #
4.1	**Team nursing results in optimal risk management across this hospital.**	**1.5%**	**5.6%**	**15.2%**	**46.0%**	**31.8%**
4.2	**Team nursing provides an extra role model for clinicians.**	**1.0%**	**4.5%**	**20.7%**	**46.0%**	**27.8%**
4.3	**Team nursing results in improvement in the quality of care and support given to patients.**	**1.0%**	**2.5%**	**9.6%**	**42.4%**	**44.4%**
4.4	**Team nursing enhances the nurses' ability to provide consistent high quality of care to patients allocated to a team.**	**1.0%**	**2.0%**	**8.1%**	**47.5%**	**41.4%**
4.5	**Team nursing ensures improvement in staff satisfaction levels.**	**1.0%**	**4.5%**	**14.6%**	**46.5%**	**33.3%**
4.6	Team nursing reduces the effects of nursing staff shortages	2.5%	7.1%	18.2%	40.9%	31.3%
4.7	**Team nursing enhances the supervision of less experienced staff**	**0.5%**	**2.0%**	**13.3%**	**46.4%**	**37.8%**

 # bold indicates high factor loadings

(Source: Developed for this study from data supplied in Part 4 of NMCS).

4.7.4.1.2 Effective team leadership (Sub-Factor 3.2)

As depicted in Table 4.14b below, the survey participants indicated very strong agreements on specific aspects of effective team leadership. Sixty percent strongly agreed and a further 35% agreed that nurse managers (q4.8) who are team leaders should communicate effectively with other nurses and health professionals in a team. In addition, 54% strongly agreed and 39% agreed (q4.12) that a nurse manager who is a team leader should encourage other nurses to take advantage of learning opportunities. Likewise there is also strong agreement and agreement (approximately 90%) that nurse managers who are team leaders should (q4.11) encourage team members to work towards the attainment of the vision of the hospital and should have (q4.10) access to staff development programs to enhance their clinical leadership skills. There was less agreement on whether nurse managers who are team leaders (q4.9) are selected for their leadership skills as

opposed to their availability. In addition, the selection of team leaders should be carefully considered and should be based on their leadership skills.

Table 4.14b NMCS part 4 - effective team leadership sub-factor 3.2 (cohort analysis)

	Statement	Strongly disagree	Disagree	Neutral	Agree #	Strongly Agree #
4.8	**Nurse managers, who are team leaders, should communicate effectively with other nurses and health professionals in a team.**	**0.5%**	**0.5%**	**3.5%**	**35.2%**	**60.3%**
4.9	Nurse managers who are team leaders are selected for their leadership skills as opposed to their availability.	1.5%	6.0%	15.1%	38.7%	38.7%
4.10	**Nurse managers who are team leaders should have access to staff development programs to enhance their clinical leadership skill.**	**0%**	**0.5%**	**9.5%**	**42.2%**	**47.7%**
4.11	**Nurse managers who are team leaders encourage team members to work towards the attainment of the vision of the hospital.**	**0.5%**	**1.0%**	**6.5%**	**44.2%**	**47.7%**
4.12	**The nurse manager who is a team leader should encourage other nurses to take advantage of learning opportunities.**	**0%**	**0.5%**	**5.5%**	**39.2%**	**54.8%**

 # bold indicates high factor loadings

(Source: Developed for this study from data supplied in Part 4 of NMCS).

Part 4 of NMCS also included an open-ended question. Survey participants were asked to state any other comments on the relevance of a team nursing approach in their hospitals that they would like to add to the provided list of factors (q4.1-q4.12). In responding to the question, those participants that responded stated issues such as the following: “nurses in a team are able to grow to be competent leaders who will take over from the older man”; “team nursing approach is used well in risk management and in conflict situations”; “fully functional team leads to quality improvement”; “strengthen mentorship and mentee relationship to improve learning and development”; “it should be practiced by all so as to improve the entire system”. These factors all form part of Sub-Factor 3.1 benefits of team nursing approach. In addition other comments were “team leaders have to do more than just chasing targets”; “the selection of leaders should be informed by their

good communication and leadership skills", and these form part of Sub-Factor 3.2 effective team leadership.

A number of challenges experienced that supposedly hinder effective team nursing approach were also stated even though not all captured in this Chapter. These included comments such as: "having numerous students inhibits effective team nursing and their supervision"; "in reality team nursing does not happen because there is lots of conflict and dissatisfaction"; "it can only work if there are sufficient managers"; "respect of team members is of utmost importance"; "the hospital does not have enough competent staff to be able to fully and effectively practice team nursing".

4.7.4.2 Findings about Research Issue 4: Relevance of Team Nursing Approach - Part 4 of the NMCS

- *H^n_8 There is no relationship between the relevance of team nursing approaches and perceptions of nurse manager performance.*
- *H^n_9 There is no difference in perceptions of the relevance of team nursing approaches between public or private hospitals, age, length of service as a nurse manager and management level of participants.*

4.7.4.2.1 Hypothesis H^n_8 for Research Issue 4

To examine **H^n_8**, a **Pearson product-moment correlation coefficient** correlation 2-tailed test was computed using SPSS to determine whether there was a relationship between the relevance of team nursing approaches (Part 4 of NMCS) and perceptions of nurse manager performance (Part 5 of NMCS). The researcher started by checking whether there was a linear relationship between the two variables by creating a histogram using SPSS. The data showed no violation of normality.

The results of the analysis indicate that there was correlation between team nursing approach (Part 4 of NMCS) and perceptions of nurse manager performance (Part 5 of NMCS). The positive correlation relationships are as follows: The scores of the benefits of team nursing approach Sub-Factor 3.1 are positively correlated with (a) performance management in hospitals Sub-Factor 4.1 scores, (b) management of resources Sub-Factor 4.2 scores, (c) budgetary control measures Sub-Factor 4.3 scores. In addition, (d) effective team leadership Sub-Factor 3.2 scores are positively correlated with (e) with management of resources Sub-Factor 4.2 scores and with (f) budgetary control measures Sub-Factor 4.3. The correlation matrix is tabulated on Appendix VIII - C.

Overall, the outcomes of the study show that team nursing approach is recognized as highly relevant and significant in addressing or predicting nurse manager performance. The H^n_8 model is different from the hypothesized model because there is strong correlation between the relevance of team nursing approaches and perceptions of nurse managers' performance. Therefore, the null hypothesis, **H^n_8 is rejected** and the alternative hypothesis is accepted. The results are discussed in more detail in Chapter 5.

4.7.4.2.2 Hypothesis H^n_9 for Research Issue 4

The exploration of the moderating effects of the null hypothesis **H^n_9**, of the variables was conducted to determine whether there were differences in perceptions on the relevance of team nursing approach of nurse managers between public and private hospital participants (TH), age of participants (A) and length of service as a nurse manager (LS). The moderation relationship was considered to be significant if the *p*-values associated with variable were significant (< 0.05) (Hair et al. 2010).

H^n_9 is designed to investigate whether type of hospital (TH), age of nurse managers (A), length of service (LS) and managerial level (ML) vary the relationship between the independent variable – relevance of implementation of team nursing approach, and the dependent variable – effective performance of nurse managers.

From the analysis of the output (Table 4.9 above) of the **moderated multiple regression,** team nursing approach was found to be significantly and uniquely contributing to the predictor of effective performance (β = 0.33, *t* = 4.45 and significant p < 0.05 (0.00) even when moderating variables were added. The addition of interaction items provided no unique contribution to the regression equation (β = 0.34, *t =3.44 and* significant p < 0.05 (0.00). Therefore, the null hypothesis, $\mathbf{H^n_9}$ is **supported.** At the same time, Table 4.9 output has also shown that of all the independent variables, team nursing approach remained the most statistically significant in all 3 models. A detailed discussion on these relationships is presented in Chapter 5.

4.7.5 Findings regarding Research Issue 5: Competency Development, Part 6 of the NMCS

The **Fifth Research Issue (RQ5)** was**:**

> *What competency development initiatives have nurse managers been exposed to, to be able to carry out their roles and responsibilities as nurse managers?*

NMCS participants indicated whether they agreed or not with the statements related to competency development of nurse managers identified in the literature. The statements were as per the questionnaire in relation to clinical nursing skills generic management (Part 6A-q6.1-6.12), followed by future competency development that should be in hospitals (Part 6C-q18-28). In addition there were also questions in the survey that participants had to respond to in relation to competency development that had been completed in their hospitals. All tests were conducted on SPSS. It should be noted that the survey results are presented below under new classification labels determined after factor analysis was conducted. See Section 4.3.2 above on labelling of factors.

4.7.5.1 Frequency Distributions for Research Issue 5: Competency Development for nurse managers in hospitals, Part 6 of the NMCS

4.7.5.1.1 Current clinical and generic management competency (Sub-Factor 5.1)

In Table 4.15a below, a frequency analysis of nurse managers' perceptions of aspects on development of clinical nursing skills indicate that most participants (more than 60%) agreed and strongly agreed that there are currently clinical skill development initiatives in hospitals. They mostly (67%) agreed and strongly agreed that in their hospitals (q6.1) there is staff development and support for nurse managers to enhance their clinical leadership skill. A majority (64%) agreed and strongly agreed that their hospital (q6.2) creates a clinical learning environment for nurse managers. In addition many participants (approximately 63%) were also in agreement that (q6.6) competency development programs are monitored to ensure best practice in accordance with nursing regulations. There was less agreement on the statement that the (q6.3) formal training that nurse managers receive focuses only on clinical nursing theory. Only half of the participants agreed and strongly agreed that the current clinical course curricula help learners acquire the management competencies they need (q6.5). In terms of factor items related to generic management competency development, by far the vast majority (approximately 83%) of participants agreed and strongly agreed that management skills training is of equal importance to clinical training (q6.7).

Table 4.15a NMCS part 6 - current clinical and generic management sub-factor 5.1 (cohort analysis)

	Statement	Strongly disagreed	Disagree	Neutral	Agree #	Strongly agree #
6.1	**There is staff development and support for nurse managers to enhance their clinical leadership skill.**	**2.6%**	**10.3%**	**19.5%**	**43.1%**	**24.6%**
6.2	**Our hospital creates a clinical learning environment for nurse managers.**	**3.1%**	**11.2%**	**21.4%**	**44.4%**	**19.9%**
6.3	The formal training that nurse managers receive focuses only on clinical nursing theory.	3.6%	23.6%	31.8%	30.8%	10.3%
6.4	**Our hospital provides adequate on-the-job learning opportunities for nurse managers.**	**1.5%**	**16.5%**	**24.7%**	**40.7%**	**16.5%**
6.5	**The current clinical course curricula help learners acquire the management competencies they need.**	**2.6%**	**12.0%**	**35.4%**	**35.9%**	**14.1%**
6.6	**Competency development programs are monitored to ensure best practice in accordance with nursing regulations**	**1.6%**	**4.7%**	**31.1%**	**45.1%**	**17.6%**
6.7	Management skills training is of equal importance to clinical training.	0.5%	5.2%	11.9%	43.3%	39.2%
6.8	The formal training that nurse managers receive includes generic management competencies.	1.0%	6.8%	27.7%	43.5%	20.9%
6.9	Nurse managers only learn their management role by observation, experience and by trial and error.	5.8%	19.9%	20.9%	37.2%	16.2%
6.10	**Our hospital exposes new nurse managers to forma training on nursing management.**	**7.8%**	**22.3%**	**24.9%**	**33.7%**	**11.4%**
6.11	**Individual management competencies are always determined prior to any competency development intervention.**	**1.6%**	**16.2%**	**30.9%**	**37.7%**	**13.6%**
6.12	**The competency development course content includes leadership skills of nurse managers.**	**4.2%**	**8.9%**	**30.9%**	**38.2%**	**17.8%**

 # bold indicates high factor loadings

(Source: Developed for this study from data supplied in Part 6A, questions 6.1-6.12 of NMCS).

It is worth noting that there is generally a high level of participants who opted to be neutral as opposed to indicating whether they agreed with the statements or disagreed. See Table 4.15a above. Their responses either way could have to some extent changed some of the findings. For example, item q6.5 on whether the current clinical course curricula help learners acquire the management competencies they need has approximately 32% of participants who are neutral. If

the 35% of those who are neutral is added to those who agreed and strongly agreed with the statement (35%+36%+14% =85%), then a vast majority would be in agreement that the current clinical course curricula helps learners acquire the management competencies they need. Likewise if the 35% is added to those who are in disagreement (35%+3%+12%=50) then at least half of the participants would have disagreed that the current clinical course helps learners acquire the management competencies they need. Therefore, future training programs or competency development framework to address clinical and generic competency gaps amongst of nurse managers have to be carefully crafted.

4.7.5.1.2 Future competency development initiatives (Sub-Factor 5.2)

In terms of perceptions of NMCS participants on future competency development initiatives, almost all participants (96%) are in favour of the inclusion of on-the-job learning and formal training (q6.19), which would obviously not be possible through purely on-line training. The same numbers of participants were of the view that risk management should be included in course curricula for nurses at management level (q6.26). In addition, the majority of participants (93%) strongly agreed and agreed that (q6.28) management competencies should be taught as an integral part of basic nursing course units and (q6.25) that the course outline had to be aligned with their requisite core management competencies (91%). Furthermore many participants (approximately 90%) were in support of improvement of the training and orientation of nurse managers on cost containment issues by possibly providing more opportunities for on-the-job learning (q6.20) and by educators using a variety of delivery styles such as case studies, group discussions and role playing.

Table 4.15b NMCS part 6 - future competency development initiatives sub-factor 5.2 (cohort analysis)

	Statement	Strongly disagree	Disagree	Neutral	Agree #	Strongly agree #
6.19	**Competency development of nurse managers should include on-the-job learning and formal training.**	**0%**	**0%**	**3.5%**	**44.4%**	**52.0%**
6.21	Nurse educators should use a variety of delivery styles such as case studies, group discussions, role playing etc.	0.5%	2.5%	8.1%	40.4%	48.5%
6.22	Assessment of nurse managers after competency development interventions should be based on an examination.	0.5%	9.6%	23.9%	43.7%	22.3%
6.24	Competency development initiatives for nurse managers should focus on the development of the individual nurse on professional and personal levels.	1.0%	2.5%	10.1%	52.0%	34.3%
6.25	**The course outline for nurse manager training has to be aligned with their requisite core management competencies.**	**0%**	**0%**	**8.6%**	**54.3%**	**37.1%**
6.26	**Course curricula for nurse managers should also include risk management**	**0%**	**0%**	**4.0%**	**36.9%**	**59.1%**
6.27	Training and orientation of nurse managers about cost containment issues should be improved.	0%	0%	10.1%	43.4%	46.5%
6.28	Management competencies should be taught as an integral part of basic nursing course units.	0%	0.5%	6.6%	47.0%	46.0%

 # bold indicates high factor loadings

(Source: Developed for this study from data supplied in Part 6C of NMCS).

4.7.5.1.3 Future delivery modes (Sub-Factor 5.3)

Survey participants indicated the extent to which they agreed or disagreed with statements that relate to future delivery modes of competency development initiatives. As depicted in Table 4.15c below, the majority of NMCS participants (more than 80%) called for more opportunities for on-the-job learning (q6.20). Fewer participants support (q6.23) the use of conventional face-to-face lecturer method to teach requisite nurse management skills and (q6.22) of assessment of nurse mangers that is based on examination after exposure to competency development interventions (66%). It is clear that most of the NMCS participants

were not in favour of a purely on-line mode of delivery of competency development initiatives (q6.18). Notably, just over half of the NMCS participants were in agreement that nurse managers learn their management role by observation, experience and by trial and error (q6.9).

Table 4.15c NMCS part 6C future delivery modes sub-factor 5.3 (cohort analysis)

	Statement **In this hospital**	**Strongly disagree**	**Disagree**	**Neutral**	**Agree #**	**Strongly Agree #**
6.3	The formal training that nurse managers receive focuses only on clinical nursing theory.	3.6%	23.6%	31.8%	30.8%	10.3%
6.9	Nurse managers only learn their management role by observation, experience and by trial and error.	5.8%	19.9%	20.9%	**37.2%**	**16.2%**
6.18	Competency development for nurse managers should be purely in on-line mode.	9.2%	35.7%	24.0%	16.8%	14.3%
6.20	The hospital should provide more opportunities for on-the-job learning.	0%	0.5%	10.1%	**41.4%**	**48.0%**
6.22	Assessment of nurse managers after competency development interventions should be based on an examination.	0.5%	9.6%	23.9%	**43.7%**	**22.3%**
6.23	Conventional face-to-face lecture method should be used to teach requisite nurse management skills	1.0%	7.7%	25.1%	**46.2%**	**20.0%**

(Source: Developed for this study from data supplied in Part 6C of NMCS).

4.7.5.2 Additional Analysis on Completed Competency Development Programs/Courses, Part 6B of the NMCS

Survey participants were asked to indicate how many courses had they received on leadership and or management in the hospital where they are currently employed. From a frequency analysis, majority (57%) of those participants that responded to the question stated between one and five courses followed by those who indicated that they received none (29%). Only ten percent received or have been exposed to between 6 and 10 courses and only four percent received between 11 and 15 courses. This reflects the fact that the hospitals represented in the survey appear to have to some extent exposed their nurse managers to capacity development

programs in leadership and or management. An **independent sample *t*-test** was run on SPSS to determine if there were mean differences in the number of courses received on leadership and or management by participants in public and private hospitals. From the analysis of the output of the Independent sample *t*-test, there is no significant difference in mean measures between the number of courses received by nurse managers in public and private hospitals. Therefore, survey participants in both public and private hospitals shared almost similar experiences in terms of current exposure to competency development initiatives related to management and or leadership. As a result perceptions in terms of aspects related to future competency development initiatives can be applicable for both types of hospitals.

The ten leadership and or management courses that participants received at the hospitals where they were employed include (not in an order of highest frequency): (a) unit managers' course, (b) leadership and management course, (c) communication skills, (d) infection control and management, (e) hospital management, (f) finance control and management including budget preparation and control, (g) stress management, (h) risk management, (i) Performance Management Development System (PMDS) and (j) human resource management. Seemingly even though nurse managers have been exposed to some courses such as communication and budget preparation and control, the findings of the NMCS indicate that there are still competency gaps in those areas. Therefore, there is a need for review of the current programs and continuous development of such competencies.

The majority (65%) of NMCS participants indicated that they did not complete their clinical practice where they were currently employed. Therefore, the knowledge and experience of competency development in the selected hospitals was for many of the participants limited to after they were employed at those hospitals as nurses or nurse managers.

Survey participants were to indicate if they had ever received on-line training related to their managerial work. Only 15% of those who responded indicated that they did receive on-line training. These participants received some element of training on both managerial skills courses and clinical-related courses through online mode. They mentioned that they received courses such as Kronos, computer training, mentoring and coaching subordinates, financial management and development of quality management programs, human resource management, HIV management, BETA training, ICNet Infection Control System and Kronos. BETA training, ICNet systems and Kronos are briefly explained under the section on qualitative approach results in this chapter (Section 4.9). There is no statistically significant difference between the mean score of NMCS participants that have received online training related to managerial work in public and in private hospitals. Out of the above-stated list of the type of training received, it is only HIV management (1 participant) and ICNet (1 participant) that was mentioned by participants in public hospitals. Thus the researcher explored the question further in in-depth interviews with the aim of probing interview participants about the preferred delivery mode of training for future competency development initiatives. The results of those discussions are outlined in Section 4.9 on qualitative results.

Part 6 of NMCS also included an open-ended question. Survey participants were asked to state any other comments on competency development of nurse managers that they would like to add (q6.29). In responding to the question, those participants that responded confirmed their perceptions and input on various survey factors and sub-factors discussed above. Some comments made included: “customer excellence, staffing norms, health-related information and soft skills should be covered”; “improve computer literacy to reduce usage of paper”. These comments are linked to modes of delivery and curriculum issues that should be covered in future competency development initiatives Sub-Factor 5.2. In addition they also stated issues such as “on-the-job learning”; “mentoring and coaching of new managers”; “there should be job orientation prior to commencement of the new role presumably because not all good nurses are good managers”; “senior managers should act as role models for junior managers” these factors all form part

of future delivery modes Sub-Factor 5.3. Furthermore it was also stated that "up-skilling of managers should be a continuous process".

A number of challenges experienced that make it difficult for nurse managers to render quality patient care were also stated even though not all captured on this Chapter. Some of the key ones that seem to be relevant for this study included that: "operational managers are overloaded with non-nursing tasks"; "there is limited or lack of training for managers"; "unit managers are, for example, employed without proper training in preparation for the role however, noting that there are some who have been exposed to unit managers' course". Another challenge mentioned is that "there is a lack of resources in hospitals such as computers and internet access therefore making it difficult or almost impossible for managers to be a bank of knowledge as expected" and "I have been developing my own competencies by studying through correspondence with universities".

4.7.5.3 Findings about Research Issue 5, Competency Development for nurse managers - Part 6 of the NMCS

- *H^{n}_{10} Competency development for nurse managers is not focused on clinical nursing.*
- *H^{n}_{11} Competency development for nurse managers is not focused on generic management skills.*
- *H^{n}_{12} Improved nurse managers' performance in hospitals is not a result of clinical and management competency development initiatives.*

4.7.5.3.1 Hypothesis H^{n}_{10} for Research Issue 5

For testing hypothesis **H^{n}_{10}, a principal component factor analysis** of the 12 variables of clinical and generic management competency development (Part 6 of NMCS, q6.1-q6.12) was conducted. For the coefficient display format, the values less than 0.40 are suppressed. Missing values were excluded list wise. An

Orthogonal factor rotation (Varimax factor rotation with Kaiser Normalization) was executed to make the structure more interpretable (Coakes & Steel 2007, p.122).

The rotated component matrix yielded two components or groups, which explained 58.8% of the total variance. As shown in Table 4.16 below Sub-Factor 5.1a explained 46.3% of the variance, Sub-Factor 5.3a explained 12.5% of the variance. It should be noted that the output on Table 4.16 only focuses on issues related to current competency development (only 12 factor items, 6A of NMCS) as opposed to Table 4.4b above, which focused on both current and future issues (23 factor items, 6A & 6C of NMCS).

As depicted in Table 4.16 below, all factors are retained in the measure as they are all loaded on the rotated component matrix with values that are above the recommended limit. For Sub-Factor 5.1a, 10 items loaded higher than 0.40 and are, therefore, considered to have adequate construct validity. Sub-Factor 5.3a, has only two items that have factor loadings higher than 0.40. Contrary to the hypothesis, H^{n}_{10} the first item (q6.3) states that the formal training that nurse managers receive focuses only on clinical theory. Therefore, the hypothesized model is not supported. The null hypothesis **H^{n}_{10} is rejected** and the alternative hypothesis is accepted. The results are discussed in more detail in Chapter 5.

Table 4.16 Principal component factor analysis conducted on the 12 current clinical and generic management competency development variables – competency development for nurse managers in hospitals, part 6A of NMCS

Rotated Component Matrix[a]

	Component	
	Sub-Factor 5.1a	Sub-Factor 5.3a
q6_1	.791	
q6_2	.789	
q6_3		.730
q6_4	.816	
q6_5	.747	
q6_6	.697	
q6_7	.501	
q6_8	.691	
q6_9		.841
q6_10	.761	
q6_11	.721	
q6_12	.818	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

(Source: Developed for this study).

4.7.5.3.2 Hypothesis H^n_{11} for <u>Research Issue</u> 5

For testing hypothesis **H^n_{11}**, the **same factor computation** referred to above and the same output rotated component matrix was analyzed - See Table 4.16 above. Item q6.9 in Sub-Factor 5.3a above states that nurse managers only learn their management role by observation, experience and by trial and error. This implies that the current formal competency development initiatives do not focus on generic management skills and as such nurse managers are not adequately equipped for their management role. Therefore, the null hypothesis **H^n_{11} is supported**. The results are discussed in more detail in Chapter 5.

4.7.5.3.3 Hypothesis H^n_{12} for Research Issue 5

To explore null hypothesis **H^n_{12},** a **Pearson product-moment correlation** coefficient 2-tailed test was computed using SPSS to determine the relationship between nurse managers performance Factor 4 (Part 5 of NMCS) and current clinical and management competency development initiatives Sub-Factor 5.1 (Part 6A q6.1-q6.12 of the NMCS). Even though normality test for composite scores was carried out, the researcher started by checking whether there was a linear relationship between the two variables by creating a histogram using SPSS. The data showed no violation of normality.

The results of the test indicate that there are a number of correlation items between nurse manager performance and management competency development. Refer to Appendix VIII - A. In responding to the null hypothesis the correlations that are considered include:

Nurse Managers only learn their management role by observation, experience, and by trial and error (q6.9) correlates:

with the hospital needs better management of resources (q5.27).

with the hospital needs better management of clinical supplies (q5.28).

The training that nurse managers receive focuses only on clinical nursing theory (q6.3) correlates with:

with the hospital needs better management of resources (q5.27).

with the hospital needs better management of clinical supplies (q5.28).

The formal training that nurse managers receive includes generic management competencies (q6.8) correlates:

with effective management of hospitals will result in higher patient satisfaction levels (q5.25).

with enhancing competence of nurse managers will increase staff retention in this hospital (q5.26).

Overall, the outcome of the test shows that even though there are competency development initiatives that nurse managers have been exposed to, not all nurses have been formally trained in management skills, which are equally important to clinical training despite hospitals having formal procedures and policies to promote competency development of nurse managers. Therefore, there is a need for clinical and management competency development initiatives of nurse managers to be reviewed to ensure that it (amongst other issues) results in improved management of human and clinical resources. The null hypothesis **H^n_{12} is rejected** and the alternative hypothesis is accepted. The results are discussed in more detail in Chapter 5.

4.7.6 Additional Findings relating to Research Issue 5, Competency Development for nurse managers in hospitals, Part 6 of the NMCS

The **Sixth Research Question (RQ6)** was:

What should future competency development initiatives entail taking into account the moderating variables of type of hospital, age, length of service as nurse manager and management level of nurse managers?

To respond to this research question, the researcher considered the survey results on Part 6C of the questionnaire and also conducted an **Independent sample *t*-test** to determine the mean differences for future competency development initiatives (Part 6C of the NMCS) in relation to moderating variables - type of hospital, age of participants, length of service as a nurse manager and management level of participants.

The results of the test show that there were no statistical differences between type of hospital and what future competency development initiatives should entail, age

of participants, management level of participants. In terms of length of service as a nurse manager, there were differences noted in relation to an item on the use of conventional face-to-face lecture methods in the future (q6.23). Participants who have been nurse managers for over 15 years were less in favour (q3.29) of the use of conventional face-to-face lecture methods in the future initiatives compared to those who have been nurse managers for period range of between 4-10 years (3.87), $p < 0.05$. See Table 4.17 below. It is assumed that nurse managers with longer service in the position generally have a deeper understanding, knowledge and experience in management hence they would prefer other ways of training than formal face-to-face lecture methods. Generally perceptions of NMCS participants on future development initiatives as stated in Section 4.7.5.1, above, are applicable for future competency development initiatives of nurse managers irrespective of the type of hospital that they are working in, the age of nurse managers and level of management. Careful consideration is important, though, in terms of the selection of the delivery mode of training for nurse managers with many years of service in the position and those who have less experience in the position. The results are discussed in more detail in Chapter 5.

Table 4.17 Independent samples test – future competency development of managers – age moderator variable, 4-10yrs and over 15yrs

		Levine's Test for Equality of Variances		**t-test for Equality of Means**						
									95% Confidence Interval of the Difference	
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**Lower**	**Upper**
q6_23	Equal variances assumes	.013	.908	2.911	105	**.004****	.588	.202	.187	.988
	Equal variances not assumes			2.955	48.798	.005	.588	.199	.188	.987

*****: p < 0.05***

(Source: Developed for this study from data supplied in Part 6C of NMCS).

Taken together, the results of Chapter 4 are summarized in Table 4.18 below. The table reflects that the relationship between independent and dependent variables is to some extent varied when taking into account the moderator variables.

Table 4.18 Summary of the findings related to the five research issues

Research Issue	Major findings about each research issue	Sections in the chapter
RQ1 What competencies of nursing management are regarded as important in hospitals?	**H^n_1 is rejected** Possession of competencies that are deemed critical for nurse managers in hospitals does predict an increase in nurse manager performance. **H^n_2 is supported** There are no substantial differences in the perceptions of the importance of certain competencies in relation to the moderating variables - TH, A, LS, ML	**4.7.1.2.1** **4.7.1.2.2**
RQ2 How do specific competencies relate to the behaviour of effective nurse managers?	**H^n_3 is rejected** There is correlation between perceptions of requisite competencies and effective manager behaviour **H^n_4 is supported** There are no substantial differences in the perceptions of the effective behaviour in relation to the moderating variables - TH, A, LS, ML	**4.7.2.2.1** **4.7.2.2 .2**
RQ3 What are the factors influencing effective nurse manager performance in hospitals?	**H^n_5 is supported** There are multiple factors and sub-factors influencing nurse manager performance **H^n_6 is supported** Requisite competencies, effective behaviour, Team Nursing Approach and competency development have an effect on nurse managers' performance **H^n_7 is supported** There are no substantial differences in perceptions of factors influencing effective nurse manager performance. Even though there are some in A and ML, there are none for TH & LS	**4.7.3.2.1** **4.7.3.2.2** **4.7.3.2.3**
RQ4 Do perceptions on the relevance of team nursing approaches influence perceptions of nurse managers' performance	**H^n_8 model is rejected** Team Nursing Approach is a predictor of nurse managers' performance **H^n_9 is supported** There are no differences in the perceptions of the relevance of team nursing approaches in relation to moderating variables - TH, A, LS & ML	**4.7.4.2.1** **4.7.4.2.2**
RQ5 What competency development initiatives have nurse managers been exposed to, to be able to carry out their roles and responsibilities as nurse managers?	**H^n_{10} is rejected** The current formal competency development exposure that nurse managers receive in preparation for their role focuses only on clinical nursing aspects **H^n_{11} is supported** The current formal competency development initiatives do not focus on generic management skills **H^n_{12} is rejected** Clinical and management competency development initiatives should be improved to develop nurse manager performance	**4.7.5.2.1** **4.7.5.2.2** **4.7.5.2.3**
RQ6 What should future competency development initiatives entail taking into account the moderating variables of type of hospital, age, length of service as a nurse manager and management level of nurse managers?	Future competency development initiatives should cover the development of clinical and management competencies. Variation in delivery modes should be considered for long serving managers and for those with fewer years of service in the position. No substantial differences in terms of TH, A, ML of nurse managers in relation to future competency development initiatives are to be considered.	**4.7.6**

(Source: Developed for this study).

4.8 Qualitative data analysis

As indicated in Chapter 3 of this dissertation, the seven in-depth interview participants were coded as follows to protect participants' identity:

E- 001: external stakeholder and E- 002: external stakeholder
I-003, I-004, I-005, I-006 and I-O07 are all internal stakeholders

The analytic structure for qualitative data is also outlined in Chapter 3.

4.8.1 Qualitative results about Research Issue 1: Requisite competencies Factor 1

The First Research Issue 1:

> *What competencies of nursing management are regarded as important in hospitals?*

An analysis of in-depth interview participants' responses, indicated that the possession of 'practical management competencies', 'research-related competencies' and 'leadership and communication' competencies are important and would contribute to improvement in the current poor health outcomes and in restoring patient and staff confidence in public and private health care system. To a large extent, an analysis of the qualitative data confirms and expands NMCS findings.

4.8.1.1 Practical management competencies (Sub-Factor 1.1)

The key themes raised by in-depth interview participants in relation to practical management competencies are described in Table 4.19 below.

Table 4.19 Themes and supporting comments – practical management competencies

Theme	No. of times raised	Supporting comments
Administration skills and clinical experience	**2**	*Most importantly all nurse managers should have administration-related skills and clinical experience or expertise in nursing (E-001).* *Compiling reports, keeping and updating patient records; without good administration skills there would always be shortage of clinical supplies and equipment to be able to provide quality care (I-004).*
Appropriate scheduling and staffing	**1**	*Lack of good planning of sick leave, night duties, annual leave of staff results in heavy workloads on some; compromise in the quality of nursing care and less or lack of job satisfaction for others (I-003).*
Knowing the regulations and standards of practice	**2**	*There have lately been many cases of litigation in public hospitals in particular (I-003 also supported by E-001).*

(Source: Developed for this study, N=7).

Time management, computer literacy, health risk management, budget control skills, assertiveness, problem solving and managing conflict amongst staff were also cited as competencies that nurse managers should possess (I-006 also supported by I-005 and E-002).

4.8.1.2 Research-related competencies (Sub-Factor 1.2)

The possession of research-related skills was perceived as critical for nurse managers. One participant (I-005) said,

> "They must portray an image of being knowledgeable because she/he is a think tank for the team in a sense that she/he has to research clinical solutions for the team so as to guide them accordingly. They should be able to collect data, analyze and use the information on the job, read researched

reports and be able to apply what is new or what is recommended in research studies" (also supported by I-004).

4.8.1.3 Leadership and communication (Sub-Factor 1.3)

When asked what competencies nurse managers should possess, one participant (I-007) mentioned good leadership skills. She said operational managers should be able to manage teams in units … directors of nursing are supposed to lead. It was also mentioned that during a crisis, managers should be able to step in and help with patient care. In that way they would not lose control of what is happening in the wards/units and would show support for their subordinates (also supported by I-007).

All in-depth interview participants mentioned the importance of communication skills. For example, one participant (E-002) explained,

> "Communication skills are important. Managers should be able to share the right information in the most effective way and timeously with their juniors. Rules and possible consequences for poor performance or lack of adherence to the rules should be communicated to all. They should be able to use cheaper user-friendly communication methods such as WhatsApp messenger mobile to communicate quickly, regularly and effectively with the team" (also supported by I-004).

The cited competencies confirmed the findings of literature review and NMCS in terms of the core competencies that are important for nurse managers and the vital role of those competencies.

4.8.1.4 Moderating variables differences

When discussing moderating variables (type of hospital, level of management, age of participants), in relation to requisite competencies, three out of the seven in-

depth interview participants were of the view that the competencies required for nurse managers are the same across management levels. Interview participants (I-006) who held a different view mentioned that different levels of management should possess different competencies. The importance of having "extensive general management capabilities at senior level as opposed to junior level managers" was emphasized (I-006). Another interview participant (I-005) also echoed the view that there were some differences in the core competencies required at different levels of managers.

She explained,

> "unit managers must have emotional intelligence so that they can understand themselves and to handle whatever situation might come their way … they should also have good interpersonal skills because it is important to understand the entire team and to relate to doctors, patients and other valued stakeholders. Deputy directors should have a good understanding of budgeting … they need to understand the procedures and processes that should be followed in addressing labour-related matters or problems. Problem solving is also important because hospitals are highly unionized. The matron should have and demonstrate self-confidence and excellent personal grooming … she cannot be overweight given that she works in the health sector … in keeping with the image of the organization. She should also have good decision-making skills" (also supported by E-001).

Clearly there are to some extent varied views in relation to the effect of moderator variables when taking into account literature review, NMCS and in-depth interview findings.

4.8.2 Qualitative results about Research Issue 2: Effective behaviour Factor 2

The Second Research Issue:

> *How do specific competencies relate to the behaviour of effective nurse managers?*

From comments made by in-depth interview participants, there is a positive relationship between requisite competencies and behaviours of effective nurse managers.

4.8.2.1 Effective human resource practices (Sub-Factor 2.1)

The following excepts provide understanding of the relationship between requisite competencies and nurse manager behaviour.

Role modelling was viewed as vital contribution for instilling effective behaviour of nurse managers,

> they should "lead by example in order to positively influence staff who work under their guidance ... they should walk the talk. They should be role models for their juniors. … mismanaged hospitals and the resultant negative image is associated with all professionals working in those hospitals" (E-001).

Effective nurse managers should be able to *provide counselling for staff and patients.*

Reportedly there are nurses and even managers with bad attitudes towards their work, caused by unhappiness about the working environment that they are in. The reasons given for bad attitudes include work overload and low salaries (I-003).

All seven (7) in-depth interview participants identified three themes that emphasized the importance of being able to *access and use available technology in*

their hospitals to facilitate quick and easy communication amongst the team: information sharing, evidence-based practice and improving their knowledge levels and performance**.** The comments made are highlighted in the excerpts in Table 4.20 below:

Table 4.20 Themes and supporting comment – access and use of information communication and technology

Theme	No. of times raised	Supporting comments
Access to technology	4	*Some modern advanced technology that's needed for caring for patients is available in some hospitals (I-007 also supported by E002).* *Not all managers have access to computers (I-005).* *Lack of computers, telephone lines and limited internet access particularly in some public hospital makes it difficult for nurse managers to practice evidence-based research (I-006).*
Ability to use technological facilities	3	*Computer literacy makes it easier for nurse managers to search the internet for information; the older generation needs them the most. They should be able to prepare PowerPoint presentations, to control resources, to send emails, to file better and keep records and patient reports that are easily be accessible* (E-002). *Managers who cannot use computers to type their reports, write the reports by hand and then ask their subordinates to type reports for thereby using the time for nursing care to type reports. Others write on a piece of paper and then type it using one finger at a time on the keyboard until the report is completed (I-003).* *Not all know how to operate computers; there is a need for skilling managers on the use of available technology and equipment (I-007 also supported by E002).* *Nurses should be forced to attend computer training in preparation of management role; managers should be able to use email to get information timeously and documents like salary advices than having to walk to someone's office and queue to get a salary advice (I-003).*
Improved outcomes	2	*Can improve overall nursing knowledge and functioning of hospitals; reduce clinical errors, better scheduling of staff, improved control of resources, (I-007 also supported by E002).*

(Source: Developed for this study, N=7).

Three out of seven interview participants raised concerns about the recruitment, appointment and placement of nurse managers. Refer to Table 4.21 below for some of the comments made. An analysis of the three identified themes and comments indicated that good performance during the interview did not always guarantee the competence of the appointed candidate. Looking at the frequencies of findings, requisite knowledge, skills and competencies is of high regard in relation to the recruitment, appointment and placement of nurse managers.

Table 4.21 Themes and supporting comments – recruitment, appointment and placement of nurse managers

Theme	**No. of times raised**	**Supporting comments**
Recruitment	1	*The job adverts for management positions are always asking for the bare minimum not high standards (I-005)*
Appointment	1	*Selected in management positions based on who they know, not always the best candidates that are selected through the interviews … positions are given to pals (I-005).*
Requisite knowledge, skills and competencies	3	*Must be competent and knowledgeable on health issues; be in possession of relevant qualifications, skills and management competencies (I-006 also supported by I-005 and E-002).*

(Source: Developed for this study, N=7).

4.8.2.2 Effective leadership communication (Sub-Factor 2.2)

Interview participants mentioned that effective nurse managers should have good communication skills as they have to disseminate accurate and clear information timeously to the entire nursing team and to be to be able, for example, to communicate with patients, family members, staff and other supporting healthcare professionals. They should communicate the vision, the strategies for a cohesive team environment, goals and objectives of the hospital to all team members so that all team members can understand how they fit in the big picture of the hospital (I-007 supported by I-003). It was also mentioned that managers should be able to listen to staff and also members of the public. A concern that was raised was that

currently most seniors are not approachable at all and “concerns raised by staff are not taken seriously and not addressed” (I-004).

In-depth interview participants provided more insights on practices that can positively or negatively affect performance of nurse managers.

4.8.2.3 Moderating variables differences

No differences in perceptions were noted when discussing moderating variables (type of hospital, level of management, age of participants), in relation to behaviour of effective nurse managers.

4.8.3 Qualitative results about Research Issue 3: Nurse Manager Performance Factor 4

The Third Research Issue:

What are the factors influencing effective nurse manager performance in hospitals?

4.8.3.1 Performance management in hospitals, Sub-Factor 4.1

From in-depth interview data, it is clear that a perception exists among participants that there are various factors that influence the performance of nurse managers. Some of the factors are highlighted in the three themes identified by participants as delineated in Table 4.22 below. Accordingly, recognition and reward of expertise and excellence of nurse managers as well as performance management systems are the key factors influencing nurse manager performance.

Table 4.22 Themes and supporting comments – HR-related factors influencing nurse manager performance

Theme	No. of times raised	Supporting comment
Recognition and reward	4	*Managers work hard and their hard work is not appropriately recognized. Therefore, mostly have become cheque collectors or are there to keep going until pension … or they tend to be caught up with their personal matters during working hours (I-004).* *There is a need for acknowledgement of good work or achievements so as to encourage personnel growth. Nurses are mostly only told about the bad work that they do and never praised for the good work (E-002).* *Nurses are not always adequately compensated or valued by society or policy makers; Nursing is not respected by politicians. It is recorded as a semi-profession by the Department of Labour. It is not surprising because nursing is dominated by women and women are marginalized because of the patriarchal nature of our society (E-001).* *All levels of managers should not be forced to work over weekends and holidays without being given any incentive or reward for overtime (I-007).*
Lack of motivation and high levels of dissatisfaction	1	*Managers have developed all sorts of tricks that they use to make sure that they stay away from work every month for some days and still be paid in full (I-007).*
Performance management systems	4	*Performance Management and Development System (PMDS) in some hospitals is wrongly applied or misused or not understood by some senior managers; there are no interventions to provide support to a staff member that it to be able to improve their performance (I-005).* *Current performance appraisals are used mainly as a punitive measure in the sense that someone would be given a bad score so that they did not get financial reward not because that's what they deserve; managers are not considered during appraisals and they are politely forced to sign an appraisal report which they do not agree with; there is no feedback on staff evaluation (appraisal) reports; performance reports are also not read and scrutinized by the relevant authorities in the hospital. This is demotivating to staff and hence there are high levels of dissatisfaction, high staff turnover, or low standard of care and high rate of absenteeism amongst managers (I-004).* *The current performance appraisal system has to be transparent and reviewed and all managers should be trained on its implementation (I-006).* *There should be clearly defined performance standards that should communicated to all and applied to all otherwise the consumers of healthcare may suffer the adverse effects of health personnel who operate without clear and effective guidelines and standards (I-003).*

(Source: Developed for this study, N=7).

One participant who mentioned lack of motivation and high levels of dissatisfaction made suggestions on how to address the issue. She said,

> "… Directors of nursing should introduce creative measures to address the high rate of absenteeism and dissatisfaction otherwise the healthcare needs of patients will be compromised. They should introduce flexible working hours and *clear career paths* for nurse managers" (I-007).

4.8.3.2 Management of Resources, (Sub-Factor 4.2)

Seemingly *control of resources* in the units is a challenge that needs to be improved. Lack of control systems and skill in using and managing available resources can impact on the ability to render quality health care service. It was stated for example that "all managers should ensure that all team members sign the control of resources sheet. Some equipment used by doctors does go missing and no one is able to account for it. The government does buy equipment such as cardiac monitors, blood warmers, paediatric bronchoscopy, but this equipment is either not cared for, broken by people who do not know how to use it or even stolen" (I-007 also supported by I-006).

4.8.3.3 Budgetary control (Sub-Factor 4.3)

One interview participant mentioned that *budget control is a skill that nurse managers should possess* to be able to understand that money spent in an area must be budgeted for otherwise un-budgeted spending results in monies being redirected from another area or in debt. She stated that they should be able to introduce budget control measures however, "budget control should not be in vain such that it compromises the provision of quality service. It should be informed by the bigger picture of the hospital" (E-002).

4.8.3.4 Moderating variables differences

Although some in-depth interview participants articulated that there are no (or limited) resources in some hospitals specifically in some public hospitals, which may influence the performance of nurse managers, these findings are not generalizable to be the predictor of performance particularly in public hospitals as there are many other factors that influence performance of nurse managers.

4.8.4 Qualitative Results regarding Research Issue 4: Relevance of Team Nursing Approach Factor 3

The Fourth Research Issue:

Do perceptions on the relevance of Team Nursing Approaches (TNA) influence perceptions of nurse manager performance?

From the discussions that have taken place with interview participants on the relevance of TNA, it is apparent that TNA is relevant and can play a key role in improving the quality of clinical nursing care given to patients. In addition, it is clear that effective leadership is important to drive the successful implementation of TNA.

4.8.4.1 Benefits of team nursing approach (Sub-Factor 3.1)

In responding to a probing question about the benefits of TNA, in-depth interview participants mentioned a number of benefits of TNA which resulted in good quality nursing care. The benefits mentioned by participants have been highlighted in the excerpts below:

> "Team nursing … allows the team to provide total quality nursing care to patients … to provide emotional, psychological and physical care because of skill mix of the team" (I-003 also supported by E-002). It was also mentioned that "it provides an opportunity to network in multi-disciplinary teams. If there is good team spirit, the team would work together in harmony, even if they have high workload, and it would still result in efficient quality care" (I-005). If implemented appropriately; "team nursing approach can be a solution to addressing problems of staff shortages and shortages of skilled staff" (I-004). It was also mentioned that "team nursing ensures accountability and responsibility for a large number of patients" (I-007).

The benefits of TNA cited by in-depth interview participants further confirmed the relevance of the implementation of TNA in addressing some of the challenges in hospitals in developing countries and maybe even in developed countries. This input was also considered in developing the revised conceptual model illustrated in Figure 5.2 below.

4.8.4.2 Effective team leadership (Sub-Factor 3.2)

In discussing competencies that a team leader should possess to be an effective team leader, it was mentioned that a team leader should take full responsibility for the output of the team, therefore, she/he must have a strong personality and be able to motivate team members to ensure that they remain committed (I-006). Participants explained,

> "they should have exceptional knowledge of operations and requirements of the hospital … understand the big picture to be able to provide excellent healthcare service at affordable rates … should be able to drive the vision of the hospital and to be able to lead the team to work towards attaining the vision of the hospital" (I-005). Another participant also mentioned that a team leader should be able to take decisions (I-004).

When asked to explain the characteristics of an effective team leader, one participant described an effective team leader as someone who was "objective and treats all members of staff equally. She/he should explore ways of promoting staff and ensuring that the hard workers are acknowledged and remunerated accordingly so as to improve on the level of performance and of the hospital as a whole. She/he should not view staff as a threat and try by all means to supress them" (I-007).

Other participants mentioned that effective team leaders should,

> "not be just implementers of procedure. They must be leaders who take calculated risks and who give others in a team space to explore and grow … They should be able to manage their juniors and to delegate to the team. Juniors should do what they are supposed to do" (I-006). It was also

mentioned that they "should be committed to creating a learning organizational environment" (E-001).

In discussing the relevance of TNA in hospitals, a number of considerations viewed as important for ensuring the success of team nursing were mentioned. The six (6) themes delineated from responses of participants are described in Table 4.23 below.

Table 4.23 Themes and comments – additional considerations for successful implementation of TNA

Theme	No. of times raised	Supporting comment
Reporting	2	*Reporting of teams and proper rotation of staff to other cubicles is key (E-002)* *Reporting of teams is critical for making sure that everyone in the ward knows what is happening in the entire ward (I-003).*
Composition of teams	2	*Different personality traits and multi-disciplinary skilled people-skill mix (I-006 also supported by I-004)*
Clear duties and responsibilities	3	*Caterers, technical, cleaning staff should know and understand the importance of their role and should do their best in ensuring that nursing care is not compromised; to be known who is responsible for giving drugs, anaesthetic (I-007 also supported by I-004 and I-005).*
Allocation of patients	1	*Need for balanced nursing-staffing ratios … acuity levels of patients should differ so that some teams do not end up only with patients who need high care or supervision whilst other teams are having it easy (I-004).*
Knowledge, competencies & skills	3	*Team members should have clinical areas of specialization or should excel in their field to be able to manage effectively and to ensure good nursing standards and care (I-006 also supported by I-004).* *Team skills are important for team members to be fully committed to their work and to be able to work together with passion when attending to the urgent needs of patients (I-007).*
Inter-professional trust and respect	1	*There needs to be trust amongst team members, respect and acknowledgement of the contributions made by all in a team. In some instances nurse managers are more knowledgeable and experienced than doctors and are yet undermined by doctors who were for that matter only recently qualified. For example, there is equipment that doctors do not know how to operate only to find that nurse managers do know how; Doctors need to trust decisions taken by nurse managers and to respect contributions made by other nurse managers or nursing staff otherwise there will always be power struggles between doctors and managers about patients' care and ownership of the units; Managers do need to feel valued by physicians (I-006).*

(Source: Developed for this study, N=7).

4.8.4.3 Moderating variables differences

No differences in perceptions were noted when discussing moderating variables (type of hospital, level of management, age of participants), in relation to the relevance of the implementation of team nursing approaches in hospitals.

4.8.5 Qualitative results about Research Issue 5: Competency Development Factor 5

The Fifth Research Issue:

> *What competency development initiatives have nurse managers been exposed to, to be able to carry out their roles and responsibilities as nurse managers?*

4.8.5.1 Current clinical and management competency development (Sub-Factor 5.1)

Aspects of the discussion on current competency development revolved around the duration of interventions linked with the intensity and adequacy of the interventions. Reportedly, nurse managers are not trained thoroughly for their positions. One interview participant (I-005) said,

> "In preparation for their new role, nurses are given opportunities to attend conferences and few days' workshops. Unfortunately because of limited exposure what is being learnt from conferences or workshops is not even implemented in the workplace. We need to have proper intense in-service training on leadership and orientation for new managers" (also supported by I-006).

4.8.5.2 Future competency development initiatives (Sub-Factor 5.2)

In discussing course curriculum for future competency development initiatives, interview participants in the main identified management and leadership-related programs and courses because the hospital environment is dynamic and that the health sector, like others, is evolving. The theme is supported by comments outlined in Table 4.24a below.

Table 4.24a Themes and comments - future competency development initiatives – curriculum

Theme	**No. of times raised**	**Supporting comments**
Management and leadership course content	2	*Leadership for change and transformational management, change management, strategic management, research skills, communication skills, computer literacy and general management (E-002 also supported by E-001).*

(Source: Developed for this study, N=7).

4.8.5.3 Future delivery modes (Sub-Factor 5.3)

The researcher originally expected to find that management skills could be successfully transmitted through *distant learning*. However, probing questions revealed that distant learning is not ideal or it is not the only preferred mode of delivery. Interview participants identified three (3) themes: face-to-face class attendance, e-learning and on-the-job learning. Their views on the three delivery modes are depicted in Table 4.24b below.

Table 4.24b Themes and comments - future competency development initiatives – delivery modes

Theme	No. of times raised	Supporting comments
Face-to-face class attendance	*1*	*...is the best to ensure that managers go through the training and learn; however, due to many competing demands and obligations managers cannot be expected to be in a class. The current training of nurse managers is through correspondence which is not the best and most effective means of learning; I have seen managers who are studying through correspondence copying their colleagues' assignments and submitting them without them learning anything in the process (I-003).*
E-learning	*3*	*Learners enrolled on e-learning would be able to develop professionally in nursing without limitations of work, personal, or even social circumstances; learners are able to communicate with their educators and facilitators, access work given in their respective choice of courses, and check their results (E-001).* *Online training is ideal, but it cannot work because most managers are not computer literate (I-003).* *On-line training for nurses and managers does not offer practical experience. It is more theory-based than practical and in nursing there is a need for hands on experience or practical training more than theory (I-004).*
On-the-job training	2	*It provides practical experience; senior managers should also spend some time in wards where patients are being cared for. They should not only be based in offices so that they can be "visible managers" and be able to help and to provide on-the-job coaching or mentoring (I-007).* *There should be mentorship for new managers in hospitals; new managers should buddy with someone who has held a management position for a while or of other departments for at least a day per unit until all the units in a hospital have been covered … because unit managers are at times, over weekends, expected to manage the entire hospital (I-005).*

(Source: Developed for this study, N=7).

All seven (7) interview participants identified five additional themes that should be considered for future competency development initiatives. Refer to Table 4.25 below for details. Notably, needs-based content has the highest frequency in terms of additional considerations for competency development programs.

Table 4.25 Summary of additional competency development considerations

Theme	No. of times raised	Supporting comments
Target group	*3*	*Attendance of initiatives should be compulsory for all nurse managers, including new and existing managers (I-005 supported by I-004)* *The entire team including other non-nursing staff members should be trained (I-003).*
Duration of interventions	*2*	*Continuous professional development is needed for all (I-004)* *Courses on management in preparation for the new role should be completed over 6 months (1 day/month x 6 months) (I-007).*
Needs-based content	*4*	*Assessments should be carried out prior to placement in management positions to identify areas of support (I-004).* *To be informed by feedback from performance appraisals and hospital strategic plan (I-006)* *Skills audit for existing managers is a necessity (E-002)* *Some nurses do lie about their computer skills and they get away with it because they are not assessed during interviews … (E-002 supported by E-001)*
Logistics	*2*	*Centralized training for networking purposes should continue (I-007)* *Induction to be at hospital level focusing on key aspects or responsibilities of the new role where one is employed (hospital specific induction); There should be better schedules and plans so as to ensure improved attendance. Flexible work schedules should be considered (I-005)*
Financing of interventions	*1*	*Hospitals should finance the education/competency development initiatives (E-001)*

(Developed for this study, N=7).

4.8.5.4 Moderating variables

When discussing future competency development initiatives in relation to moderating variables (type of hospital, level of management, age of participants), it was mentioned that the new generation is technologically advanced hence a need for *older ones to up-skill* so that they can use the available technology (E-001). It was also mentioned that the level of intensity of the training should be informed by the *level of management* that the person is at. It was, for example mentioned, that at entry level, all nurses should have completed a basic leadership course before they could be appointed as managers (I-007). Operational managers should do a basic course in management while the director of nursing should attend an advanced management programme (I-003). However, "induction and orientation for all levels of management should focus more on leadership skills**"** (I-007). No input was made in terms of competency development considerations for nurse managers in different types of hospitals.

Table 4.26 below provides a summary of the qualitative analysis.

Table 4.26 Summary of the qualitative input about the five research issues

List of Factors	Key Recommendation	Source
Requisite competencies Factor 1	Skills that have been listed include: administration skills, clinical expertise, planning, knowledge of regulations and standards of practice, time management, computer literacy, health risk management, budget control skills, assertiveness, problem solving and managing conflict amongst staff, research-related competencies, leadership, communication, diversity management, emotional intelligence, budgeting, interpersonal skills, decision-making and personal grooming	I-006, I-005, I-004, I-003, E-002, E-001
	Different levels of management should possess different competencies.	I-005, I-006
Effective behaviour Factor 2	Access to technology and use of available technology to improve overall functioning of hospitals is important	I-007, E-002
	Limited knowledge and capabilities of nurse managers impact on their performance and functioning of hospitals	I-003
	Good leadership and communication skills are vital	I-004 I-007 I-005
Team Nursing Approach Factor 3	Team nursing approach is relevant. **The benefits include:** Provision of holistic nursing care to patients, provides networking opportunity Solution to staff shortages Ensures accountability and responsibility	E-002 I-007 I-005 I-004
	The **characteristics or attributes of a team leader** should include: A strong personality with ability to motivate others Operational knowledge A person who is objective, decisive and can take calculated risks A manager with leadership skills who can delegate to team members A person who promotes a culture of learning within their organizations	I-006 I-005 I-004 I-007 I-006 E-001
	Other approach considerations Skill mix of team members - clear allocation of duties and responsibilities Clear allocation of team members and careful allocation of patients Team commitment, rotation and reporting is critical Positive team spirit, trust and respect amongst members Recognition and reward for contributions of each member	 I-007 I-004 I-005 I-003 I-007 I-006 E-002 I-003 E-002 I-006
Nurse manager performance Factor 4	Nurse manager performance is influenced by factors such as lack of recognition and reward, lack of motivation, flawed implementation of performance management appraisals and performance management and development system, lack of resources and control of use of resources and lack or limited budget control knowledge.	I-004 I-007 I-005 I-003 I-006 E-002
Competency development Factor 5	Currently managers are not thoroughly trained for their positions	I-005 I-006
	Considerations for future competency development initiatives include: There should be different interventions for different age groups and different levels of management.	 E-002 E-001 I-007
	Course curriculum: management and leadership related courses Modes of delivery: varied modes are preferable-face-to-face class attendance, e-learning, on-the-job training/coaching/mentoring Program content should be informed by the needs of nurse managers.	E-002 E-001 I-003 I-004 I-007 I-005

(Developed for this study).

4.9 Summary of the chapter

This chapter has presented the research findings from the study based around the five research issues. Various constructs in this research were analyzed for validity, reliability and normality.

Further, descriptive statistical analysis and hypotheses testing were conducted. The results of the relationships amongst the independent variables - requisite competencies, effective behaviour, team nursing approach and competency development against the dependent variable nurse manager performance are presented and discussed. Qualitative data from in-depth interviews with internal and external stakeholders was also analyzed. Implications of the findings in the context of the literature and conclusions of the study are made in the last chapter of this dissertation - Chapter Five.

CHAPTER 5 - CONCLUSIONS AND IMPLICATIONS

5.1 Introduction

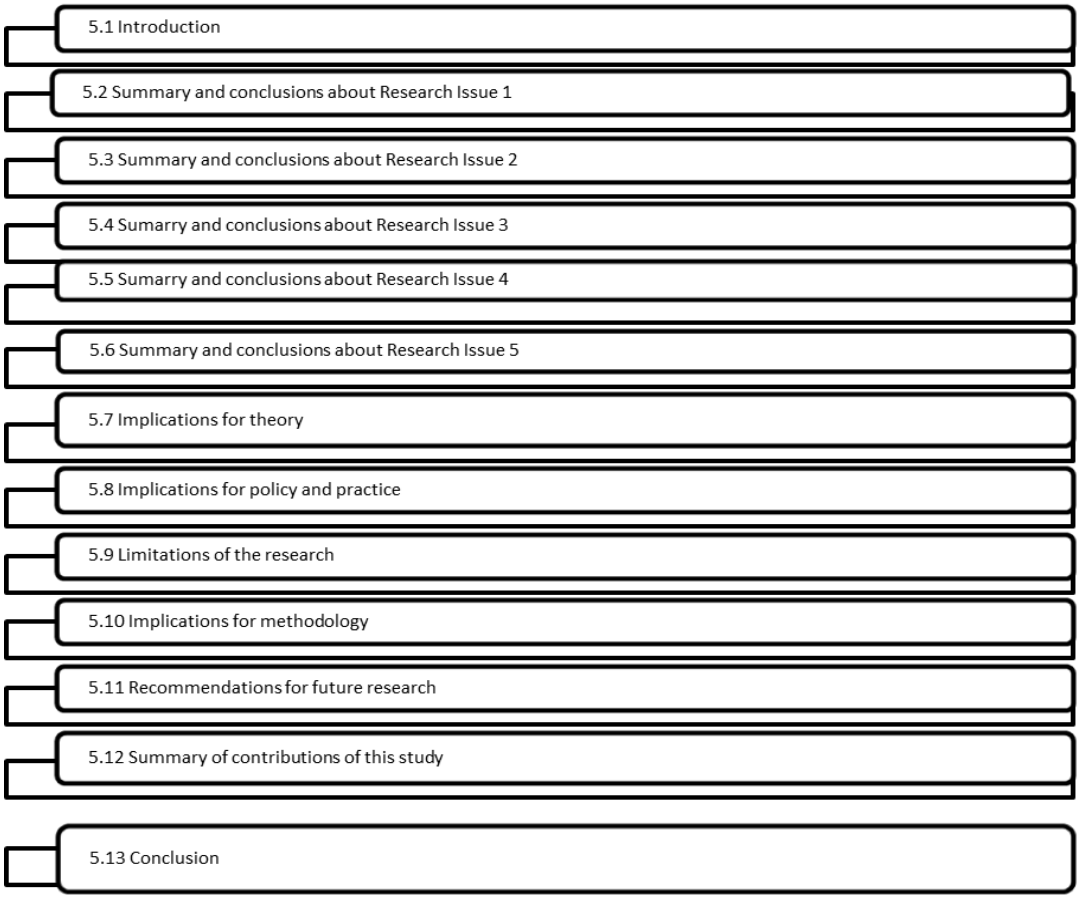
The last chapter presents conclusions about the research questions and the research objective, namely, to gain knowledge about the role and importance of soft skills or requisite competencies for nursing management in hospitals. Further, the goal of this dissertation is to establish a competency framework by which key competencies required for nurse managers working in hospitals are reflected in competency development programs that benefit the profession.

Chapter 1 introduced the research issue, while Chapter 2 presented the literature overview on the problem and identified six related research questions. Chapter 3 then outlined the two methodological phases viz. survey and in-depth interviews that were used to collect the data on the research questions. Next, Chapter 4 provided the analysis of data on the requisite competencies.

This Chapter consists of 13 parts. Firstly, summaries are presented and conclusions about the five research issues are drawn. Through the process of literature review and discussions with experts in the nursing profession, the research questions were formulated to inform the research problem and guide the investigation. The Sections 5.2 to 5.6 present in each section, firstly a short overview of the main findings of each research issue and then the conclusions reached on the five research issues. Section 5.7 outlines implications for theory and Section 5.8 presents implications for policy and practice. The study's limitations are outlined in Section 5.9 and implications for methodology are in Section 5.10. Recommendations for future research are presented in Section 5.11. Finally, the chapter summary of contributions of this study is presented (Section 5.12) and

conclusion (Section 5.13). The following diagram, Figure 5.1 presents the structure of the chapter.

Figure 5.1 Outline of conclusions and implications chapter



(Source: Developed for this study).

The study's findings are analysed and discussed in the context of theory and management practice drawing on literature reviewed in Chapter 2. However, the initial literature review was completed in June 2013, because data began to be gathered at that time to investigate the research issues raised by the literature. Therefore, more literature is incorporated into this chapter to assist in the discussion of the findings. This procedure of incorporating recent literature into the final chapter and not in Chapter 2 is supported by Murray (2006) cited in Perry (2012). The discussions and conclusions for the five research issues, noted above, offer a solid framework for formulating conclusions about the research problem, which explores:

What are the perceptions of nurse managers about the role and importance of certain management competencies (soft skills) on performance in Gauteng hospitals?

5.2 Summary and Conclusions about Research Issue 1: Requisite Competencies

In this section the findings of requisite competencies (based on Factor 1) are summarized and conclusions are drawn.

From a definition of competency adapted from a number of authors (Boyatzis 2009; Crosthwaite 2010; Frank et al. 2010; South African Nursing Council 2013; Stuart & Lindsay 1997) stated in Chapter 2 (Section 2.2.2) mentioned in this dissertation, it is implied that there is a link between critical competencies of nurse managers and their effective performance. C*ompetency is integrated sets of behaviours, knowledge, skills, values and attitudes that can be directed towards effective performance within competence of the occupation.* Thus the first intention in investigating the research problem was to understand, which competencies of nurse managers are vital and their role and importance for nurse manager performance (Research Issue 1).

This study indicates that the key components of nurse manager competencies are practical management competencies (Sub-Factor 1.1), research-related competencies (Sub-Factor 1.2) and leadership and communication competencies (Sub-Factor 1.3). As such these sub-factors are used as sub-headings for summaries about Research Issue 1.

5.2.1 Practical management competencies (Sub-Factor 1.1)

The findings of this research support extant literature on practical management competencies (see Section 2.3.1 Table 2.1) on clusters of management competencies that are vital for managers in general, which have been implied in previous research (for example Bakanaustiene & Martinkiene 2011; Espinoza,

Ukleja & Rusch 2011; Weber et al. 2009). Previous studies have also identified practical management competencies in relation to requisite competencies of nurse managers in hospitals (for example Cathcart, Greenspan & Quin 2010; Eason 2009; Jones 2007; Kraak 2010; Ntlabezo, Ehlers & Booyens 2004; Pillay 2010; Pillay 2010a; Surakka 2008; Viitanen et al. 2007).

5.2.2 Research-related competencies (Sub-Factor 1.2)

This study supports findings of previous research on the vital role of research-related competencies for nurse managers. For example, the results of Sub-Factor 1.2 build upon the literature by Jones (2007) as well as Moiden (2002); Schneider 2003 and Viitanen et al. (2007) about the importance of evidence-based practice. These authors stated that analyzing and utilizing relevant research data results in continuous improvement of nursing practice, desired high standards of health-care, best cost effective interventions and effective best practice that is essential to the establishment and regulation of the standard of nursing practice.

5.2.3 Leadership and communication competencies (Sub-Factor 1.3)

The significant role of leadership and communication competencies is confirmed by the study's findings about Sub-Factor 1.3. This research supports for example, Busic, Robinson and Ramburuth (2010); Carney (2009), Hartman, Conklin and Smith (2007); Jones (2007); Murray and Donegan (2003) and Stanley's (2011) statements that managers, by being involved in the development of the vision, goal and objectives of their organizations, are involved with determining the direction of their organization and the requisite competencies as well as motivating the team to work towards the vision.

The study's findings also support Hartman, Conklin and Smith (2007) as well as Passarelli (2011) on the importance of communication skills as a competency that is vital for effective leadership and leadership development. It is a skill and competence that nurse managers need for effectively communicating with clients, their family members and other healthcare professionals and workers (Chitsulo,

Pindani, Chilinda & Maluwa 2014). Here, this research adds that communication skills are useful for sharing with or communicating the vision, mission, goals and objectives of the hospital to their teams (Section 4.7.1.1).

As suggested in the literature review and Chapter 3 of this dissertation there was no standard list of competencies particularly for nurse managers in Gauteng developed and used in previous research, therefore, a long list of competencies (with 27 items) that were deemed relevant was used in a Nurse Manager Competence Survey (NMCS) to source perceptions of nurse managers on competencies that they regarded as most critical. When Factor Analysis was conducted, all the factors on requisite questionnaire on Part 2 of the questionnaire were accepted. However, an observation made is that while there is a degree of consensus between NMCS participants and in-depth interview participants (internal and external stakeholders) the list of requisite competencies is too long and could be further tested (Section 4.7.1). Also, because there is relatively little research into the requisite competencies of nurse managers in hospitals it is, therefore, not surprising that the findings are not entirely aligned with prior research findings as shown for example in Table 5.1, below.

As a result, from qualitative and quantitative evidence, a list with the 10 most highly-rated competencies was developed (See Table 5.1 below). Some of the *contributions* of this research are that it is addressing the lack of a standard list of requisite nurse manager competencies for nurse managers in public and private hospitals in Gauteng by providing a list of highly rated competencies and a measuring instrument. In addition five (5) of the top ten requisite competencies of effective nurse managers are regarded as highly important. The study presents a proposition that the five highly-rated competencies should be considered as a standard list of core requisite competencies to be considered in future competency development initiatives or during re-orientation of existing nurse managers and in the recruitment and placement of appropriately skilled nurses in management positions in Gauteng hospitals. Furthermore, these competencies may be

considered in other provinces in SA and in other developing and developed countries.

Table 5.1 List of Top 10 requisite competencies for effective nurse managers in Gauteng hospitals

	Requisite Competencies	**In the literature**	**Empirical data**
1	Knowing the regulations and standards of nursing practice	limited	yes
2	Appropriately staffing and scheduling nurses	limited	yes
3	Understanding and managing self and others	limited	yes
4	Building trust amongst staff	yes	yes
5	Problem solving skills to be able to make accurate clinical judgements and decisions	yes	yes
6	Time management	limited	yes
7	Team skills/building team/managing & leading teams	yes	yes
8	Monitoring & managing individual performance of team members	limited	yes
9	Research-related skills	limited	yes
10	Communication skills	yes	yes

Notes: * the 5 most highly-rated in order of highest frequency are shaded in grey in this table

**** In the literature column heading = literature overview Chapter 2. Empirical data = based on findings of this research not theory, Chapter 4***

(Source: Developed for this study using literature and empirical data from this research).

Qualitative findings from this study identified three major themes (refer to Table 4.19 above) which confirmed the importance of practical management competencies: administration skills and clinical knowledge, appropriate scheduling and staffing, knowing regulations and standards. These three themes are consistent with the literature as noted below.

The research findings support Jones's (2007) view about the *importance of knowing the regulations and standards of nursing practice* primarily through the use of evidence-based practice. According to Pillay (2010), an awareness and implementation of the South African regulatory environment especially issues on labour and health is important. It is assumed that by knowing the regulations and standards they would be in a better informed position to advise labour unions and nursing teams on the expected high standards of patient care in an ever changing healthcare environment, and also to ensure that appropriate regulations are implemented in both public and private hospitals. Furthermore knowledgeable managers would be able to take the most appropriate clinical decisions, to prevent

further reported litigations and high cost of ligation claims for negligence, and to work towards achieving Department of Health's goals (Mail & Guardian Health Journalism Centre 2014, Mail & Guardian Newspaper 2014a).

In terms of the importance of *staffing and scheduling competencies*, the result of this research supports previous research and extends it. Internationally, staffing and scheduling is a problem that needs special attention in nursing to be able to deliver quality care. The results provide support for Ma, Samuels and Alexander (2003) and Dickerson, Brewer, Kovner and Way's (2007) findings that inflexible schedules and insufficient staffing of nurses results in delays in the treatment of patients as nurses fake illness and stay away from work. The absence of nursing staff led to the shifting of care of patients to family members, mental and physical exhaustion of nurses due to fast pace and being overworked, burnout, work related injuries and stress symptoms, changes in work settings, high turnover rates, low morale and work dissatisfaction. In accordance with Pillay (2010) appropriate staffing and scheduling is more critical in SA, where there is shortage of skilled managers and of nurses in particular (Daniels 2007; Erasmus & Breier 2009; JIPSA 2010). In the absence of appropriate staffing and scheduling more nurses would complain of work overload and taking on non-nursing duties resulting in feelings of unhappiness, burnout syndrome and increased turnover (Gardner 1991) which would ultimately compromise safety and quality of nursing care and services (Chitsulo et al. 2014).

In terms of *understanding and managing self and others,* the findings of this research support a notion by Boyatzis (2009); Laker and Powell (2011); as well as Weber et al. (2009) that success of management beyond entry levels usually requires proficiency in leadership, self-management and managing relationships with others and emotional intelligence competencies. In addition they would be able to lead others, to understand themselves and others in a team. Clarkson (2009) is supportive of the importance of emotional intelligence competence in nurse managers. He stated that emotional intelligence assists in self-recognition and can increase job commitment, satisfaction and inspiration for nurse managers themselves and others that they interact with. Notably, in a study by Pillay (2010) in

South African public and private hospitals, understanding and managing self and others was regarded as the most valuable competence for nurse managers. This is also supported by Mathena's (2002) assertion that social skills are important for nurse managers.

In terms of *building trust,* the findings of this study support that view and add that management as leaders should be able to inspire trust amongst staff members (Chauhan 2011) for successful interactive processes, collaboration, and joint planning which contribute to overall organizational effectiveness (Bhat et al. 2012). In addition both quantitative and qualitative evidence suggested that clear consistent communication would result in improved trust and confidence in managers particularly in the case of TNA.

In terms of *problem solving*, the findings of the research indicate that problem solving is a critical competency as it allows one to make accurate clinical judgements and decisions. This empirical research finding supports Karan (2011); Surrakka (2008); and Weber et al. (2009) that nurse managers or rather nursing leaders should, irrespective of the clinical setting that they are working in, possess problem solving competence to be able to solve healthcare problems that might arise within their hospital.

This research also explored the link between perceptions of importance of certain competencies and types of hospital, age of nurse manager, length of service of nurse manager and management level of nurse manager.

A lack of a significant difference in competencies required by nurse managers in *public and private hospitals* for optimal performance was identified in the literature by some authors (for example Surakka 2008; Viitanen et al. 2007) who, contrary to popular view, advocated that the relevant and appropriate competencies should be the same in different hospital environments across the globe. Consistent with Surakka's statement (2008), quantitative evidence in this research supports the notion that nurse managers across the globe do have the similar roles and

experiences and similar healthcare challenges, therefore, the requisite core competencies for nurse managers should be similar irrespective of the type of hospital or hospital environment. It should however, be noted that in contrast Surakka (2008) also stated that practice setting, for example working in a university or rural hospital between different types of units and different sizes of units, does have an impact on the role and invariably on the required competencies of nurse managers in varied hospital environments.

Quantitative and qualitative evidence from this research supports the proposition that the requisite competencies of nurse managers in public and private hospitals are the same even though differences in measures were noted in Model 3 when interaction items were added. Whilst this conclusion is exploratory, it *contributes* to a need for a better understanding of requisite competencies for nurse managers in the various types of public and private hospitals or settings found in Gauteng or in other provinces of SA. Gauteng has the highest population in SA thus has different socio-economic concerns and needs (Stats SA 2012). Also, Gauteng hospitals service people from neighbouring countries (for example Swaziland) other neighbouring provinces such as North-West, Limpopo and Mpumalanga who have been referred to Gauteng hospitals due to limited or lack of facilities and inability to provide treatments in their provinces. Therefore, the requisite competencies for nurse managers in Gauteng might be different from those of managers in other provinces (Antonie et al. 2012). This area needs further investigation.

Qualitative evidence of this study supports the findings of a study by Mokoka, Oosthuizen and Ehlers (2010) in South African hospitals that pointed to the importance of nurse managers *understanding of multigenerational workforce differences* in the interest of providing better health care service to patients and other clients as there is a possibility of differences in values, beliefs, norms and behaviour amongst nurses resulting in conflict which could undermine collaboration and the provision and co-ordination of care. Gentry, Deal, Griggs, Mondore and Cox (2011) explained that according to previous findings on generational differences and leadership skill level, managers from different generations are more similar

than they are different on leadership competencies that they regard as important (Gentry et al. 2011). Clearly more research examining requisite competencies at various *nurse management levels* is likely to be more fruitful particularly in terms of knowing whether competency development interventions should differ by generation or if they should be the same regardless of generation.

Qualitative evidence (2 participants) from in-depth interviews with internal and external stakeholders in Gauteng province indicates that *different levels of managers* should possess different competencies. Understanding the competencies required by different levels of managers over time as the health care evolves would be useful. This view is supported by the national strategic plan for nurse education, training and practice 2012/13-2016/17, which indicated that competencies for different levels of nursing should be defined (DOH 2013a).

5.2.4 Conclusions about Research Issue 1: Requisite competencies

In response to the research problem, the quantitative and qualitative evidence have been able to firstly *contribute insight* on the competencies of nurse managers that are regarded as important in hospitals (Research Issue 1).

While the identified soft skills or competencies are in the main general management competencies and not related to clinical knowledge, they are relevant, useful for managing nursing services and considerable for nurse managers working in different departments/units in hospitals primarily because NMCS participants worked in a wide variety of departments/units.

There are a number of possible reasons for regarding mostly generic management as important. Perhaps this is so also because *most of the items were related to management skills and competencies* as the focus of the study is on role and importance of management competencies and the performance of nurse managers. Consistent with the findings of a literature review by Doherty (2013), unit managers in SA and the UK spend more time on administrative matters than they do in clinical care.

Nonetheless there also generally seem to be confusion or contradictory views on the *expected duties and roles of nurse managers*. According to Surraka's view, nurse managers should not directly and indirectly be involved in nursing care though clinical competence is important for them. Some NMCS participants complained about spending time on non-nursing duties such as many administration-related tasks for example compiling reports, keeping and updating patient records which are management duties viewed as secondary. As a result they were struggling to be visible at the patient care area even if they wanted to because of the managerial workload. In contrast, other NMCS participants mentioned that nurse managers are to provide mostly nursing duties as opposed to managerial duties. In addition, there was a call for nurse managers, especially senior ones, to support nurses and other junior managers by being visible and hands-on in the units so as to know the activities taking place in the clinical setting, to promote professional development and to acknowledge the performance of subordinates. This contradiction could be because most of the NMCS participants were unit (operational) managers.

Unit (operational) managers are junior level managers who are overall in charge of the unit regarding nursing services, to ensure delivery of quality and comprehensive nursing and health services as opposed to senior managers who operate at a strategic level with less focus on nursing (Chitsulo et al. 2014). However, consistent with Litecky, Arnett and Prabhakar (2004), it is important that there is a *balance of clinical skills (technical) and soft skills* emphasis in the recruiting and hiring process of nurse managers. This would ensure that hospitals are staffed by effective nurse managers and leaders who will contribute to the quality and safety of the health care systems where they work.

In summary, this empirical research *contributes to the body of knowledge a list of core requisite management competencies for nurse managers working in public and private hospitals in Gauteng*. This list of core requisite competencies for nurse managers is important because it defines the standard for the required leadership and management skills in Gauteng hospitals. Further, the list is also relevant to the healthcare sector in developed countries such as Australia, UK, and US as well as developing countries such as Brazil, Russia, India, China and South Africa (BRICS).

Evidently, while there is an association between requisite competencies and performance of nurse managers, the possession of competencies does not predict efficient performance of nurse leaders. Simply put when a nurse has clinical expertise and acumen it does not mean she or he will be immediately successful as a nurse manager and or team leader. The "job title on its own does not make a leader" (Curtis, de Vries & Sheerin 2011, p.307).

The main conclusion and contribution, therefore, about RQ1 is that identification of requisite soft skills or certain competencies like communication skills is pertinent for effective management or leadership of hospitals however the competencies must be continuously developed. Some differences were noted in terms of the importance of certain competencies in relation to type of hospital, age of nurse manager, length of service of nurse manager and management level of nurse manager.

5.3 Summary and Conclusions about Research Issue 2: Effective Behaviour

In this section the findings of effective behaviour of nurse managers (based on Factor 2) are summarized and conclusions are drawn.

Having considered the requisite soft skills or competencies for nurse managers in hospitals, it is important now to understand the link between specific competencies and behaviour of effective nurse managers (Research Issue 2).

This study indicates that the key components of effective behaviour of nurse managers are effective human resource practices (Sub-Factor 2.1) and effective leadership and communication (Sub-Factor 2.2). As such these sub-factors are used as sub-headings for discussing conclusions about Research Issue 2.

5.3.1 Effective human resource practices (Sub-Factor 2.1)

The findings of this research support extant literature on the various behaviour

components that relate to human resource processes, which result in effective performance of nurse managers and ultimately effective care delivery, role satisfaction, improved staff and patient satisfaction.

Consistent with Pazos (2012) and Trent's (2004) view, competence in conflict management is vital for nurse managers and leaders to be able to deal with work-based challenges that might affect the safety of patients and staff, relations amongst healthcare staff and other workers. It is suggested that if nurse managers have *conflict management competencies* and act responsibly, they would be able to deal with ethical problems and conflict that might affect the team's effectiveness, process and outcomes, and negatively impact on the nursing profession and or hospital environment. Therefore, consistent with Husting's view (1996), it is a proposition and contribution of this study that problem solving and conflict resolution and management should be considered in the curriculum of future competency development initiatives for nurse managers and leaders.

It should be clear from what is in the preceding paragraph that this research adds to the call by the South African Standards for Nursing Practice (SANC 1992) that nurses should work in a *safe environment,* which is equipped with the necessary resources. Quantitative and quantitative evidence of this research is supportive of Berg (2010) and Queensland Health's (2008) view on the importance of possessing risk management competence. Berg (2010) and Queensland Health (2008) explained that risk management entails identification of the risk that might affect an organization, assessment of likelihood and severity of effect, developing strategies to manage it and mitigation of the risk. Also, according to the National core standards of nursing risks have to be eliminated where necessary (DOH 2011). NMCS participants indicated that the possession of risk management competence is of importance for nurse managers especially in ensuring a safe environment that is conducive to optimum health care by at least investigating and reporting unsafe or unprofessional clinical practice behaviour that she/he observes.

NMCS findings support Carney (2009); Weber et al. (2009); Zakari, Khamis and Hamadi (2010) that there is a link between *effective professional leadership* and

ethical behaviour as well as with ethical behaviour and patient satisfaction and effective care delivery.

This research complements a notion by Ferguson and Cioffi (2011) that nurse managers should be *able to conduct performance appraisals and review* of their team members. Quantitative evidence on the one hand indicates that nurse managers in both public and private hospitals in Gauteng, conducted performance appraisals and that they have the ability to conduct performance appraisals and review of their team members. However, qualitative evidence on the other hand indicates that not all nurse managers have the competence to conduct appraisals (Section 4.8.3). However, there were complaints mentioned about how the appraisals were conducted and this led to lack of confidence in the system and unhappiness among staff as such staff put minimum effort into their work, adversely affecting the delivery of nursing and health services (Chitsulo et al. 2014). In addition, identified core competencies and work behaviour could be used in competency-based appraisal of nurse managers (Bergenhenegouwen, Horn & Mooijman 1996).

This study also supports extant literature in terms of behaviour components that relate to education and training, which result in competent, effective nurse managers and leaders. The findings are supported by some authors (for example, Alves & Canilho 2010; Busic, Robinson & Ramburuth 2010; McCallin & Frankson 2010) that it is important that there be *investment in the development of competencies* of nurse managers so that they could acquire the skills to develop their leadership capacities, to know their team better and to adopt strategies that were different from the ones that are currently used.

Positive psychological capital can be learned, enhanced and developed through formal professional development initiatives (theory), or on-the-job interventions (practical) resulting in improved psychological performance of participants and their on-the-job performance (Luthans et al. 2010; Newman et al. 2011; Peterson et al. 2011).

Enhancing, or the development of identified core competencies and desired effective behaviour of nurse managers, should be informed by identified requisite competencies to result in effective leadership and or performance. Skilled nurse managers are essential in driving adherence to core standards and competencies, reducing errors and improving the quality of nursing care and overall service delivery.

This research contributes by building upon existing literature by showing the link between role modelling competency and effective leaders. The national core standards of nursing (DOH 2011) indicated that senior managers are to provide positive role modelling. Exposure to poor supervision or role modelling results in poor performance (Mumford et al. 2002). It is Busic, Robinson and Ramburuth (2010) as well as Disch, Walton and Barnasteiner's (2001) view that an effective leader acts as an excellent role model that inspires other nurses and health care teams to achieve the expected high standards of patient care. As role models, nurse managers who are team leaders and those who are just managers instil effective behaviour within their team or department. In addition, they create and sustain a healthy working environment and provide support for nurses in addressing clinical practice issues.

5.3.2 Effective leadership communication (Sub-Factor 2.2)

The findings of this research support previous findings on the implications of good leadership and communication. For example Miller, Riley and Davis (2009); Timmins (2011) as well as Uys and Naidoo (2004) viewed communication as a fundamental element of health care. It is also mentioned that leaders should be role models of good communication. They should use it to share vital information such as the vision of the hospital with internal and external hospital stakeholders, to boost the morale of staff and to build and maintain relationships, which would result in effective performance of leaders. Quantitative and qualitative evidence indicates that nurse managers use a variety of methods such as WhatsApp messenger mobile

application, emails, computers and phones to communicate regularly with staff and other health care professionals. This finding is supportive of a statement by Chitsulo et al. (2014) who indicated that nurse managers' work involves a great deal of communication activities, which involve making the information available to all service providers for effective decision-making.

5.3.3 Conclusions about the Research Issue 2: Effective behaviour

In response to the research problem, the second aspect considered was what competencies relate positively to the behavior of effective nurse managers (Research Issue 2). Having considered quantitative and qualitative evidence from Research Issue 1 it was possible to assess whether there was a link between specific competencies of nurse managers and effective behavior. For example, three themes emerged with regard to access and use of ICT (refer to Table 4.20): access to technology, ability to use technological facilities and improved outcomes. Computer literacy was regarded as important (Research Issue 1). Quantitative and qualitative evidence of this research indicates that effective leaders use computers for communicating regularly and effectively as well as for preparation and sharing of documents that are important for overall functioning of hospitals and for the empowerment of nurses and other health care professionals (Research Issue 2). Lack of computers and computer literacy were mentioned by participants as barriers that nurse managers have in relation to using computers for communication, research and for e-learning. It can thus be postulated that limited capabilities of nurse managers such as lack of or limited computer literacy impacts on their performance and the functioning of hospitals. Future competency development initiatives for leaders should ensure that they have the appropriate competencies to be able to do the work given rapid worldwide advances in information management, therapeutics and technology.

Considering the evidence found for RQ1 and RQ2, the study contributes the conclusion that the possession of requisite competencies and an exhibition of effective behaviours are important in order to have an effect on the performance of

nurse managers and ultimately improved health care service delivery in Gauteng hospitals.

The findings of RQ1 and RQ2 present a novel *contribution to our existing knowledge on competencies of nurse managers in that* a list is provided of behaviours that could be expected of effective nurse managers. The list of recommended practices and competencies that could guide the revision of competency framework and standards, future competency development initiatives and skills audits is developed as depicted in Table 5.2 below. These behaviours should be considered in the design, development and selection of learning programs and short courses for, in particular, nursing management and leadership programs to specifically address performance deficiencies and areas of need for new and existing nurse managers and team leaders in Gauteng hospitals. These behaviours could also be used as a guide or expected outcomes for regulating bodies that set standards for accreditation of nursing education programs.

Table 5.2 List of behaviour for effective nurse managers in Gauteng hospitals

	Requisite Competencies Outcomes	**Practical management**	**Research-related**	**Leadership & communication**
1	Collecting, analysing, utilizing and reporting nursing research data in nursing practice and nursing education		✓	
2	ICT-Computer literacy & other relevant technology based equipment	✓	✓	
3	Health risk management	✓		
4	Financial management including budget control/cost containment	✓		
5	Appropriately staffing and scheduling of nurses	✓		
6	Knowing and understanding of regulations and standards of nursing practice	✓		
7	Understanding and managing self and others	✓		
8	Team skills including team collaboration, team leadership & management, building team/team learning climate			✓
9	Problem solving including conflict resolution and management	✓		
10	Communication skills			✓
11	Management of resources-human & clinical resources	✓		
12	Time management	✓		
13	Managing appropriate implementation of Team Nursing Approach	✓		✓

(Source: Developed for this study).

5.4 Summary and Conclusions about Research Issue 3: Nurse Manager Performance

In this section the findings of nurse manager performance (based on Factor 4) are summarized and conclusions are drawn. Having considered how specific competencies relate to the behaviour of effective nurse managers, it is important to now understand what factors influence nurse manager performance in hospitals (Research Issue 3).

This study indicates that the key components of nurse manager performance are performance management in hospitals (Sub-Factor 4.1), management of resources (Sub-Factor 4.2) and budgetary control measures (Sub-Factor 4.3).

5.4.1 Performance management in hospitals (Sub-Factor 4.1)

In terms of performance management in hospitals, participants in the study identified a range of factors that relate to leadership, education and training, performance standards, communication and human resource practices that influence nurse manager performance in their hospitals and these are consistent with existing literature. In particular, qualitative findings from this study identified three major themes: recognition and reward, lack of motivation and high levels of dissatisfaction as well as performance management systems (refer to Table 4.22).

The existence of on-going performance appraisals for nurse managers, formal procedures and policies to promote competency development of nurse managers as well as a strong view by NMCS participants that hospitals should ensure that the capabilities of nurse managers are consistent with the SANC set standards in most of the hospitals, are some of the factors influencing performance.

The findings of this study support Crosthwaite's (2010) definition of management leadership competencies that makes reference to competencies that can be measured against accepted standards and be improved through training. In

addition, Crosthwaite's (2010) and participants' assertion that on-going training may help ensure efficient delivery of services is also consistent with the finding of one of the factor components of RQ2, which found that provision of continuous education or guidance to nurses is associated with effective nurse managers. In addition, in accordance with Jones (2007), NMCS participants' strong view that their hospitals should encourage nursing research to maintain high standards of nursing practice is supportive of the finding of one of the components of RQ2, which found that effective nurse managers should collect and examine information to improve the quality of nursing. This finding further builds upon the importance of research-related competencies that was identified above. Furthermore participants indicated that in their hospitals, nurse managers, through constructive and supportive discussions, have access to information about expected hospital performance outcomes, required standards of performance of nurse managers, role expectation and behaviour. This is consistent with the findings of RQ1 about the importance of communication competence.

Recognition and rewards for expertise were identified as other key issues influencing performance (Section 4.8.3). Consistent with literature, the theme of recognition and reward (refer to Table 4.21) for expertise echoes the importance of recognition and acknowledgement of competencies of those in leadership by other team members and hospital hierarchies. For example, Force's (2005) view is that the primary reason for nurses to stay in an institution is support, recognition and appreciation of their seniority, experience, education certificates and their daily performance. De Groot, Burke and George (1998) indicated that if rewards are perceived to be inadequate and inconsistent, nurses may be demotivated to go to work, they may be less productive when they are at work; or they may be frequently absent from work or ultimately leave their employment resulting in high staff turnover and greater shortage of nurses. It was also explained that rewards should include varied characteristics such as education, position and merits.

5.4.2 Management of resources (Sub-Factor 4.2)

Participants also identified the importance of access and management of human, financial and material resources (clinical supplies) as factors that could influence improved management of hospitals, which would result in high patient satisfaction levels. Participants also mentioned lack of resources such as lack of telephone lines, computers and internet access as negatively impacting on their ability to perform to expected standards. These findings are consistent with extant literature that the availability and management of necessary resources have implications for efficient performance of nurses and nurse managers and thus provision of better patient care (Chitsulo et al. 2014; Disch, Walton & Barnasteiner 2001; Force 2005; SANC 1992). Effective leaders should be able to acquire and distribute resources (Mumford et al. 2002). Poor leadership and management at all levels are cited as a cause for poor performance (DBSA 2011). Staff shortage is also cited as a cause of deterioration of services in hospitals (Cullinan 2006). As a result of a shortage of resources, relationships amongst staff get strained and nurse managers become demotivated and affect the morale of the nursing staff (Chitsulo et al. 2014). This finding is consistent with a view that the leader's psychological capital influences and can improve follower psychological capital and performance (Walumbwa et al. 2010).

These findings are thus supportive of a proposition that improved competence in management of resources would, for example, contribute to increasing staff retention in hospitals in Gauteng, in other provinces in SA and in developing countries and would ultimately contribute to Department of Health's (DOH) ability to meet health service delivery demands and achieve positive health outcomes especially in light of the commonly reported poor state of public hospitals and management failures (for example, Antonie et al. 2012; DBSA 2011; Gauteng IOL News 2012; Gauteng IOL News 2012a; Mail & Guardian Newspaper 2014; Star Newspaper 2013).

5.4.3 Budgetary control (Sub-Factor 4.3)

The finding that the budgetary control measures enhance cost containment efforts. This is consistent with literature findings implying that the issue of budgetary control is vital in terms of the duties and responsibilities of nurse managers in hospitals across the globe especially considering escalating health care costs. It is stated for example that nurse managers in **Asia, Africa and Middle East** play a role in ensuring cost effectiveness in hospitals (Surakka 2008). The finding is also supportive of a study by Ntlabezo, Ehlers and Booyens (2004) on South African nurse managers' perceptions regarding cost containment in public hospitals, which suggested that nurse managers should be involved in planning of hospital budgets and be informed about the hospital's projected capital expenditure. In addition, nurse managers should be better prepared for their cost control responsibilities by being exposed to continuous education on cost containment because failure to do so could be more costly to hospitals in the long term. Furthermore nurse managers should have knowledge and skills in financial management to carry out an analysis of actual spend against the budgets to ensure continuity of services and prompt payment of suppliers (Chitsulo et al. 2014). These findings are also consistent with the findings of RQ1, which found financial planning and budgetary control competence as important for nurse managers to possess. Thus the study *contributes* a proposition that competence in budgetary control will be useful in providing solutions to budget constraints. The latter is mentioned as one of the barriers to maintenance of hospital equipment, which result in a compromise in provision of quality health care and ultimately ineffective nursing practice (Section 4.7.2.1).

5.4.4 Conclusions about Research Issue 3: Nurse Manager Performance

In response to the research problem, the NMCS participants have identified multiple factors influencing nurse manager performance in hospitals (RQ3). The findings of Research Issue 3 *contribute to enrich the understanding of the effect (either negative or positive) that requisite competencies, effective behavior, team nursing approaches*

(TNA) and competency development have on nurse managers' performance. An insight into these factors helps in understanding the challenges of nurse managers which impact on their ability to learn, their behaviour and ultimately their inability to perform efficiently in their hospital environment. An analysis of empirical research data also indicates some concerns among nurse managers in public and private hospitals in Gauteng that have a negative effect on them resulting in poor performance and ultimately in unhappy patients. These concerns are, amongst others, using performance appraisals as a disciplinary measure, lack of transparency, lack of feedback and lack of support after an appraisal has been done (Section 4.8.3) which support Lephoko, Bezuidenhout and Roos (2006) as well as Jones's (2007) statements that constructive feedback from seniors is vital as it helps subordinates know their strengths and weaknesses on their clinical practice performance which may inform competency development interventions. Further, in this study nurse managers indicated that dissatisfaction amongst nurses is caused by a lack of recognition of competence and excellence of nurse managers and unfair practices such as not rewarding them appropriately.

The main conclusion and *contribution* of Research Issue 3 is *that human resource practices must be improved and effective performance management systems should be explored*. In particular, competencies must be recognized and acknowledged in order to contribute to effective management of Gauteng public and private hospitals and in turn improve the provision and delivery of health care services by meeting the expectations of patients, health professionals, politicians and the general public. The findings also indicated some differences, though not statistically significant, in perceptions of factors influencing effective nurse manager performance in age groups of managers and management levels of nurse managers. A contextual understanding is essential for the identification and introduction of competency development interventions. It is likely that a further study of the various types of public hospitals and private hospitals alone as well as according to age of participants will provide a complete explanation of the factors affecting performance.

5.5 Summary and Conclusions about Research Issue 4: Team Nursing Approach

In this section findings in terms of the key components of a Team Nursing Approach (TNA) (based on Factor 3) are summarized and conclusions are drawn.

Having considered the factors that influence performance of nurse managers, the focus turns to the relationship between the implementation of TNA and nurse manager performance (Research Issue 4).

This study indicates that the key components of a TNA are: understanding the benefits of a TNA (Sub-Factor 3.1) and effective team leadership (Sub-Factor 3.2). As such, these sub-factors are used as sub-headings for conclusions about Research Issue 4.

5.5.1 Benefits of Team Nursing Approach (Sub-Factor 3.1)

Firstly the benefits of a team nursing approach identified by participants are consistent with extant literature (Section 4.7.4.1). For example, benefits observed by Atwal and Caldwell (2006); Fairbrother, Jones and Rivas (2010); Miller, Riley and Davis (2009) as well as Murray and Donegan, (2003) include improved planning, improved collaboration, learning/knowledge transfer opportunities amongst team members, more clinically effective services with fewer mistakes, more satisfying roles for health care professionals as well as improved staff morale, less sickness and absenteeism of staff, improved motivation to deliver high quality care and improved safety of patient care. In addition, TNA could contribute to addressing some of the effects of lack of motivation as identified in an in-depth interview theme on lack of motivation and high levels of dissatisfaction (refer to Table 4.22). Consistent with literature it may increase job satisfaction resulting in improved staff retention and increased cost effectiveness (Cherie & Gabrekidan, 2005).

Other authors (Boekholdt & Kanters 1978; Cioffi & Ferguson 2009) have also identified **benefits for patients** including, more responsible and patient focused

services, continuity of care, greater potential to coordinate care, improved patient outcome orientation, more satisfied patients and their relatives. Furthermore some nurse managers believe that TNA also has benefits for nurses such as better work context and coverage during breaks, more independence in staff, multidisciplinary team approach, team effectiveness, teams and organizations accomplish goals, shared responsibility and positioning in the team to accept greater responsibility for supervising juniors and less skilled and a complete picture of all patients in a unit (Boekholdt & Kanters 1978; Cioffi & Ferguson 2009; Fairbrother, Jones & Rivas 2010; Ferguson & Cioffi, 2011; Gleason 1996; Weber et al. 2009).

Qualitative evidence of this study also included provision of holistic nursing care to patients, which is made possible by multi-skilled team members. This finding is in support of a statement by Upenieks (2002) who stated that teamwork by the multi-disciplinary team promotes a comprehensive approach to patient care through shared expertise between the physicians, nurses, ancillary personnel and the management team.

Another novel *contribution of this study is that TNA is a predictor of nurse manager performance*. It can thus be postulated that the implementation of TNA in Gauteng public and private hospitals is relevant and contributes to propositions of addressing some of the challenges experienced in hospitals in Gauteng and in other provinces in SA, in developing countries, and in developed countries such as **USA, UK** and **Australia** (See Section 2.3.3).

5.5.2 Effective team leadership (Sub-Factor 3.2)

The *significance of effective team leadership* for the successful implementation of TNA was confirmed. The quantitative and qualitative evidence from this study build upon existing literature. For example, in a study by Mokoka, Oosthuizen and Ehlers (2010) nurse managers agreed that the health care environment requires managers who are also leaders as nurse managers' role changed in the 2000s from nurse to nurse leaders. Curtis, de Vries and Sheerin (2011) emphasized the importance of having effective leadership to nursing to drive the effective provision of healthcare.

Participants in this research also mentioned *characteristics or attributes* of an effective team leader which compliments existing literature (Section 4.7.4.1). Some authors (for example Bhat et al. 2012; Eason 2009; Hartman, Conklin & Smith 2007; Jennings et al. 2007; Karan 2011; Trent 2004; Weber et al. 2009) made reference to the knowledge and skills that effective leaders should possess, and behaviour that they should demonstrate.

Atwell and Caldwell (2006) indicated that the *selection of team leaders* should be based more on the merit that is their leadership skills as opposed to their status, hierarchy or availability. In addition, an effective team leader should be someone who can motivate and inspire subordinates to achieve greater levels of authenticity (Walumbra & Fry 2011) and to positively influence their behaviour, attitudes and job performance, she/he should be credible, visionary and able to anticipate future needs of the organization and to cope with change, be able to negotiate and encourage innovation and creativity, and be exemplary, open and honest (Clarkson 2009; Rego et al. 2012; Walumbwa et al. 2010; Wang H et al. 2014). Furthermore, Doherty (2013) advocated that a leader should be someone who has interest in patients and the health system. It should be someone who has the motivation to manage (Curtis, de Vries & Sheerin 2011).

The findings of this research *support and expand* on other factors stated in existing literature to be considered that may otherwise negatively or positively *impact on team leaders' performance* in terms of the successful implementation of TNA as well as the teams' ability to achieve its goals. Consistent with existing literature, for TNA to be successful there needs to be focus on specialization work (Kitson et al. 2011), appropriate training for team leaders (Busic, Robinson & Ramburuth 2010; Trent 2004), and competency development for teams to ensure acquisition of teamwork skills or competency to collaborate (Atwell & Caldwell 2006). Alves (2010), Bhat et al. (2012) as well as Busic, Robinson and Ramburuth (2010) also indicated that a leadership style of a team leader impacts on the development of learning within the team and team performance.

Consistent with other existing literature (for example, Hartman, Conklin & Smith 2007; Husting 1996; Simpson 2007; Upenieks 2002) participants mentioned lack of respect and team spirit as other factors, which should be addressed in trying to make the implementation of TNA or collaboration of team members a success. If there are clear operating procedures, inter-professional trust and if interdisciplinary teams respect one another, harmony will prevail in the work setting even if there is a high workload and the result will be efficient quality care (Upenieks 2002). Prior research emphasized that "trust and respect are the glue that hold the team together, so if they disappear, repair work will be necessary" (Husting 1996, p.37). Evidence from qualitative data in this research adds that there needs to be careful allocation of members to teams, rotation of members to teams and careful allocation of patients to teams. Also, similarities between team leaders' personality type and that of team members are important in making allocations as it results in satisfaction with the relationship (Nieszczezewski 1996).

This study supports the proposition by Trent (2004) that hospitals should evaluate the knowledge and skills that potential team leaders possess or will require once they assume leadership positions. McCallin and Frankson (2010) also emphasized the importance of *competency development* for nurse managers who are team leaders, otherwise they are likely to be ineffective in the role if they do not have the requisite competencies. Nurse managers are advised to address their shortcoming in their managerial and leadership positions within a challenging work environment in order to be effective team leaders in giving quality care and treatment (Mokoka, Oosthuizen & Ehlers 2010). Addressing their shortcoming is vital because from the findings of a studies by Alves 2010; Busic, Robinson and Ramburuth (2010), the effectiveness of a team leader impacts on subordinates and on team-level learning and performance outcomes. It was mentioned that while all teams require competent leaders, over and above clinical training, it is important for TNA team leaders to learn how to manage teams for enhanced team performance and management skills such as communication, good planning and consultation with other health staff (Fairbrother, Jones & Rivas 2010). They also need staff development and support to enhance their clinical leadership skills in order for

them to manage the additional responsibilities of leading teams in acute care settings. Team leaders should be able to draw on the competence, experience and knowledge of team members (Fairbrother, Jones & Rivas, 2010). Similarly, a study by Kostopoulos, Spanos and Prastacos (2013) found that team learning is based on collective and not individual contributions.

My research confirms that reporting and communication between team members and between teams, regular monitoring and feedback to nursing teams, clarity on expected roles and responsibilities of all team members to ensure that there are not too many lines of authority, ownership and power struggles towards patient care are important (Boekholdt & Kanters 1978; Ferguson & Cioffi 2011; Husting 1996; Timmins 2011; Uys & Naidoo 2004). Moreover these elements are critical for ensuring that challenges that influence the performance of nurse managers are dealt with.

Qualitative evidence indicates that there needs to be clarity on the role, position and behaviour of physicians in particular who seem to believe themselves, and behave as if they are, superior and exhibit little willingness to cooperate with others because of their level of professionalization that is higher than that of nurse managers. This finding is consistent with results of a study by Dickerson et al. (2007) that nurses felt that they were regarded as the lowest profession and they were not valued by physicians and their managers.

5.5.3 Conclusions about Research Issue 4: Team Nursing Approach

This research contributes empirical research evidence of the efficacy of TNA in diverse settings (Research Issue 4). This dissertation supports existing literature on competencies which all other team members should possess individually and as a team, benefits of having effective nursing teams as well as other important considerations for the successful implementation of TNA. For example, the findings support the view by Murray and Donegan (2003a) as well as Weber et al. (2009) that team skills are important for all team members in order to improve quality of health care and safety of patients. In addition, an evolving nursing profession and

the need for mixed skills to deal with the challenges in the health sector calls for greater teamwork; working in a team and team co-operation to ensure high levels of team performance, optimal patient and staff outcomes (Murray & Millett 2011). The findings of RQ1, and RQ2 in particular, contribute some insights to competencies and knowledge that an effective team leader should have and behaviour that she/he should demonstrate.

What extant studies increasingly highlight is that team management and a team's learning climate is critical in enhancing team performance (Murray & Millett, 2011) and foregrounding a competency development framework front and centre in team nursing. In addition, understanding of team dynamics and behaviours that professionals must acquire to function effectively as part of a team should also be considered in designing a competency development framework (Ferguson & Cioffi 2011).

The overall conclusion about Research Issue 4 is that *TNA is highly relevant and this study makes a major contribution because most influences of nurse manager performance in Gauteng public and private hospitals using TNA have not previously been investigated*.

5.6 Summary and Conclusions about Research Issue 5: Competency Development

In this section the findings of competency development (based on Factor 5) are summarized and conclusions are drawn.

Having considered the relationship between the implementation of TNA and nurse manager performance, it is important now to understand the competency development initiatives that nurse managers have been exposed to, to be able to carry out their roles and responsibilities as nurse managers (Research Issue 5) and suggestions for future competency development initiatives to some extent taking into account the moderating variables of type of hospital, age, length of service as a nurse manager and management level of nurse managers (Research question RQ6).

The key components of a competency development are views and experiences on the current clinical and management competency development initiatives (Sub-Factor 5.1), propositions for future competency development initiatives (Sub-Factor 5.2) and suggested future delivery modes of competency development initiatives (Sub-Factor 5.3). As such these sub-factors are used as sub-headings for conclusions about Research Issue 5.

5.6.1 Current clinical and management competency development (Sub-Factor 5.1)

Consistent with existing literature, the findings indicate that most nurse managers in public and private hospitals in Gauteng Province are not thoroughly prepared for their new management role. NMCS participants indicated that in preparation for their new role, the formal competency development exposure that they received primarily focused on clinical nursing theory and not on generic management skills (Section 4.8.5.1). This finding correlates positively with the literature finding that most courses or programs studied at institutions of higher learning do not include soft skills (Mitchell, Skinner & White 2010). Some authors (for example, Casida & Pinto-Zipp 2008; Clarkson 2009; Curtis, de Vries & Sheerin 2011) confirmed that those programs do not prepare nurse managers for management roles. They commented that it is common that nurse managers assume their new management roles without any preparation for the new role as managers, this being one of the causes of ineffective leadership in nursing and negative nursing outcomes. Clarkson (2009) emphasized that lack of academic preparation in leadership and management compromises the quality of patient care, on-going motivation and positioning of nurse managers.

It is acknowledged from the research findings that some NMCS participants have to some degree been exposed to clinical and leadership and or management training programs (Section 4.7.5.2). The details of those programs such as content structure, duration and mode of delivery of those programs were however, not investigated in this research. Despite being exposed to some training, there is a call from nurse

managers for more staff development and support in courses or competencies similar to those that they have already been exposed to, to enhance both management and clinical skills. This confirms a need for *Continuous Professional Development* (CPD). Also, it could be that the programs that nurse managers have been exposed to, are not aligned to their needs or those of their organizations and need to reviewed and improved. For example, the finding of the NMCS about what courses nurse managers have been exposed to in their hospitals, confirms that *research-related courses*, which are critical for nurse managers, were not common amongst nurse managers both in public and private hospitals in Gauteng as they were not listed by any of the NMCS participants. This finding is supportive of the findings of a study by Viitanen et al. (2007) that currently education in clinical research or management field of nursing science is not common. It adds support to Mokoka, Oosthuizen and Ehlers's (2010) statement that the current management skills development initiatives in public and private hospitals in SA are insufficient and that the content structure could be outdated or irrelevant given the changing health care environment. *This study contributes the notion that a review of competency development programs needs to ensure that they remain relevant, promote continuous development and help learners acquire and enhance critical competencies required for ensuring effective leadership and management of hospitals and meeting the increasing demand for improved quality of healthcare provision.*

Some researchers (for example Jones 2007) stated that nurse managers are less prepared to manage business activities than clinical activities. They are promoted among their peers without any formal training in nursing management and yet expected to perform management tasks by, for example, building teams in order to improve performance, conducting strategic process evaluations as part of competence development and to promote efficiency and effectiveness (Viitanen et al. 2007). Also they are expected to "provide all round help and good care for patients and their managerial work, which is described as being mostly based on experience and a good hunch, referred to as silent knowledge" (Viitanen et al. 2007, p.117). It can thus be postulated that once selected and placed in a management or

leadership position, new leaders find it difficult without any formal training and orientation to learn and master their new role and gain skills that are expected of managers and leaders.

In support of Clarkson (2009); De Vos, De Hauw and Willemse (2011) as well as Pillay's (2010) assertion, that most management development programs are informal, the quantitative and qualitative evidence of this research indicates that nurse managers' preparation for the management role and responsibilities is to a large extent based on on-the-job learning experiences and in some instances attendance of conferences and workshops, but not formal training as is the case with clinical skills. This leaves nurse managers unprepared for the complex requirements of the job they are expected to carry immediately when they become managers such as reporting budgets, leading evidence-based clinical care, rostering and responding to patient complaints (Clarkson 2009).

Preparation for the new role is also inadequate in other *areas beyond Gauteng.* For example, results of a study on factors hindering performance of nurse managers *in Malawi* hospitals by Chitsulo et al. (2014) indicated that CPD was not prioritized. It was mentioned that training and refresher courses for nurse managers on managerial skills were not common, resulting in knowledge and skill deficiency which negatively affect the nursing outcomes and the image of the nursing profession. Another example is of a study by Clarkson (2009) on leadership and management nursing *in New Zealand*. This study indicates that nurses are promoted to management level without any preparation in management knowledge and skills. They are reported to remain largely uneducated, unsupported and with no or very little orientation or succession planning pertaining to management skills and knowledge. This observation to some extent explains Surakka's (2008) assertion that the introduction of nurse manager education occurred in New Zealand in 2008 and obviously the effects of it were not yet noticeable when Clarkson (2009) conducted the study.

Consistent with the views expressed by Daniels (2007); Dingle (1995); Erasmus and Breier (2009) as well as JIPSA (2010), namely that it is essential to address the

shortage of managers and of management skill gaps in SA, hospitals should also take responsibility and find ways for training and developing its nurse managers in the workplace in skills deemed to be critical for their position or for the profession. Curtis, de Vries and Sheerin (2011) are of the view that the gap between education and demands of their positions could be bridged by training interventions and employers should contribute to the identification and development of skills for the South African economy (DHET 2010). In accordance with Litecky, Arnett and Prabhakar's (2004) view, there needs to be a balance of emphasis on clinical and management skills in the curricula of future competency development initiatives. Casida and Pinto-Zipp (2008) are of the view that undergraduate and graduate programs should include management aspects. In addition, nurse managers should be taught, coached and mentored on leadership strategies. Also, leadership workshops and seminars for nurse managers should cover the preparation of new-comers to assist them to achieve leadership competencies to enhance their performance (Casida & Pinto-Zipp 2008). According to the South African national core standards of nursing (DOH 2011), leadership development should be supported at all levels.

5.6.2 Future competency development initiatives (Sub-Factor 5.2)

Consistent with extant literature, this study indicates that future competency development initiatives for nurse managers should include both clinical and management competencies. Some authors (for example Chin-Ju, Edwards & Sengupta 2010; Cosser 2010; DOL 2006; Erasmus & Breier 2009; Kar 2011; Mitchell, Skinner & White 2010; Muir 2004; Skulmoski & Hartman 2010) suggested that for any profession there is a need for training to include both technical and soft skills. It was also suggested that the change in various industries necessitated a need for upskilling in soft skills (Chakraborty 2009). The findings of for example Van Niekerk (2002) support the importance of soft skills in nursing in particular. Also, the SANC emphasizes that all nursing education, including continuous education, should focus on the development of the individual nurse on professional and personal levels (Van Niekerk 2002). It therefore stands to reason that future competency development

initiatives for nurses or competency development framework should cover both clinical and soft (management) skills, in particular both clinical and leadership and management competencies, to ensure improvement of knowledge and skill which would result in improvement of the quality of care.

Quantitative and qualitative evidence indicates that those responsible for the development of competencies of nurse managers in Gauteng public and private hospitals should *promote the introduction and formalization* of management training for nurse managers in hospitals prior to promotion of nurses. This view lends support to the situation in countries such as **Australia and New Zealand** where nurse manager training has been offered since 1980s (Surakka 2008).

5.6.3 Future delivery modes (Sub-Factor 5.3)

The findings of this study are supportive of statements that diverse future modes of delivery are the preferred choice for new nurse managers or for those who are already in management position. As mentioned by Joni (2009), curriculum is often delivered in *mixed modes* and the choice of learning options is often connected to convenience. It is also acknowledged that formal education and training on its own is insufficient to develop high levels of competencies desired by organizations. Rather a combination of modes is to be provided for the development of different types of competencies thereby creating value *(*Bergenhenegouwen, Horn, & Mooijman 1996; De Vos, De Hauw & Willemse 2011; Jones 2007*)*. Atwal and Caldwell (2006) as well as Dingle (1995) believe that training (formal) and on-the-job learning (informal) does overlap as organizations realize that most management learning takes place in the organization itself. Hence nurses in preparation for their new role must be exposed to a competency development programme that includes formal training (mostly theory), on-the-job learning experiences (practical) through mentors or through other avenues to provide better intense learning and to develop high levels of competencies desired by organizations. Also, observing expert leaders and working closely with them, as well as receiving constructive feedback on their performance from their leaders (Jones 2007).

Three themes emerged from interviews with regard to modes of delivery of future competency development programs and courses: face-to-face, e-learning and on-the-job learning (refer to Table 4.24b). Overall, participants of this research prefer face-to-face lecture (formal), on-the-job learning (informal), and online mode though having a hands-on practical component for example Kronos e-learning and virtual classrooms for those managers who do not have time to attend fulltime classes. For online mode to be an option nurse managers should have access to functional computers and internet connection and this does not seem to be the case in some of the hospitals in Gauteng Province. It was indicated that senior nurse managers and leaders should provide on-the-job-training or mentoring as well as continuous education or guidance to nurses within their team or department to develop their professional competence and to meet any skills gaps causing unprofessional clinical practice. The suggestion of mentoring by NMCS participants is consistent with views by the DOH (2013), National Planning Commission (2011); Pillay (2010) and Schroeter (2008) that mentoring can help build competence, leadership skills, self-awareness and morale and networking with colleagues as well as rolling out best practice. Mentoring is an effective educational strategy that can for example be used to build and enhance research competence in nursing. In addition, mentoring can also be used to familiarize nurse managers with online learning environment (Schoeter 2008). It was also mentioned that job orientation and induction that is hospital-specific by on-the-job mentors should be added prior to commencement of the new role. Furthermore, the Nursing Strategy of South Africa 2008 supports the notion that there should be leadership programs for nurses that include mentorship and coaching programs, succession planning, carefully planned deployments to increase exposure to diverse leadership environments, recognition and reward for expertise and excellence (DOH 2013).

This research did not investigate preferences for different levels of management, but only preferences in general. The first-mentioned aspect is worth investigating because it was reported that nurse managers that have long years of experience in

the management positions might not perceive professional development as a priority (Mathena 2002).

5.6.4 Conclusions about Research Issue 5: Competency development

In response to the research problem, the competency development initiatives that nurse managers were exposed to in order to carry out their roles and responsibilities as nurse managers is explored (Research Issue 5) as well as their preferences for the future.

This research indicates that nurse managers in Gauteng public and private hospitals have not been adequately prepared for the management role and responsibilities that go with the position. *One of the contributions of this research is a recommendation that the current clinical and management competency development programs in both public and private hospitals in Gauteng need to be continuously reviewed and improved*. There needs to be continuous review of curricula for management and leadership programs to include new challenges of change as well as a review of the delivery modes and alignment of delivery modes with the reviewed content (Joni 2009). Another contribution from the analysis of quantitative and qualitative data in this research presents a proposition that *future competency development programs should include theory and practice and should at least cover the courses that are aligned to the identified core requisite management competencies for nurse managers who are team leaders and those who are not to be able to succeed and excel at their work*.

The suggested varied methods of delivery of future learning programs and courses differ vastly from the traditional teaching strategies. In this regard, this study presents a proposition consistent with the outcomes of a study in **Rwanda** by Harerimana and De Beer (2013) on nurse educators' utilization of different teaching strategies in a competency-based approach. It is suggested that varied delivery modes of the competency-based curriculum could be implemented and utilized by nurse educators for nurse managers in Gauteng hospitals as they are likely to

improve competency and knowledge in accordance with current best practice standards.

The overall conclusion for Research Issue 5 indicates that the mere existence of requisite competencies in nurse managers is insufficient to predict efficient nurse manager performance; they need to be continuously developed to ensure efficient and sustainable performance of leadership. Generally, the findings of this research provide support for Nursing Strategy for South Africa 2008 (cited in DOH 2013) as well as Pillay's (2010) statements that appropriate development of requisite competencies would result in improved nurse manager performance which would in turn improve the quality of care and health of the citizens. The existence of appropriate standards of nursing practice for nursing managers in Gauteng public and private hospitals would contribute to encouraging nurse managers to perform well, thus addressing some of the health care service delivery challenges that have been alluded to in the health sector.

5.6.5 General conclusions

In summing up and by addressing the research problem and specifically the 5 research issues, an overview of the overall conclusions is provided (which are to some extent limited, given the limitations of the study):

(a) Having clarity about requisite competencies and effective behaviours of nurse managers is extremely important.
(b) The study confirms that the mere existence of core competencies in nurse managers is insufficient to predict efficient nurse manager performance.
(c) The competencies of those in leadership must be recognized and acknowledged by other team members and hospital hierarchies. In addition, they must be continuously developed to ensure efficient and sustainable performance.
(d) TNA is recognized as highly relevant and significant in addressing the challenges in Gauteng public and private hospitals. This is a new contribution

to theory of TNA and competency development that emerges from this study.

The next section considers the implication of these findings for theory.

5.7 Implications for theory

Having considered the conclusions for the research problem, it is now important to understand the implications for fundamental contributions to theory. The implications of each of the theories considered in this study are detailed below.

5.7.1 Implications for management competency theories

Previous research on management competency theories has indicated that there is a need for the possession of soft skills to be able to deliver efficient services (Özkahraman & Özsoy 2011; Sharma G & Sharma P 2010). This study confirms the need for the possession of both management and clinical skills for optimum performance of nurse managers and leaders to be able to ensure the provision of better health care service to patients and the people of Gauteng.

A number of authors (for example Bakanaustiene & Martinkiene 2011 cited Boyatzis 1982 and Shaw 1998; Espinoza, Ukleja & Rusch 2011; Weber et al. 2009 cited Stevens 1994 & Champion 1999) of management competency theories refer to mostly generic management competencies applicable for managers in different industries or professions and only a few of those are relevant for nurse managers particularly in hospitals. Table 2.1, Section 2.3.1 presents a list of some of those suggested management competencies. This research supports the listed competencies and highlights that the most relevant clusters for the study are those by Boyatzis 1982 (cited in Bakanaustiene & Martinkiene 2011) as well as those by Stevens (1994) and Campion (1999, cited in Weber et al. 2009). However, using the existing lists as a base, this research succeeded in *developing a list of core soft skills or requisite competencies* particularly for nurse managers in Gauteng public and

private hospitals. Even though the list seems to include mostly generic management competencies as was the main focus of the study, it lists management competencies that are *unique to nurse managers in Gauteng hospitals* and has to be further developed. This study's findings therefore support to some degree Pillay's (2010b) observation that specific competencies are relevant for nursing management only because of the uniqueness of the health environment. It also supports Kraak's (2010) statement that having clarity about requisite competencies is important because the lack of appropriate competencies of nurse managers in both public and private hospitals is viewed as a stumbling block to effectively managing and attaining the goals of health for all in SA.

It should however, be kept in mind that different levels of managers should have different sets of competency requirements (Pillay 2010). Qualitative data from this research supports the view that the *requisite competencies for nurse managers should be in relation to the level of management given that they have different responsibilities and duties*. This research did not investigate task-related competencies for different levels of managers. The NMCS only focused on the differences in perceptions of nurse managers occupying different management levels on the importance of competencies.

Again, to some degree this research supports Boyatzis's (1982) views in Bakanaustienė and Martinkienė (2011) that managerial competencies relate to performance effectiveness irrespective of the organization. Consistent with these statements, the findings of this research indicated that the *identification of managerial competencies that relate to performance of nurse managers in Gauteng hospitals is important and such competencies must be developed in order to achieve performance effectiveness*. Overall, the findings of this research support existing management competency theories on requisite competencies for managers. However, it should be remembered that even if there is a strong link between competencies and performance that does not imply that nurse managers' possession of certain competencies predicts their performance.

5.7.2 Implications for leadership theories

The findings of the research support to some extent a notion in extant literature (for example, Jones 2007; McCallin & Frankson 2010; Stanley 2011) that there should be programs aimed at upgrading nurse managers' skills given the dynamic and demanding profession as well as preparation of nurses for their new role also noting that some individuals may function as both leaders and managers simultaneously and effectively.

Furthermore, extant literature suggested that even though an individual does not hold a management position she/he can still be a team leader regardless of being in a management position because all nurse roles are in one way or another leadership roles (Curtis, de Vries & Sheerin 2011; Jones 2007). Jones (2007) indicated that all nurses need to view themselves as leaders, upskill themselves and learn from other nursing profession leaders in order to accomplish the tasks and achieve maximum quality care and lead in some patient care settings. Ferguson and Cioffi's (2011, p.10) statement that "senior staff require support to enhance their clinical leadership skills to enable them to manage the additional responsibilities of leading teams" suggests that teams should be led by senior staff who in most cases would be leaders. Clarity in terms of leadership and management is key, particularly for the successful implementation of TNA. Participants in a study by Clarkson (2009) indicate that it is difficult to provide both leadership and management and to fully carry out demands of both leadership and management. According to Clarkson (2009) clarification will minimize role confusion which creates a tension within the person and the position. He added that clarification will ultimately assist in the realization of organizational vision and values as well as in fulfilment, increasing position fulfilment, leading to optimal patient care delivery and best patient outcomes. These findings therefore point to *a need for further exploration on whether team leaders should necessarily have the added responsibility of management positions or not*.

A number of authors (Mokoka, Oosthuizen & Ehlers 2010; Viitanen et al. 2007) do to some extent support Jennings et al. (2007) in their research finding about a need

to review and revise the competency development programs and the curricula of programs to ensure that they focus on competencies that are needed by both nurse managers who are team leaders and those who are just managers in general in hospitals in accordance with their career stage and care delivery setting.

Some authors (for example Bhat et al. 2012; Busic, Robinson & Ramburuth 2010; Crosthwaite 2010; Curtis & O'Connell 2011; Murray & Donegan 2003; Stanley 2011) on leadership theories, contributed to a greater understanding of the type of leadership most appropriate for Gauteng hospitals. Four types of leadership, namely transactional, transformational, authentic and positive leadership have been outlined in detail (Section 2.3.2).

Some authors (for example, Alves & Canilho 2010; Bhat et al. 2012; Busic, Robinson & Ramburuth 2010; Husting 1996; Moiden 2002; Surakka 2008) are of the view that depending on a setting, group's knowledge, skill, team maturity and confidence a team leader should be in a position to select a situation appropriate leadership and management style and behaviour, which might even ideally entail electing to utilize both transactional and transformational behaviour. However, while utilizing both styles of leadership is ideal, the findings of this study indicate that *transformational leadership is the most necessary in Gauteng public and private hospitals*. Previous studies (for example, Curtis, de Vries & Sheerin 2011; Murray & Donegan's 2003; Stanley 2011) are supportive of the view that transformational leadership is the most appropriate choice for modern nursing leadership. Building on Crosthwaite's (2010) view, transformational leadership would result in higher levels of performance in Gauteng hospitals than that produced by transactional leadership. These types of leaders would change personal competencies into organization-wide competencies and would embrace shared accountability, responsibility and power (Murray & Donegan 2003). Also, consistent with Murray and Donegan (2003) these leaders would lead and implement change at an organizational level, individual level and or team level which is exactly what is needed in hospitals in Gauteng Province especially considering the phasing in of the new health financing system, the National Health Insurance (commonly called NHI), which lacks implementation of regulations by all public and private hospitals and poor quality of service in some

hospitals (Antonie et al. 2012). Notably, the Department of Health in SA has emphasised that "NHI will only succeed if the quality of service in public hospitals is significantly improved and the pricing of healthcare in the private sector is seriously addressed" (DBSA 2011 p.31). As such transformational leaders will drive the necessary change and service demands and they will inspire subordinates by leading by example and explaining how to achieve the expected health care standards (Busic, Robinson & Ramburuth 2010). They are managers who understand the vision and mission of the organization; as such they are able to lead others in that direction (Cherie & Gebrekidan 2005; Hartman, Conklin & Smith 2007; Stanley 2011). As a result of understanding the vision, such leaders would be better able to lead teams in patient care settings and to stimulate their subordinates to embrace the vision, mission and goals of their organization and achieve extraordinary outcomes.

The findings of this research have *contributed further evidence that there are similarities and a fine line between nursing leadership and management competencies as a result of the evolving context of health care* (see also Clarkson 2007; Jennings et al. 2007; Scholtes 1998). Looking at the list of top 10 competency categories for nursing leadership and management (as shown in Table 2.6 in Section 2.3.2) by Jennings et al. (2007) and the top 10 developed for this study (Table 5.1), there are competencies from the list developed from this research that appear on the leadership and management competencies list developed by Jennings et al. (2007). While reaffirming the degree of similarity between leadership and management competencies, it is important that further research is conducted focusing on requisite competencies of those nurse managers who are also team leaders and of those who are only nurse managers. *This is because so far leadership theories do not seem to sufficiently explain the team leader competency requirements of nurse managers in public and private hospitals in SA, particularly Gauteng*.

5.7.3 Implications for team nursing approaches

This study found that TNA is relevant in Gauteng public and private hospitals. *An important finding was that successful implementation of TNA is a predictor of effective nurse manager performance in hospitals and ultimately significant in addressing the challenges in Gauteng hospitals and hopefully in other developing and developed countries. This has provided a new contribution to the theory of TNA*.

Numerous studies have been conducted on the benefits of team approaches in various organizations (for example Atwell & Caldwell 2006; Fairbrother; Jones & Rivas 2010; Trent 2004). The findings of other authors such as Ferguson and Cioffi (2011); Gleason (1996) as well as Miller, Riley and Davis (2009) have also highlighted the significance of TNA in hospitals. However, none of the studies have focused on the role of TNA in Gauteng public and private hospitals in addressing challenges in South African health care environment. Existing literature focuses on developed nations and none differentiates between public and private hospitals.

5.7.4 Implications for competency-based model

The findings of this research support the adoption of Outcome-Based-Education approach in the development of competencies of nurses aimed at improving the quality of health professionals (Pillay 2010; Van Niekerk 2002).

The findings expand the competency development model or framework, adapted from Bergenhenegouwen, Horn and Mooijman (1996), by suggesting that feedback from *continuous review of the effectiveness of competency development programs* should be added to the model outlined in Figure 2.6 in Section 2.3.4. Continuous review will ensure that competency development programs remain relevant and promote continuous development or enhancement of critical competencies in a changing healthcare environment.

It is also acknowledged from the literature that *adults can develop competencies* that are vital to outstanding performance in management and leadership

irrespective of professions (Boyatzis 2009; Erasmus & Breier 2009). The design and delivery of appropriate training and continuous professional development initiatives for nursing managers will result in improved management skills and competencies or team and individual competences. According to the South African National core Standards of Nursing (DOH 2011) staff should receive on-going in service education in accordance with their roles and responsibilities. Results of this research provide support for Nursing Strategy for South Africa 2008 (DOH 2013) as well as Pillay's (2010) statements that *appropriate development of requisite competencies* would also result in improved nurse manager competence and performance which would in turn improve the quality of care and health of the people. In addition, the findings of this research support DBSA (2011); Mokoka, Oosthuizen and Ehlers (2010); Uys and Naidoo (2004) and Van Niekerk's (2002) statements that improved nurse manager performance will contribute to meeting challenges of change associated with the profession or with hospitals in SA.

The findings of this research support contentions of previous studies that *content structure* of most current courses or programs for various professions does not include requisite soft skills or management skills courses (Mitchell, Skinner & White 2010). Empirical evidence of this research confirms the importance of the inclusion of management skills courses by indicating that formal generic management skills training is also important and should be considered in future competency initiatives for nurse managers.

The various leadership and management competencies cited by various authors do to some extent include competencies that would be relevant for TNA leaders. TNA should be added to a competency-based model as a new contribution that emerges from this study. Therefore, its requisite competencies and its expected outcomes should in future be emphasised in a competency development framework for nurse managers in public and private hospitals in Gauteng.

In accordance with the national strategic plan for nurse education, training and practice 2012/13- 2016/17 (DOH 2013a), SANC is supposed to revise and finalize national framework for education and training of nurse managers and standards for

the Continuous Professional Development (CPD). It is therefore a proposition of this study that the implementation of TNA should be added as a standard for competency. Another key area noted from the study is a list of effective behaviour of nurse managers for nurse managers in Gauteng hospitals presented in Table 5.2 above. Also, the competency developed outcomes compiled for this study (See Table 2.3), using existing literature (Atwal & Caldwell 2006; Bakanauskienė & Martinkienė 2011; Eason 2009; Ferguson & Cioffi 2011; Hartman, Conklin & Smith 2007; Jennings et al. 2007; Laker & Powell 2011; Timmins 2011; Pazos 2012; Weber et al. 2009*)* could be taken into consideration.

5.7.5 Measurement of competencies, behaviours, team nursing approaches and nurse manager performance

NMCS is a unique new survey, which was developed based on theory. For requisite competencies (Part 2 of the NMCS), there was no standard list of management competencies for nurse managers that could have been used. Only lists of mostly generic management competencies were available and as such were adapted and used to construct 'competencies'. The effective behaviours of nurse managers (Part 3 of the NMCS) had to be created from the outcomes of the competencies. TNA was crafted from theory as there was no existing survey available (Part 4 of the NMCS). Nurse manager performance (Part 4 of the NMCS) was crafted from theory, supervisors' wealth of knowledge, researcher's consulting experience as well as information gathered from informal engagements with people in the nursing professions prior to the study. Competency development (Part 6 of the NMCS) was constructed from theory and practical consulting experience.

It is acknowledged that NMCS has too many constructs therefore it may be useful to refine the instrument by putting together some of the constructs. Additional leadership and management literature reviews might be useful in guiding the development of a higher order instrument.

Health sector experts in Australia and nurse professionals in SA were asked to contribute to face/construct validity. Factor analysis yielded interpretable factors, which explained high percentages of the variance (all factors are acceptable as they are all loaded on the rotated component matrix with values that are above the recommended limit). The high reliability scores noted in Table 4.6 are as a result of extensive literature review to generate items on the scale. In addition, feedback from the health sector experts in Australia and SA as well as from the two supervisors that the researcher worked closely with face-to-face on campus in Australia for about three months prior to data collection, was used to refine the items.

The following Factors and Sub-Factors are being contributed to research: Requisite competencies *Factor 1* (practical management competencies Sub-Factor 1.1, research related competencies Sub-Factor 1.2, leadership and communication Sub-Factor 1.3) Effective behaviour *Factor 2* (effective human resource Sub-Factor 2.1, effective leadership communication Sub-Factor 2.2); Team Nursing Approach *Factor 3* (benefits of TNA Sub-Factor 3.1, effective team leadership Sub-Factor 3.2); Performance management *Factor 4* (performance management in hospitals Sub-Factor 4.1, management of resources Sub-Factor 4.2, budgetary control measures Sub-Factor 4.3 and Competency development *Factor 5* (Current clinical and management competency development Sub-Factor 5.1, future competency development initiatives Sub-Factor 5.2, Future delivery modes Sub-Factor 5.3).

5.7.6 Modification of the conceptual framework

The final set of components in the *initial theoretical framework* of this research illustrated in Figure 2.9 in Section 2.5 was on factors that predict nurse managers' performance in hospitals. This research had varied findings about these factors. The findings from the research issues and the conclusions of the study support the theories about requisite competencies for nurse managers in Gauteng public and private hospitals. The findings of the study support the theoretical construct that requisite competencies is associated with, but does not in itself predict effective performance.

Additionally, as the initial model suggests, this study found some value in identifying specific competencies required for nurse managers, but adds that efficient performance (efficient management) of nurse managers while distinct and critical, is not necessarily triggered by the identification of the requisite competencies. This contribution notes that additional research is required to further develop and validate the list of the identified management competencies (Table 5.1) and its impact on the performance of nurse leaders in public and private hospitals. The findings of the study also recognize the importance of understanding a combination of requisite competencies and practices of managers and leaders in order to predict high performance levels.

As the original conceptual framework suggests, this study found strong association between competency development and nurse manager performance.

An unexpected finding in relation to the study was (extremely important) that a list of competencies is not the key to efficient performance in hospitals. However, a properly conceptualized, planned, resourced and implemented TNA could be put into practice to meet many of the challenges experienced in hospitals particularly in South African public and private hospitals. Thus in making a contribution to theory building, the original framework is revised.

Although the initial factors are useful, neither fully addresses the unique role and importance of soft skills or requisite competences in addressing the challenges found in hospitals. A *revised research model* is presented in Figure 5.2, below. The revised model as presented below illustrates insights provided by the research. In this new framework, TNA has a more central role in the efficiency of hospitals. *TNA* is a stronger predictor for success in *Nurse Manager Performance*. It illustrates the specific relationship of *TNA to Nurse Manager Performance*.

The initial model acknowledges that nurse managers are key to driving performance in hospitals. The research findings indicate that it is leaders of teams that should be accountable for performance, which could be nurse managers who are team

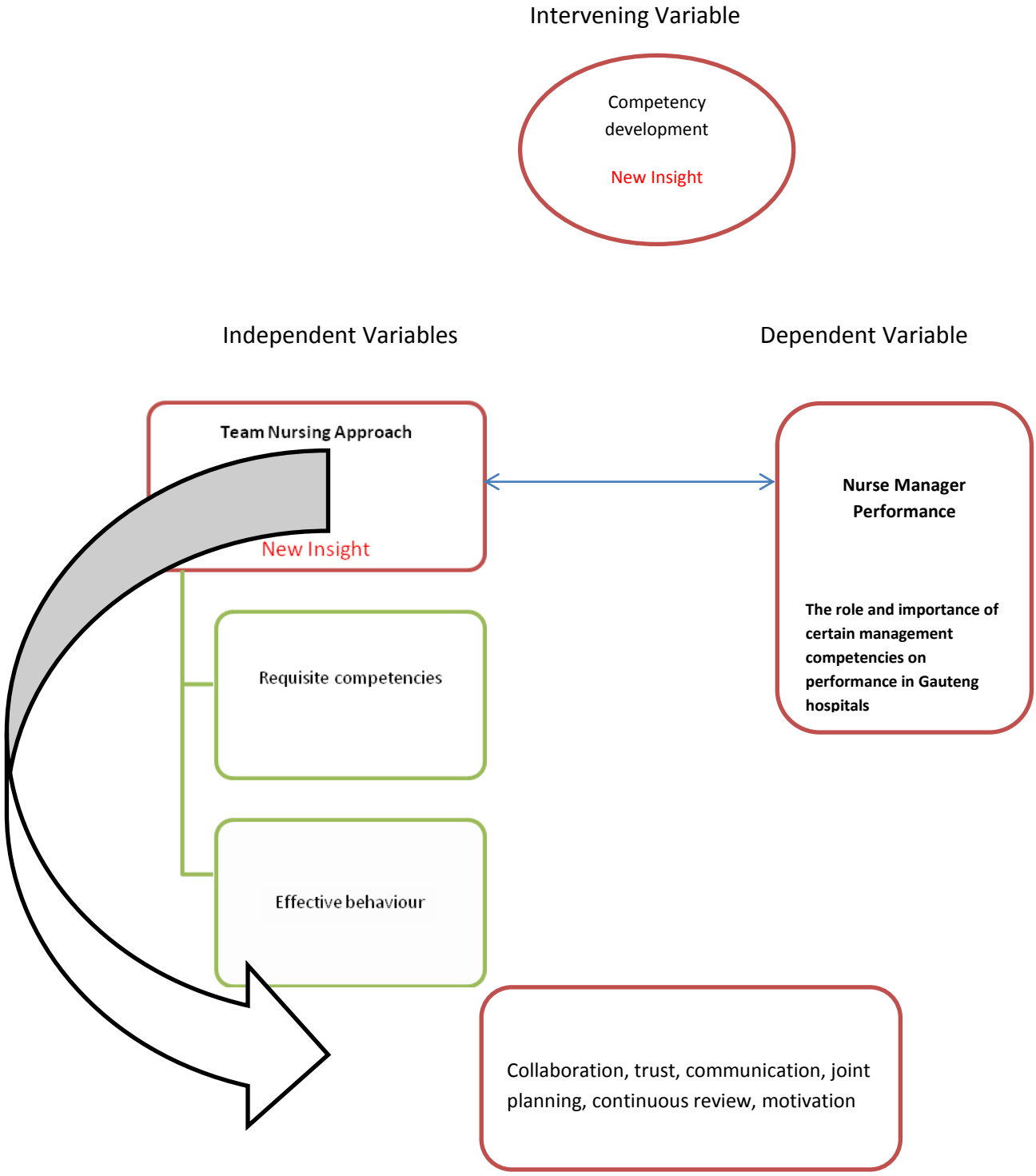
leaders or who are just managers in their own right. In addition it might even be team leaders who do not necessarily hold a management position.

While both models acknowledge the critical role of competency development, the original model is insufficient to serve as a comprehensive explanation for effective Nurse Manager Performance with the *TNA taking a central role*. This research extends that understanding by adding that it is critical to *develop and continuously implement competency-based development programs that would improve management skills of nurse managers and leaders to result in higher performance levels*. In addition, successful implementation would ensure sustainable effective behaviour of leadership, which would result in quality health care, which would ultimately result in improved staff and patient satisfaction as well as improved service delivery. It is acknowledged in the literature that adults can develop competencies that are vital to outstanding performance in management and leadership in many occupations and professions (Boyatzis 2009). A double arrow is included to indicate that there should be a two-way continuous relationship between TNA and competency development as well as between competency development and Nurse Manager Performance by drawing on the continuously developed collective competencies, experience and knowledge of team members.

The model also recognizes the importance of the possession of certain soft skills or competencies as well as the demonstration of effective behaviour appropriate to the successful implementation of TNA. Therefore, it is efficient behaviour and competencies that need to be developed thus to impact positively on Nurse Manager Performance and ultimately efficient and effective hospital performance. As such, the dependent variable is Nurse Manager Performance.

The study has defined other factors such as recognizing and rewarding performance, trust, collaboration, communication and joint planning which are deemed critical for the success of the implementation of TNA.

Figure 5.2 Components of a modified conceptual framework



(Source: Developed for this study- Revised February 2015)

Having now considered the implications for theory indicated by this study, the implications for policy and practice are delineated in the next section.

5.8 Implications for policy and practice

The objective of this study is to produce results that are relevant and practical for nurse manager performance in Gauteng public and private hospitals. The model and propositions developed in this study can potentially be of use to policy makers, nurse managers, hospital authorities and management, professional institutes and educators, government, employers, nursing associations and labour unions who are trying to improve the provision of services in hospitals, to meet the anticipated challenges and changes in the nursing profession or health sector in the coming decades. Findings about requisite competencies, effective behaviour of nurse managers, TNA, nurse manager performance and competency development provide a platform for action, further research and review. The implications for use of the study's outcomes as well as additional considerations for implementation of TNA and for a competency development framework are described in the following sections.

5.8.1 Implications for policy in hospitals

Generally, in NMCS participants' hospitals, there were clear standards of best practice, performance procedures and policies and a fair performance measurement practice. The findings of the study indicate that there is, however, a need to review and revise current policies on performance appraisals systems and its application, nurse-to-patient ratio that depend on acuity levels, overtime, workload, staff rotation, allocation of staff and patients to teams as well as the issue of performing non-nursing and clinical duties. Further, policies would need to be revised to address problems of staffing and scheduling by ensuring that there is a staffing plan that specifies the number and type of staff who are needed to perform the team nursing delivery approach. In addition, continuous professional development needs to be incorporated in the competency development policy or

HR policy (Dingle 1995). It is advisable that nurse managers, who are the ones affected, should make input in the policies.

5.8.2 Implications for management practice

The practical and relevant implications for use of the study's outcomes are described in the following sections.

5.8.2.1 Implications for nurse managers

Nurse managers contemplating taking on senior management positions can focus on the importance of continuous development of their skills in the light of the reality of changes in the health sector.

5.8.2.2 Implications for hospital authorities and management executives

Qualitative findings from this study identified three themes that should be considered (refer to Table 4.21) in relation to ensuring effective practices: recruitment, appointment and requisite knowledge, skills and competencies of nurse managers. Hospital authorities and management executives are thus advised to be deliberative about the recruitment, selection and placement in management and leadership positions as well as retention of nurses. Nurse managers should not be chosen on the basis that they are friends with members of the interview panel, demonstrate desired behaviour or only on claims to possess certain competencies, which are deemed to be critical for a management and or leadership position.

It is not sufficient for hospital authorities to have a comprehensive list of requisite core competencies that relate specifically to performance effectiveness of leaders. However, hospital authorities should consider these key competencies as the driving force in the design and implementation of future competency development initiatives. Furthermore, there is a need to identify sets of competencies that an individual nurse manager should possess and to accommodate each individual nurse manager's learning needs. In so doing, CPD would not only be generic and

applicable to a larger group, but would also take into account the needs of any one individual (Bergenhenegouwen, Horn, & Mooijman 1996; Dingle 1995; Trent 2004). This would be useful in determining what training is appropriate and what familiarization is necessary particularly for management new comers (Dingle 1995). Consistent with results of a study by Belbin (2011), the provision of CPD opportunities can go a long way in retaining nurses, which is one of the challenges faced by the South African health sector. However, noting that, Passarelli (2011) is of a view that people are more attached to their jobs than to being committed to their organizations. He explains that there are many other factors such as job security and friendly work environment that would keep people employed in their organization.

Hospital authorities and management executives could also address the lack of clarity on the roles and responsibilities of all team members in the TNA delivery model. In particular, the position and behaviour of physicians is a difficult factor in achieving team nursing and therefore needs to be carefully considered.

For hospital authorities and management executives, there is an interest in continuing with providing opportunities for nurse managers to attend conferences and workshops in preparation for their management role. It is recommended that in addition to the formal training on management and clinical skills, leaders could also attend conferences and manager's forums, educational programs, present papers, write articles and also obtain reference materials from any source or at any meeting for their teams.

For hospitals that are using or will adopt on-the-job learning, it is recommended that on-the-job learning should be acknowledged, formalized and recognized as a way of learning for nurse managers. This is because on-the-job learning in most organizations is not captured in an organization's formal procedures and processes (De Vos, De Hauw & Willimse 2011).

Hospital authorities and management executives should consider the role of the most senior nurse managers in supporting their junior in ensuring that juniors acquire the behaviour, skills, knowledge and values needed for successful implementation of TNA. This will enhance the transfer of knowledge. Mentorship can help in the short term by providing a trusted guide to the operational aspects of the new role. However, it should be noted that mentorship runs the risk of creating many different leaders with different types of leadership styles and approaches.

Hospitals that wish to prepare nurse managers for being able to manage hospitals or units efficiently should take note of the powerful impact of proper rewards and recognition systems for expertise as well as provision of adequate human, financial and material (including clinical supplies and equipment) resources. This focus on the positive gives potential managers a reason to want to join management.

Also, consistent with strategic priority 5 of strategic plan for nursing education, training and practice 2012/13-2016/17 on improving the use of ICT in nursing (DOH 2013a), nursing hospital authorities are advised to make more effort to provide extensive opportunities for managers to attend computer literacy training. Attending computer training and experience in using computers would contribute to ensuring that nurse managers are able to use ICT, computers in particular, towards improving their competencies. This would enable nurse managers to meet current and future changing health care service delivery needs by, for example, being able to: use computers to research most suitable patient care and treatment approaches, consider e-learning as an option for future mode of delivery of competency programs, or use videoconferencing for reports of teams.

Hospitals should not only encourage nurse managers to learn, but should create a learning environment. Qualitative evidence from the study indicates that some hospitals have inflexible working hours, which make it difficult or almost impossible for nurse managers to participate in competency development programs. A dialogue on the issue of payment for study fees by hospitals or by nurse managers should be started and finalized with nurse managers.

5.8.2.3 Implications for professional institutes and those responsible for the education of nurse managers

A conscious decision should be taken to put in place and to roll-out appropriate leadership learning programs and courses for nurses prior to promotion to management positions as well as for new comers. Refresher courses for those that have been in management for a while should also be considered.

Existing learning programs and courses should include mentorship and coaching programs, succession planning and carefully planned deployments to increase exposure to diverse leadership environments and to enhance leadership capacity. These existing programs and courses should continuously be reviewed and improved to ensure that they remain relevant for the participants.

Review and revision of existing learning programs and courses should, in collaboration with curriculum experts and practitioners, be prioritized to ensure that the content meets the quality standards and expected outcomes for nurse managers in Gauteng hospitals. In addition, there is evidence in the data (though not statistically significant) that differences in age and management level should be considered in crafting future competency development programs. The fact cannot be ignored that an older generation has a lot of experience since they have been in the profession a long time and it can be expected that they would want their work environment to satisfy them as they would not easily leave the hospital. In addition, older nurse managers are generally the nurse leaders that younger managers or new comers seek out for clinical, professional and even personal advice. They are also most likely to identify opportunities for improvement and volunteer to lead the improvement initiative. Furthermore it should also be noted that there are also environmental pressures such as technological advancement, in which older ones may need upgrading.

5.8.2.4 Implications for government, employers, nursing associations and labour unions

This research has highlighted specific challenges identified by nurse managers in public and private hospitals in Gauteng that impact negatively on their ability to perform effectively and which need to be acted on. To begin, it is advisable that employers should have a clearer understanding of the dynamics around turnover behaviour, delinquent and negligent behaviour, lack of implementation and adherence to nursing regulations, migration, burnout, job dissatisfaction and absenteeism to be able to develop strategies to address these challenges that are found in some of the hospitals and to be able to attract and retain competent managers.

Government, employers, nursing associations and labour unions should be aware that although it may seem apparent that some identified skills sets and competencies are suited for TNA team leaders, they could include some form of assessment of the competencies and competency development interventions specifically for team leaders prior to promotion or placement to team leadership level.

Government, employers, nursing associations and labour unions should promote the use of evidence-based nursing by sharing widely the outcomes of research done including of this study in the nursing profession and by considering them in the development or refinement of nursing standards and clinical guidelines.

5.8.2.5 Additional considerations for successful implementation of team nursing approach and competency development and framework

5.8.2.5.1 Considerations for team nursing approach

There are a number of recommendations from quantitative and qualitative evidence that hospitals could consider for ensuring improved or successful implementation of TNA. These include:

(a) Nurse managers and competency development initiatives should ensure the acquisition of teamwork skills or competency to collaborate in a multi-disciplinary team or as a team.

(b) Good planning, consultation with staff, clear definition of the team nursing model, clear operating procedures and principles prior to the implementation or for the improvement of the existing team nursing model of care is important.

(c) Clarity on the roles and responsibilities of all team members and commitment by all team members is essential. There is evidence in qualitative data that nurse managers are at times caught up with duties that are beyond their scope of practice and or management duties such as checking quality of food for patients and looking for cables for equipment to an extent that it takes up their time, which ultimately compromises nursing care management.

(d) Good open communication between teams and amongst team members is emphasized. The use of various available modes of communication should be promoted and optimized.

(e) Teams require inter-professional trust and respect to ensure that there is maximum participation and collaboration of team members.

(f) Nurse managers should be given the opportunity to develop and design individual and team competency development plans. Nurse managers' participation in the development and their understanding of the vision, goals and objectives of the hospital makes them better positioned to factor that into the design and development of individual and team competency development plans.

(g) A strong orientation programme for new team leaders and continuous in-service education for older ones is recommended.

(h) It is recommended that a clear and transparent process and system for identifying, training, rewarding and supporting leaders should be in place and its implementation should be consistent.

5.8.2.5.2 Considerations for competency development and framework

There are a number of recommendations from the qualitative evidence to be considered in addressing gaps in competency development and education as well as in the development and refinement or finalisation of a competency development framework for nurse managers. These include:

(a) There could be better and more flexible scheduling and planning of competency development initiatives so that all nurse managers at different levels of management are able to attend.

(b) All members of the team, not only nurse members, should be exposed to training or at least orientated on their expected role within the team.

(c) All nurse managers should be exposed to Continuous Professional Development and attendance should be compulsory.

(d) In preparation for the new role, nurse managers should be exposed to at least 6 days of formal classroom training spread over a period of 6 months (1 day/month x 6 months).

(e) Orientation and induction courses are important for all including new recruits to familiarize them with the new role. Induction courses should be carried out at hospital level focusing on key aspects or responsibilities of the new role where one is employed so as to avoid or to minimize costly mistakes at the place of work.

(f) The focus areas of competency development interventions should be informed by input from nurse managers, skills audit results, feedback from performance appraisals and the strategic plan of the hospital.

Having now considered the implications for policy and practice, the limitations of the study are delineated in the next section.

5.9. Limitations

Delimitations of the research were noted and justified in Chapter 1 and limitations of the methodologies were examined in Chapter 3 along with how they were addressed. That is, the research is limited to the data collected from the 203 nurse managers in Gauteng public and private hospitals (Section 1.8) and from the seven (7) internal and external stakeholders in Gauteng. Further empirical research in other provinces could extend the scope of this research.

5.9.1 The design of the research

There is some limitation in using a structured survey. Participants had to mostly tick the correct response and some participants could have just ticked the responses without reading the questions. In addition, the researcher may have inadvertently influenced the participants' responses through the structure of the NMCS. However, the structure and questions were reviewed by Australian and South African experts.

Furthermore the type of question format did not always permit the participants to fully express themselves as there were only a few open-ended question sections in the survey, hence limiting data collection. This is somewhat mitigated by the use of prior theory, the few (7) in-depth interviews with internal and external stakeholders that were conducted after the NMCS to get more rich data and to close gaps that existed in the NMCS dataset. Therefore, the accuracy of the finding was enhanced by the use of triangulation during data analysis resulting in greater understanding, which would not have been possible from only quantitative analysis.

The NMCS participants were not randomly selected by the researcher and the selection depended on the availability of the participants and the persuasion of

contact persons in the hospitals. In addition the hospitals were also not randomly selected. They were included as a result of their willingness to give access to the nurse managers. It should be noted that from the analyses done of the study, the researcher is confident that the results are valid and reliable and give an accurate picture of the situation in public and private hospitals in Gauteng. Also, the findings can be generalised at least to the nurse managers of SA, and possibly developing countries – such as the BRICS.

5.9.2 Methodological limitation

Another limitation of the research may relate to the fact that the levels of nurse management in public and private hospitals are different and therefore did not allow standardized comparisons of perceptions of different levels of management. In addition, the lack of sufficient cases on the most senior levels of management limited comparisons. Although it was never the researcher's intention to compare the findings between public and private hospitals and between the various levels of nurse managers, future studies that examine the same topic could provide more insight into whether this is a significant research design issue in this context or that a study should only focus on one type of hospitals.

Due to time and financial constraints, only 203 nurse managers in some Gauteng hospitals participated in the NMCS. This sample size is considered large enough for purposes of data analysis and drawing a number of tentative conclusions.

5.9.3 Quality of the data

The NMCS, as indicated in Chapter 3, was self-administered. Therefore, poor quality of responses, some omissions and unclear responses were noted on some of the questions. Where participants were to indicate their level of agreements with the statements on the NMCS, there are some participants who opted for 'neutral' or did not fill it rather than indicating whether they agree or not with the statements. There are several possible reasons for this. One is that as there were a considerable

number of questions to get through in the available time, a few errors and omissions would have been made by participants hurrying to complete the NMCS or not wanting to continue. Furthermore, it is possible that the participant did not know the answer, or simply did not wish to provide answers to those questions. The reasons cannot be confirmed because the researcher could not follow up as the NMCS was anonymously completed. Nonetheless in-depth interviews with stakeholders were used to clarify some of the responses and to probe for details where necessary. Further, the interviews contributed in raising the researcher's level of understanding of the nursing profession which was useful for the interpretation of the research findings.

Most omissions were noted on questions relating to leadership and management competency development programs that have been completed in their hospitals. Perhaps the question was ambiguous for some as they may have not completed programs in their workplace (their hospitals) even though they were completed whilst in their employ. Others could have preferred to skip the questions rather than to paint the actual picture with fear of being traced even though they were promised anonymity. Or they know that opportunities were offered and were just never seized by nurse managers.

It became apparent during data collection that the question about the number of staff (Part 1, Participant Profile) of the NMCS was not easy to complete as data was either not updated or not readily available especially in the case of big hospitals. As a result there were many missing values on this question.

A few open-ended questions were included in the instrument to source participants' views on the various factors. The fact that most NMCS participants did not respond to those questions raises issues about the inclusion of those questions. It may also raise questions about nurse managers not knowing the competencies they possess, the competencies needed for their job and not knowing their training and development needs.

Having discussed the limitations, the implications for further research originating from this study are presented in the next section.

5.10 Implications for methodology

The following discussion considers lessons gained from the experience of conducting this study and the implications of these lessons for methodology.

Three implications for methodology were evident from this research. In terms of investigation of the relationships amongst variables, when multiple regression was executed, the entering of independent variables in different sequences did not create any significant impact on the initial results of multiple regression. This outcome had not been noted within the general methodology literature and it is a new recommendation for research methodology.

Secondly, *R*-square was used in this study as a measure for regression analysis. Again the methodology literature has not emphasized the practical importance of using *R*-square as opposed to using the adjusted *R*-square (Cavana, Delahaye & Sekaran 2001).

Scholars may take advantage of using more complex analytical models such as structural equation modelling (SEM) to advance their research agendas. The SEM analytical approach would allow them to understand the interrelatedness of variables more fully and completely.

The private sector hospitals in Gauteng had less strict rules and regulations governing granting access and facilitating participation of nurse managers in the survey. In the case of private hospitals, once clearance was secured at their head office for a group of hospitals, access at hospital level was easier and co-operation was smooth. Access in smaller hospitals in both public and private hospitals was easier and turnaround was quicker than in larger hospitals with more complex hierarchies. Perhaps small hospitals attach a lot of value to the research outcomes, which they could benefit from as they have limited resources to conduct the research themselves.

Next, during data collection, once clearance to conduct the NMCS was received from hospital authorities, some hospital managers invited the researcher to their meetings to make a brief presentation about the study to the potential participants. Those nurse managers who were interested in completing the NMCS forms were then given time during the meeting to complete the NMCS immediately in the presence of the researcher. The researcher would leave with all the completed survey forms. This strategy worked well as it ensured a high response rate and was less disruptive and time saving. In addition, the researcher was available to respond to whatever clarity seeking questions were raised. It must however, also be mentioned that the researcher later discovered five surveys that were not completed, which were put in sealed envelopes and handed over to the researcher as if they were completed. The reason for this could be that those managers did not want to participate in the NMCS and not to be seen by colleagues that they were not interested. Perhaps they did not regard identifying requisite skills and competencies, factors that affect performance, successful implementation of TNA and making input in future competency development programs as important for their current management position.

Over and above formal ethical approval secured at USQ, some hospitals still required ethical clearance to be applied for and attained at a local university or their ethics committee prior to hospitals giving the researcher access to conduct the study. Where another clearance was sought and granted, there was easy negotiation and less cumbersome processes at a hospital level.

Having discussed the implications for methodology, the recommendations for further research originating from this study are presented in the next section.

5.11 Recommendations for future research

A range of recommendations for future research arise from conclusions of this research. In general, issues of further research arise from sets of conclusions about

each research issue as well as the final conceptual model of this study (Figure 5.2 in Section 5.4.6).

5.11.1 Further investigation and validation of nurse manager's competency survey

A unique NMCS developed from the findings of this research should be validated further in other hospitals. This survey could be adapted for investigation in other contexts. For example in Part 6 on competency development by changing 'hospital' to 'organization', deleting 'nurse' and 'clinical' and adapting some statements to fit the organization and sector.

5.11.2 Determination of competencies for various levels of management

This research did not investigate competencies needed by the various levels of nurse managers given their different roles and responsibilities. It targeted all nurses at management level in public and private hospitals in Gauteng hospitals. Even though nurse managers were to indicate their level of management on the NMCS (q1.6), the finding for this question could not be relied upon and applied in analysis because the researcher discovered during data collection that the levels in public and in private hospitals in Gauteng are different from one another, therefore, the categories on the NMCS might have been confusing to some participants. Further some of the levels did not have sufficient representation. Quantitative evidence indicates that it was mostly operational managers/unit managers who participated in the survey. From observation, there are many operational managers/unit managers in hospitals and they were more available to participate in the NMCS than their seniors who were often short of time. It is important for future research to investigate the competencies according to levels and over time given the dynamic nature of the health sector so as to appropriately inform future competency development initiatives. For example, the intensity of the management skills training could be informed by the level of management of individuals or training participants.

5.11.3 Determination of competencies unique to team leaders and nurse management

Given the central role of TNA in the revised conceptual framework, it is important to identify the competencies unique to team leaders and nurse managers who are not team leaders, as well as areas they share in common, to more appropriately guide educational efforts or rather competency development interventions for specific groups.

5.11.4 Determination of non-nursing duties versus management duties of the team leader

This study found that some nurse managers complain about focusing on non-nursing duties that are part of management duties. Yet others complain about being overworked by nursing duties. The feasibility of team leaders only or primarily focusing on nursing functions merits further investigation.

5.11.5 Validation of the use of coaching and mentoring as a competency development approach for requisite competencies of nurse managers and or team leaders

In addition to formal structured competency development initiatives, seniors could mentor and couch juniors. Additional study of the experience of subordinates in developing new competencies through coaching or mentoring could provide insight into how competency development approach could lead to better skilled nurse managers and or team leaders resulting in improved nurse manager performance.

5.11.6 Additional research examining the relationship between moderator variables and requisite competencies, team nursing approach and competency development

Although the evidence is clear that there are some, though not statistically significant, differences in perceptions of nurse managers in terms of requisite competencies, behaviour, TNA, performance management and competency

development in relation to type of hospital, age of managers, length of service of managers and management level, it is not strong enough to generalize the results. This warrants more study before conclusions leading to generalizations across type of hospitals, ages, length of service and management levels and even other provinces in Gauteng can be drawn.

5.11.7 Expanding the scope of the research

This study did not as per its design adequately solicit the perceptions of other health sector professionals. A survey including other sources of data such as managers of nurse managers, clients and other professionals in the health sector could shed more light on the factors under investigation and could improve the reliability of interpretations.

The target population for the study was limited to nurse managers in public and private hospitals in Gauteng province. Extending the study to include other provinces in SA would enable better understanding of issues that are generic and those that are peculiar to each province. It is also likely that a further study of the various types of public hospitals and of private hospitals alone will provide a more comprehensive analysis.

5.12 Summary of contributions of this study

Table 5.3 below presents conclusions about each research question and contributions to the body of knowledge made from this study.

Table 5.3 Summary of conclusions and their contributions for each research issue

Conclusions about each research question	Contributions to the body of knowledge
RQ1 What competencies of nursing management are regarded as important in hospitals?	
While there is an association between requisite competencies and performance of nurse managers, the possession of competencies does not predict efficient performance of nurse leaders. Identification of requisite soft skills or certain competencies is pertinent for effective management or leadership of hospitals however, the competencies must be continuously developed	The findings support the theories about the requisite competencies for nurse managers in Gauteng public and private hospitals. A standard list of core requisite management competencies is developed. A unique Nurse Managers' Competency Survey is developed.
RQ2 How do specific competencies relate to the behaviour of effective nurse managers?	
Having clarity about the requisite competencies and effective behaviours is extremely important. The possession of requisite competencies and an understanding of practices of managers and leaders is important to ensure appropriate interventions, maximum performance and ultimately improved health care service delivery in Gauteng hospitals.	The findings support the theories about the link between requisite competencies and effective behaviour of nurse managers in public and private hospitals in Gauteng. A list of effective behaviours of nurse managers in hospitals is developed.
RQ3 What are the factors influencing effective nurse manager performance in hospitals?	
The possession of requisite competencies must be recognized and acknowledged by other team members and hospital hierarchies in Gauteng public and private hospitals.	The findings support the theories on the influence of varied factors on the performance of nurse managers and leaders in Gauteng public and private hospitals.
RQ4 Do perceptions on the relevance of team nursing approaches influence perceptions of nurse manager performance?	
TNA is recognized as highly relevant and significant in addressing the challenges in Gauteng public and private hospitals.	The recognition of TNA as highly significant in addressing challenges in Gauteng hospitals is a new contribution to theory of TNA that emerges from this study. Transformational leaders who are not necessarily nurse managers, who understand and embrace the vision of their hospitals, are needed in Gauteng hospitals.
RQ5 What competency development initiatives have nurse managers been exposed to, to be able to carry out their roles and responsibilities as nurse managers?	
Nurse managers in Gauteng public and private hospitals have not been formally prepared for their management role. Leadership and management learning programs and courses should be introduced for preparation of new managers and team leaders (prior to promotion). Development of management competencies should be formalized as is development of clinical competencies. Formal and informal approaches should be considered and varied modes of delivery. Management competencies must be continuously developed through competency-based-education so that they can produce competent practitioners.	TNA should be added to competency-based model for nursing. Feedback from continuous review of the effectiveness of competency development programs should be added in the cycle of competency development model to ensure that they remain relevant.

(Source: Developed for this study).

Table 5.4 below presents a list of other tables that are available for inspection by examiners.

Table 5.4 Additional tables available for inspection by examiners

Detail	**Table Number**
Correlation between requisite competencies (Part 2 of NMCS) and nurse manager behaviour (Part 3 of NMCS)	Table 5.4 A
Correlation between team nursing approach (Part 4 of NMCS) and nurse manager performance (Part 5 of NMCS)	Table 5.4 B
Stepwise regression tables- SPSS output	Table 5.4 C
Hierarchical regression tables – SPSS output	Table 5.4 D

(Source: Developed for this study).

5.13 Conclusion

The South African health sector is characterized by challenges that are mostly related to poor management and delivery of health care services. Ways to improve the performance of nurse managers and or leaders have been suggested in this research. Factors that affect the performance of nurse managers have been explored. One main factor relating to nurse manager performance in hospitals is the issue of recognition and reward of expertise and excellence of nurse managers. This factor has led to unhappiness, dissatisfaction, delinquent behaviour, absenteeism, and poor performance. Understanding the role and importance of a TNA in addressing challenges in Gauteng hospitals constitutes a useful approach that could be applied to other public and private hospitals in SA and in other developing and developed countries.

This research has presented a number of contributions for the improvement of competence of nurse managers and leaders, which would result in effective nurse manager performance. The literature suggests that identification of core skills, competencies and effective behaviour, performance management factors, TNA and competency development should be considered in trying to improve the efficiency of nurse managers.

The model developed from the findings proposes that TNA should have a central role and team leaders' vital competencies and effective behaviours need to be understood and continuously developed and enhanced in order to have skilled nurse managers and leaders. This would result in effective performance of management and leadership in hospitals, which would ultimately result in role satisfaction, improved staff and patient satisfaction and ultimately improved delivery of health care services for the people of Gauteng and of SA.

LIST OF REFERENCES

Alves, HM & Canilho, P 2010, '*Are leadership styles and maturity in healthcare teams synchronized*', IUP Journal of Organizational Behaviour, vol. 9, no. 3, pp. 7-27.

Andrew, S & Halcomb, EJ 2006, '*Mixed methods research is an effective method of enquiry for community health research'*, International Journal of Multiple Research Approaches, vol. 23, no. 2, pp. 145-153.

Antonie, F, Francis, K, Edmeston, M, Gon, S, Kenny, T, Mash, L, Mtwesi, A & Nkambule, D 2012, *'FOCUS: State and nation',* The Journal of Helen Suzman Foundation, vol. 67*,* Parktown, South Africa.

Atwal, A & Caldwell, K 2006, '*Nurses perceptions of multidisciplinary team work in acute health-care'*, International Journal of Nursing Practice, vol. 12, pp. 359-365.

Avey, HB, Wernsing, TS, Luthans F 2008, '*Can positive employees help positive organizational change? Impact of psychological capital and emotions on relevant attitudes and behaviors,* The Journal of Applied Behavioral Science, vol. 44, no. 1, pp. 48–70.

Avey, JB, Luthans, F & Youssef. CM 2010, '*The additive value of positive psychological capital in predicting work attitudes and behaviour,* Journal of management*'*, Leadership institute, no. 2421, viewed 09 July 2015, http:// www.researchgate.net/publication/228932163.

Bakanauskienė, I & Martinkienė, J 2011, '*Determining managerial competencies of management professionals: business companies managers' approach in Western Lithuania region',* Management of Organizations: Systematic Research, no. 60, pp. 29-43.

Belbin, C 2011, '*Employee perceptions of workforce retention strategies in a health system'*, unpublished doctoral dissertation, University of Southern Queensland, Australia, viewed 14 June 2012, http://eprints.usq.edu.au/view/people/Belbin=3ACheryl=3A=3A.html.

Berg, HP 2010, '*Risk management: procedures, methods and experiences',* RT & A, vol. 1, no. 2, pp. 79-95.

Bergenhenegouwen, G, Horn, H & Mooijman, E 1996, '*Competence development a challenge for HRM professionals: core competencies of organisations as guidelines for the development of employees'*, Journal of European Industrial Training, vol. 20, no. 9, pp. 29-35.

Bhat, AB, Verma, N, Rangnekar, S & Barua MK 2012, '*Leadership style and team processes as predictors of organisational leaning*', Department of Management Studies, Indian Institute of Technology Roorkee, vol. 18, no. 7/8, pp. 347-369.

Blanche, TM, Durrheim, K & Painter D 2006, '*Research in practice'*, 2nd edn, University of Cape Town Press, South Africa.

Boekholdt, MG & Kanters, HW 1978, '*Team nursing in a general hospital: Theory, results and limitation',* Journal of Occupational Psychology, vol. 51, pp. 315-325.

Bohlman, H 2010, '*The macroeconomic impact of skilled emigration from South Africa: A CGE analysis'*, working paper no. 166, Centre of policy studies, Monash University.

Boyatzis, RE 2009, '*Competencies as a behavioral approach to emotional intelligence*', Journal of Management Development, vol. 28, no. 9, pp. 749-770.

Bucic, T, Robinson, L & Ramburuth, P 2010, '*Effects of leadership style on team learning*', vol. 22, no. 4, pp. 228-248.

Burström, T & Jacobsson, M 2011, '*The Role and Importance of 'Glue People' in Projects*', IUP Journal of Soft Skills, vol. 5, no. 1, pp. 7-15.

Carney, M 2009,'"*Public health nurses perception of clinical leadership in Ireland: narrative descriptions*', Journal of Nursing Management, vol. 17, pp. 435-445.

Casida, J & Pinto-Zipp, G 2008, '*Leadership-organizational culture relationship in nursing units of acute care hospitals*', Nursing Economics, vol. 26, no. 1, pp. 7-15.

Cathcart, B, Greenspan, M & Quin, M 2010, '*The making of a nurse manager: the role of experiential learning in leadership development*', Journal of Nursing Management, vol. 18, pp. 440-447.

Cavana, RY, Delahaye, BL & Sekaran, UM 2001, *'Applied Business Research, Qualitative and Quantitative Methods',* John Wiley & Sons Ltd, Queensland, Australia.

Chakraborty, M 2009, '*Impact of Soft Skills in the Professional Domain*', ICFAI Journal of Soft Skills, vol. 3, no. 1, pp. 25-27.

Chauhan, GS 2011, '*Soft skills beyond classroom: Taking a leaf out of Obama's India visit',* IUP Journal of Soft Skills, vol. 5, no. 2, pp. 33-38.

Cherie, A & Gebrekidan, BA 2005, '*Nursing Leadership and Management',* Ethiopian Public Health Training Initiative, Addis Ababa University, The Carter Center, the Ethiopia Ministry of Health & the Ethiopia Ministry of Education.

Chin-Ju, T, Edwards, P & Sengupta, S 2010, '*The associations between organisational performance, employee attitudes and human resource management practices',* Journal of General Management, vol. 36, no. 1, pp. 1-20.

Chitsulo, C, Pindani, M, Chilinda, I & Maluwa, A 2014 '*Factors Promoting and Hindering Performance of Unit Nurse Managers at Kamuzu and Queen Elizabeth Central Hospitals in Malawi',* Open Journal of Nursing, vol. 4, pp. 928-938.

Cioffi, J & Ferguson, L 2009, '*Team nursing in acute settings: nurses experiences',* Contemporary Nurses, vol. 33, no. 1, pp. 2-12.

Clarkson, M 2009, '*Leadership and Management in nurses: Concepts Analysis',* Hamilton, New Zealand.

Coakes, SJ & Steed, LG 2007, '*SPSS Analysis without Anguish, version 14.0 for Windows*', Brisbane, John Wiley & Sons Australia Ltd.

Coffman, DL & MacCallum, RC. 2005, '*Using parcels to convert path analysis models into latent variable models'*, Multivariate Behavioral Research, vol. 40, no. 2, pp. 235-259.

Cosser, M 2010, **'***The skills cline: higher education and the supply-demand complex in South Africa',* Higher Education, vol. 59, no. 1, pp. 43-53.

Creswell, J 2009, '*Research Design: Qualitative, Quantitative, and Mixed Methods Approaches',* SAGE Publications Inc., London.

Crosthwaite, C 2010, *'Managerial leadership competencies of heads of departments: a case study of higher educational institutions in Kerala, India',* unpublished doctoral dissertation, University of Southern Queensland, Australia, viewed 06 June 2012, http://eprints.usq.edu.au/view/people/Crosthwaite=3ACheryl=3A=3A.html.

Cullinan, K 2006, '*Health services in South Africa: A basic introduction*', Health-e-news services, Health Journalism, Health Management.

Curtis, E & O'Connel, R 2011, '*Essential leadership skills for motivating and developing staff*', Journal of Nursing Management, vol. 18, no. 5, pp. 32-35.

Curtis, EA, de Vries, J & Sheerin, FK 2011 '*Developing leadership in nursing: exploring core factors'*, British Journal of Nursing, vol. 20, no. 5, pp. 306-309.

Daniels, R 2007, '*Skills shortages in South Africa: A literature review*', Development policy research unit, working paper vol. 07 no. 121, pp. 1-44, University of Cape Town, South Africa, viewed 25 November 2012, http:www.commerce.uct.ac.za/dpru/.

De Groot, HA, Burke, LJ & George, VM 1998, '*Implementing the differentiated pay structure model*', Journal of Nursing Administration, vol. 28, no. 5, pp. 28-38.

De Vos, A, De Hauws, S & Willimse, I 2011, '*Competency development in organizations: Building an integrative model through a qualitative study*', Vlerick Leuven Gent Management School, Vlerick Leuven Gent Working paper series, vol. 1, pp. 1-38.

Department of Health (DOH) 2013, '*Nursing Strategy for South Africa 2008*', Pretoria, South Africa, viewed 20 July 2014, http://www.DOH.gov.za.

Department of Health (DOH) 2013a, '*The National Strategic Plan for Nurse Education, Training and Practice 2012/13 – 2016/17',* Pretoria, South Africa: DOH.

Department of Higher Education and Training (DHET) 2010, *'National human resource development strategy for South Africa, 2010 – 2030',* Pretoria, Department of Higher Education and Training.

Department of Labour (DOL), 2006, '*Master list of scarce and critical skills*', Pretoria, South Africa: DOL.

Development Bank of South Africa (DBSA) 2011, '*Development Report 2011: Prospects for South Africa's future*', Halfway House, South Africa.

Dickerson, SS, Brewer, CS, Kovner, C & Way, M 2007, '*Going voice to registered nurses' decisions to work'*, Nursing Forum, vol. 42, no. 3, pp. 132-141.

Dingle, J 1995, '*Analysing the competence requirements of managers*', Management Development Review, vol. 8, no. 2, pp. 30-36.

Disch, J, Walton, M & Barnasteiner, J 2001, '*The role of clinical nurse specialist in creating a healthy work environment*', American association of colleges of nursing, vol. 12, no. 3, pp. 345-355.

Doherty, J 2013, '*Strengthening clinical leadership in hospitals: a review of the international and South African literature*', Municipal Services Project, School of Government, University of the Western Cape, South Africa.

Dubois, D & Rothwell, W 2004, '*Competency-Based Human Resource Management',* Davies–Black Publishing.

Duffield, CM, Rocha, MA, Blay, N & Stasa H 2010, '*Nursing unit managers, staff retention and the work environment'*, Blackwell Publishing Ltd, Journal of Clinical Nursing, pp. 23-33.

Eason, T 2009, '*Emotional Intelligence and Nursing Leadership: A Successful Combination*', Creative Nursing, vol. 15, no. 4, pp. 184-185.

Erasmus, J & Breier, M 2009, '*Skills shortage in South Africa, Case studies of key professions'*, Human Sciences Research Council, South Africa, viewed 26 February 2014, http://www.lmip.org.za/skills shortage in South Africa/Entire eBook.pdf.

Espinoza, C, Ukleja, M & Rusch, C 2011, '*Core competencies for leading today's workforce*', Leader to Leader, pp. 18-23.

Fairbrother, G, Jones, A & Rivas K 2010, '*Changing model of nursing care from individual patient allocation to team nursing in the acute inpatient environment*', Journal for the Australian Nursing Profession, vol. 35, no. 2, pp. 202-220.

Ferguson, L & Cioffi, J 2011, '*Team Nursing: Experiences of nurse managers in acute care settings*', Australian Journal of Advanced Nursing, vol. 28, no. 4, pp. 5-11.

Force, MV 2005, '*The relationship between effective nurse managers and nursing retention',* Journal of Nursing Administration, vol. 35, no. 7/8, pp. 339-341.

Frank, JR, Snell LS, Cate, OT, Holmboe, ES, Carraccio, C, Swing, SR, Harris, P, Glasgow, NJ, Campbell, C, Dath, D, Harden, RM, Lobst, W, Long, DM, Mungroo, R,

Gardner, DL 1991, '*Issues related to the use of nurse extenders',* Journal of Administration, vol. 21, no. 10, pp. 40-45.

Gardner WL, Schermerhorn Jr JR 2004, '*Unleashing individual potential: Performance gains through positive organizational behavior and authentic leadership'*, Organizational Dynamics, vol. 33, no. 3, pp. 270-281.

Gauteng IOL News 2012, '*Hospital on verge of collapse*', viewed 10 September 2012, http:// www.iol.co.za/news/South Africa.

Gauteng IOL News 2012a, '*So what is new the whole of our health system has been shot to hell with this government*: *Bara's rotten food scandal*', viewed 07 December 2012, http:// www.iol.co.za/news/South Africa.

Gentry, WA, Deal, JJ, Griggs, TL, Mondore, SP & Cox BD 2011, '*A comparison of generational differences in endorsement of leadership practices with actual leadership skill level',* Consulting Psychology Journal: Practice and Research, vol. 63, no. 1, pp. 39-49.

Gleason, J 1996, '*Breaking a shortage, Regional Review',* 1 page EBSCO Database, Business Source Complete, vol. 6, no. 2, item: 10621865.

Hair, JF, Black, WC, Babin, BJ, Anderson, RE & Tatham, RL 2006, '*Multivariate data Analysis'*, 6th edn, Pearson Prentice Hall, Upper Saddle River, New Jersey.

Hair, JF, Black, WC, Babin, BJ, Anderson, RE & Tatham, RL 2010, '*Multivariate data Analysis'*, 7th edn, Pearson Prentice Hall, Upper Saddle River, New Jersey.

Hannah, ST, Walumbwa, FO & Fry, LW 2011, '*Leadership in action teams: team leader and members' authenticity, authenticity strength and team outcomes'*, Personnel Psychology, vol. 64, no. 3, pp. 771-802.

Harerimana, RN & De Beer, J 2013, '*Nurse educators' utilisation of different teaching strategies in a competency-based approach in Rwanda*', Africa Journal of Nursing and Midwifery, vol. 15, no. 11, pp. 29-41, item: 1682-5055.

Hartman, N, Conklin, T & Smith, J 2007, '*What leaders say versus what academics write: the relevance of leadership theory',* SAM advanced management journal, pp. 32-39, item: 07497075.

Hedrick, TE, Bickman, L & Rog, DJ (eds) 1993, '*Applied Research Design*', Thousand Oaks, CA: SAGE Publications, Inc., viewed 12 December 2014, doi: http://dx.doi.org/10.4135/9781412983457.

http://www.businessdictionary.com 2013, *'Professional-development definition'*, viewed 12 December 2013, from online business dictionary, http://www.businessdictionary.com.

Husting, PM 1996, '*Leading work teams and improving performance*', Journal of Nursing Management, vol. 27, no. 9, pp. 35-38, item: 9708061936.

Jennings, B, Scalzi, C, Rodgers, J & Keane, A 2007, '*Differentiating nursing leadership and management competencies*', Nursing Outlook, vol. 55, no. 4, pp. 169-175.

Johnson, RB & Onwueghuzi, AJ 2004, '*Mixed methods research: A research paradigm whose time has come*'", Educational Researcher, vol. 33 no. 7, pp. 14-26.

Joint Initiative on Priority Skills Acquisition (JIPSA) 2010, '*Growing priority skills in South Africa, Final report on JIPSA*', viewed 10 February 2013, http://www.Jipsa.org.za.

Jones, RP 2007, '*Nursing Leadership and Management: Theories Processes and Practice*', F.A Davis Company, Philadelphia.

Joni, R 2009, '*Developing a Training Program Framework: Determining the Structure of Corporate Education*', viewed 30 May 2012.

Kane, M 2012, '*All validity is construct validity or is it*?', Measurement, Psychology Press Taylor & Francis Group, vol. 10, pp. 67-70.

Kar, AK 2011, '*Importance of Life Skills for the Professionals of 21st Century*', IUP Journal of Soft Skills, vol. 5, no. 3, pp. 35-45.

Karan, N 2011, '*The soft skills advantage'*, 1 page, Internal Auditor, vol. 68, no. 4, pp. 72-72 item: 67123104.

Kitson, A, Silverston, H, Wiechula, R, Zeitz, K, Marcoionni, D & Rage, T 2011, '*Clinical Nursing Leaders', Team Members' and Service Managers' experiences of implementing evidence at a local level*', Journal of Nursing Management, vol. 19, pp. 542-555.

Kostpoulos, KC, Spanos, YE & Prastacos, GP 2013, *'Structure and function of team learning emergence: A multilevel empirical validation'*, Journal of Management, vol. 39, no. 6. pp. 1430-1461.

Kraak, A 2008, '*A critical review of the national skills development strategy in South Africa'*, Journal of Vocational Education and Training, vol. 60, no. 1. pp. 1-18.

Laker, DR & Powell, J 2011, '*Differences between Hard and Soft Skills and their Relative Impact on Training Transfer*', Human Resource Development, vol. 22, no. 1, pp. 111-122, item: 59445756.

Lephoko , CSP, Bezuidenhout, MC & Roos, JH 2006, '*Organisational climate as a cause of job dissatisfaction among nursing staff in selected hospitals within the Mpumalanga Province*', Curationis, vol. 29, no. 4, pp. 28-36.

Lewis, JD 2002, '*Promoting growth and employment in South Africa*', Africa region working paper series no. 32, pp. 1-29.

Limpanitgul, T 2009, '*Methodological considerations in a quantitative study examining the relationship between job attitudes and citizenship behaviours*', Cardiff University, United Kingdom.

Litecky, C, Arnett, K & Prabhakar, B 2004, '*The paradox of soft skills versus technical skills in in is hiring'*, Journal of Computer Information System, p8p. 69-76.

Luthans, F & Youssef, CM 2007, '*Emerging positive organizational behaviour',* Journal of Management, vol. 33, pp. 321–349, viewed 15 July 2015, http://digitalcommons.unl.edu/leadershipfacpub/8.

Luthans, F, Avey, JB, Avolio, BJ, & Peterson, SJ 2010, '*The development and resulting performance impact of positive psychological capital'*, Human Resource Development Quarterly, vol. 21, pp. 41–67.

Luthans, F, Avolio, BJ, Avey, JB & Norman SM 2007, '*Positive psychological capital: Measurement and relationship with performance and satisfaction',* Personnel psychology, vol. 60, pp. 541–572.

Luthans, KW, & Jensen, SM, 2005, '*The linkage between psychological capital and commitment to organizational mission*', Journal of Nursing Administration, vol. 35, no. 6, pp. 304–310.

MA, C, Samuels, ME & Alexander, JW 2003, '*Factors that influence nurses' job satisfaction'*, Journal of Nursing Administration, vol. 33, no. 5, pp. 293-299.

Mail & Guardian Health Journalism Centre 2014, '*Medical negligence claims threaten NHI',* viewed 16 April 2014, http://mg.co.za/article/2014-04-16-medical-negligence-claims-threaten-nhi.

Mail & Guardian Newspaper 2014, '*Publicly waiting for X-rays, privately abandoning all hope*', 28 March 2014, pp. 18-19.

Mail & Guardian Newspaper 2014a, '*Gauteng addresses hospital staff negligence*', viewed 31 March 2014, http://mg.co.za/article/2014-03-31-gauteng-addresses-hospital-negligence.

Mathena, KA 2002, '*Nursing Manager Leadership Skills*', Journal of Nursing Administration, vol. 32, no. 3, pp. 136-142.

McCallin, M & Frankson, C 2010, '*The role of the charge nurse manager: a descriptive exploratory study',* Journal of Nursing Management, vol. 18, no. 3, pp. 319-325.

McGrath, S, Badroondien, A, Kraak, A & Unwin, L 2004, '*Shifting understanding of skills in South Africa',* Cape Town, HSRC Press.

Miller, K, Riley, W & Davis, S 2009, '*Identifying key nursing and team behaviours to achieve high reliability*', Journal of Nursing Management, vol. 17, no. 2, pp. 247-255.

Mitchell, G, Skinner, LB & White, B 2010, '*Essential soft skills for success in the twenty-first century workforce as perceived by business educators*', Delta Pi Epsilon Journal, vol. 52, no. 1, pp. 43-53.

Moiden, N 2002, '*Evolution of leadership in nursing*', Journal of Nursing Management, vol.9, no.7, pp.20-25, EBSCO Database, Business Source Complete, item: 7717041.

Mokoka, E, Oosthuizen, MJ & Ehlers, VJ 2010, '*Retaining professional nurses in South Africa: Nurse managers' perspectives',* Health SA, Journal of Interdisciplinary Health Sciences, vol. 15, no. 1, pp. 484-493.

Mouton, J 1996, *'Understanding social research'*, Van Schaik Publishers, Pretoria, South Africa.

Mouton, J 2001a, '*How to succeed in your Master's & Doctoral Studies – A South African guide and resource book*', Van Schaik Publishers, Pretoria, South Africa.

Muir, C 2004, *'Learning soft skills at work',* Business Communication Quarterly, vol. 67, no. 1, pp. 95-101.

Mumford, MD & Licuanan, B 2004, '*Leading for Innovation: Conclusions, issues and directions'*, The leadership quarterly, vol. 15, pp. 163 – 171, viewed 14 July 2015, http:// www.sciencedirect.com.

Mumford, MD 2000, '*Managing creative people: Strategy and tactics for innovation',* Human Resource Management Review, vol. 10, pp. 1–29.

Mumford, MD, Connelly, S & Gaddis, B 2003, '*How creative leaders think: experimental findings and cases'*, The leadership quarterly, no. 14, pp. 411-432, Ok, USA.

Mumford, MD, Scott, GM, Gaddis, B & Strange JM 2002, *'Leading creative people: Orchestrating expertise and relationships',* The Leadership Quarterly, vol. 13, pp. 705–750.

Murray, P & Donegan, K 2003, '*Empirical linkages between firm competencies and organisational learning'*, The Learning Organization, vol. 10, no. 1, pp. 51–62.

Murray, PA & Millett, B 2011, '*The influence of learning behaviour on team adaptability, International Journal of Learning and Change',* vol. 5, no. 3/4, pp. 257-270.

Naicker, S, Plange-Rhule J, Tutt RC & Eastwood JB 2009, '*Shortage of healthcare workers in developing countries – Africa*', Ethnicity & Disease, vol. 19, no.1, pp. 60-64.

National Planning Commission 2011, '*National Development Plan: Vision for 2030',* The Presidency, South Africa, ISBN: 978-0-621-40475-3.

Newman, A, Ucbasaran, D, Zhu, F, Hirst, G 2014, '*Psychological capital: A review and synthesis'*, Journal of Organizational behaviour, vol. 35, pp. 120–135, viewed 16 July 2015, http: www.wileyonelibrary.com.

Nieszczezewski, MSN 1996, '*Effects of personality types on nursing management teams',* Journal of Nursing management, vol. 27, no. 3, pp. 58-59.

Ntlabezo, ET, Ehlers, VT & Booyens, SW 2004, '*South African nurse manager's perceptions regarding cost containment in public hospitals'*, Curationis, Department of Health Studies, University of South Africa, Pretoria, pp. 34-42.

Özkahraman, S & Özsoy, S 2011 '*Assessing Core Competencies for Public Health Professionals in Turkey',* HealthMed*,* Journal of Society for Development in New Net Environment in B&H, vol. 5, no. 5, pp. 1170-2276.

Passarelli, G 2011, '*Employees' Skills and Organisational Commitment*', International Business Research, vol. 4 no. 1, pp. 28-42.

Pazos, P 2012, '*Conflict management and effectiveness in virtual teams',* Team performance management, vol. 18, no. 7/8, pp. 401-417.

Perry, C 2012, '*A structured approach to presenting theses: notes for students and their supervisors'*, Australasian Marketing Journal, pp. 1-52.

Peterson, SJ, Luthans F, Avolio BJ, Walumbwa FO, Zhang Z 2011, '*Psychological capital and employee performance: A latent growth modeling approach'*, Personnel Psychology, vol. 64, no. 2, pp.427-450.

Pillay, E 2009, '*Perceived Competencies of nurse managers: A comparative analysis of the public and private sectors in South Africa*', Journal of Business Management, vol. 3, no. 9, pp. 495-503, viewed 04 December 2014, http://www.academicjournals.org/AJBM.

Pillay, R 2010, '*The skills gap in nursing management in South Africa: a sectoral analysis: a research paper*', Journal of Nursing Management, vol. 18, no. 2, pp. 134-144.

Pillay, R 2010a*,* '*Towards a Competency-based Framework for nursing management education*', International Journal of Nursing Practice, vol. 16, no. 6, pp. 545-554.

Queensland Health 2008, '*Modelling Contemporary Nursing and Midwifery, a framework for shaping professional practice*', Queensland Government, viewed 25 November 2014, www.health.qld.gov.au/ocno.

Rego A, Sousa F, Marques C, Cunha, M 2012, '*Authentic leadership promoting employees psychological capital and creativity'*, Journal of business research, no.65, no. 3, pp. 429- 437.

Reichardt, CS & Rallis, SF 1994, '*Qualitative and quantitative inquiries are not incompatible: A call for a new partnership, new directions for program evaluation*', no. 61, Jossey-Bass Publishers.

Richardson, DL, Sherbino, J, Silver, I, Taber, S, Talbot, M & Harris, KA 2010, '*Competency-based medical education: theory to practice',* Medical Teacher*,* vol. 32, pp. 638–645.

Rush, D, McCarthy, G & Cronin, C 2000, '*Report on Nursing Management Competencies*', Department of nursing, University College Cork, Office for Health Management-Facilitating Management for the health Services in Ireland, SHL Ireland, pp. 1-71.

Saunders, M, Lewis, P & Thornhill, A 2009, "*Research methods for business students*", 5th edn, Prentice Hall, Financial Times*,* London.

Scandura, TA & Williams, EA 2002, '*Research methodology in management: current practice, trends and implications for future research',* Academy of Management Journal, vol. 43, no. 6, pp. 1248-1264.

Schneider, Z, Elliott, D, LoBiondo-Wood, G & Haber, J 2003, '*Nursing research: Methods, critical appraisal and utilisation*', 2nd edition, Mosby Elsevier, Sydney.

Schroeter, K 2008, '*Competence literature review*', viewed 15 May 2013, http://www.cc-institute.org.

Sharma, G & Sharma, P 2010, '*Importance of soft skills development in 21st century curriculum',* International Journal of Education & Allied Sciences, vol. 2, no. 2, pp. 39-44.

Shirey, MR 2006, *'Authentic leaders creating a healthy work environment for nursing practice',* American journal of critical care, vol. 15, no. 3, pp. 256-266, viewed 14 July 2015, http://ajcc.aacnjournals.org.

Simpson, A 2007, '*The impact of team processes on psychiatric case management*', Journal of Advanced Nursing, vol. 60, no. 4, pp. 409–418.

Skadiang, B 2009, '*Dimensions of organisational knowledge management (OKM): A study on Malaysian managers using multidimensional USQ KM Scale*', unpublished doctoral dissertation, University of Southern Queensland, Australia, viewed 20 November 2013, http://eprints.usq.edu.au/id/eprint/6252.

Skulmoski, J & Hartman, T 2010, '*Information systems project manager soft competencies: A project-phase investigation',* Project Management Journal, vol. 41 no. 1, pp. 61-80.

Slevitch, L 2011, '*Qualitative and Quantitative Methodologies Compared: Ontological and Epistemological Perspectives*', Journal of Quality Assurance in Hospitality & Tourism, vol. 12, no. 1, pp. 73-81.

South African Nursing Council (SANC) 1992, '*Standards for nursing practice*', SANC, Pretoria, South Africa.

South African Nursing Council (SANC) 2005, '*Nursing Act 33 of 2005, The relationship between scopes of practice, practice standards and competencies*', SANC, Pretoria, South Africa, viewed 02 December 2012, http://www.sanc.co.za.

Stanley, D 2011, 'Clinical Leadership', 1st edition, Palgrave Macmillan, South Yarra, Vic.

Statistics South Africa (Stats SA) 2012, '*Census 2011 Statistical release P0301.4',* Stats SA, Pretoria, South Africa, viewed 25 February 2015, http:// www.statssa.gov.za/publications/P03014/P030142011.

Story, JS, Youssef, CM, Luthans, F, Barbuto, JE & Bovaird, J 2013, '*Contagion effect of global leaders' positive psychological capital on followers: does distance and quality of relationship matter?*' The International Journal of Human Resource Management, vol. 24, no. 13, pp. 2534-2553.

Surakka, T 2008, '*The nurse manager's work in the hospital environment during the 1990s and 2000s: responsibility, accountability and expertise in nursing leadership*', Journal of Nursing Management, vol. 16, pp. 525–534.

Terzioglu, F 2006, '*The perceived problem-solving ability of nurse managers*', Journal of Nursing Management, vol. 14, no. 5, pp. 340-347.

The Star Newspaper 2013, '*It's criminal, specialists vow to leave Joburg hospital over pay cuts',* April 19, pp. 1-2.

Timmins, F 2011, '*Managers' duty to maintain good workplace communications skills*', Nursing Management-UK, vol. 18, no. 3, pp. 30-34.

Trent, R 2004, '*Team leadership at the 100-foot level, Team Performance Management*', vol. 10, no. 5/6, pp. 94-103.

Upenieks, VV 2002, '*Assessing differences in job satisfaction of nurses in magnet and non-magnet hospitals',* Journal of Nursing Administration, vol. 32, no. 11, pp. 564-576.

Uys, LR & Naidoo, JR 2004, '*A survey of the quality of nursing care in several health districts in South Africa',* BioMed Central Nursing, School of Nursing, University of Natal, Durban, South Africa, vol. 3, no. 1, pp. 1-7.

Van Niekerk, SE 2002, *'Personnel development in nursing education: A managerial perspective*', D Litt et Phil thesis, Department of advanced nursing sciences, University of South Africa, Pretoria, South Africa.

Viitanen, E, Wiili-Peltola, E, Tampsi-Jarvala, T & Lehto, J 2007, '*First-line nurse managers in university hospitals - captives to their own professional culture'*, Journal of Nursing Management, vol. 15, pp. 114-122.

Walumbwa, F, Peterson, S, Avolio, B & Hartnell, C 2010, *'An investigation of the relationships among leader and follower psychological capital, service climate, and job performance',* Personnel Psychology, vol. 63, no. 4, pp. 937-963.

Walumbwa, FO & Lawler, JJ 2011,'*Building effective organizations: transformational leadership, collectivist orientation, work-related attitudes and withdrawal behaviours in three emerging economies',* The international journal of Human Resource Management, vol. 14, no. 7, pp. 1083–1101, viewed 09 July 2015.

Wang, H, Sui, Y, Luthans, F, Wang, D & Wu, Y 2014, '*Impact of authentic leadership on performance: Role of followers' positive psychological capital and relational processes',* Journal of Organizational Behavior*,* vol. *35*, pp. 5-21.

Weber, MR, Finley, DA, Crawford, A & Rivera, D 2009, '*An exploratory study identifying soft skill competencies in entry-level managers'*, vol. 9, no. 4, pp. 353-361.

Welman, C, Kruger, F & Mitchell, B 2005, '*Research Methodology',* 3rd edn, Oxford University Press Southern Africa, Cape Town, South Africa.

Wickramasinghe, V & De Zoyza, N 2011, *'Managerial competency requirements that enhance organisational competences: a study of a Sri Lankan telecom organisation',*

International Journal of Human Resource Management, vol. 22, no. 14, pp. 2981-3000.

Yammarino, FJ, Dionne, SD, Schriesheim, CA, Dansereau, F 2008, '*Authentic leadership and positive organizational behavior: A meso, multi-level perspective',* Leadership Quarterly, vol. *19*, no. 6, pp. 693–707.

Zakari, N, Khamis, A & Hamadi N 2010, '*Conflict and professionalism: perceptions among nurses in Saudi Arabia'*, Journal of Nursing Administration, vol. 57, pp. 297-304.

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APPENDICES

Appendix I - Nurse managers competency survey

PART 1 Survey: Participant profile

How to use this instrument:

1. Please respond to the following questions by circling the corresponding number for your answers

1.1 What is your gender? a. Female b. Male	**1.2 What is your length of service as a Nurse? (in years)** a. 0-4 b. 4-10 c. 10-15 d. 15-20 e. Over 20
1.3 What is your age? (in years) a. Less than 25 b. 26-35 c. 36-45 d. 46-55 e. 55+	**1.4 What is your length of service as a nurse manager? (in years)** a.0-4 b. 4-10 c. 10-15 d. 15-20 e. over 20
1.5 What is your race? a. Black b. Indian c. Coloured d. White	**1.6 What is your management level?** a. First level manager (registered nurse managers or deputies in charge of nursing units: Operational manager/unit managers). b. Middle level manager (chief professional nurses engaged in nurse supervisory activities in hospital departments and wards: Assistant Nurse Manager) c. Top level manager (chief professional nurses involved in decision-making and hospital policy formulations: Directors & Deputy Directors).
1.7 What type of hospital do you work in? a. General hospital/public hospital b. Private hospital c. Specialist private hospital d. Specialist public hospital e. Academic public hospital (Level 1 hospital)	**1.8 Which Department/ward are you working in?** a. Surgical b. Paediatric c. Mental health d. Medical e. ICU f. Casualty g. Orthopaedic h. Neonatal i. Maternity j. Other: please state:_____

1.9 Please indicate the number of staff that are currently employed in your department a. Nurses: ---------- b. Administration staff:---------- c. Ward aid/general assistants: ---------- d. Student nurses---------- e. Ward clerks: non-medical staff: ..... f. Other:----------	**1.10 Do you work in a team setting?** a. Yes b. No **1.11 If yes, how many are you in a team?** _____
1. 12 Do all the staff in your department or ward report directly to you? a. Yes b. No **1.13 If no, please indicate who they report to:** a. Matron b. Unit manager c. Director of nursing d. Deputy director of nursing e. Hospital superintendent f. Other: please state----------	

[Developed for this study]

PART 2 Survey: Identifying management competencies of nurse managers in this hospital

How to use this instrument:

1. Please read through each of the listed competencies.

2**. Indicate the level** of importance of the listed competencies *using a scale from 1 to 5, where 1 represents 'not important at all' and 5 'extremely important'* based on your view of its current importance **for your role as a nurse manager (please circle)**

	Competencies	Not important at all	Somewhat important	Important	Very important	Extremely Important
	Communication competencies					
2.1	Communicating a vision, goal and objectives of the hospital.	1	2	3	4	5
2.2	Understanding of multigenerational workforce differences.	1	2	3	4	5
	Leadership competencies					
2.3	Developing a vision, goal and objectives of the hospital.	1	2	3	4	5
2.4	Developing and designing individual and team competency development plans.	1	2	3	4	5
2.5	Leading teams	1	2	3	4	5
	Management competencies					
2.6	Understanding and managing self and others.	1	2	3	4	5
2.7	Exercising emotional self- awareness and self-control.	1	2	3	4	5
2.8	Building team skills	1	2	3	4	5
2.9	Problem solving skills to be able to make accurate clinical judgements and decisions	1	2	3	4	5
2.10	Ability to identify a solution when conflict occurs between nurses.	1	2	3	4	5
2.11	Monitoring and managing individual performance of team members.	1	2	3	4	5
2.12	Managing collective performance and processes of team members.	1	2	3	4	5
2.13	Accessing relevant research data	1	2	3	4	5
2.14	Analysing relevant research data	1	2	3	4	5

	Competencies	Not important at all	Somewhat important	Important	Very important	Extremely Important
2.15	Utilising relevant research data	1	2	3	4	5
2.16	Managing introduced bureaucratic changes.	1	2	3	4	5
2.17	Managing the reaction of staff to the introduced bureaucratic changes.	1	2	3	4	5
2.18	Managing collaboratively with departments/wards and other areas at the hospital.	1	2	3	4	5
2.19	Designing, planning and task co-ordination.	1	2	3	4	5
2.20	Knowing the regulations and standards of practice	1	2	3	4	5
2.21	Managing time effectively	1	2	3	4	5
2.22	Using stress management skills	1	2	3	4	5
2.23	Financial planning and budgetary control.	1	2	3	4	5
2.24	Building trust amongst staff	1	2	3	4	5
2.25	Appropriately staffing and scheduling nurses.	1	2	3	4	5
2.26	Demonstrating computer literacy	1	2	3	4	5
	Education and Training					
2.27	Improving clinical knowledge as a resource for clinicians.	1	2	3	4	5

[Adapted for this study from Crosthwaite 2010]

2.28 Out of the **above-stated list** of competencies, please state three (3) competencies that you think are the most critical. Provide reasons why you think they are important.

Competencies	Reasons
2.28.1.	
2.28.2.	
2.28.3.	

2. 29 Are there any other competencies you would add to the above-stated list? *(Please list a maximum of 3 alternatives)*

_____
_____
_____
_____
_____

PART 3 Survey: Behaviours of effective nurse managers in general

How to use this instrument:

1. Please read the descriptions below describing **other** (not yourself) nurse managers' performance in your hospital.

2. Indicate to what extent you **agree or disagree** with the following statements. Please circle.

	Statement **In this hospital effective nurse managers…**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
	Communication					
3.1	Communicate regularly with nurses and other health care professionals in her/his department or team	1	2	3	4	5
3.2	Use computers for communication and documentation	1	2	3	4	5
3.3	Communicate effectively	1	2	3	4	5
	Leadership					
3.4	Demonstrate professional leadership at all times.	1	2	3	4	5
3.5	Contribute to the implementation of appropriate competency development plans with under-performing nurses.	1	2	3	4	5
3.6	Are committed to the vision of the hospital.	1	2	3	4	5
3.7	Can see the big picture.	1	2	3	4	5
	Human resource process/management					
3.8	Always strive for achieving high standards of patient care.	1	2	3	4	5
3.9	Act responsibly by personally maintaining codes of conduct and ethics.	1	2	3	4	5
3.10	Act as role model for other nurses and members of the health care team.	1	2	3	4	5
3.11	Deal with problems and conflict that affect a team.	1	2	3	4	5
3.12	Ensure a safe working environment.	1	2	3	4	5
3.13	Report unsafe or unprofessional practice behaviour that she/he observes.	1	2	3	4	5
3.14	Investigate the causes of unsafe or unprofessional clinical practice.	1	2	3	4	5
3.15	Follow-up on the results of risk analysis that has been performed.	1	2	3	4	5
3.16	Build trust amongst nurses in the department and ward.	1	2	3	4	5
3.17	Have the ability to conduct a performance appraisal and review of their team members.	1	2	3	4	5
3.18	Provide constructive feedback to nurses in their work group about their clinical practice.	1	2	3	4	5
3.19	Maintain collaborative working relationships with other members of the health care team	1	2	3	4	5
3.20	Actively participates in performance improvement activities.	1	2	3	4	5
3.21	Collect and examine information to improve the quality of nursing.	1	2	3	4	5
3.22	Implement budgetary control measures that save their hospital lots of money	1	2	3	4	5
	Education and training					
3.23	Provide on- the-job training or mentoring to meet any skills gaps causing unprofessional clinical practice.	1	2	3	4	5
3.24	Provide continuous education or guidance to nurses within their team or department	1	2	3	4	5

[Developed for this study]

3.25 Are there comments on behaviours of effective nurse managers in general that you would like to make? If yes, please do so in the space below:

_____
_____
_____
_____

PART 4 Survey: Relevance of Team Nursing Approach in this hospital

Team nursing is an approach whereby a group of professional and non-professional personnel work in a small team under the guidance of a team leader to provide comprehensive nursing care.

How to use this instrument:

1. Please read the statements below about the relevance of team nursing **in this** hospital
2. Indicate to what extent you **agree or disagree** with the following statements. Please circle.

	Statement In this hospital	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
	Benefits of team nursing					
4.1	Team nursing results in optimal risk management across this hospital.	1	2	3	4	5
4.2	Team nursing provides an extra role model for clinicians.	1	2	3	4	5
4.3	Team nursing results in improvement in the quality of care an support given to patients.	1	2	3	4	5
4.4	Team nursing enhances the nurses ability to provide consisten high quality of care to patients allocated to a team.	1	2	3	4	5
4.5	Team nursing ensures improvement in staff satisfaction levels	1	2	3	4	5
4.6	Team nursing reduces the effects of nursing staff shortages	1	2	3	4	5
4.7	Team nursing enhances the supervision of less experienced staff	1	2	3	4	5
	Nursing team leaders					
4.8	Nurse managers, who are team leaders should communicate effectively with other nurses and health professionals in a team.	1	2	3	4	5
4.9	Nurse managers who are team leaders are selected for their leadership skills as opposed to their availability.	1	2	3	4	5
4.10	Nurse managers who are team leaders should have access to staff development programs to enhance their clinical leadership skill.	1	2	3	4	5
4.11	Nurse managers who are team leaders encourage team members to work towards the attainment of the vision of the hospital.	1	2	3	4	5
4.12	The nurse manager who is a team leader should encourage other nurses to take advantage of learning opportunities.	1	2	3	4	5

[Developed for this study]

4.13 Are there comments on the relevance of team nursing approach in this hospital that you would like to make? If yes, please do so in the space below:

_____
_____
_____
_____

PART 5 Survey: Factors influencing performance in this hospital

How to use this instrument:

1. Please indicate to what extent you **agree or disagree** with the following statements as applied to this hospital. Please circle.

	Statement	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
	Leadership					
5.1	Clear performance outcomes ensure excellence and high quality services.	1	2	3	4	5
5.2	In this hospital there is regular constructive and supportive discussions about role expectations and behaviour	1	2	3	4	5
5.3	Hospital administrators set team performance goals for nursing teams to achieve.	1	2	3	4	5
5.4	There are clear operating procedures for team nursing in this hospital.	1	2	3	4	5
5.5	Team nursing in this hospital ensures better provision of health care services.	1	2	3	4	5
5.6	The hospital frequently measures the performance of nurses working in a team or department.	1	2	3	4	5
5.7	Appropriate nursing management skills are vital for ensuring that teams accomplish goals.	1	2	3	4	5
5.8	Each nurse takes full professional accountability in terms of the allocated patient(s).	1	2	3	4	5
	Communication					
5.9	All nurse mangers have access to information about the required standards of performance and behaviour	1	2	3	4	5
	Performance standards					
5.10	In this hospital there is consensus on patient care standards.	1	2	3	4	5
5.11	This hospital should encourage evidence-based nursing practice to maintain high standards of nursing practice.	1	2	3	4	5
5.12	This hospital does benchmark its services with that of other hospitals so as to stay up-date with the changes in health care provision.	1	2	3	4	5
	Human resource practices					
5.13	This hospital allows on-going feedback on ways to improve processes in departments as well as the hospital as a whole.	1	2	3	4	5
5.14	Performance appraisal of nurse managers is an on-going process	1	2	3	4	5
5.15	Recognition and reward for expertise and excellence will result in improved health care service delivery.	1	2	3	4	5
5.16	This hospital needs to have better management of staff.	1	2	3	4	5
5.17	The hospital ensures that the capabilities of nurse managers are consistent with the South African Nursing Council set standards.	1	2	3	4	5
5.18	Risk management is considered in this hospital's strategy to increase patient safety.	1	2	3	4	5
5.19	Hospital administrators view effective implementation of	1	2	3	4	5

	budgetary control measures as enhancing cost containment efforts.					
5.20	Nurse managers view effective implementation of budgetary control measures as enhancing cost containment efforts.	1	2	3	4	5
	Education and training					
5.21	Improving professional practice through on-going training will help ensure efficient delivery of services.	1	2	3	4	5
5.22	In this hospital there is a need to up-skill all nurse managers with no management training.	1	2	3	4	5
5.23	In this hospital there are formal procedures and policies to promote competency development of nurse managers.	1	2	3	4	5
5.24	Current competency development initiatives in this hospital do improve nurse managers' performance on the job.	1	2	3	4	5
	Management competencies					
5.25	Effective management of hospitals will result in higher patient satisfaction levels.	1	2	3	4	5
5.26	Enhancing competence of nurse managers will increase staff retention in this hospital.	1	2	3	4	5
5.27	This hospital needs to have better management of resources.	1	2	3	4	5
5.28	This hospital needs to have better management of clinical supplies.	1	2	3	4	5
5.29	This hospital has identified specific competencies that are characteristic of high performance and success in nursing management.	1	2	3	4	5
5.30	Hospital managers in this hospital have the competencies needed to ensure effective performance of the hospital.	1	2	3	4	5

[Developed for this study]

5.31 Are there comments on factors influencing the effectiveness of this hospital that you would like to make? If yes, please do so in the space below:

_____
_____
_____
_____

PART 6 Survey: Competency development for nurse managers in this hospital

How to use this instrument:

1. Please indicate to what extent you **disagree or agree** with the statements in each section. Please circle.

6A. Competency Development that is currently available in your hospital

	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	Clinical nursing skills					
6.1	There is staff development and support for nurse managers to enhance their clinical leadership skill.	1	2	3	4	5
6.2	Our hospital creates a clinical learning environment for nurse managers.	1	2	3	4	5
6.3	The formal training that nurse managers receive focuses only on clinical nursing theory.	1	2	3	4	5
6.4	Our hospital provides adequate on-the-job learning opportunities for nurse managers.	1	2	3	4	5
6.5	The current clinical course curricula helps learners acquire the management competencies they need.	1	2	3	4	5
6.6	Competency development programs are monitored to ensure best practice in accordance with nursing regulations	1	2	3	4	5
	Generic management					
6.7	Management skills training is of equal importance to clinical training.	1	2	3	4	5
6.8	The formal training that nurse managers receive includes generic management competencies.	1	2	3	4	5
6.9	Nurse managers only learn their management role by observation, experience and by trial and error.	1	2	3	4	5
6.10	Our hospital exposes new nurse managers to formal training on nursing management.	1	2	3	4	5
6.11	Individual management competencies are always determined prior to any competency development intervention.	1	2	3	4	5
6.12	The competency development course content includes leadership skills of nurse managers.	1	2	3	4	5

[Developed for this study]

6. B Competency development that has been completed in this hospital

6.13 How many courses have you received on leadership and/or management in this hospital? (circle one of the options below) (if none skip to 3.15)

a. None b. 1-5 c. 6-10 d. 11-15 e. 16+

6.14 What courses were they: (list a maximum of three most important ones)

a. _____

b. _____

6.15 Did you complete your clinical practical experience in this hospital?

a. Yes b. No

6.16 Have you ever received on-line training related to your managerial work?

a. Yes b. No

6.17 If yes, what? _____

[Adapted for this study from Crosthwaite 2010]

6C. Future competency development that should be in this hospital

	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	Varied delivery modes					
6.18	Competency development for nurse managers should be purely in on-line mode.	1	2	3	4	5
6.19	Competency development of nurse managers should include on-the-job learning and formal training.	1	2	3	4	5
6.20	The hospital should provide more opportunities for on-the-job learning.	1	2	3	4	5
6.21	Nurse educators should use a variety of delivery styles such as case studies, group discussions, role playing etc.	1	2	3	4	5
6.22	Assessment of nurse manager's after competency development interventions should be based on an examination.	1	2	3	4	5
6.23	Conventional face-to-face lecture method should be used to teach requisite nurse management skills	1	2	3	4	5
	Increase in management competencies					
6.24	Competency development initiatives for nurse managers should focus on the development of the individual nurse on professional and personal levels.	1	2	3	4	5
6.25	The course outline for nurse manager training has to be aligned with their requisite core management competencies.	1	2	3	4	5
6.26	Course curricula for nurse managers should also include risk management	1	2	3	4	5
6.27	Training and orientation of nurse managers about cost containment issues should be improved.	1	2	3	4	5
6.28	Management competencies should be taught as an integral part of basic nursing course units.	1	2	3	4	5

[Developed for this study]

6.29 Are there comments on competency development of nurse managers that you would like to make? If yes, please do so in the space below:

_____
_____
_____
_____

This completes the questionnaire. Thank you very much for taking part in the study.

Appendix II - Sample of correspondences

Appendix II - A. Initial Introductory email from researcher

Dear Sir/Madam

My name is Kedibone Seutloadi. Iam a South African (Gauteng resident) pursuing doctoral studies with the University of Southern Queensland in Australia. My research topic is: ***Perceptions on the role and Importance of Soft Skills or relevant Competencies on the performance of Nurse Managers in Hospitals.***

I would like to invite 200 nurse managers in any of Gauteng hospitals to complete a questionnaire by providing input on their perceptions on the requisite competencies for nurse managers and the development of those competencies. I have prepared a survey questionnaire. (See attached). Iam also attaching an invitation participation letter that will be given to possible participants.

I got ethical clearance from the university. See attached copy. Iam now contacting hospitals to request access. I envisage to start data collection in March 2014.

Kindly note the following in terms of the participation of nurse managers:

- The participation will not disrupt their working schedule or working environment as questionnaires will be self-completed at their convenient time.
- Participation is voluntary, there will be no remuneration for participation.
- Anonymity will be ensured. No names of nurse managers or hospitals that will be written on the report.

May you kindly indicate if I can access nurse managers in your hospital to invite them to complete survey questionnaires as part of my doctoral research. Please do contact me should you have any queries or need for more information.

Trust to hear from you.

Warm Regards
Kedibone Seutloadi Twala (DBA Candidate)
Tel: 011 468-1594
Mobile: 082 878 8375
Email: Kedibone.seutloadi@usq.edu.au
Email: Kedibone@diabalwa.co.za (alternative)
Fax: 086 630 3350

Appendix II - B. Survey participant information sheet – formal invitation letter

University of Southern Queensland

Participant Information Sheet

Please read this letter carefully before completing the survey Questionnaire

HREC Approval Number: H13REA240

Invitation to participate in the research: **Perceptions on the role and importance of 'soft skills' or relevant competencies on the performance of nurse managers in hospitals.**

Student Researcher: Kedibone Seutloadi

You are hereby invited to take part in the completion of this survey questionnaire that constitutes part of my Doctor of Business Administration Dissertation. The study focuses on the perceptions of nurse managers in Gauteng hospitals about the requisite competencies for nurse managers and the development thereof.

1. Procedures

Participation in this project will involve:

- completion and return of the one survey questionnaire. See attached. The completion of the questionnaire should take about thirty minutes.

Note the following:

- There will be no compensation for participation. It is purely on voluntary basis and no risks are foreseen.
- The researcher and/or supervisor intends publishing the results of the research in academic publications (e.g., dissertation, journals) and relevant conference(s) and that all data collected will be retained for a minimum of five years following the completion of the research/study.
- If you would like a copy of the Executive Summary of research findings, please email your request to the researcher separately: Kedibone.seutloadi@usq.edu.au

2. Voluntary Participation

- Participation is entirely voluntary. If you do not wish to take part you are not obliged to.
- If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Any information already obtained from you will be destroyed.
- Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with your employer and or the University of Southern Queensland.
- Please notify the researcher through email if you decide to withdraw from this project, Kedibone.seutloadi@usq.edu.au.

3. Authorisation

Your response and return of this survey questionnaire indicates your agreement to participate in the study.

The researcher

Should you have any questions or concerns regarding the progress or conduct of this research, you can contact the researcher:

Ms Kedibone Seutloadi
Mobile: 082 878 8375
Phone 011 468 1594,
Fax: 086 630 3350.
Email: Kedibone.seutloadi@usq.edu.au/Kedibone@diabalwa.co.za

Or
Prof Ronel Erwee (Principal Supervisor)
Phone: +61 7 4631 1173, email: erwee@usq.edu.au
Prof Peter Murray(Associate Supervisor)
Phone +61 7 4631 5538
Email: Peter.Murray@usq.edu.au

If you have any ethical concerns or complaints about how the study is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details:

Ethics and Research Integrity Officer
Office of Research and Higher Degrees
University of Southern Queensland
West Street, Toowoomba 4350
Phone: +61 7 4631 2690
Email: ethics@usq.edu.au

Appendix II - C. In-depth interview participant information sheet – formal invitation letter

University of Southern Queensland

The University of Southern Queensland

Participant Information Sheet

Please read this letter carefully

HREC Approval Number:

Invitation to participate in the research: Perceptions on the role and importance of 'soft skills' or relevant competencies on the performance of nurse managers in hospitals.

Student Researcher: Kedibone Seutloadi

You are hereby invited to take part in an interview that constitutes part of my Doctor of Business Administration Dissertation. The study focuses on the perceptions of nurse managers in Gauteng hospitals about the role and importance of certain competencies on performance.

4. Procedures

Participation in this project will involve:

- Participation in an interview which should take about forty-five minutes to an hour.

5. Voluntary Participation

- Participation is entirely voluntary. If you do not wish to take part you are not obliged to.
- If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Any information already obtained from you will be destroyed.
- Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with your employer and or the University of Southern Queensland.
- Please notify the researcher through email if you decide to withdraw from this project, Kedibone.seutloadi@usq.edu.au.

6. Authorisation

You will be requested to sign a consent form which confirms your agreement to participate in the study.

Note the following:

- **There will be no compensation for participation and no risks are foreseen.**
- **The researcher and/or supervisor intends publishing the results of the research in academic publications (e.g., dissertation, journals) and relevant conference(s) and that all data collected will be retained for a minimum of five years following the completion of the research/study.**
- **If you would like a copy of the Executive Summary of research findings, please email your request to the researcher separately: Kedibone.seutloadi@usq.edu.au**

The researcher

Should you have any questions or concerns regarding the progress or conduct of this research, you can contact the researcher:

Ms Kedibone Seutloadi
Mobile: 082 878 8375
Phone 011 468 1594,
Fax: 086 630 3350.
Email: Kedibone.seutloadi@usq.edu.au/Kedibone@diabalwa.co.za

Or
Prof Ronel Erwee (Principal Supervisor)
Phone: +61 7 4631 1173, email: erwee@usq.edu.au
Prof Peter Murray (Associate Supervisor)
Phone +61 7 4631 5538
Email: Peter.Murray@usq.edu.au

If you have any ethical concerns or complaints about how the study is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details:

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Office of Research and Higher Degrees
University of Southern Queensland
West Street, Toowoomba 4350
Phone: +61 7 4631 2690
Email: ethics@usq.edu.au

Appendix III - Face Validity Feedback

Participant	**A**	*B*	*C*	**D**	**E**	F	G
Date	**14/11/2013**	*27/11/2013*	*27/11/2013*	**28/11/2013**	**29/11/2013**	09/02/2014	10/02/2014
Relevance of questions	**Ok**	*Check context in SA hospitals*	*Ok - check setting in SA hospitals*	**Ok - some questions were duplicated**	**Ok**	Ok	Ok
Clarity of questions	**Ok**	*Refine and simplify some questions*	*Some questions and instructions need to be simplified*	**Rephrase some statements**	**Ok**	Ok	Good
Layout & design of questionnaire	**Ok**	*Ok*	*Divide into sub-sections*	**Ok**	**Ok**	Ok	Good
Length of the questionnaire	**Ok**	*Too long*	*Ok*	**Ok**	**Ok**	A bit long - to be completed over a number of days	Ok
Feasibility of data collection	**Ok**	*Problematic because the questionnaire is too long*	*Need to find ways to maximize response rate*	**Don't know SA situation**	**No comment**	No comment	Yes
Other relevant considerations	**Include questions on evidence-based practice, rostering, integrated risk management,** **Include in-depth-interviews with few nurse managers to expand data** **Review title of the research and of the 6 survey parts**	*Add definitions of concepts e.g. team nursing approach*	*The sequence of rating scales should be aligned to the SPSS sequence*	**Leave out section on team nursing approach** **Delete duplicated questions**	**Questionnaire should be ok after editing & refining some questions**	Edit participant profile section to be aligned to SA hospital context	None
Researcher comments and action	**Added a few more questions on evidence-based practice and rostering** **Titles of the 6 parts of the questionnaire were reviewed and all were refined**	*A number of statements and instructions were simplified. Participant profile section was to be verified in SA in due course* *A definition of Team Nursing Approach was included.*	*The questionnaire was divided into sub-sections. The flow of some questions on Part 6 was improved. Participant profile section was to be verified in SA in due course. Rating scales were changed to 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree As opposed to 1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree*	**Duplicated questions were deleted. Some statements were clarified**	**Agreed that some statements needed to be rephrased.** **Final editing was done**	The profile section was edited - some changes were made to q1.6,q 1.7, q1.9, q1.13	Finalized the survey questionnaire and made preparations for printing

Codes: Bold = USQ academics, Italics = External experts, normal font = South African nurse managers
(Developed for this study based on input from experts and potential participants)

Appendix IV - In-depth interview consent form

University of Southern Queensland

The University of Southern Queensland

Consent Form

Student Researcher: Kedibone Seutloadi

TO: Interview Participants

Full Project Title: Perceptions on the role and importance of 'soft skills' or requisite competencies for nurse managers in hospitals.

- I have read the Participant Information Sheet and the nature and purpose of the research project has been explained to me. I understand and agree to take part.
- I understand the purpose of the study and my involvement in it.
- I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.
- I confirm that I am over 18 years of age
- I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential. I understand that the recording will be stored by the researcher for a minimum of five years following the completion of the research/study and only accessed by the researcher for the purpose of the study.
- I understand that I will be audio-recorded and information recorded will be discarded after five years from the completion of the project.

Name of participant……

Signed……Date…….

If you have any ethical concerns with how the research is being conducted or any queries about your rights as a participant please feel free to contact the University of Southern Queensland Ethics Officer on the following details.

Ethics and Research Integrity Officer
Office of Research and Higher Degrees
University of Southern Queensland
West Street, Toowoomba 4350
Phone: +61 7 4631 2690
Email: ethics@usq.edu.au

Appendix V - List of location and dates of NMCS access and collection at various hospitals

Hospital	Type & profile of hospital	Completed questionnaire	Dates	Access Approval Processes	Questionnaire distribution and completion process
1. PAH 1	-Public hospital -Academic Hospital -Central hospital	37	09 April-12 June 2014	Access granted by hospital CEO & Nursing director	Researcher gave questionnaires to some nurse managers (in a group) to complete. Nurse managers completed the questionnaires immediately and gave them back to the researcher. More questionnaires were distributed by contact staff member and the completed questionnaires were collected by the researcher from the contact people. Others were given to individual nurse managers in the wards by the researcher and were collected by the researcher from those nurse managers.
2. PSH 1	-Specialist hospital -Public hospital	14	22 April-15 May	Access granted by Nursing Manager	Questionnaires were given to nurse managers at a management meeting. A box was left at the contact persons' office for nurse managers to drop off completed questionnaires. The completed surveys were collected from the contact person on the agreed date
3. PDH1	-Public hospital -District hospital	19	04-18 April 2014	Access granted by hospital CEO	Questionnaires were all given to the contact staff member, nurse managers completed the questionnaires at their convenient time and they gave them back to the contact person. The researcher collected completed questionnaires from the contact person.
4. MGH1	-Private hospital	9	30 May & 5 June 2014	Access granted by Nursing Executive Manager (head office) for the group of hospitals & by hospital nursing manager	Questionnaires were all given to the contact person, nurse managers completed the questionnaires at their convenient time and they gave them back to the contact person. The researcher collected completed questionnaires from the contact person.
5. MGH2	-Private hospital	15	23 May 2014	Access granted by Nursing Executive Manager (head office) for the group of hospitals & by hospital nursing manager	Researcher was invited to a nurse managers' management meeting. Gave questionnaires to nurse managers (in a group) to complete. Nurse managers completed the questionnaires immediately and gave them back to the researcher.
6. PDH1	-Public hospital - District hospital	11	19 June 2014	Ethics clearance granted by DoH-Tshwane Research Committee & hospital access granted by CFO	Researcher was invited to a nurse managers' management meeting. Gave questionnaires to nurse managers (in a group) to complete. Nurse managers completed the questionnaires immediately and gave them back to the researcher.
7. NGH1	-Private hospital	10	07 July 2014 & 29 July 2014	Ethics clearance granted by Research Operational Committee of the group of hospitals & hospital access	Researcher gave questionnaires to nurse managers (in a group) to complete. Nurse managers completed the questionnaires immediately and gave them back to the researcher. A few questionnaires were left with the contact staff member to give to those managers who were unavailable. These were

				granted nursing manager	collected after 5 days from the contact person.
8. NGH2	-Private hospital	16	16 July 2014	Ethics clearance granted by Research Operational Committee of the group of hospitals &hospital access granted by nursing manager	Researcher was invited to a nurse managers' management meeting. Gave questionnaires to nurse managers (in a group) to complete. Nurse managers completed the questionnaires immediately and gave them back to the researcher.
9. NGH3	-Private hospital	3	25 June 2014	Ethics clearance granted by Research Operational Committee of the group of hospitals & hospital access granted by nursing manager	Researcher gave questionnaires to nurse managers (in a group) to complete. Nurse managers completed the questionnaires immediately and gave them back to the researcher.
10. NGH4	-Private hospital	10	03-11 July 2014	Ethics clearance granted by Research Operational Committee of the group of hospitals & hospital access granted by nursing manager	Questionnaires were all given to the contact person, nurse managers completed the questionnaires at their convenient time and they gave them back to the contact person. The researcher collected all completed questionnaires from the contact person.
11. NGH5	-Private hospital	14	07 July 2014	Ethics clearance granted by Research Operational Committee of the group of hospitals & hospital access granted by nursing manager	Researcher gave questionnaires to nurse managers (in a group) to complete. Nurse managers completed the questionnaires immediately and gave them back to the researcher.
12. PAH2	-Public hospital -Academic hospital -Central hospital	31	18 July 2014	Ethics clearance granted by MREC & hospital access granted by hospital director of clinical services	Questionnaires were all given to the contact person. The contact person gave the questionnaires to the nurse managers to individually complete in a group set-up. Nurse managers completed the questionnaires immediately and they gave them back to the contact person.
13. NGH6	-Private hospital -Netcare group of hospitals	14	7 August 2014	Ethics clearance granted by Research Operational Committee of the group of hospitals & hospital access granted by nursing manager	Researcher gave questionnaires to nurse managers (in a group) to complete. Nurse managers completed the questionnaires immediately and gave them back to the researcher.
		203			

(Developed for this study)

Appendix VI - In-depth interview protocol

1. Is there a difference between a 'nurse manager' and a 'nursing manager'? If yes please elaborate:

_____
_____
_____
_____
_____

2. May you confirm the core role and responsibilities of managers at the 3 levels (in a hospital set up) as stated. If incorrect kindly indicate the correct:

Level	Core responsibility	Correct/additional core responsibility
First Level(operational manager/unit managers)		
Middle Level Managers		
Top Level Managers		

3. State three competencies that you think are most critical for nurses at management level and give reasons:

Level	Competencies	Reason
Fist Level(Unit Managers)	a.	
	b.	
	c.	
Middle Level Managers	a.	
	b.	
	c.	
Top Level Managers	a.	
	b.	
	c.	

4. What behaviour should effective nurse managers demonstrate?

_____
_____
_____
_____

5. Is the implementation of team nursing approach relevant in our hospitals? (give reasons)

_____
_____
_____

6. What do you regard as key for successful implementation of team nursing?

_____
_____
_____

7. What comments would you make about factors influencing the performance of nurse managers in hospitals?

_____
_____
_____

8. Lets talk about the competency development programs of nurse managers

a. current programs and courses: (probe for curriculum)

b. future programs and courses (probe for appropriate modes of delivery & curriculum)

9. Are there any other comments that you would like to make in relation to the study? If yes, please do so:

_____
_____
_____
_____

THANK YOU FOR YOUR TIME

Appendix VII - Ethical Clearances

Appendix VII – A. USQ ethical clearance

Appendix VII – B. Sample of Clearance from another institution

Appendix VIII – Correlation between nurse manager performance (Part 5 of NMCS) and management competency development (Part 6A of NMCS)

		q6_1	q6_2	q6_3	q6_4	q6_5	q6_6	q6_7	q6_8	q6_9	q6_10	q6_11	q6_12
q5_1	Pearson Correlation	.365**	.326**	.015	.329**	.301**	.325**	.377**	.236**	-.099	.304**	.239**	.421**
	Sig. (2-tailed)	.000	.000	.833	.000	.000	.000	.000	.001	.175	.000	.001	.000
	N	194	195	194	193	191	192	193	190	190	192	190	190
q5_2	Pearson Correlation	.495**	.438**	.111	.532**	.421**	.366**	.270**	.393**	-.057	.406**	.369**	.461**
	Sig. (2-tailed)	.000	.000	.123	.000	.000	.000	.000	.000	.433	.000	.000	.000
	N	194	195	194	193	191	192	193	190	190	192	190	190
q5_3	Pearson Correlation	.319**	.364**	.029	.357**	.350**	.267**	.321**	.337**	-.022	.267**	.250**	.295**
	Sig. (2-tailed)	.000	.000	.692	.000	.000	.000	.000	.000	.765	.000	.001	.000
	N	194	195	194	193	191	192	193	190	190	192	190	190
q5_4	Pearson Correlation	.286**	.278**	.182*	.301**	.262**	.366**	.363**	.352**	.015	.290**	.219**	.301**
	Sig. (2-tailed)	.000	.000	.011	.000	.000	.000	.000	.000	.842	.000	.002	.000
	N	194	195	194	193	191	192	193	190	190	192	190	190
q5_5	Pearson Correlation	.325**	.321**	.073	.416**	.338**	.383**	.404**	.307**	-.023	.369**	.312**	.429**
	Sig. (2-tailed)	.000	.000	.311	.000	.000	.000	.000	.000	.752	.000	.000	.000
	N	193	194	193	192	190	191	192	189	189	191	189	189
q5_6	Pearson Correlation	.305**	.289**	.125	.377**	.381**	.421**	.296**	.280**	.037	.310**	.368**	.386**
	Sig. (2-tailed)	.000	.000	.083	.000	.000	.000	.000	.000	.611	.000	.000	.000
	N	192	193	192	191	189	190	191	188	188	190	188	188
q5_7	Pearson Correlation	.270**	.226**	.109	.322**	.250**	.280**	.326**	.376**	.035	.214**	.310**	.247**
	Sig. (2-tailed)	.000	.002	.132	.000	.001	.000	.000	.000	.635	.003	.000	.001
	N	193	194	193	192	190	191	192	190	189	191	190	189

q5_8	Pearson Correlation	.250**	.277**	.118	.343**	.233**	.229**	.170*	.235**	.099	.283**	.258**	.341**
	Sig. (2-tailed)	.000	.000	.102	.000	.001	.001	.018	.001	.173	.000	.000	.000
	N	194	195	194	193	191	192	193	190	190	192	190	190
q5_9	Pearson Correlation	.365**	.355**	.114	.367**	.204**	.241**	.404**	.502**	-.073	.254**	.164*	.352**
	Sig. (2-tailed)	.000	.000	.113	.000	.005	.001	.000	.000	.321	.000	.024	.000
	N	193	194	193	192	190	191	192	189	189	191	189	189
q5_10	Pearson Correlation	.341**	.353**	.051	.360**	.243**	.317**	.274**	.325**	.008	.255**	.307**	.412**
	Sig. (2-tailed)	.000	.000	.480	.000	.001	.000	.000	.000	.908	.000	.000	.000
	N	192	193	192	192	190	191	192	189	189	191	189	189
q5_11	Pearson Correlation	.301**	.343**	.093	.377**	.373**	.371**	.361**	.239**	-.052	.309**	.238**	.391**
	Sig. (2-tailed)	.000	.000	.200	.000	.000	.000	.000	.001	.476	.000	.001	.000
	N	192	193	192	191	189	190	191	188	188	190	189	189
q5_12	Pearson Correlation	.419**	.360**	.066	.325**	.237**	.367**	.264**	.393**	-.126	.236**	.316**	.320**
	Sig. (2-tailed)	.000	.000	.360	.000	.001	.000	.000	.000	.083	.001	.000	.000
	N	194	195	194	193	191	192	193	190	190	192	190	190
q5_13	Pearson Correlation	.384**	.411**	.114	.474**	.459**	.380**	.334**	.352**	-.062	.356**	.393**	.436**
	Sig. (2-tailed)	.000	.000	.113	.000	.000	.000	.000	.000	.399	.000	.000	.000
	N	193	194	193	192	190	191	192	189	189	191	189	189
q5_14	Pearson Correlation	.435**	.455**	.012	.462**	.431**	.353**	.266**	.343**	-.099	.344**	.429**	.433**
	Sig. (2-tailed)	.000	.000	.863	.000	.000	.000	.000	.000	.173	.000	.000	.000
	N	193	194	193	192	190	191	192	189	189	192	189	189
q5_15	Pearson Correlation	.153*	.249**	.138	.236**	.294**	.236**	.359**	.192**	.038	.131	.240**	.260**

	Sig. (2-tailed)	.034	.000	.054	.001	.000	.001	.000	.008	.600	.069	.001	.000
	N	194	195	194	193	191	192	193	190	190	192	190	190
q5_17	Pearson Correlation	.320**	.254**	.018	.286**	.295**	.351**	.173*	.336**	-.006	.231**	.289**	.390**
	Sig. (2-tailed)	.000	.000	.804	.000	.000	.000	.016	.000	.936	.001	.000	.000
	N	194	195	194	193	191	192	193	190	190	192	190	190
q5_18	Pearson Correlation	.317**	.316**	.063	.296**	.274**	.412**	.230**	.343**	-.087	.182*	.301**	.312**
	Sig. (2-tailed)	.000	.000	.387	.000	.000	.000	.001	.000	.235	.012	.000	.000
	N	193	194	193	192	190	191	192	189	189	191	189	189
q5_19	Pearson Correlation	.130	.191**	.046	.111	.230**	.289**	.237**	.274**	-.026	.267**	.143*	.268**
	Sig. (2-tailed)	.071	.008	.525	.126	.001	.000	.001	.000	.721	.000	.049	.000
	N	193	194	193	192	190	191	192	189	189	191	189	189
q5_20	Pearson Correlation	.214**	.224**	.071	.245**	.252**	.262**	.208**	.337**	.009	.194**	.248**	.185*
	Sig. (2-tailed)	.003	.002	.326	.001	.000	.000	.004	.000	.899	.007	.001	.011
	N	194	195	194	193	191	192	193	190	190	192	190	190
q5_21	Pearson Correlation	.195**	.226**	.020	.292**	.223**	.249**	.333**	.229**	.026	.089	.262**	.305**
	Sig. (2-tailed)	.006	.001	.781	.000	.002	.000	.000	.001	.725	.217	.000	.000
	N	194	195	194	193	192	193	194	191	191	193	191	191
q5_23	Pearson Correlation	.523**	.462**	.148*	.519**	.435**	.474**	.325**	.499**	-.049	.431**	.419**	.512**
	Sig. (2-tailed)	.000	.000	.039	.000	.000	.000	.000	.000	.497	.000	.000	.000
	N	194	195	194	193	192	193	194	191	191	193	191	191
q5_24	Pearson Correlation	.602**	.483**	.073	.570**	.400**	.423**	.287**	.456**	-.053	.425**	.447**	.512**
	Sig. (2-tailed)	.000	.000	.311	.000	.000	.000	.000	.000	.467	.000	.000	.000
	N	193	194	193	192	191	192	193	190	190	192	190	190

q5_25	Pearson Correlation	.337**	.222**	.121	.170*	.173*	.131	.352**	.238**	.010	.147*	.107	.170*
	Sig. (2-tailed)	.000	.002	.092	.018	.016	.070	.000	.001	.886	.042	.141	.019
	N	194	195	194	194	192	193	194	191	191	193	191	191
q5_26	Pearson Correlation	.235**	.186**	.125	.080	.145*	.185*	.186**	.258**	.112	.062	.115	.131
	Sig. (2-tailed)	.001	.009	.083	.270	.044	.010	.010	.000	.122	.394	.112	.070
	N	195	196	195	194	192	193	194	191	191	193	191	191
q5_27	Pearson Correlation	.028	.057	.192**	-.047	.038	-.079	-.027	-.039	.296**	-.089	.017	-.057
	Sig. (2-tailed)	.703	.432	.008	.521	.603	.278	.713	.597	.000	.222	.822	.437
	N	192	193	192	191	190	190	191	188	188	190	189	189
q5_28	Pearson Correlation	.038	.091	.189**	.030	.072	-.038	-.039	.021	.290**	-.112	-.015	-.029
	Sig. (2-tailed)	.604	.214	.010	.687	.327	.612	.596	.778	.000	.129	.836	.697
	N	187	188	187	186	185	185	186	184	183	185	184	184
q5_29	Pearson Correlation	.441**	.368**	.107	.404**	.430**	.466**	.274**	.277**	.023	.358**	.387**	.364**
	Sig. (2-tailed)	.000	.000	.137	.000	.000	.000	.000	.000	.749	.000	.000	.000
	N	193	194	193	192	191	191	192	189	189	191	190	190
q5_30	Pearson Correlation	.438**	.333**	.067	.420**	.286**	.336**	.230**	.315**	.000	.386**	.381**	.381**
	Sig. (2-tailed)	.000	.000	.356	.000	.000	.000	.001	.000	.996	.000	.000	.000
	N	194	195	194	193	191	192	193	190	190	192	190	190

. Correlation is significant at the 0.01 level (2-tailed).

 # Solid Tick lines indicates sample of items that did correlate

(Source: SPSS report)