THE EXPECTED ROLE OF THE CRITICAL CARE CLINICAL NURSE SPECIALIST IN PRIVATE HOSPITALS

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DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained herein is my own original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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ABSTRACT

The trend towards specialisation in nursing has resulted in the development of the role of the Clinical Nurse Specialist (CNS) since the 1960s and 1970s in North America and the United Kingdom respectively. A Clinical Nurse Specialist should demonstrate excellent skills in leadership, communication, critical thinking, clinical and collaborative ethical decision-making, as well as mentoring. Research done internationally has shown that advanced practice nursing leads to higher patient satisfaction and compliance, fewer hospitalisations and shorter length of stays. The development of the CNS role in SA is slow in implementation. The South African Qualifications Authority has only recently published qualification rules for a master's certificate and master's degree in Nursing for advanced specialist nurses in SA. This situation led to the following research question:

What is the expected role of the Critical Care Clinical Nurse Specialist in private hospitals in the northern and southern suburbs of the Cape Peninsula, South Africa?

A non-experimental, explorative, descriptive study with a quantitative orientation was conducted in eight private hospitals in the Cape Peninsula. Through non-probability sampling 73 critical care health professionals (critical care professional nurses, clinical nurse specialists, nursing managers, unit managers, nurse educators, clinical facilitators, clinical coordinators and doctors) out of a population of 170 critical care health professionals participated in the study. A survey tool was designed and validated to collect the data. Quantitative data was analysed through Statistica® and qualitative data was analysed thematically.

It was found that 81% of the participants agreed that Clinical Nurse Specialists should be appointed in the South African critical care environment as soon as possible to improve patient outcomes, to contribute to safer nursing care, to relieve work stress of shift leaders and bedside nurses and to improve the professional status of nursing.

It is recommended that greater awareness regarding the Clinical Nurse Specialist should be developed. The relevant educational requirements should be finalised and a clear job description should be compiled. Nursing managers should appoint Clinical Nurse Specialists in each critical care unit as soon as possible.

Key words: Clinical Nurse Specialist; critical care environment; advance practice nursing; private hospital

OPSOMMING

Die rol van die Kliniese Verpleegspesialis het as uitvloeisel van spesialisering in verpleging sedert 1960 en 1970 in Noord-Amerika en Groot-Brittanje onderskeidelik ontwikkel. `n Kliniese Verpleegspesialis behoort die volgende eienskappe te openbaar: uitmuntende vaardighede met betrekking tot leierskap, kommunikasie, kritiese denke, kliniese en etiese besluitneming en mentorskap. Internasionale navorsing het aangetoon dat gevorderde verpleegkunde tot `n hoër vlak van pasiënttevredenheid en nakoming van behandelingsvoorskrifte, minder hospitalisasie en korter hospitaalverblyf aanleiding gee. Die ontwikkeling van die rol van die Kliniese Verpleegspesialis in Suid-Afrika geskied langsaam. Die Suid-Afrikaanse Kwalifikasie-Outoriteit (SAKO) het eers onlangs die reëls vir `n meestersertifikaat en meestersgraad in Verpleegkunde vir gevorderde spesialisverpleegkundiges gepubliseer. Hierdie situasie het tot die onderstaande navorsingsvraag aanleiding gegee:

Wat is die verwagte rol van die Kritiekesorg- Kliniese Verpleegspesialis in privaathospitale in die noordelike en suidelike voorstede van die Kaapse Skiereiland, Suid-Afrika?

`n Nie-eksperimentele, beskrywende studie met `n kwantitatiewe benadering is in agt hospitale in die Kaapse Skiereiland onderneem. Deur nie-waarskynlikheids-, toevallige steekproefneming is 73 professionele betrokkenes by kritiekesorggesondheid (professionele kritiekesorgverpleegkundiges, kliniese verpleegspesialiste, verpleegbestuurders, eenheidsbestuurders, opvoeders in verpleegkunde, kliniese fasiliteerders, kliniese koördineerders en dokters) uit `n populasie van 170 professionele betrokkenes by kritiekesorggesondheid in die studie ingesluit. `n Vraelys is ontwerp en gevalideer vir die insameling van data. Kwantitatiewe data is deur middel van Statistica® ontleed terwyl die kwalitatiewe data tematies ontleed is.

Daar is gevind dat die meerderheid van die deelnemers saamgestem het dat Kliniese Verpleegspesialiste so gou moontlik in die kritiekesorgomgewing in Suid-Afrika

aangestel behoort te word. Die Kliniese Verpleegspesialis dra by om pasiënt-uitkomste te verbeter, om tot veiliger verpleegsorg by te dra, om werkspanning van skofleiers en verpleegsters te help verlig en om die professionele status van verpleging te verbeter.

Daar word aanbeveel dat daar groter bewusmaking aangaande die Kliniese Verpleegspesialis moet wees. Vereistes vir opleiding behoort gefinaliseer te word en `n duidelike werksbeskrywing moet opgestel word. Verpleegbestuurders behoort Kliniese Verpleegspesialiste so gou moontlik in die kritiekesorgomgewing aan te stel.

Sleutelwoorde: Kliniese Verpleegspesialis; kritiekesorgomgewing; gevorderde verpleegkunde; privaathospitaal

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To my husband, Chris,
and to my children, Cilliers and Laetitia, for their constant support and encouragement.
To my mother, and in memory of my father, who taught me the ethics of basic hard work.

ABBREVIATIONS

APN	Advanced Practice Nurse
CACCN	Canadian Association of Critical Care Nurses
CCU	Critical Care Unit
CNS	Clinical Nurse Specialist
ICN	International Council of Nurses
NACNS	National Association of Clinical Nurse Specialists
NP	Nurse Practitioner
RN	Registered Nurse
SA	South Africa
SANC	South African Nursing Council
SAQA	South African Qualifications Authority

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CHAPTER 1: INTRODUCTION

1.1 Rationale

Advanced practice nursing in the United States of America began in 1943 with the development of the role of the nurse clinician through the work of Frances Reiter. This development set the precedent for advanced practice nurses to have additional education and training in post-basic nursing preparation. By 1960 the term 'nurse clinician' had evolved to 'Clinical Nurse Specialist' (Lubkin & Larson, 2002). The trend towards specialisation in nursing has resulted in the development of the role of the Clinical Nurse Specialist (CNS) since the 1960s and the 1970s in North America and the United Kingdom respectively (Hamric, Spross & Hanson, 2005).

To properly introduce the concept of the CNS it is important to clarify other terms that are used in the literature related to specialist nursing. The term 'Advanced Practice Nursing' (APN) is used for specialised (expert) nursing in a specific area or discipline of nursing. Advanced practice nursing is an umbrella term that incorporates the Nurse Practitioner and the Clinical Nurse Specialist (CACCN, 2002):

- The Nurse Practitioner (NP) usually functions within her own practice (mostly outside of the hospital setting), diagnoses client illnesses and monitors patients, promoting patient satisfaction with her broad knowledge (CACCN, 2002).

- The CNS is autonomous, but works in collaboration with patients and other health care professionals, namely allocated nurses at the bedside, doctors, radiographers, physiotherapists, and dieticians. The CNS typically functions in a collaborative relationship with physicians, mostly within hospitals (CACCN, 2002).

South Africa has lagged behind in the development of these nurse specialist roles. In 1972 in the department of human genetics in the Groote Schuur Hospital, Cape Town, specialised training was rendered to a professional nurse in the field of genetics. Shortly thereafter similar unique nursing requirements were experienced in areas of cardiology, organ transplant and stomal therapy (McAllister & Beatty, 1989). 'On the job' training assisted these nurses in meeting the needs of their specific roles, but the training and professional status were not formally recognised. Nurses who undergo postgraduate or post-basic training in critical are nursing are not registered as clinical nurse specialists with the professional body.

According to the Canadian Association of Critical Care Nurses (CACCN) the CNS should demonstrate *"superior leadership, communication, critical thinking, clinical decision-making, collaborative, ethical decision making and mentoring skills"* (CACCN, 2002, p. 1). These skills point to an experienced, versatile, nursing specialist who practises her/his expert skills in the multidisciplinary team of critical care health professionals. The CNS in the critical care environment has to direct and execute these multi-faceted responsibilities.

The CACCN (2002) stipulated that there are five interrelated components of the Scope of Practice woven into the CNS`s everyday functioning, namely that of practitioner, educator, consultant, researcher and leader. Urquhart, Roschkov, Rebeyka and Scherr (2004) have pointed out that the CNS plays a leading role in the development of policies, standards of care and clinical programmes. Internationally the CNS is seen as an important link in the collaboration of the multidisciplinary team and as far as leadership and clinical decision making is concerned.

The CNS should have expert research skills and should encourage research in the critical care unit (CACCN, 2002). A CNS in the critical care environment will thus have the responsibility to initiate research and motivate the nursing team to be part of the research team.

According to Whitcomb (2006) Advanced Practice Nursing can be grouped into four major categories, namely that of nurse anaesthetist, nurse midwife, nurse practitioner

and clinical nurse specialist. For the purpose of this study, which is directed at the critical care environment, the main focus will be on the CNS as opposed to the Nurse Practitioner, as their roles often overlap and cause confusion (Lorentzen & Hooker, 1996).

Some older literature was used in this study to describe the role and challenges in the development of the CNS, both internationally and in South Africa. Current authors (e.g. Fulton & Baldwin, 2004; Myfanwy, 2005; CACCN, 2002; Jitna, 2008; Henderson, 2004) also quoted earlier authors as the older research studies still carry weight and have apparently to date not been repeated. The CACCN (2002), in the conclusion of its position statement, supports the statement of the researcher that not much recent research is available regarding the role of the CNS. Myfanwy (2005) states that it is surprising that few studies came from the USA, notwithstanding the long history of nursing specialists and advanced nursing roles.

Since clear boundaries and specific job descriptions have not been determined internationally for all advanced nursing professionals, the role of the CNS remains a source of disagreement and confusion (Redekopp, 1997). Attempts have been made to combine the roles of the Nurse Practitioner and the CNS, but this has not removed the ambiguity surrounding these titles. Page and Arena (1993) argue that the two roles should not be merged. Dowling (2000) claims that the lack of understanding of the CNS role and the resulting ineffective utilisation of the CNS could limit the development of this role. It is therefore important that the CNS should have a defined understanding of her/his role. Her/his skills and competencies should be measured (evaluated) regularly, as the advanced skills may increase with experience.

Notwithstanding the confusion of roles, the CNS as an Advanced Practice Nurse plays an important role internationally and empirically documented positive outcomes are associated with CNS practice nursing. Patient outcomes such as the resolution of pathological conditions, the improvement of patient functional status, and clinical outcomes have been found to be equivalent to, or slightly better than where the patient is in the care of physicians (Wheeler, 2000; Lombness, 1994; Crimlisk, Bernardo & Blansfield, 1997; Kaye, Ashline & Erickson, 1999).

The CNS is involved in indirect outcomes, reflected in the quality care delivered by other nurses, as the CNS guides these nurses at the bedside. The CNS is *"mainly institution-based and functions in acute care for short periods of the patient's recuperation"*. She/he concentrates on *"body systems and related nursing interventions with deep, focused knowledge"* (Lindeke, Canedy & Kay, 1997, p. 285). Consequently the CNS has an indirect effect on the positive patient outcomes, as she/he guides and assists the bedside nurses.

1.2 Problem statement

1.2.1 Ambiguity regarding the role of the CNS

The contemporary understanding regarding the role of advanced practice nursing remains unclear, as some authorities want to merge the roles of the CNS and the Nurse Practitioner (Elder & Bullough, 1990). However, literature reflects the concern that the unique role contributions of the CNS may be lost if the CNS and the NP roles are merged (Page & Arena, 1993).

Recently the researcher observed two different forms of scope of practice of CNSs in The Cape Peninsula:

- The one form of CNS functions within the critical care environment, but mainly in the rest of the hospital wards as specialist, for example as stomal, wound, continent, cardiac rehabilitation and diabetes experts similar to the roles they fulfilled since the 1970s. It appears that in South Africa the label CNS is being attached to these professional nurses (stomal, wound and continent experts) to appease them. However, this creates a platform for greater role confusion as it is incompatible with the requirements for a clinical master's degree internationally and those requirements set by the South African Qualifications Authority (2007). In terms of the previous discussion these nurses may appropriately be termed Nurse Practitioners.

- The second form of CNS (found only on three occasions in the eight private hospitals where the research took place during 2008 and 2009) functioned as an expert in the critical care environment to be a role model for the bedside nurses by guiding and training them. They concentrated on safe, effective patient care, with early recognition of problems or deterioration in the patients` condition, and early critical clinical decision-making to improve patient outcomes. This description seems to be more in line with the recognised CNS role in the critical care environment.

The Advanced Practice Professional Nurses Joint Dialogue Group (APRN, 2008, p. 20) noted the following: *"The ultimate goal of licensure, accreditation, certification and education is to promote patient safety and public protection."* In the recommendations a need is reflected *"to collaborate among regulatory bodies to achieve a sound model and continued communication with the goal of increasing the clarity and uniformity of APRN regulation"* (APRN, 2008, p. 20). Title and role ambiguity should be eliminated by licensure through professional regulating bodies and accreditation of the CNS position by Health Education Institutions. It is recommended that the SANC perform the licensure of the CNS position

1.2.2 Educational requirements

There is still no agreement regarding the requirements for educational preparation for the CNS. The Canadian Association of Critical Care Nurses has suggested that the CNS should be educated to a master's degree level (CACCN, 2002). In contrast with this view Jitna (2008) argues that this does not mean that nurses without such an academic qualification (master's degree) cannot engage in advanced nursing practice.

Since the 1970s professional nurse experts (this being defined by experience) were appointed in specialist units in South Africa in larger government hospitals (e.g. the Groote Schuur and Tygerberg hospitals). The units of specialty where these CNSs in South Africa have practised since the 1970s until now are: cardiac rehabilitation, continence, diabetes, human genetics, immunology, infection control, infertility,

oncology, pap screening, rheumatology, stomal therapy and transplant coordination. These qualified specialist nurses later adopted the title CNS, but they were mostly self-taught and attended seminars and congresses of their own accord (McAllister & Beatty, 1989). Since very little formal training took place, by 1988 only one CNS had a master's degree in South Africa (Du Preez, 1988).

There is globally a lack of agreement as to the definition of the CNS and a wide variation exists in the qualification requirements. The CACCN (2002, p. 1) recommends that the CNS should hold *"a master's degree or doctorate with clinical expertise in critical care nursing".* Thus, in South Africa, as in the rest of the world, the same problems are evident there is no advanced degree preparation and no formal advanced clinical training.

The South African Qualifications Authority (SAQA) has only recently published qualification rules for a master's degree in Nursing (SAQA, 2007). The requirements for a master's degree with current clinical experience for the CNS, as preferred by the CACCN (2002), are not currently met in South Africa.

1.2.3 Nursing shortages and the CNS

According to Subedar (2005) an exodus of nursing staff from South Africa to work abroad has occurred, with 68,5% of registered professional nurses registered in SA from 1996 to 2004 unaccountable for as to where they are practising. An increased workload is being experienced due to the quadruple burden of disease with nurses being the main primary health care service providers (Subedar, 2005). This dovetails with having fewer professional nurses available for the critical care environment.

South African professional nurses strive for improved working conditions as the workload at the bedsides of the patients has increased tremendously due to the scarcity of professional nurses (Gillespie, Kyriacos & Mayers, 2006). This scarcity is reflected in Table 1.1:

Table 1.1 Numbers of nursing staff in the Western Cape, South Africa					
Nurse Categories	**Critical care qualified professional nurses**	**Critical care experienced professional nurses**	**Enrolled Nurses**	**Enrolled Nurse Auxiliaries**	**Total**
Public Sector	118	289	127	234	768
Private Sector	204	204	81	46	535
Total	322	493	208	280	1303

Source: Gillespie, Kyriacos & Mayers (2006)

Gillespie et al. (2006) argue that in the Western Cape the current supply of nurses does not meet the demand of the critical care units and that the situation can be described as a crisis. Out of 768 nurses in the public sector's critical care units, 118 (15,4%) were critical care qualified professional nurses, while out of 535 nurses in the private sector, 204 (38,1%) were critical care qualified professional nurses. Therefore in the Western Cape 1 303 nurses were permanent employees in critical care units in both the public and the private sector with 322 (24,7%) critical care qualified professional nurses.

According to a calculation by Gillespie et al. (2006) the Western Cape critical care units have a deficit of 72% of professional nurses in the public sector and a deficit of 80% in the private sector, which amounts to an actual shortage of 2 711 professional nurses in both sectors. This is of concern in the light of Zondagh's (2004) statement that insufficient staffing results in increased errors, and patient risk. Stanton (2004) stated that staff shortages lead to patient complications.

A dedicated medical director as the head of a critical care unit, preferably a critical care specialist (intensivist), contributes to more effective functioning of any critical care unit. However in the Western Cape there were only five registered intensivists in 2004 (Gillespie et al. 2006). In the light of the abovementioned nursing and intensivist shortages a CNS in a critical care unit could play an important role in improved patient outcomes and nursing staff support.

According to Stanton (2004) significant associations exist between lower levels of nurse staffing and higher rates of pneumonia, lung collapse, pressure ulcers, thrombosis after major surgery, pulmonary collapse after surgery, longer hospital stays and a 30-day mortality. The presence of a CNS and her/his skills and abilities in clinical decision making may help to relieve the workload and nurse stress, resulting in improved patient care.

The researcher has experienced that the shift leader in the critical care unit is often occupied with having the sickest patient on the unit, as she is often the only critical care qualified professional nurse on that shift after hours. With this responsibility of having an unstable patient herself, she cannot efficiently supervise, guide and train inexperienced nurses in this complex critical care environment. The nurse educators cannot render the full support that the shift leaders expect as they are usually dedicated to more than one critical care unit as well as to wards; and in some hospital groups to more than one hospital. The expert guidance and knowledge of a CNS who could provide effective clinical decision-making and leadership in the critical care unit, thereby also supporting the shift leader, would bridge this personnel support gap.

According to Bell (2005) the relationship between the medical profession and the nursing profession in the critical care units has become less defined as a result of staff shortages, budget constraints, loss of critical care qualified and experienced professional nurses and experienced critical care doctors; and increasing patient volumes and quality of care. Bell (2005, p.1) emphasises that *"[t]his increases the responsibilities of the critical care nurse while resources and support systems decrease".* The CNS should be part of the team in the critical care unit to help alleviate these stressors for the critical care nurse and to promote improved patient outcomes.

The possible development of the career path to CNS level may improve working conditions by providing role models, promoting best practices, developing and guiding evidence-based nursing, providing expertise in critical and ethical decision making and facilitating hands-on training at the bedside of the patient.

1.2.4 Development of a clinical career path

The CNS *"is considered an expert at the leading edge of knowledge and technology but unfortunately as there is no specific career ladder she may feel that her contribution to nursing goes unrecognised by management and by her colleagues"* (McAllister & Beatty, 1989, p. 43). Therefore, it is important that attention is paid to the development of the CNS`s career path.

Currently professional nurses, who have post-basic or post-graduate qualifications in critical care nursing with significant clinical and leadership experience, leave the critical care environment and move into training and management positions for promotion. This is due to the professional dead end with regard to promotion and remuneration. Few South African publications are available on the subject of the CNS, but Commerford et al. (1989), as quoted by Wood and Jacobs (1989) in a letter to the editor of the *SA Medical Journal*, stated that a ladder (a proper career structure) should be mandatory to encourage the advanced nurse to remain at the bedside. If this does not happen, it will lead to the continual loss through the promotion of advanced trained nursing staff into administration, education or out of nursing altogether.

In conclusion, the literature reports that a realistic and progressive career structure will allow for recognition of the CNS knowledge, skills and clinical contribution potentially resulting in the return of experienced role models to the care provided at the patient's bedside.

1.2.5 Work challenges for the CNS

The scope of nursing practice has broadened; this, together with the trend towards specialisation, has resulted in the development of nurses who specialise in particular disciplines. The forces involved in the above, namely technology, shortages of health care personnel, expansion of scientific knowledge and increased focus on public

health care needs, are becoming more complex (Vitello-Cicciu, 1984). More clinical nurse specialists are therefore needed to keep abreast of advancements in the field.

Research done internationally has shown that advanced practice nursing leads to higher patient satisfaction and compliance, fewer hospitalisations and shorter length of stays (Wheeler, 2000 & Lombness, 1994).

The work of the Advanced Practice Nurse, including the CNS, enhances the overall safety of the health care delivery system and patient care. However, nursing is in a curious position. According to Huston (1996) health care market forces are downsizing hospitals and eliminating registered nurse positions while procuring larger numbers of unlicensed assistive staff. This is a grim picture as the current tendency is to discharge patients home earlier; therefore the patients require advanced care to assure fast and effective recovery (Huston, 1996).

Experience that the researcher had in a critical care unit where a CNS was appointed for a year, made it clear that open communication regarding the role of the CNS is vitally important in the critical care environment. The allocated nurses at the bedside have to be informed about the CNS role before the CNS is appointed. The CNS has to be interviewed and screened properly to ensure that a clinical expert is appointed who has good people skills to guide and teach, but not offend the bedside nurses; otherwise the CNS may be met with distrust, conflict and confusion in the critical care environment.

According to Marshall and Luffingham (1998) problems may occur if other critical care health professionals feel threatened by a CNS`s monitoring role, or if the CNS is thought to deskill other nurses. The CNS`s role is poorly understood by other health care professionals and persons managing the CNS services. Hence, greater awareness should be spread to health care professionals regarding the role and the benefit of positive patient outcomes where the CNS is employed.

In the light of the above and the development of the role of the CNS in SA it is vital to understand how the professional nurses and other health care professionals in the

critical care environment perceive the impact, possible benefits and challenges of this nursing role.

1.3 Research question

According to Burns and Grove (2007, p. 115) a research question "is a clear, concise interrogative statement that is worded in the present tense, includes one or more variables (or concepts), and is expressed to guide the implementation of quantitative and qualitative studies".

Based on practice experience and the discussion provided, the following research question was posed:

What is the expected role of the Critical Care Clinical Nurse Specialist in private hospitals in the northern and southern suburbs of the Cape Peninsula, South Africa?

1.4 Research goal

According to Burns and Grove (2007, p. 33) "the goal of a study might be to identify, describe, or explain a situation; predict a solution to situation; predict a solution to a situation; or control a situation to produce positive outcomes in practice".

The goal of this study was to determine the expectations of critical care health professionals regarding the role of the CNS within the context of critical care nursing.

1.5 Conceptual framework

According to Polit, Beck and Hungler (2005) a framework is the conceptual underpinning of a study. Burns (2007, p. 540) defines a framework (in the context of nursing) as an abstract *"that guides the development of the study, is tested in the study, and enables the researcher to link the findings to nursing`s body of knowledge"*.

The flow diagram of the conceptual framework (Diagram 1.1) is structured as an overview of the role of the CNS in the critical care environment. The influence of the CNS on critical care health professionals working in collaboration with the CNS and the effects on patients and nursing staff are reflected. The framework, which was designed by the researcher, illustrates the potential positive results from the functions of a CNS in an ideal situation in the workplace.

The CNS is portrayed as the centre or starting point in the diagram. She/he initiates the positive cascade of reactions and effects (in the ideal situation) derived from the expert knowledge, skills and effective approach summarised in the diagram.

Thus, the first part of the diagram pertains to the required characteristics of the CNS and the role that the CNS will have to play to reach the point of transferring the relevant skills, knowledge and approach to the critical care health professionals (unit manager, shift leaders, bedside nurses and the multi-disciplinary team) in the critical care environment. These characteristics are described by Hamric, Spross and Hanson (2005). According to these authors the CNS should exhibit the competencies of expert guidance and coaching, clinical and professional leadership, collaboration skills, clinical and professional leadership and change agent skills.

Parallel to the required characteristics for the CNS, is the fact that she/he has to function within the boundaries of her/his registration requirements and the Scope of Practice Regulation 2598 of the Nursing Act (Act No. 33 of 2005). The CNS delivers multifaceted practice roles with direct and indirect benefits to patient care and staffing problems.

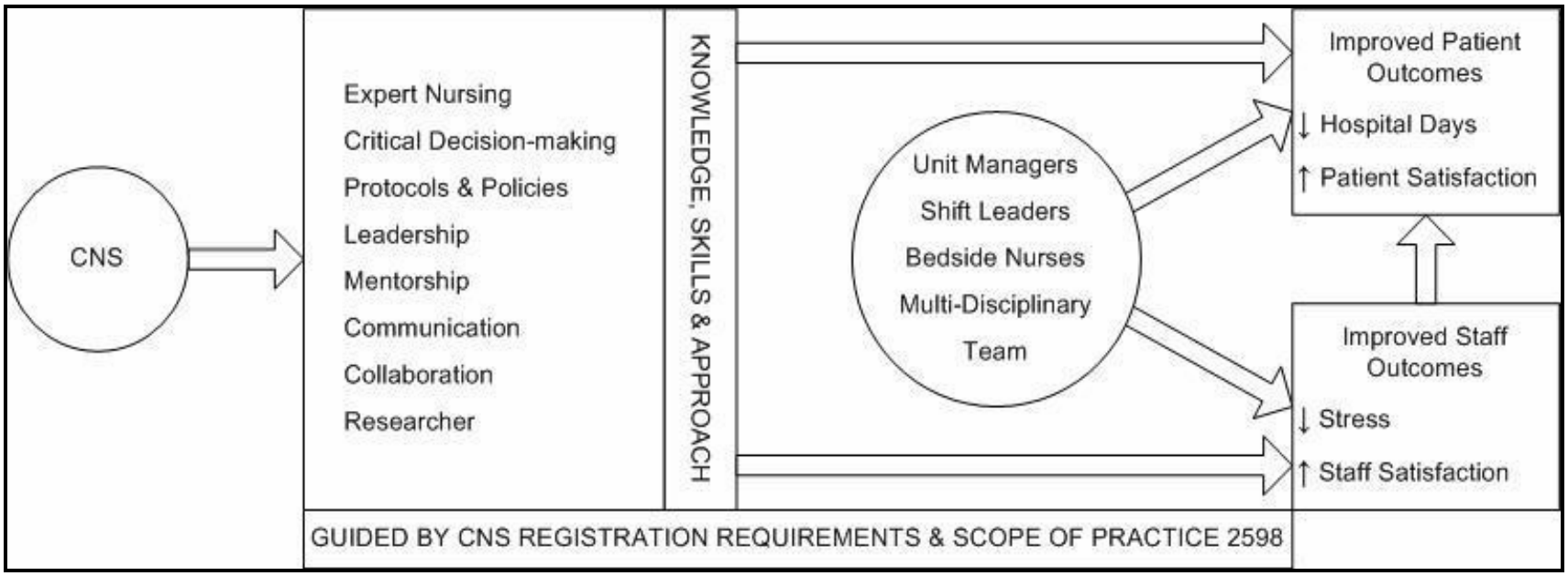
The manner by which the CNS approaches the critical care health professionals will play a pivotal role regarding their responses and their openness to guidance, suggestions and interventions from the CNS. Collaboration and daily liaison between the CNS and the unit manager should bring about a firm foundation of trust, harmony in the unit, job satisfaction for the nursing staff, and improved patient outcomes. Winning the trust of the patients and relatives is of utmost importance for the CNS to

reach the goal of promoting improved patient outcomes, with fewer hospital days and improved patient satisfaction, as was noted by Wheeler (2000) and Lombness (1994).

Positive interaction between the CNS and the other critical care health professionals, namely the unit manager, bedside nurses and the multi-disciplinary team, is of vital importance if the CNS endeavours to share her/his knowledge with the nursing staff successfully and form part of the multi-disciplinary team.

The positive interaction in the critical care unit with the expert skills and knowledge of the CNS should reduce patients` hospital days and increase patient satisfaction (Wheeler 2000, Kaye et al., 1999; Lombness, 1994), and reduce work stress for the staff, and increase staff satisfaction (Bell, 2005).

Diagram 1.1 Flow diagram of the conceptual framework



1.6 Objective

The objective of this study was the following:

Describe the opinions of health care professionals working within the critical care environment regarding their expectations of the CNS role with respect to the following:

- the scope of practice and professional status
- education and qualifications
- clinical practice
- financial and quality impact on the hospital
- impact on collaborative interdisciplinary relationships

1.7 Assumptions

According to Burns and Grove (2007, p. 531) assumptions are *"statements taken for granted or considered true, even though they have not been scientifically tested".* Burns and Grove (2007, p. 37) state that *"the researcher's recognition of assumptions is a strength of the study and not a weakness".* The logic of the study is influenced by assumptions and the recognition of assumptions may lead to more rigorous study development (Burns & Grove, 2007).

The assumptions listed below regarding the role of the CNS were those of the researcher, derived from nine years of experience in the critical care environment in private hospitals. It was possible that this research, or follow-up research by other researchers, would confirm or disprove these assumptions. The assumptions were the following:

- The financial cost involved when appointing an 'expensive' expert CNS might be a deciding factor in the current economic situation and have an impact on the appointment of the CNS by management in the critical care units of South

Africa. The CNS will need to continue to educate other health care professionals regarding their important role in the health care environment. In the current managed health care system of competitive cost-effectiveness, CNS services may be viewed as expendable. (Henderson, 2004).

- Nursing managers, unit managers and doctors lack the knowledge of the functions and benefits of having a CNS in each critical care unit. This may contribute to the absence of a CNS in most critical care units in South Africa. Henderson (2004) concludes that the skills and knowledge of the CNS can be underused in the light of the fact that McMyler and Miller (1997, p. 171) reported that *"42% (of CNSs in a study) believed the physicians had low, vague, absent or unrealistic expectations when the CNS was hired".*

- The critical care unit nursing staff's lack of knowledge of and trust in the role of the CNS might contribute to the slow process of incorporating these expert nurses into the critical care unit teams. Distrust and fear of conflict, for example from interference at the bedside, ambiguous instructions and certain teaching methods, may lead to critical care unit staff being wary of and prejudiced towards these experts in their midst. Critical care nursing staff, being mostly task-driven and analytical, as the researcher has experienced over nine years of working in critical care units, will not easily accept the CNS as part of the critical care team unless their role and benefits are clearly emphasised. The CNS will have to introduce herself tactfully and skilfully into the critical care unit.

- The appointment of the CNS in the critical care unit in South Africa might lead to the return of nurses qualified in critical care who have left the stressful environment of the critical care unit to work overseas or in the alternative fields of nursing (for instance as medical representatives, occupational health nurses or research nurses). According to Wildschutte and Mqolozona (2008) many professional nurses have left South Africa due to unbearable pressures and poor working conditions. The researcher assumes that the CNS will relieve the pressure at the bedside with her/his expert skills and clinical

decision-making initiatives. Thus, when critical care nursing staff experience these positive contributions of the CNS, the good news will spread fast that the South African circumstances have improved. It is therefore assumed that the professional nurses in other fields and those in other countries will then return to South Africa.

1.8 Research methodology

In this section the scientific processes which were utilised for this research study are described.

1.8.1 Design

“A research design is a blueprint for the conduct of a study that maximises control over factors that could interfere with the study’s desired outcome” according to Burns and Grove (2007).

A non-experimental, exploratory, descriptive design was followed. A non-experimental design points toward a method that, for example has a partially controlled setting but not a highly controlled setting as in an experiment. Exploratory design means that the researcher would explore the data to become as familiar as possible with it.

This design allowed the researcher to explore and describe the expectations that critical care health professionals have regarding the role of the CNS in the critical care environment. According to Burns and Grove (2007) the descriptive study is designed to gather more information regarding characteristics within a particular field of study. In the descriptive design no manipulation of variables occurs. Burns and Grove (2007) explain that bias is prevented in the descriptive design by compiling conceptual and operational definitions of the variables, by sample selection and size, by valid and reliable instruments and by data collection methods that partially control the environment.

Quantitative research, according to Burns and Grove (2007, p. 551), is the *"formal, objective, systematic process used to describe variables, test relationships between them, and examine cause-and-effect interactions among variables".*

Qualitative research is the *"systematic, subjective methodological approach used to describe life experiences and give them meaning"* (Burns & Grove, 2007, p. 551). Both quantitative and qualitative methods were incorporated in the design. When using two methods, e.g. quantitative and qualitative research combined in one study, it is called triangulation.

Most of the expectations of the critical care health professionals could be calculated numerically, thus generating quantitative data. However, this would have excluded the personal views of the participants; therefore section D of the survey tool allowed the participants to convey their personal views on the implementation of the CNS in the critical care unit (qualitative data). By comparing the views of the participants on the qualitative research with the quantitative responses the researcher could obtain a better idea of the expectations of the participants.

1.8.2 Sampling

The sample was taken in critical care units from eight private hospitals in the Cape Peninsula. The sample was taken from professional nurses qualified in critical care, with either critical care qualifications or critical care experience. Doctors functioning in the critical care units, as well as nursing managers, unit managers, clinical nurse specialists, nurse educators, clinical coordinators and clinical facilitators from the critical care environment were selected as part of the sample.

Non-probability, purposive sampling was utilised to select the participants. The sample was drawn from critical care units from professional nurses with either critical care qualifications or critical care experience, nursing managers, clinical nurse specialists and unit managers involved with critical care units, clinical facilitators, clinical coordinators, doctors who consulted patients in the critical care units and nurse educators involved in critical care training.

Non-probability sampling is often used in nursing studies, although it decreases the sample representativeness of the population. Not every element of the population has an opportunity to be selected for the study (Burns & Grove, 2007). Purposive sampling, according to Burns and Grove (2007), is often also called 'selective sampling', as the researcher consciously selects certain subjects or elements. It is difficult to evaluate the accuracy of the researcher's judgment. It is therefore of importance that the researcher indicates the characteristics desired in the subjects.

In this study the adult critical care units in private hospitals were selected by purposeful sampling. State hospitals would be excluded from this study, as according to a letter from the Department of Health obtaining permission for this study would create a significant time delay for the researcher who had to work within the time constraints of the MCur programme. Although this would limit the generalisability of the results of the study, the study would still provide important groundwork from which further broader studies could be developed.

1.8.3 Data collection

The researcher developed a survey tool, based on the objective, to measure the expectations of critical care health professionals regarding the prospective role of the CNS in the critical care environment.

The researcher planned to take a total of 170 survey tools to the eight hospitals and hand out some of the survey tools to the critical care health professionals being on duty. The unit manager would distribute the rest of the survey tools to the critical care health professionals. The anonymously completed survey tools would be placed in sealed boxes, marked with the applicable hospital name, in the offices of the unit managers or in the nurses' stations in the critical care units at the selected hospitals. The researcher would remind the nursing staff about the questionnaires per telephone twice during the six week period. The unit managers and shift leaders also would also remind the staff to complete the survey tools. The researcher would fetch the survey tools in the sealed boxes six weeks after distribution thereof.

1.8.4 Data analysis and presentation

The data was finalised and analysed with the support of a qualified statistician. The expectation statements with response were categorised into common themes and then analysed quantitatively. Histograms and frequency tables were used for descriptive purposes. The data is mainly presented in the form of histograms.

1.9 Operational definitions

- *Advanced Practice Nursing (APN)* is nursing which has met both educational and clinical requirements beyond the basic nursing educational requirements for all nurses. Advanced practice nurses has a broad depth of knowledge and expertise in a certain specialty area and is able to manage complex clinical and system issues (Urden, Stacey & Lough, 2006).

- *Clinical Nurse Specialist (CNS)* is a registered nurse who holds a master`s degree in Nursing and who has acquired advanced knowledge and clinical skills in a specific area of nursing practice. The unique functions of the CNS are based on clinical expertise and judgement and include caring for patients, delegating responsibilities, teaching other staff members, and influencing and effecting change with respect to the needs of the patient and family and the total health care system (CACCN, 2002). According to the CACCN (2002) the CNS`s attributes are superior leadership, communication, critical thinking, clinical decision-making, collaborative, ethical decision-making and mentoring.

- A *critical care unit (CCU)* is a specialised section in a hospital, specially designed for the treatment of patients with acute life-threatening conditions. Professional nurses trained and skilled in life-threatening health emergencies render specialised monitoring and treatment. For the purpose of this study, this definition is synonymous with *critical care environment.*

- A *private hospital* is a hospital that is owned and managed by a private company, which is not affiliated with the public health care sector.

- An expectation is *"the act or an instance of expecting or looking; allowing the participant a free and thoughtful response"* (*Oxford English Dictionary*, 2009).

- *Clinical master's degree* in this context means that the candidate follows a post-graduate programme at a master's degree level in nursing, containing course work and clinical experience which support the development of the CNS role in the critical care environment. The clinical experience will take place under the supervision of an advanced health specialist, who will measure the progress and performance of the CNS student against set criteria (CACCN, 2002).

  The *scope of practice for nurses*, according to Regulation 2598, from the Nursing Regulations of the Nursing Act No. 50 of 1978 in the Nursing Act No. 33 of 2005 states in the introduction that "the scope of practice of a registered nurse shall entail the following acts or procedures, which may be performed by scientifically based physical, chemical, psychological, social, educational and technological means applicable to health care practices".

- *Critical Care Health Professionals,* for the purpose of this study, means professional nurses qualified in critical care, with critical care qualifications or critical care experience, doctors functioning in the critical care units, as well as nursing managers, nurse educators, clinical coordinators and CNSs. These critical care professionals exhibit a high degree of skill and competence in patient care and critical care technology within the critical care unit.

- *Critical care qualified professional nurse* for the purpose of this study means a general nurse that has also a post-basic or postgraduate qualification in critical care nursing and is registered as such with SANC. The term 'critical care

qualified professional nurse' is synonymous with 'critical care qualified registered nurse'.

- *Critical care experienced professional nurse* for the purpose of this study means a general nurse that has experience in critical care nursing; some are ventilator competent and some not. The term 'critical care experienced professional nurse' is synonymous with 'critical care experienced registered nurse'.

1.10 Chapter outlay

Chapter 1: Introduction and rationale

The background information, problem statement and research question are formulated in this chapter.

Chapter 2: Literature review

The literature history of the CNS and her/his position in the field of advanced practice nursing is discussed.

Chapter 3: Methodology

This chapter comprises the discussion of the research method including the design, sampling, data collection and data analysis.

Chapter 4: Results

The research results and the interpretation are discussed.

Chapter 5: Conclusions and recommendations

This chapter includes the conclusions derived from the study results. The researcher's recommendations are also discussed.

1.11 Summary

In Chapter 1 the rationale of the study was discussed. The important skills and competencies of the CNS are highlighted as leadership, collaboration, communication, critical thinking, clinical and ethical decision making, and mentoring. These skills point to expert specialist nursing.

The problem statement comprised a discussion of the ambiguity regarding the role of the CNS, the educational requirements, nursing shortages and the CNS, the work challenges, and the development of a career path for the CNS. The development of the CNS career path can lead to improved nursing services and patient care in the critical care units as the CNS is skilled in role modelling, mentoring, promoting best practices by developing and guiding evidence-based nursing, and hands-on training at the bedside of the patient.

The methodology used for the study is highlighted in Chapter 1.

In Chapter 2 the literature review is discussed.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

According to Burns and Grove (2007, p. 545), a literature review is *"a summary of theoretical and empirical sources to generate a picture of what is known and not known about a particular problem"*. The literature study builds a logical case for the proposed study and results in a synthesis of what is known and not known. The review includes the description of the current knowledge available about the problem; it must identify the gaps in the knowledge base and contribute information to the present study.

Polit, Beck and Hungler (2005) suggest that the literature review should conclude with a summary of the state-of-the-art knowledge on the topic by recapping the study findings and their credibility. Thus, critical judgement about the extensiveness of the evidence on the topic is required. It is important to rely on primary source research reports, which are descriptions of studies written by the researchers who conducted them.

In this study, the researcher considered and analysed international information regarding the Clinical Nurse Specialist (CNS) to compare it to the research that is available about the CNS in the South African context. According to Mouton (2006) a review of the existing scholarship and available body of knowledge must be done for the literature review. Reviewing the existing scholarship is important (Mouton, 2006) for the following reasons:

- to prevent duplication of a previous study
- to discover the most recent, authoritative theory about the subject
- to obtain the most widely accepted definitions of key concepts in the field
- to save time and prevent duplication and repetition

Literature for this review was obtained through searches of the Medical Library at Stellenbosch University. Relevant Internet nursing databases (CINAHL and

PUBMED) were used. Sabinet and the database of Stellenbosch University were utilised in the search for theses related to advanced practice nursing. The time span of this literature review is 26 years. Articles from 1984 to 2010 were utilised. The researcher tracked the path of development of the CNS internationally over these years to formulate the literature review on the history of advanced nursing and the importance of employing the CNS. The researcher reached a point of saturation of the literature as repetition of authors appeared and no new viewpoints emerged.

Of 115 articles and books reviewed, 77 references were utilised and reflected in the bibliography. The research results of Wheeler (2000), Crimlisk et al. (1997), Lombness (1994) and Kaye et al. (1999) form part of a meta-analysis which was performed by Fulton and Baldwin (2004) on positive patient outcomes. These four articles were based on research in critical care units where CNSs were employed. Recent articles on the Clinical Nurse Specialist (Hamric & Spross, 2005) still utilise these older articles as proof for positive patient outcomes as it appears that more recent studies regarding positive patient outcomes have not been done.

It was thus important to incorporate the older literature to illustrate the development of the CNS which progressed internationally over a long period of time. The researcher did not identify any new literature focused on this aspect of the CNS and positive patient outcomes after 2000 in the critical care environment. This accentuates the need for research regarding the critical care CNS.

In comparing the literature of international and South African sources the researcher found that the history of the Clinical Nurse Specialist has been recorded overseas since the 1960s and in South Africa since the 1970s (McAllister & Beatty, 1989). Since South African literature on the CNS is not plentiful, it was important to consult the history of the CNS in overseas countries and to highlight the international development path of the CNS. As the local data on this topic is sparse and the function of the Clinical Nurse Specialist is not well defined and implemented in South Africa most of the literature was obtained from international journals, articles and books. Consequently some of the literature is not current (not published within five years of the date accepted for publication).

Key words that were used in the initial literature search were *clinical nurse specialist, advance practice nursing, nurse practitioner* and *critical care unit*.

Mouton (2006) states that a literature review should be well organised, structured and logical. Organising the review of the literature according to themes is more prevalent in exploratory studies. Therefore, the literature review for this exploratory study on the CNS was logically organised in three sections according to themes:

Section 1:

- The historical role of the CNS
- The international role and characteristics of the CNS
- The contribution of the CNS to improved patient outcomes

Section 2:

- Differences between the NP and the CNS
- Role confusion and overlapping of roles in advanced nursing practice
- The CNS versus the physician

Section3:

- Education of the CNS internationally
- Development and education of the critical care CNS in South Africa

2.2 Section 1

2.2.1 The historical role of the CNS

Some nurses in North America have been called ‘specialist’ since 1910. The United Kingdom followed suit much later in the early 1970s. The label ‘CNS’ began to appear in North America in the 1960s. Much of the literature focuses on a master’s degree education for advanced clinical practice. Nursing was required to respond

rapidly to the development of specialist treatment and technological interventions (Hamric & Spross, 2005).

This rapid development led to nurses taking on certain skills, such as prescribing medication, which had previously been reserved for doctors. The expanded scope of nursing practice and the trend toward specialisation have resulted in the development of the role of the CNS. The forces involved in the need for the role of the CNS are increasingly more complex technology, shortages of health care personnel, expansion of scientific knowledge and increased focus on public health care needs (Vitello-Cicciu, 1984).

2.2.2 The international role and characteristics of the CNS

An Advanced Practice Nurse (APN) working in the critical care environment would be regarded as a CNS. This practitioner should have advanced clinical expertise to deliver direct nursing care. In-depth knowledge of pathophysiology and physical assessment skills are prerequisites for advanced preparation. This CNS must have the expertise to render comprehensive care to the critically ill patient. She must function as a role model for the nursing staff. Thus, she should attain credibility amongst the staff as a specialist to contribute to quality care **(**Vitello-Cicciu, 1984).

Urquhart, Roschkov, Rebeyka and Scherr (2004, p. 19) argue that the CNS should

> *promote excellence in the nursing practice by developing, implementing and evaluating evidence-based nursing protocols, policies, procedures and standards of care. She collaborates with and acts as a role model for front-line staff. By the guidance of other nursing staff and developing innovative approaches to clinical practice, the nursing profession may advance. Mentoring will only be successful once the CNS has gained credibility.*

Internationally the CNS plays a role in the mentoring of nursing staff in the critical care units. Mary Johnston, CNS in oncology, in Bruce (2006, p. 4-5), states that

> *it is so rewarding when a nurse at the bedside or chair side discovers and applies a new idea to care of a patient based on something that I taught. When that nurse*

recognises an improvement in care and feels good about his or her contributions, I feel that I have made a difference.

Johnston emphasises that the mentoring role of the CNS is of key importance to staff and patient success and that the CNS provides teachable moments for the nursing staff. Thus, working with the nursing staff and mentoring on an ongoing basis has an impact on the quality of care rendered to patients by nurses.

The CNS should implement protocols, pathways, new equipment and technology at the patient's bedside, thus bringing *"specialty care informed by the cutting edge of current knowledge"* (Kelly et al., 2007, p. 125). This statement accentuates the fact that the CNS is needed to guide and to teach the bedside nurses in the modern, medical and surgical critical care environment where advanced technology is the order of the day.

2.2.2.1 International authors` perspectives of the CNS

Eight critical elements were isolated, with accentuated potentially problematic negative characteristics, by which the role of the CNS can be understood. Some of the elements are positive, and some are negative in the form of added stress to the role of the CNS, which could result in a lack of support, role conflict and burn-out. It was suggested that a successful CNS is one who maintains patient care as a primary focus (Bousfield, 1997).

The eight critical elements (according to Bousfield, 1997) are *enthusiasm for leadership* (innovative thinking, quality patient care, self-directing and patient advocacy); *knowledge* (theoretical and clinical competency); *lack of support* (from organisations, managers and peers, and demotivation); *isolation* (nature of the job, no direction, no support); *poor time management* (lack of structure, no directives, need for evaluation of the role); *inter/intra-role conflict* (medical staff, nursing staff, multidisciplinary team); *disempowerment* (lack of autonomy, attitudes, beliefs and feelings) and *burn-out* (stress, self-imposed demands, organisational expectations). The researcher found that Bousfield (1997) was one of the few authors who indicated

that the CNS will encounter negative elements in her work situation. This aspect is of importance as it prepares the CNS to be alert about the elements that may influence her work performance negatively, namely lack of support, isolation, role conflict and burn-out.

According to Hamric, Spross and Hanson (2005) the core competencies of advanced nursing are clinical practice expertise, expert guidance and coaching, consultation, research skills, clinical and professional leadership, collaboration, change agent skills and ethical decision-making skills.

The above-mentioned competencies represent advanced practice, irrespective of which role function or setting relates to the advanced nurse practitioner, be it the CNS or the NP. These core competencies are accentuated by the requirements of a CNS as articulated by the Canadian Association of Critical Care Nurses: *"superior leadership, communication, critical thinking, clinical decision-making, collaborative, ethical decision making and mentoring skills"* (CACCN, 2002, p. 6).

The following table by Maylor (2005), adapted from McGee and Castledine (2003), illustrates more core competencies of nurse specialists:

Diagram 2.1 Core competencies of nurse specialists

Core competencies of nurse specialists

Core competencies[1]	CNS competency framework[2]
A Direct clinical care	Contributes to effective clinical care delivery
B Improving quality and health outcomes	Improves and enhances health care
C Evaluation and research	Identifies areas for further research
D Teaching and educating others	Facilitates and delivers training
E Leading and developing practice	Acts as a role model
F Innovation and changing practice	Promotes innovative approaches and best practice
G Scholarly activity, speaking, presenting, writing and publications	Uses a variety of methods to ensure knowledge and usage of the CNS is maximized, attends conferences, contributes to the body of knowledge
H Developing self and others	Reads and disseminates literature
I Work across professional and organizational boundaries	Facilitates effective pathways for communication, crosses multidisciplinary team

Source: [1] Adapted from Castledine (2003b); [2] Adapted from Cattini and Knowles (1999); CNS = clinical nurse specialist

(Maylor 2005, p.467)

These core competencies of the various writers correspond to a great degree, for example, Maylor (2005, p.467), added “leading and developing practice – acts as role model”, which reflects on what Hamric, Spross and Hanson (2005) called “clinical and professional leadership” and “expert guidance and coaching”. In the Strong Model the competencies correspond with “Professional leadership” and “Empowerment” (Ackerman et al., 1996, p.70). Competence is the ability to fulfil the nursing role effectively and expertly. This recognises that competence possesses a complexity that increases with experience, and as responsibilities become more

intricate. How to measure expertise could be answered by linking it to outcome measurement with reference to the above competencies.

For the purpose of this study, the main focus is on the CNS in the critical care unit. However, the various areas of specialty where the CNS can function outside the critical care unit will be discussed as part of a general overview of the role possibilities for the CNS:

- The role and characteristics of the CNS could be expanded to more areas of specialty, for example the CNS as *expert witness.* By virtue of education, experience and knowledge that an ordinary person does not have, the CNS can aspire to be an expert witness, used in legal actions. She then contributes to the case by rendering professional evidence and explanations (Janulis, 1989).

- The CNS as *case manager* should have a master's degree and knowledge of costing, accounting, financial data, medical record coding and pricing resources. She should focus on the patients with chronic conditions who might be at high risk for excessive resource consumption. Each month the case manager should evaluate and categorise the variances of the length of stay, cost and quality of care to provide a patient-centred focus and outcome system of care (Jezewski, 2000).

- The CNS can also specialise as a *researcher.* Douglas, Marthna and Cameron (1989) point out that besides doing the recommended research, the CNS should collaborate with other nurse researchers. She is then not merely a data collector, but is involved in all aspects of planning, implementing and analysing the research.

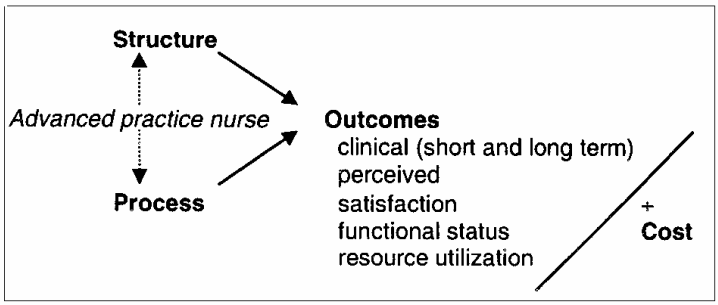
2.2.3 The contribution of the CNS to the improvement of patient outcomes

Sinclair (1997) contends that the cost-effectiveness of the CNS is attributable to lower salaries than physicians, fewer invasive procedures, greater compliance by

patients, less follow-up or length of hospital stay needed and increased non-pharmacological treatment.

The following model (Diagram 2.2) developed by Byers and Brunell (1998) provides a holistic assessment of the impact of the service that the Advanced Practice Nurse delivers; this extends to the contribution of the CNS.

Diagram 2.2 Theoretical model of evaluation of advanced practice, for example the CNS



From Byers & Brunell (1998) as illustrated in Pearson & Peels (2002, p. S14)

Byers and Brunell's (1998) model depicts the value of an Advanced Practice Nurse by incorporating quality of service and cost. Although apparently simplistic, the essential elements necessary for a comprehensive evaluation are included in the model (Pearson & Peels, 2002). Included in the structure and process noted in the model are the combined influence of structural factors, the characteristics of the Advanced Practice Nurse, the specific setting, the process and the cost-effective care delivered as leading to patient outcomes.

Fulton and Baldwin (2004) compiled a comprehensive list of publications of various authors to indicate the positive patient outcomes emanating from the CNS's clinical role. According to these researchers, the innovative nursing interventions of the CNS improve the quality, safety and cost-effectiveness of patient care. Some of these studies conducted by Crimlisk et al. 1997, Bernardo and Blansfield (1997), Lombness (1994), Wheeler (2000) and Kaye, Ashline and Erickson (1999) are briefly discussed.

Crimlisk et al. (1997) study determined the frequency and causes of reintubation, and evaluated the impact of an educational intervention aimed at minimising unplanned extubations. In their discussion they mention that the reintubation rate was decreased from 4,4% to 1,9% (P=.005). Reintubations after unplanned extubation were decreased from 14% to 5,2%. Increased provider education and protocol changes were associated with lower intubation rates.

Lombness (1994) noted the differences in length of stay with care managed by CNSs versus physician assistants in the USA. Significant lower mean length of stay was shown in the CNS-managed group at 7,377 days versus 9,059 days with the physician assistant-managed group of patients. An estimated cost saving of almost US $500 000 was achieved during the six months of this study.

Wheeler's (2000) study on the CNS`s impact on process and outcome of patients with total knee replacement determined that patients on the units with CNSs received more nursing care interventions more frequently, had shorter total lengths of stay, and experienced fewer complications.

Kaye et al. (1999) note the development of a multidisciplinary team, including a CNS, used to decrease the incidence of ventilator-dependent pneumonia in the critical care environment.

According to Wheeler (2000) and Kaye et al. (1999) the contributions of the CNS in the critical care environment are of great value as proven by improved patient outcomes, quality patient care, patient satisfaction, cost-effective care, decreased hospital stays for patients and the benefit for the nursing staff in having a credible mentor.

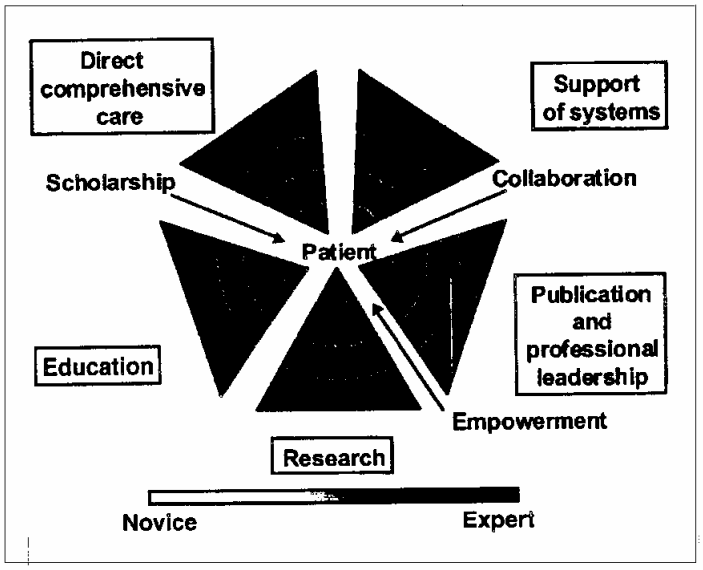
Fulton and Baldwin (2004) conducted a meta-analysis of research which included the authors Crimlisk et al. (1997), Lombness (1994), Wheeler, (2000) and Kaye et al. (1999), who reported on studies undertaken in the critical care environment. The latter researchers agreed that the main objective of advanced nursing practice is the quality of care rendered to patients with resulting positive patient outcomes, in

particular the combination of patients and professionals and their skills, individualised care and empathy. This exclusive nursing practice will ensure its place in the multidisciplinary teams (Gerrish, McManus & Ashworth, 2003).

Kelly et al. (2007, p. 125) emphasise that

> *[t]he future for CNSs is rich, filled with promise, and focused on the provision of advanced practice nursing care to patients in all healthcare settings and across all specialties. CNS practice into the future will ensure that the health care system is safe for our patients and that positive patient care outcomes are attained through collaboration with transprofessional teams of healthcare providers.*

Diagram 2.3 The Strong Model of advanced practice



(From Ackermann, Norsen, Martin, Wiedrich & Kitzman, 1996, p. 70)

The Strong Model envelopes the following domains of practice, from novice to expert, with the patient as the centre of importance: direct comprehensive care, support of system, publication and professional leadership, research and education.

Mick and Ackerman (2000) discuss the Strong Model of Advanced Practice which was developed in 1994 by a group of APNs and members of the academic faculty at Strong Memorial Hospital, University of Rochester Medical Centre in the USA. In this

conceptual framework, in each practice domain, the role of the CNS, her job descriptions and standards of advanced practice is illustrated according to the American Association of Critical Care Nurses. The strands of the Strong Model are circular and continuing, illustrating the functions of the expert nurse, as indicated in Diagram 2.3.

Thus, the Strong Model indirectly promotes most of the core competencies (leadership, communication, collaboration, ethical decision making and mentoring skills) for the expert nurse, for example the CNS, as also reported by the CACCN (2002). To summarise, an advanced nurse requires advanced clinical education and theoretical knowledge and the proficient use and application of this knowledge to promote excellence of practice.

2.3 Section 2

2.3.1 Differences between the NP and CNS

To form a clear understanding of the roles and functions of the CNS and the NP respectively, the following descriptions should be of value:

- According to Lindeke, Canedy and Kay (1997), the CNS is involved in indirect outcomes, reflected in the quality care of other nurses. She is mainly institution-based and functions in acute care for short periods of the patient's recuperation. She concentrates on body systems and related nursing interventions with her deep, focused knowledge. The role of the CNS is defined by the employer. The utilisation of the CNS leads to improved patient outcomes. The emphasis on the CNS's advanced ability to apply nursing care appropriately to each patient`s unique clinical circumstances is important.

- In contrast, the NP compiles her own job description and can function with more autonomy. The NP, usually within her own practice, assesses and

diagnoses client illnesses and monitors patients, striving for patient satisfaction with her broad knowledge (Lindeke et al., 1997).

The Canadian Association of Critical Care Nurses (2002, p. 1) describes the term 'Critical Care Advanced Nurse Practitioner' as an umbrella term for *"advanced nursing practice that maximises the use of in-depth nursing knowledge and skill in meeting the health care needs of clients (individuals, families, groups, populations and entire communities)"* within the specialised clinical area of critical care nursing.

The Advanced Practice Nurse, being the CNS or NP, distinguishes herself/himself by complex clinical reasoning and decision making, with highly developed communication skills, in-depth knowledge, management skills, increased autonomy**,** expert and specialised practice, utilisation of evidence-based practice and critical analysis of health policies (Canadian Association of Critical Care Nurses, 2002). However, according to the literature, the roles are not as clear-cut as expected. In their conclusion, MacDonald, Herbert and Thibeault (2006, p. 178), state that Advanced Practice Nurses share many *"areas of sameness"*, but it appears that they do not prefer a common identity and a common title.

When taking the role and characteristics of the Advanced Practice Nurse into account, Redekopp (1997) states that the mutual goal for both roles (the CNS and NP) is the promotion of quality care, although the roles had very different beginnings and were created with different goals in mind. The role of the CNS was created to improve quality bedside nursing, while in contrast, the role of the NP was created to improve access to primary care and to be a direct care provider. It is therefore clear that the description of the CNS is more appropriate to the critical care environment and critically ill patient.

2.3.2 Role confusion and overlapping of roles in advanced nursing practice

According to Elder and Bullough (1990), the roles of the CNS and the primary care Nurse Practitioner overlap. In some instances CNSs also have private practices (often after hours) and they render the same type of care that NPs do. Often it is a

matter of name and role confusion. Some experts recommend a common role title, as this would have advantages for education, the health care systems and patients. However, it would lead to more confusion, as these two roles are distinctly different in most areas (Elder & Bullough, 1990).

The CNS and NP roles are similar in some aspects, but distinctly different in others. Roles that the CNS is known for are consultation, liaison and advocating for the patient and patient family. Added to the above are often management roles and developing policies and procedures with a focus on systems (Fenton & Brykczynski, 1993).

The Clinical Nurse Specialist is often confused with the Nurse Clinician, Clinical Nurse Leader or Nurse Consultant, with subtle changes in their job descriptions:

- The National Joint Practice Commission (1977) discussed the professional set of functions that the Nurse Clinician should perform. The functions include counselling, education and management of problems. The physician is responsible for an area of care at one end of the spectrum and the Nurse Clinician is responsible for care at the other end. Thus, the Nurse Clinician and the physician complement one another. The definition of a Nurse Clinician is a registered nurse who holds a master`s degree in Nursing with emphasis on clinical nursing and who functions independently in coordinating plans for patient care. Common names or alternative terms used are Nurse Specialist, Clinical Nurse Specialist and Nurse Clinician (Research News and Information, 2010).
- The NACNS (2005) compared the roles of the proposed Clinical Nurse Leader (CNL*)* and the CNS, and indicated that the proposed competencies of the CNL duplicated those of the CNS. The NACNS (2005) recommended that the role of the CNL should not progress to implementation as it overlapped with the role of the CNS. Creating a new role would have duplicated many current roles, such as those of the CNS.

- According to Warr (2006) the Nurse Consultant has job criteria which overlap with those of the CNS: expert function, leadership, education and development, research and evaluation and clinical decision making.

Irrespective of the specific title, the APN is focused on improved patient outcomes through expert guidance and coaching, clinical expertise and clinical and professional leadership (Hamric, Spross & Hanson, 2005). Thus, in each work environment of the advanced nurse, being it the CNS or NP, it is of vital importance to have a clear job description to prevent role confusion.

2.3.3 The CNS versus the physician

The role of the NP developed as a result of an acute shortage of physicians in the 1960s and 1970s. The NP practice is most commonly demonstrated in the outpatient primary care arena. The physician workforce size of the future might not be adequate to meet the needs of the public for the medical care services. Due to the projected shortage of physicians, more of the physician's services will have to be provided by non-physicians (Quaal, 1999).

Sinclair (1997) states that nursing has followed closely behind the medical profession and claims that nurses believe that power and autonomy must come from the acquisition of delegated procedures.

The appointment of the advanced practice nurse is recommended, because *"the supply of physicians will not be adequate to care for the increasing population of patients with chronic diseases. It is simply unacceptable to have the needs of those patients go unmet"* (Whitcomb, 2006, p. 779).

In the light of the above projected physician shortages, the prescription of pharmacological agents to augment patient care may also be included in the scope of practice of the CNS, providing that valid training was done and the necessary qualification obtained. The CNS will be competent to order diagnostic

tests/surveillance to inform the plan of care and to order durable equipment to maintain or achieve higher levels of health care (Kelly et al., 2007).

2.4 Section 3

2.4.1 Education of the CNS

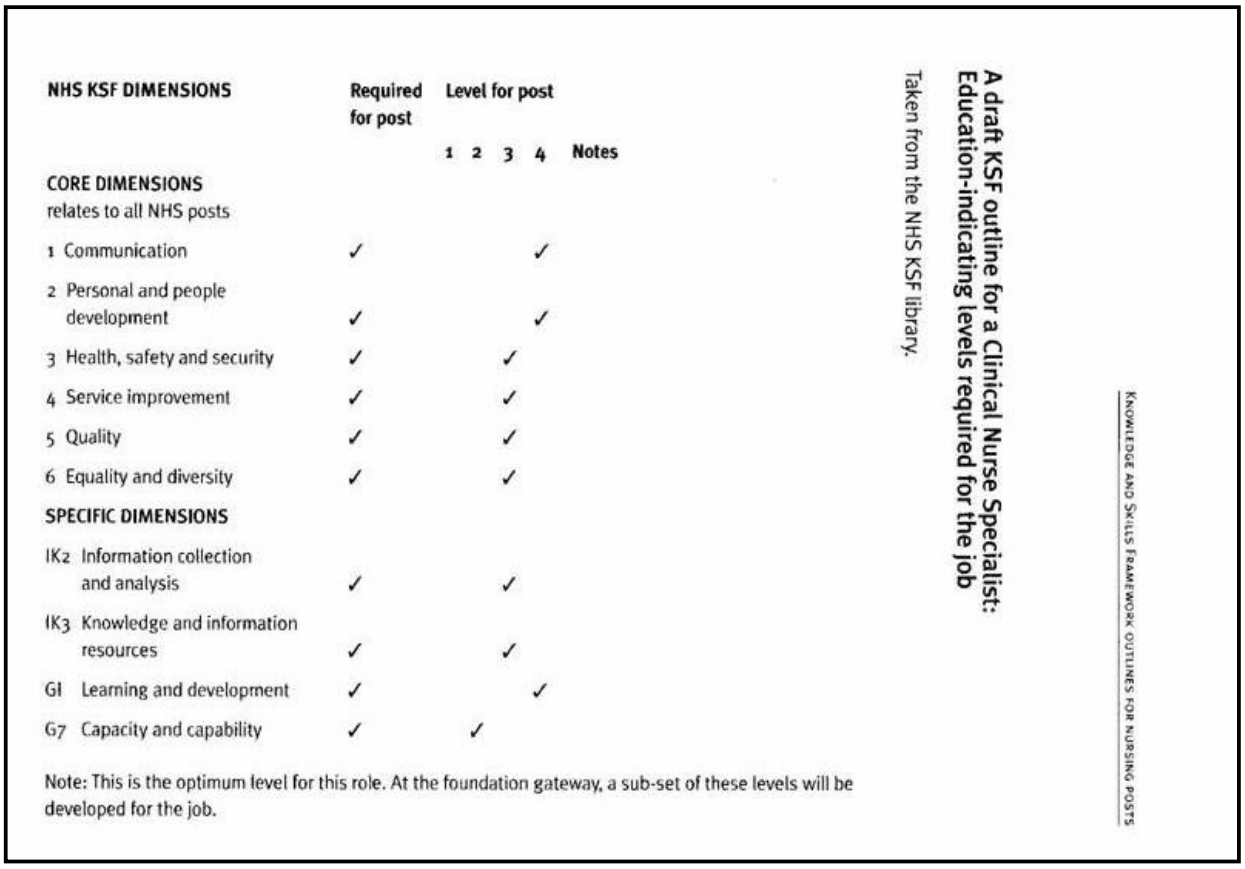
2.4.1.1 Qualification requirements for and auditing of the CNS

Specialised programmes were established at the master's level in the 1950s in the United States and the roles of the CNS and NP evolved from this. Some authors have claimed that a master's degree is the minimum criterion for admission to the advanced nursing profession and that this is an essential step in the process towards autonomy for today's nurses. Raising nursing standards supports the credibility of nursing. Since nursing requires great dedication, the master's degree as qualification will help ensure this sense of commitment (Boyce et al., 2001).

Some form of practice audit as professional accountability should be developed for the CNS. Recognising the varied preparation of nurses internationally it is important to provide alternate pathways to those nurses with appropriate skill and ability to become a CNS (Dyson, 1997, p. 728).

An educational framework for advanced nursing is an essential structure to support the different aspects included in a curriculum. The core dimensions of this framework were: communication, personal and people development, health, safety and security, service improvement, quality and equality and diversity. The following Knowledge and Skills Framework (KSF) for the CNS was published by the Royal College of Nursing (2005) in the United Kingdom in September 2005.

Diagram 2.4 Knowledge and skills framework for the CNS



A draft KSF outline for a Clinical Nurse Specialist: Education-indicating levels required for the job

Taken from the NHS KSF library.

KNOWLEDGE AND SKILLS FRAMEWORK OUTLINES FOR NURSING POSTS

NHS KSF DIMENSIONS	Required for post	Level for post 1	2	3	4	Notes
CORE DIMENSIONS relates to all NHS posts						
1 Communication	✓				✓	
2 Personal and people development	✓				✓	
3 Health, safety and security	✓			✓		
4 Service improvement	✓			✓		
5 Quality	✓			✓		
6 Equality and diversity	✓			✓		
SPECIFIC DIMENSIONS						
IK2 Information collection and analysis	✓			✓		
IK3 Knowledge and information resources	✓			✓		
G1 Learning and development	✓				✓	
G7 Capacity and capability	✓		✓			

Note: This is the optimum level for this role. At the foundation gateway, a sub-set of these levels will be developed for the job.

Royal College of Nursing (2005)

This framework is included in this study to show the importance of having a system in place to train and evaluate the CNS. It is recommended that the framework be utilised as an evaluation tool and that it should be linked to annual development reviews and personal development plans.

The aim is that all staff should have clear and consistent development objectives and that they should be able to apply the knowledge and skills. They will be helped to identify and develop knowledge and skills that will support their career progression as CNSs. This emphasises the importance of planning, implementation and evaluation in ensuring that the CNS obtains the required qualifications and keep up to expectations regarding knowledge and skills.

The advanced practice nurse must be guided by a nursing model and it should not be allowed that a medical model be used or that physicians dictate or direct the model for the advanced practice nurse. The educational preparation of the advanced practice nurse should be a clinically based master`s degree (McGee & Castledine, 2003).

Describing the work of the CNS is an important preliminary step towards measuring outcomes as cost of care. Darmody (2005) utilised an NACNS model as a useful framework for developing a data collection tool to analyse the work of the CNS in the critical care unit. The activities of five master`s prepared advanced practice nurses were measured in the Darmody study. Direct observation and time study were used to record their activities. The CNS activities and time spent within each practice domain were patient/client 30%, nursing 44%, organisation/system 10% and other activities 16% (Darmody, 2005).

2.4.2 The development and education of the critical care CNS in South Africa

In South Africa the development of the role of the CNS has been slow in comparison to the USA, Canada and the United Kingdom. However, in 1972 specialised training was rendered to a professional nurse in the field of genetics in the Groote Schuur Hospital, Cape Town. Shortly thereafter similar unique nursing requirements were experienced in areas of cardiology, organ transplant and stomal therapy. Most of these CNSs did not have master`s degrees and they were not functioning full-time in critical care units (McAllister & Beatty, 1989).

In 1988 a seminar and workshop (reported on in the referenced Monograph) was held by the Department of Nursing at the University of Natal, Durban, in South Africa. Babich (1988) states in the Monograph (1988) that the inclusion of the CNS in over 75% of the hospitals in the USA seems to affirm their value. The CNSs discussed in 1988 were more as described in first part of paragraph 2.4.2. A negative point is that the CNS can become loaded with administrative functions that draw her away from nursing at the bedside. In this South African Monograph Dewar (1988, p.1) notes: "*Acknowledgement has taken the form of collegiate recognition and respect rather*

than improved financial or promotional status." Mdakane (1988, p. 18) concludes that the CNS is not a second-rate doctor but that she requires reward in the form of remuneration, professional recognition and ongoing training: *"It is essential that promotion of the Professional Nurse remains in the clinical field and does not force her into an administrative position."* Du Preez (1988) stated that out of the 14 areas of specialisation at Groote Schuur Hospital only the CNS in Infection Control had a master's degree (from Monograph, 1988).

The CNS in South Africa is basically self-taught and she expands her knowledge by attending seminars and congresses. Due to her isolation from general nursing and the nature of her job the CNS is unlikely to be considered for promotion (McAllister & Beatty, 1989). The researcher noticed in the past nine years in critical care units that formal training of the CNS is exceptional.

Jitna (2007), from King's College London, shares the South African point of view that it does not mean that nurses without the required academic qualifications cannot currently engage in advanced nursing practice, as there are not enough CNSs with master`s degrees, not to mention clinical master`s degrees.

In reply to McAllister and Beatty (1989), Wood and Jacobs (1989) drew attention to the need for development of a proper career structure for professional nurses with academic aspirations in SA. In this regard Commerford et al. (1989) state that such a career ladder (structure) should be compulsory, otherwise a continual loss of advanced trained nursing staff to administration or education or out of nursing altogether will take place.

McAllister and Beatty (1989) illustrated the various areas of specialty covered by the early CNSs in Groote Schuur Hospital in 1987: cardiac rehabilitation, clinical nutrition, continence, diabetes, human genetics, immunology, infection control, infertility, oncology, rheumatology, stomal therapy and transplant coordination.

According to the South African Qualifications Authority (SAQA, 2007) the purpose and rationale of the qualification Master of Nursing (NQF Level 8 and above) for the

CNS are that it is a career path for the professional nurse who wants to remain in the clinical context and specialise. It is mentioned that these qualified CNSs will function in “specialised nursing settings as a leaders, consultants, educators and specialist practitioners” (SAQA, 2007, p. 1) and these nurse specialists “are critical analytical thinkers” who are to change “the scope from pathological to therapeutic” (SAQA, 2007, p. 2). The CNS will function within the scope of practice for the CNS as formulated by SANC, taking the policies of the institution of employment into account (SAQA, 2007).

SAQA (2007) states in the exit level outcomes of the CNS in adult critical care nursing that the CNS has to know and understand biomedical technologies and nursing care of the critically ill. The CNS has to apply evidence-based knowledge and skills in functioning in the critical care environment with the patient, family and staff. She/he has to show insight into principles, theories and international issues in critical care nursing.

All the South African Health Education Institutions are required to compile a curriculum for the clinical programme of the CNS in line with the purpose and rationale for the qualification Master of Nursing for the CNS published by the South African Qualifications Authority (SAQA, 2007).

2.5 CONCLUSION

It appears as if much research energy was spent internationally on the history of Advanced Practice in Nursing, as well as on the overlapping, the confusion of the roles and the ‘threat’ of the Advanced Practice Nurse (for example the CNS) to the physician. More research effort could however have been directed at the specific outcomes and advantages of the CNS. In South Africa it appears that there is a lack of research on Advanced Practice Nursing, for example regarding the CNS.

In Chapter 3 the research methodology of the study is discussed.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, a description of the research methodology is discussed. The rationale for the study design and methods is described. The instrument discussion and data collection process form part of this chapter.

3.2 Research design

Burns and Grove (2007, p. 553) state that the research design is a *"blueprint for conducting a study [which] maximises control over factors that could interfere with the validity of the findings [and] guides the planning and implementation of a study in a way that is most likely to achieve the intended goal".* According to Burns and Grove (2007) the study design could be seen as the structural framework for the study. In the planning and implementation phases of the research the study design led the researcher to achieve the intended goal and objectives.

According to Brink, Van der Walt and Van Rensburg (2006) the research design is a set of logical steps taken by the researcher to answer the research question. These steps form the recipe for the study and determine the methods used to collect and analyse data and to interpret the results. The design is seen as the overall plan for collecting data in a research study. The choice of the design depends on the expertise of the researcher, the purpose of the researcher and the research problem.

In this research study a non-experimental, explorative, descriptive research design was followed. This design allowed the researcher to explore and describe the expectations that critical care health professionals have regarding the role of the CNS in the critical care environment.

3.2.1 Non-experimental method

Brink et al. (2006) defines a non-experimental research method as the exploration and explanation of the relationships between phenomena that are observed in the natural environment. The setting in this study was uncontrolled and no manipulation of variables took place. The expectations of critical care health professionals regarding the proposed role of the CNS were the phenomena in this study. The ideas (expectations) of the participants were utilised to draw conclusions regarding the objectives of the study.

3.2.2 Exploratory method

Babbie and Mouton (2002) stated that in examining a new interest the exploratory method is a means of providing the researcher with a basic familiarity of a topic. Thus, in this study by exploring the topic, the researcher gained insight into and understanding of the subject under study.

Few articles (for example in the Monograph, 1988; Commerford et al., 1989, McAllister & Beatty, 1989) had been published in South Africa regarding the CNS.

The role challenges and role ambiguity of Advanced Practice Nurses in South Africa are discussed by Bhengu (2009). Specialisation and qualifications of the CNS with reference to the OSD (Occupational Specific Dispensation) were part of this presentation. Suggestions were made regarding the way forward on the career path for the Advanced Practice Nurse (which is an umbrella term and includes the CNS) Bhengu (2009). The dearth of literature required the researcher to approach the research from an exploratory perspective to allow greater understanding of the focus of the research.

Since the exploratory design assisted in providing insight into the topic of the CNS in South Africa, this method was chosen as most appropriate to achieve the goals of the study. This study was exploratory in the sense that it intended to explore the

expectations of critical care health professionals regarding the prospective role of the CNS in private hospitals.

3.2.3 Descriptive design

According to Burns and Grove (2007) no manipulation of variables is involved in a descriptive design. The descriptive design identifies a phenomenon of interest, identifies the variables within the phenomenon, develops conceptual and operational definitions of the variables, and describes the variables. The purpose of descriptive studies is to identify and describe concepts or variables, to identify relationships amongst variables and to delineate differences between or among groups. In descriptive studies, no treatment is administered, as often happens in experimental studies.

3.2.4 Triangulation

According to Burns and Grove (2007, p. 558) triangulation is *"the use of two or more theories, methods, data sources, investigators, or analysis methods in a study".* In this study, methods from both the quantitative and qualitative approaches were used to obtain better insight into the phenomenon and to come to a more comprehensive conclusion about the expectations of critical care health professionals regarding the role of the CNS in the critical care unit. Triangulation reduces the impact of bias by confirmation of findings through convergence of different perspectives.

3.2.5 Quantitative method

Burns and Grove (2007) define the quantitative method as a formal, objective, rigorous, systematic process to describe variables, test relationships between them and examine cause-and-effect interactions among variables. Thus, new events, information or concepts in the world are described. The quantitative research process is expressed by conceptualising, planning, implementing and communicating the findings of the study. Brink et al. (2006) states that a quantitative method facilitates

logistic deductive reasoning. This method was chosen as it allowed the researcher to investigate a topic of which little is known in South Africa.

A quantitative method was used to obtain information about the expectations of the participants as critical care health professionals regarding the prospective role of the CNS in private hospitals in the Cape Peninsula. A survey tool was compiled with four sections. Section A comprised the demographic (biographical) information regarding the participants. In section B the participants could select their expectations from boxes marked on a scale from 1 to 6 (strongly agree, agree, slightly agree, slightly disagree, disagree, strongly disagree). In section C the participants could select, by marking boxes, the most important benefits they thought the appointment of a CNS would support in the critical care unit. The data was presented numerically in histograms and percentages. Most of the expectations of the critical care health professionals could be calculated numerically thus generating quantitative data. However, this would have excluded the personal views of the participants if a part of the study was not dedicated to the qualitative method of research. Therefore section D was dedicated to qualitative research.

3.2.6 Qualitative method

In section D of the survey tool the participants could convey their personal views on the implementation of the CNS in the critical care unit, thus including a qualitative research method. Burns and Grove (2007) describe qualitative research as a systematic, subjective methodological approach used to describe life experiences and give them meaning. In this event, the participants could provide their views on their ideas and opinions of the proposed role of the CNS in their critical care units. Burns and Grove (2007) state that qualitative research is a better method of investigating emotional responses than quantitative research, as human emotions are difficult to measure. Qualitative research is conducted to promote understanding of human experiences and situations. These authors explain that *"[t]his research methodology evolved from the behavioural and social sciences as a method of understanding the unique, dynamic, holistic nature of human beings"* (Burns & Grove, 2007, p. 18).

3.3 Context of study

The study was conducted in the critical care units of eight private health care hospitals in the Cape Peninsula in Cape Town. These eight hospitals belong to two private hospital groups.

3.4 Population and sampling

3.4.1 Population

According to Burns and Grove (2007, p. 549) the population is “all elements (people, objects, events, or substances) that meet the sample criteria for inclusion in a study, sometimes referred to as a target population”.

The population for the purpose of this study consisted of the following:

- Critical care health professionals in nursing (critical care qualified and experienced professional nurses, nursing managers, unit managers, nurse educators, CNSs, clinical coordinators, clinical facilitators) and specialist doctors, working in the critical care environment of private hospitals in the Cape Peninsula of South Africa. This resulted in a population of approximately 170 (N=170) potential participants for the study.
- The critical care units of eight private hospitals.

3.4.2 Sampling

Non-probability sampling, in the form of purposive and convenience sampling, was utilised to select the participants for this study. Not every element of the population has an opportunity for selection in this type of sampling. This approach of non-probability sampling decreases the sample representativeness of a population, but it is commonly used in nursing studies (Burns & Grove, 2007). Non-probability sampling is regarded as more convenient and economical; however it increases the

chances that the sample does not accurately represent the population. The researcher made an effort to distribute the survey tools to as many critical care health professionals dedicated to critical care units of the eight private hospitals in the Cape Peninsula as possible. The non-probability sampling utilises the judgment of the researcher to select subjects who know most about the phenomenon and who are able to articulate and explain nuances to the researcher (Brink et al., 2006).

In this study the eight private hospitals belonging to two private health care groups were selected by purposive sampling. Purposive sampling is selective sampling which involves the conscious selection by the researcher of certain subjects to include in the study (Burns & Grove, 2007). Due to the time limitations associated with the MCur programme, the third private health care group was excluded as they have a very lengthy permission process that would have significantly delayed the completion of the study. The fourth private hospital group was not approached due to time constraints. The private hospitals included in the study are within 100 kilometres of Cape Town and were conveniently identified and purposively included. In the eight hospitals survey tools were distributed to nursing staff and doctors in 14 combined adult high care units and critical care units. Convenience sampling includes subjects who happen to be in the right place at the right time, with addition of available subjects until the sample has reached the desired size (Burns & Grove, 2007).

The sample was taken in critical care units from critical care qualified professional nurses and critical care experienced professional nurses. Doctors functioning in the critical care units, as well as nursing managers, nurse educators, clinical coordinators, clinical facilitators and CNSs from the critical care units of the eight private hospitals were included in the sample. The minimum criterion for entry into the study was that at the time of the research the participants should be working in the critical care environment in its broadest context.

State hospitals were excluded from this study, as obtaining permission for this study according to the guidelines of the Department of Health would pose a significant time delay for the investigator who had to work within the time constraints of the MCur programme. This does limit the generalisability of the results of the study; however,

the study still provides important groundwork from which further broader studies can be developed.

The researcher aimed at getting 30% to 40% of a projected total population of 170 to improve the reliability of the data. De Vos, Strydom, Fouché and Delport (2005) claim that a population of 100 to 200 participants should have a sample size of between 32% and 45% to indicate an appropriate sample. A total of 73 (n=73) health care professionals out of a population of 170 (N=170) participated in the study, forming a sample size of 42,9%. Thus the sample for this study met the abovementioned criteria. Sample mortality would be related to staff who were sick, on leave, or those who did not consent to inclusion, or who withdrew from the study.

3.4.2.1 Inclusion criteria

According to Burns and Grove (2007) the inclusion sampling criteria for a research study are the characteristics that the subject or element must possess to be part of the target population. In this study the inclusion criteria for participants were that they had to be working in the adult critical care environment in the eight sampled private hospitals, and that they had to be critical care health professionals in nursing (professional nurses, experienced or qualified in critical care), unit managers, nurse managers, nurse educators, lecturers, CNSs, clinical coordinators, clinical facilitators and specialist doctors, working in the critical care environment of the eight selected private hospitals in the Cape Peninsula of South Africa.

Convenience sampling is referred to as accidental or availability sampling and involves choosing readily available people or objects for the study (Brink et al., 2006). This convenience sample was economical and accessible to the investigator. Participants were identified by using non-probability convenience sampling. This allowed the researcher to use her own judgment in selecting participants who knew most about the phenomenon under investigation and would include all participants who were available to the researcher during the planned data collection period.

3.4.2.2 Exclusion criteria

The following were applied as exclusion criteria for this study:

- nurses from enrolled categories
- general medical practitioners
- allied health professionals (physiotherapists and dieticians)

The researcher narrowed the eligibility criteria for the study by means of the abovementioned exclusion criteria to ensure that the applicable critical care health professionals have the knowledge to answer the questions with insight and thus render the research more trustworthy and accurate.

3.5 Data collection

3.5.1 Survey tool (Addendum A)

The researcher developed a survey tool, based on the objective of the study and evidence derived from the in-depth literature review, to measure the expectations of critical care health professionals regarding the prospective role of the CNS in the critical care environment. The survey tool was discussed with the statistician and study supervisor. The content consisted of negative and positive statements regarding the role of the CNS. The statements were grouped according to themes. A survey tool would allow a large number of participants to be reached in a short space of time. The fact that it was hand-distributed to participants helped to increase the response rate (as opposed to mailed survey tools). Survey tools were preferred as they were cost-effective, required less time to administer than for example, focus groups, and offered complete anonymity.

As time and money were constraints to the study, the survey tool was not translated into Afrikaans, as English is the corporate/business language of South Africa and a compulsory subject in South African schools (www.southafrica.info). The participants

were informed that they might answer the qualitative section in Afrikaans if they preferred.

The survey tool comprised four sections:

- Section A: Biographical data of the participants
- Section B: Expectation statements, which had to be marked with an X in empty boxes
- Section C: Grouped questions to select and mark in boxes
- Section D: Opportunity to give qualitative opinions and ideas on the role of the CNS

3.5.1.1 Section A

According to Burns and Grove (2007, p. 127) the demographic variables are *"characteristics or attributes of subjects that are collected to describe the sample"*. The analysed demographic variables are called sample characteristics that describe the sample. In this study (section A of the survey tool) the demographic (biographical) data which was used consisted of the participants` age, type of qualification, being permanent, agency, night or day staff, and years of experience in the critical environment. The researcher utilised this data to confirm that the sample met the inclusion criteria.

3.5.1.2 Section B

A Likert-type scale was used for the survey tool, which was designed to measure the opinion or attitude of the subjects. It contained a number of declaration statements with a scale after each statement. According to Burns and Grove (2007) the number of categories may range from four to seven. The researcher selected six. Section B comprised 41 expectation statements regarding the CNS that the participants had to rate by marking with an x according to a scale of six options:

- Strongly agree
- Agree

- Slightly agree
- Slightly disagree
- Disagree
- Strongly disagree

The statements were tabled without headings, but approximately grouped together in themes of statements with the same context, to improve the line of thought of the participants. For example, activities regarding patient outcomes were grouped together in questions 1 to 6. Some statements were put in a positive fashion, 'will require' and some in a negative fashion, 'will not require'. This urged the participants to think and make decisions and not only to select the options blindly. Only one statement was made per line.

The 41 statements for section B of the survey tool were compiled according to the objective of the study and supported by the literature regarding proposed benefits or problems in relation to the appointment of a CNS. To have a clearer understanding of section B of the survey tool the researcher has repeated the research objective in this section: describe the opinions of health care professionals working within the critical care environment regarding their expectations of the CNS role with respect to the following:

- the scope of practice and professional status
- education and qualifications
- clinical practice
- financial and quality impact on the hospital
- impact on collaborative interdisciplinary relationships

In the literature, according to diagram 2.1 (Maylor, 2005) illustrates the core competencies required for the CNS; diagram 2.2 (Byers and Brunell, 1998) demonstrates the theoretical model of evaluation of advanced practice, for example the CNS and in diagram 2.2 Mick and Ackerman (2002) discuss the Strong Model of advanced practice which illustrates the CNS`s domains of practice from novice to expert. These above-mentioned diagrams contain most of the main themes utilised

for the questions in section B of the survey tool. The expectations of the participants would be determined by their opinions regarding the following themes mostly derived from the diagrams as mentioned above:

3.5.1.2.1 Scope of practice and professional status: A few role challenges mentioned by Bhengu (2009) are the lack of scope of practice for additional qualifications of the CNS, the lack of a competency framework, the lack of standards, and that certification by SANC does not consider levels of study but just qualification in an area of specialisation. The need for the CNS in South African critical care units (Bhengu, 2009): Bhengu (2009) points out that although there is a great need for the CNS, certain role challenges regarding the CNS will first have to be corrected. Questions reflecting on the scope of practice of the CNS are number 27 and 32. Questions 3, 10, 14, 18, 19, 35 reflect on the improved professional status where a CNS is employed.

3.5.1.2.2 Education and qualifications: Educational requirements (master's degree) (SAQA, 2007): SAQA (2007) stipulates the purpose and rationale of the qualification Master`s of Nursing for the CNS in South Africa as a career path for the professional nurse who wants to stay in a clinical context, but who would like to specialise. Questions pertaining to this topic were reflected by questions 24, 33, 34, 38, 39, 40 and 41.

3.5.1.2.3 Clinical practice: Safer nursing care, shorter patient stay and improved patient outcomes as reported on by Wheeler (2000), Crimlisk et al. (1997), Lombness (1994) and Kaye et al. (1999): The discussion in these studies was about the shorter patient stay and the improved patient outcomes in the critical care units where CNSs were employed. This theme pertaining to clinical practice is reflected in questions 1, 2, 4, 15 and 17 and overlaps with the financial and quality aspect as safer nursing care with positive patient outcomes underpins quality patient care.

3.5.1.2.4 Financial and quality impact on the hospital: The financial burden or benefit of the CNS in the critical care unit is covered by questions 5, 6 and 22.

The quality impact of having a CNS in a critical care unit is reflected by questions 25, 26, 36 and 37 as these questions point toward the importance of research and evidence-based nursing for quality patient care. In the Strong Model of Advanced Practice Mick and Ackerman (2000) discuss the importance of research initiated and conducted by the CNS to promote evidence-based nursing methods for best quality patient care.

Stress relief for shift leaders and/or bedside clinical nurses have a quality impact on patient care (Bell, 2005, p. 148): *"Effects of poorly managed stress on a critical care nurse will affect her ability to manage a critically ill patient, thereby influencing the quality of care provided to the patient*." The subject of stress relief by having the CNS in the critical care unit was addressed in questions 7, 8 and 9.

3.5.1.2.5 Impact on collaborative interdisciplinary relationships: The cause of conflict and overlapping of roles (Page & Arena, 1993): Page and Arena discuss the confusion and conflict regarding the overlapping of roles within the advanced practice domain and the negative impact that it has on the nursing environment. Questions 11, 12, 13, 16, 20, 21, 27, 29 and 30 pertain to the problems around overlapping of roles and conflict.

3.5.1.3 Section C

In section C the participants were required to answer three questions. Section C was added to gain clarity on the participants` decisions in section B. The participants had to select 'yes' or 'no' if they thought that the appointment of the CNS would contribute positively to the staff and patients in the critical care unit. Following the above, the participants had to select the three most important benefits out of an option of six that the appointment of a CNS in a critical care unit will support. In section C the options

comprised some of the same themes derived from research objective which were utilised to compile the 41 questions in section B of the survey tool.

3.5.1.4 Section D

In this section the participants had the opportunity to give qualitative opinions and ideas on the role of the CNS. Section D of the survey tool was posed as an open-ended question: 'Describe your opinions and ideas of the role that the CNS could play in your CCU'. Open-ended questions required the participants to provide their own answers. The analyses of open-ended questions are more difficult and time-consuming than closed-ended questions (Polit, Beck & Hungler, 2005). According to *The Concise Oxford Dictionary* (2009) *"open-ended"* means *"having no predetermined limit or boundary".* Thus the participants were given the opportunity to air their views on the subject of the CNS in the critical care unit freely, without any limits or boundaries. This was an attempt to elicit the participants` own views on the CNS. Section D is therefore the part of the survey tool that entails the qualitative section of the research.

The researcher provided her telephone number on the last page of the survey tool in case the participants had any questions. The telephone number of the study supervisor was available on the information and consent leaflet of Stellenbosch University.

3.5.1.5 Reliability

According to Polit, Beck and Hungler (2005) reliability can be defined as the degree of consistency or dependability with which the instrument measures attitudes it is supposed to measure. The consistency of the measurement technique reflects the reliability of the survey tool.

Burns and Grove (2007) state that the Cronbach alpha coefficient is the most commonly used measure of reliability. However, in this study it was not utilised as

only summary statistics were reported. Since no calculations were made in terms of the answers on the survey tool and no grouping was done, the Cronbach alpha coefficient is not applicable to this study, according to the statistician.

3.5.1.6 Validity

Since no instrument is completely valid one needs to determine the degree of validity. Brink et al. (2006) define instrument validity in terms of whether an instrument accurately measures what it is intended to measure.

Validity of the instrument was improved by:

- obtaining the opinion of six experts and making adjustments to the survey tool according to their recommendations;
- performing a pilot study and adjusting the survey tool for a second time;
- distributing the same instrument to all participants;
- keeping the questions as simple as possible and to the point; and
- allowing sufficient time (six weeks) for completion.

Prior to the pilot study the survey tool was pre-tested by six critical care experts, namely a clinical facilitator, a unit manager with a clinical master's degree, a nurse educator, two lecturers (one with a master's degree) and an intensivist with a doctoral degree. Content and face validity was evaluated by these expert clinical and educational practitioners. The expert group commented that there was not enough information available to the participants regarding the CNS. On the recommendation of the expert group the researcher compiled a short page of participant information on the topic of the CNS, which was included with the survey tool and the Stellenbosch University information and consent leaflet.

Suggestions from the five experts were that:

- too little information about the CNS was available with the survey tool;
- structural changes needed to be made;
- the questions should be reduced; and

- the questions should be compiled in such a way that aspects of the survey tool that belong together would be logically grouped together. This would ease the trail of thought for the participants.

The survey tool was adjusted according to the recommendations of the experts, and structural changes were made. The scale from one to six (strongly agree to strongly disagree) was added above the numbers 1 to 6 for clarity. The questions were reduced from 53 to 43. Some questions were clumsy and were refined and rephrased. It was recommended that 'tutor' be changed to 'nurse educator'. The grouping of the statements was primarily done according to the research objective. A concise page containing the overview of the international role and functions of the CNS (Addendum B) was added to the survey tool and information/consent letter as participant information.

Face validity concerns the verification that the instrument measures the content desired (Burns & Grove, 2007).The fact that the researcher was actively involved in the critical care field contributed to the use of language and terms that were familiar to the participants. Therefore the participants recognised that the researcher was conversant with the field of reference, which is in essence what face validity is about. The participants were selected from the critical care environment.

Content validity is reflected in the extent to which the method of measurement includes all the major elements relevant to the construct being measured (Burns & Grove, 2007). Content validity was increased by including as many aspects relating to the implementation of the CNS as possible in the survey tool. These aspects were taken from scientific literature published with respect to this topic and discussed in the literature review. Again, the feedback from the expert group supported content validity.

Construct validity relates to whether the instrument measures the theoretical construct it purports to measure (Burns & Grove, 2007). This study focused on the role of the Clinical Nurse Specialist. To support construct validity a thorough literature review informed the study design and methodology. The survey tool was developed

from scientific literature on this subject. Review by the expert group and pilot study participants indicated that the survey tool did indeed measure role constructs of the Clinical Nurse Specialist.

External validity refers to the extent to which study findings can be generalised beyond the sample used in the study (Burns & Grove, 2007). The study was performed in the critical care environment with participants who worked in this context regularly. The survey tool was available in the critical care units for a period of six weeks, which allowed for as many participants as possible to complete the tool. These considerations in addition to the fact that the sample was adequately representative of the population imply that the findings can be applied to the population of this study.

3.6 Pilot study

According to Burns and Grove (2007, p. 549) a pilot study entails a *"smaller version of a proposed study conducted to develop and refine the methodology, such as the treatment, instruments, or data collection process to be used in the larger study".*

A pilot study was conducted at an identified private hospital with the revised survey tool. The survey tool was again refined after analysis of the pilot study. The pilot study participants were excluded from the main study. Five professional nurses participated in the pilot study. Three of them were critical care qualified professional nurses and two were critical care experienced professional nurses. They indicated that it took them between 15 and 20 minutes to complete the questionnaire, they found no spelling or grammar mistakes, the questions were unambiguous and the survey tool was easy enough to understand.

However, the researcher found from their answers to the questions that they had interpreted a heading of section A (biographical data) incorrectly. The heading was changed appropriately. The heading stated 'doctors' and the pilot participants interpreted it to mean that they had to tick what type of doctors were in their critical

care unit. In fact, this was meant for doctors only to complete. It was subsequently changed to 'Doctors: please mark the applicable box'. After analysing these five survey tools, and making the corrections as indicated, the researcher concluded that the tool would measure what it was intended to measure.

3.7 Data collection procedure

Appointments were made with the respective nursing managers of the eight selected hospitals and the unit managers of the different critical care units. The nursing managers received survey tools with the information/consent letter for them to complete. The unit managers received between 6 and 28 survey tools, depending on the number of permanent professional nurses and regular agency professional nurses in their critical care units as well as other critical care health professionals as stipulated on the biographical data of the survey tool. The researcher distributed 35 survey tools directly to the nursing staff, doctors and other critical care health professionals on duty in the eight hospitals. The applicable unit managers distributed the remaining 135 survey tools to the nursing staff on the different shifts and to the doctors and other critical care health professionals working in the critical care units.

The participant information leaflet and the Stellenbosch University information and consent leaflet were attached to the survey tool. The participants deposited the completed survey tools through the small slots of sealed boxes in the unit managers` offices or the nurses` stations in the critical care units. The letters of consent to participate in the research were posted separately from the survey tools, into these sealed boxes to ensure anonymity.

The researcher paid three visits in total to all eight hospitals to encourage the professional nurses and critical care health professionals in the critical care units to complete the survey tools. The researcher answered questions regarding the survey tool or the topic of the CNS. Some of the questions the participants asked were how the CNS would benefit their working circumstances in their units, whether agency staff could complete the survey tool as well, and whether there were already any

CNSs employed in the Cape Peninsula. After six weeks and on the third (and last) visit to all the participating hospitals the researcher fetched the sealed boxes with the survey tools.

3.7.1 Sample mortality

According to Burns and Grove (2007) sample mortality entails the number of subjects who withdraw from or who are lost during a study.

Sample mortality in this study involved the following:

- Ninety-seven survey tools were not completed by the critical care health professionals. Forty uncompleted survey tools were returned to the researcher in the sealed boxes. Fifty-seven survey tools were unaccounted for. The researcher assumes that some professional nurses took the forms to complete but did not find the time to do so, and then did not return the uncompleted forms of the survey tools.

A total of 73 completed survey tools were collected out of 170 (n/N=73/170) survey tools that had been handed out. This reflects a return rate of 42,9%, which is well within the requirements of a return rate between 32% and 45%, according to De Vos et al. (2005).

3.8 Ethical considerations

The research proposal of the study was submitted to the Committee for Human Research at Stellenbosch University for ethical approval. Permission was obtained from the Nursing Directors of the applicable private hospitals (Addenda B and C).

3.8.1 Informed consent

- Essential information regarding the proposed research, for example the research purpose and an explanation of the procedure to be followed, was

provided to the participants. The participants were informed why they had been selected to participate in the study, that they were allowed to ask questions and that their participation was voluntary and that they had the option to withdraw at any time.

3.8.2 Confidentiality and anonymity

The participants received an information and consent letter to read and complete. They could complete the consent form in English or Afrikaans. The letter of consent was handed in separately from the survey tool to maintain confidentiality and anonymity. These are human rights that require protection in research. The completed survey tool contained no names of participants. The participants could withdraw from the study at any stage. They could complete the survey tool in their own time within six weeks. If they were given a longer time to complete the survey tool it would limit the impact of the research project on the clinical responsibilities of the participants. The completed survey information was accessible to the researcher only and would be applied solely for the purpose of this research.

3.8.3 Human rights

The participants were assured that their human rights would be respected. They were informed of the following:

- No participant would be under any obligation to complete the survey tool.
- Privacy, anonymity and confidentiality would be maintained as described in 3.7.2.
- There would be fair treatment and protection from discomfort and harm: no participant would be targeted for questioning or forced to participate. The participants received the telephone number of the researcher in the event of questions.
- Minimal risks were expected, as no interventions were performed in this non-experimental research study.

- No minors were involved in the study.

The undertaking of the research was the choice of the researcher and there was no sponsorship.

The participants would derive no direct benefits from their participation in the research. However, the outcome of the research could contribute to the improvement of health care.

3.9 Data analysis

According to Polit, Beck and Hungler (2005) data analysis refers to the systematic organisation and synthesis of research data. Brink et al. (2006, p.170) states that *"[d]ata analysis thus entails categorising, ordering, manipulating, and summarising the data and describing them in meaningful terms".*

The survey tool was designed and validated to collect the data. Volumes of quantitative data were collected by the survey tools which were distributed to the participants. The researcher prepared the raw data from the survey tools, presented it in columns with applicable headings and then captured it on an Excel® template provided by the statistician. A professional nurse assisted the researcher by reading the quantitative results while the researcher captured them on the Microsoft Excel work sheet. This method contributed to more accurate capturing of the data.

With the support of a qualified statistician, the data was finalised and analysed. The expectation statement with response was categorised into common themes and then analysed quantitatively. Histograms (charts consisting of rectangles whose areas and positions are proportional to the value or range of a number of variables) and frequency tables were used for descriptive purposes. Interpretation of the data supported the literature. Recommendations were based on the scientific evidence obtained from the study. The quantitative data was analysed through Statistica®.

Section D of the survey tool comprises the qualitative aspect of the survey tool. The participants were asked to describe their opinions and ideas on the role that the CNS could play in their critical care units. The researcher wanted to identify how the participants viewed the role of the CNS in the critical care environment.

According to Burns and Grove (2007) qualitative data analysis occurs in three stages, namely description, analysis and interpretation. The researcher therefore remained in the descriptive mode for as long as possible before moving on to analysis and interpretation of the qualitative data. The notes were reread until the researcher became immersed in the data. Burns and Grove (2007) contend that qualitative researchers work by insight and intuition, but that they have to remain intellectually honest and rather see confirming evidence than disconfirming evidence. The qualitative data was analysed thematically and then discussed.

3.10 Summary

The researcher's design of the study was explained in this chapter.

The empirical investigation is presented in the next chapter (Chapter 4).

CHAPTER 4: DATA ANALYSIS AND DISCUSSION

4.1 Introduction

According to Burns and Grove (2007) the data analysis stage of the research project comprises the technique of reducing, organising and giving meaning to the data. Following the data analysis is the discussion section of the research report presenting the discussion of research outcomes and conclusions. The results from the data analysis were examined, conclusions were formed and the implications for nursing were considered.

The research information in this study is generally reported in the form of histograms. The answers to the questions of the survey tool were converted into histograms by the statistician. Each histogram in the quantitative section is followed by a description.

4.2 Response rate

The researcher calculated the number of survey tools to be handed out by obtaining information regarding professional nurses and other health care professionals, as stated on the survey tool, working in the critical care units from the unit managers of the eight different private hospitals taking part in the research survey. The unit managers provided the number of permanent professional nurses working in the critical care units and added the number of regular agency professional nurses. The respective unit managers estimated how many other critical care health professionals there were. It was estimated that in total, together with the nursing staff, there were 170 health care professionals working and involved in the 14 critical care/high care units.

The survey tool was designed in four relevant sections to simplify the process of completion. The questions were grouped according to broad themes to assist the participants in their sequence of thought. Feedback from the group of experts and pilot study participants indicated that the survey tool made a good impression due to modern and simple formatting that held the interest of the participants. This could have increased the response rate.

The response rate was most likely positively influenced by the researcher who personally delivered the survey tools to the eight critical care units. At two weekly intervals over a period of six weeks the researcher revisited the eight critical care units to be available for questions and to encourage the nursing staff to complete the forms. Additional measures to support an increased response rate were the sealed boxes supplied for depositing the completed survey tools and the fact that anonymity was ensured. All these strategies assisted in securing a reasonable response rate.

The researcher took a total of 170 survey tools to the eight hospitals. Of these, the researcher handed out 35 survey tools to critical care health professionals who were on duty in the critical care units when she delivered the survey tools and the sealed boxes for collection of the completed survey tools to the eight hospitals. The remaining 135 survey tools were handed to the unit managers of the critical care units to distribute to the critical care health care professionals of their units. Seventy-three survey tools out of 170 were completed and left in the sealed boxes in the unit managers` offices or nurses` stations. This comprises a response rate of 42,9%, which is within the requirements of a return rate between 32% and 45% according to De Vos et al. (2005).

Table 4.1 indicates to which hospitals the survey tools were distributed, how many survey tools were distributed to the participants of each hospital and the amount of completed survey tools that were collected from the applicable hospitals by the researcher.

Table 4.1 Hospitals to which survey tools were distributed and distribution of survey tools to health care professionals

DISTRIBUTION OF SURVEY TOOLS								
Private Hospitals	Survey tools distributed by Researcher to doctors	Survey tools distributed by researcher to other participants	Survey tools distributed by unit manager to doctors	Survey tools that unit manager agreed to distribute to other participants	**Total** survey tools **distributed** to doctors	**Total** survey tools **distributed** to other participants	Survey tools **completed** by doctors	Survey tools **completed** by other participants
Group A								
Hospital (Hosp.) 1	5	2	0	15	5	17	4	10
Hosp. 2	2	3	1	14	3	17	1	7
Group B								
Hosp. 3 High care (HC) (i)	0	1	1	6	1	7	0	4
ICU (ii)	0	1	1	4	1	5	0	2
HC (iii)	0	2	1	8	1	10	0	2
ICU (iv)	1	2	1	8	2	10	1	6
HC & ICU (v)	3	4	1	20	4	24	0	8
Hosp 4 ICU (vi)	3	1	1	17	4	18	0	6
Hosp. 5 (vii)	1	1	0	10	1	11	0	7
Hosp. 6 (viii)	0	1	1	9	1	10	0	6
Hosp. 7 (ix)	0	1	1	5	1	6	0	4
Hosp. 8 (x)	0	1	1	9	1	10	0	5
TOTAL	15	20	10	125	25	145	6	67
TOTAL	**35**		**135**		**170**		**73**	

The above table illustrates the numbers of survey tools that were distributed to the participants.

4.3 Data analysis

A qualified statistician supported the researcher in finalising and analysing the data.

The expectation statements with response was categorised into common themes and then analysed quantitatively. Histograms and frequency tables were used for descriptive purposes. Each histogram was inspected by the researcher and trends noticed were reported and discussed. The purpose of the descriptive statistical results was not to test causality, but rather to describe the data. Descriptive research consists of "describing and classifying findings without expressing feelings or judgement" (*Oxford English Dictionary*, 2009). The left side of the histograms comprising the 'agree with' and the right side of the histograms comprising the 'do not agree with' were compared with each other and the reaction percentages of the participants were calculated accordingly.

The data findings were presented according to the different sections pertaining to the survey tool. The survey tool consisted of four sections:

- Section A: Biographical data
- Section B: The Clinical-Nurse Specialist in a critical care unit
- Section C: Three recapping questions
- Section D: The participants had to give their opinions and ideas of the role that the CNS could play in their CCUs.

Section A contains the biographical data of the participants. According to Burns and Grove (2007) these demographic variables are called sample characteristics that describe the sample. In the following paragraphs (4.3.1) the biographical data is discussed from the histograms which were compiled by the statistician on the Statistica programme. In this study (section A of the survey tool) the demographic (biographical) data that was used consisted of the participants` age, type of qualification, whether they were permanent, agency, night or day staff, and years of experience in the critical environment. The researcher utilised this data to confirm that the sample met the inclusion criteria.

Sections B and C comprised data that was analysed quantitatively. Conducting quantitative research requires rigour and control. Burns and Grove (2007) define

rigour in research as performing research with excellence by using discipline, scrupulous adherence to detail and strict accuracy.

Section D required of participants to provide their expectations and opinions resulting in qualitative data. The qualitative data was analysed thematically with quotations of the participants followed by an analysis by the researcher.

The study results are discussed under the named sections.

4.3.1 Section A: Biographical data

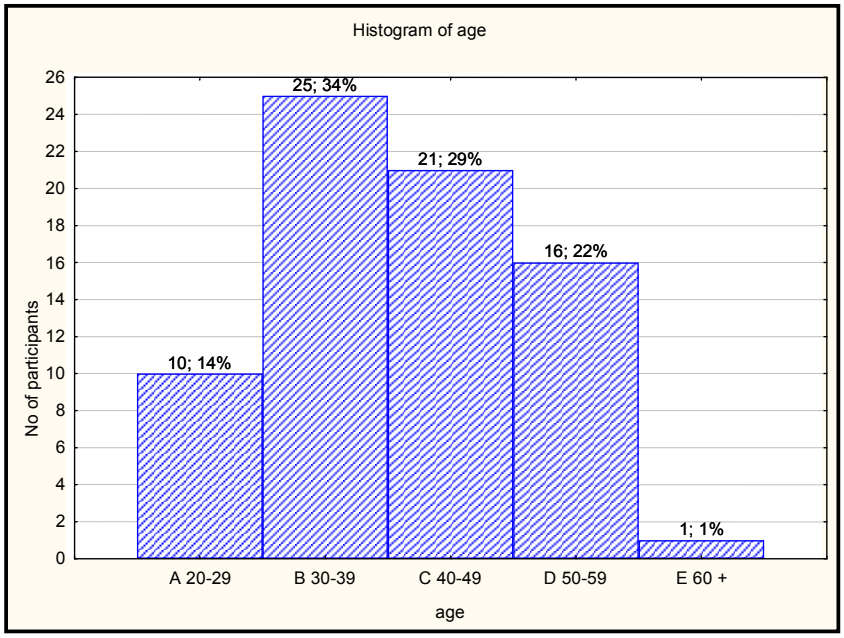
The biographical data contains information pertaining to the ages of the participants, their positions in the critical care environment, their status in their positions, the categories of the doctors, their highest nursing/medical qualifications, their number of years of experience in the critical care environment and their awareness of the CNS in the critical care environment. Burns and Grove (2007) state that demographic data is a collection of characteristics or attributes that describe the sample. Biographical data supports the researcher in forming a 'portrait' of the participants.

The following is a discussion of graphs describing section A (Biographical data) of the survey tool:

4.3.1.1 The age groups of the participants

This graph represents the age distribution of the sample participants. The majority of the sample participants are included in the age group 30 – 39 years with 25 participants (34%) (n/N=25/73). The age group 40 – 49 years (21 participants representing 29% of the sample (n/N=21/73). This represents a total of 46 participants (63%, n/N=46/73).

Figure 4.1 Age groups of the participants



Section A, Question 1

It is of concern that there were only 10 participants in the age group 20 – 29 years (14%) (n/N=10/73), thus indicating that fewer younger nurses are available to critical care nursing. Bell (2005) states that the responsibilities of the critical care nurse increases, while resources and support systems decrease, due to staff shortages, budget constraints, loss of critical care nurses and experienced critical care doctors and increasing patient volumes.

The fact that there were only a few nurses in this age group who responded could indicate that there are only a limited number of younger nurses who are available in the critical care environment. This limited number of nurses in the younger age group in the critical environment of these eight private hospitals raises the concern that there will soon be smaller numbers of experienced critical care staff and less staff in general. This phenomenon points towards the crucial need for guidance and role modelling by the CNS to maintain high nursing standards and patient care in a continuously shrinking nurses` work force.

The age group of 50 to 60 years was represented by 16 participants (22%) (n/N=16/73). This group will not be in nursing after 5 – 15 years when they retire. Thus a further reduction in the already depleted nursing staff numbers is foreseen. Therefore, a CNS is needed in the critical care environment to orchestrate and mentor the nurses and to ensure effective critical clinical decision-making at the bedside to obtain positive patient outcomes.

It is of concern that according to SANC (2007) 74% (76 806) of South African professional nurses were older than 40. Only 3% (3 112) were younger than 30. Of professional nurses in South Africa in 2007 only 22% (22 834) were in their forties. Thus more student nurses are needed to close the gap.

As noted by Bell (2005) the novice nurse, without the experience and knowledge to function on a higher level of clinical decision-making, often has the tendency of crisis management of the patient instead of applying proactive and preventative measures. These novice nurses, often being the younger nurses, would fall in the category of the age group 20 – 29 in this data.

The shrinking nurses` work force, reflected in Figure 4.1 by only having 14% professional nurses in the age group 20 – 29 years, demonstrates that professional nurse numbers in the critical care environment are heading for a serious deficit in the near future, partially due to the diminished numbers of young nurses registering for the nursing profession. Gillespie, Kyriacos and Mayers (2005) reported that the Western Cape critical care units had a deficit of 72% of professional nurses in the public sector and a deficit of 80% in the private sector, which amounted to an actual shortage of 2 722 professional nurses in both sectors in 2005. Out of 815 professional nurses from all critical care units (N=80) in public and private hospitals (N=35) in the Western Cape, 322 were critical care qualified and 493 were critical care experienced. Having too few critical care qualified professional nurses making the early clinical decisions to reduce patient incidents and mortality, increases the need for the CNS in the critical care environment to fulfil this important role. The participants agreed that the CNS is required to improve nursing care (Figure 4.11) and reduce medico-legal claims (Figure 4.12).

Novice nurses, often being in the younger age group, cannot fulfil the expectations of ‘intensive patient care’ as they do not have the experience or skills to integrate good nursing care with complex and intricate physiological management and the complex technology of the critically ill patient (Bell, 2005). In the light of the decreasing numbers of the nurses` work force the CNS will be able to fill this gap by guiding and mentoring the novice nurses in the critical care environment.

Concern is raised that, with a reduced and young nurses` work force, the ‘intensive care’ will not be rendered to the critically ill patient, resulting in higher rates of complications and longer patient stays. Due to the multiple risks associated with diminished nursing staff numbers the supervision, role modelling and clinical intervention of the CNS will reduce medico-legal claims against the hospital and improve patient outcomes.

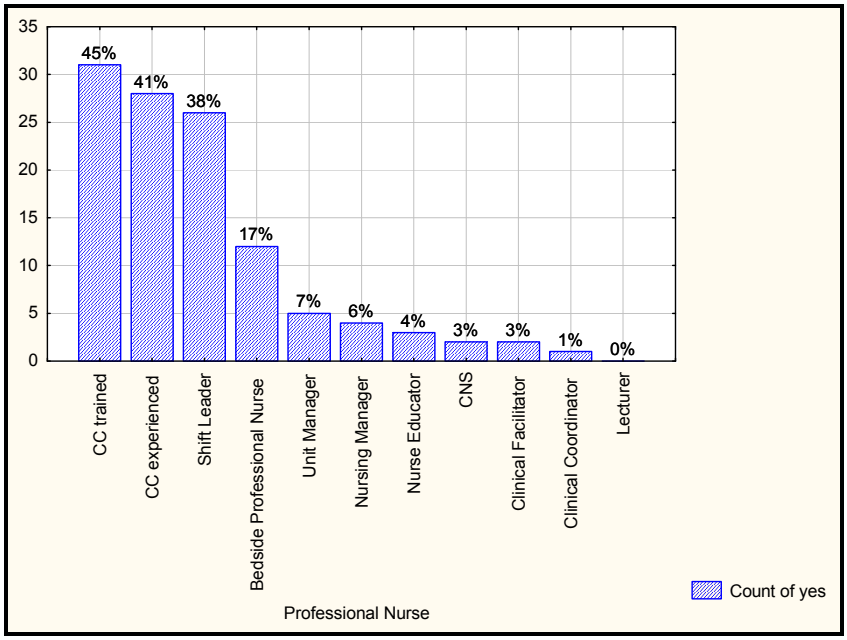
The data reflects that only 14% of nurses in the critical care environment of the eight participating hospitals were between the ages of 20 and 29, which indicates that there will be a nurse shortage in the near future. Stanton (2004) reported that there is a significant association between lower levels of nurse staffing and higher rates of pneumonia, lung collapse, pressure ulcers, thrombosis after major surgery, and pulmonary collapse after surgery, longer hospital stays and 30-day mortality. Therefore, the presence of a CNS and her/his skills/ability in critical clinical decision-making would result in more effective nursing intervention, resulting in improved patient care (Wheeler, 2000 & Lombness, 1994).

This information added to the value of the study by demonstrating that there are a larger percentage of nurses who will be retiring in the short term, meaning that valuable experience will be lost within the critical care environment with a small number of young nurses to replace this retiring group. Thus, the appointment of a CNS would be of value to provide expert guidance and role modelling to these younger, inexperienced nurses.

4.3.1.2a Professional nurses

This graph represents 67 professional nurses, as the other six participants comprise the doctors. The present role status of professional nurses is reflected in this graph. The first two bars of the graph represent the main body of participants, namely critical care experienced and critical care qualified professional nurses. The remaining bars consist of shift leaders, bedside professional nurses, unit managers, nurse educators, CNSs, clinical facilitators and clinical coordinators. They are all critical care qualified or critical care experienced professional nurses. Thus, they overlap with the first two bars.

Figure 4.2 Professional nurses (doctors excluded)



Section A, Question 2a

The majority of the sample comprises 32/67 critical care qualified (synonymous with 'trained' in figure 4.2) professional nurses (45%) (n/N=32/67). The seven per cent unit managers of n/N=5/67 (73 participants minus the six doctors) form part of the 45% critical care qualified participants.

The nursing managers (6%, n/N=4/67) are not all critical care qualified or critical care experienced professional nurses, but they were included in the study as they take important staff appointment decisions. It was an objective of this study to spread awareness regarding the importance of the role of the CNS in South Africa. According to Marshall and Luffingham (1998) the CNS's role is poorly understood by other health care professionals and persons managing the CNS services. Therefore it is regrettable that only 6% of the participants were nursing managers, as more received the survey tool, but they have not completed it.

The term 'bedside professional nurse' might have been ambiguously interpreted by the participants, as this response rate is rather low (17%) and the percentage of bedside nurses should have been more than the shift leaders. However, it can also be assumed that more shift leaders completed the questionnaire, as shift leaders demonstrate more responsibility and they might have reasoned that they want to complete the questionnaire to obtain the expert skills of the CNS on their team to relieve responsibility and stress in critical clinical decision-making.

CNSs only formed 3% (n/N=2/73) of the study as they are not yet formally utilised in the South African critical care environment.

The researcher noticed that 'clinical facilitator' and 'clinical coordinator' are terms which different hospitals use for their clinical nurse educators in the critical care units. These alternating terms have slightly different requirements written into their job descriptions. For clarity in this study the researcher provided both terms to the participants.

Altogether 45% of the participants in the study are critical care qualified of which only 38% are shift leaders. Thus, 26 shift leaders (n/N=26/67) form 38% of the participants. Shift leaders are critical care qualified or to a lesser degree at least critical care experienced. This reflects on the fact that over the past nine years the researcher experienced that many shift leaders in the critical care environment suffered burn-out and preferred to work as agency bedside nurses only. They verbalised that they no longer wanted to carry the main critical clinical decision-

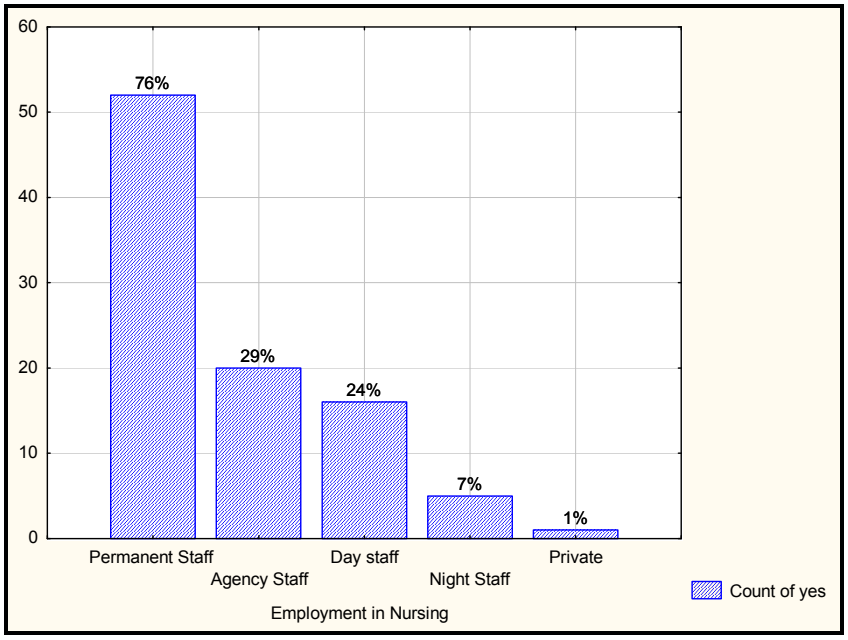
making responsibilities for the whole team in the critical care unit. It is assumed that the appointment of CNSs in the critical care units would reduce the stress and responsibilities of the shift leaders and more critical care qualified professional nurses would return to the critical care environment.

The picture of having 45% of critical care qualified professional nurses as participants of whom the majority function as shift leaders (38%) may be skewed by their responses, as 45% reflects a high percentage of critical care qualified professional nurses, in comparison to reality where there are more experienced than qualified critical care professional nurses. It might be that they responded in high numbers as they wanted to express their need for support in the critical care environment, or because they have more training and more responsibility. On the other hand, in comparison to the critical care qualified professional nurses, the critical care experienced professional nurses might have responded to a lesser degree as they do not all carry the burden of shift leading and critical clinical decision-making for the patients of the complete critical care unit.

4.3.1.2b The status of the present position of the participants in nursing

This section relates to the employment facets covered by the participants, being permanent or agency staff doing night or day duty. The percentages of these bars of the graph do not total 100% (but 137%) as some of the permanent staff also do agency nursing in their off duty time.

Figure 4.3 Status in nursing



Section A, Question 2 b

Figure 4.3 indicates that n/N=52/73 (76%) are permanent staff in the critical care environment. Day staff is reflected by 17 participants (24%) (n/N=17/73) as opposed to night staff only being five (7%) (n/N=5/73).

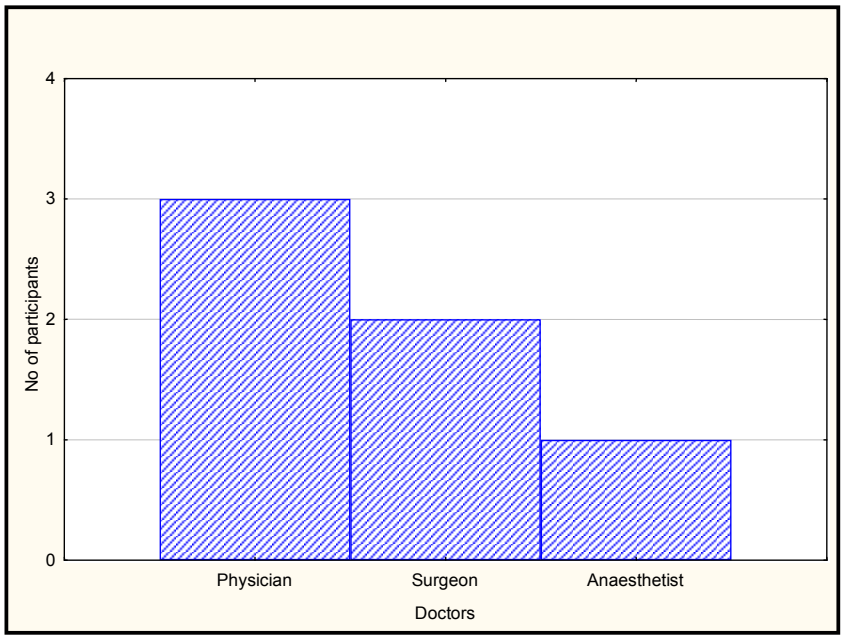
The higher percentage of permanent staff can be skewed by the fact that permanent staff are part of the establishment and feel a responsibility to participate in the research, whereas agency staff (20 participants in this research study) (29%) (n/N=20/73) do not always want to be involved in the day to day general activities.

Another factor may be that the higher percentage of permanent staff, mostly facilitating the shift leader task, had a need to air their views on the CNS subject as they felt that the appointment of the CNS could relieve shift leaders` and bedside nurses` stress.

4.3.1.3 The responses of the doctors

This graph indicates that three physicians, two surgeons and one anaesthetist completed the survey tool for the study in the doctors` category. Thus, six specialists (8%) (n/N=6/73) took part in the survey.

Figure 4.4 Doctors



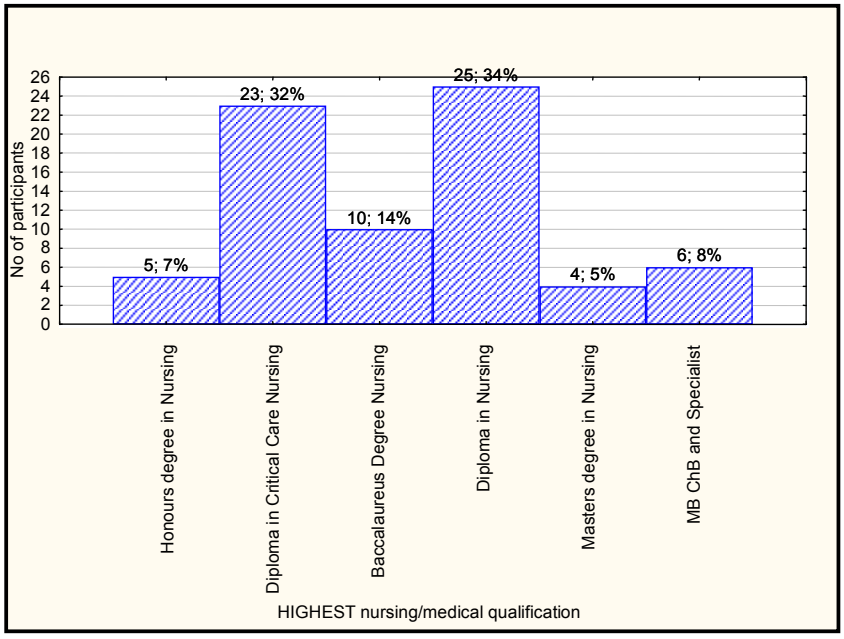
Section A, Question 3

The researcher distributed 15 survey tools to the doctors. These were 15 of the 35 survey tools that the researcher hand-distributed (n/N=15/35). The survey tools for the 10 remaining critical care doctor specialists were included in the 135 (n/N=135/170) survey tools distributed by the unit managers. On counting the survey tools the researcher realised that the survey tools had been distributed over the holiday period (December and part of January) and that many doctors were on leave. Although only few doctors (n/N=6/25) participated, their opinions were important.

4.3.1.4 The highest nursing or medical qualification of the participants

In this graph the highest nursing or medical qualification of the participants is reported. Five of the participants (7%) (n/N=5/73) have an honours degree in Nursing as highest qualification. Twenty-three (32%) (n/N=23/73) of the participants have a diploma in critical care nursing as a highest qualification. Twenty-five (34%) (n/N=25/73) of the junior participants only have the Diploma in Nursing as their highest qualification. A Baccalaureus degree is held by 10 (14%) (n/N=10/73) of the participants. A master's degree in Nursing is held by four (5%) (n/N=4/73) of the participants.

Figure 4.5 Highest nursing/medical qualifications



Section A, Question 4

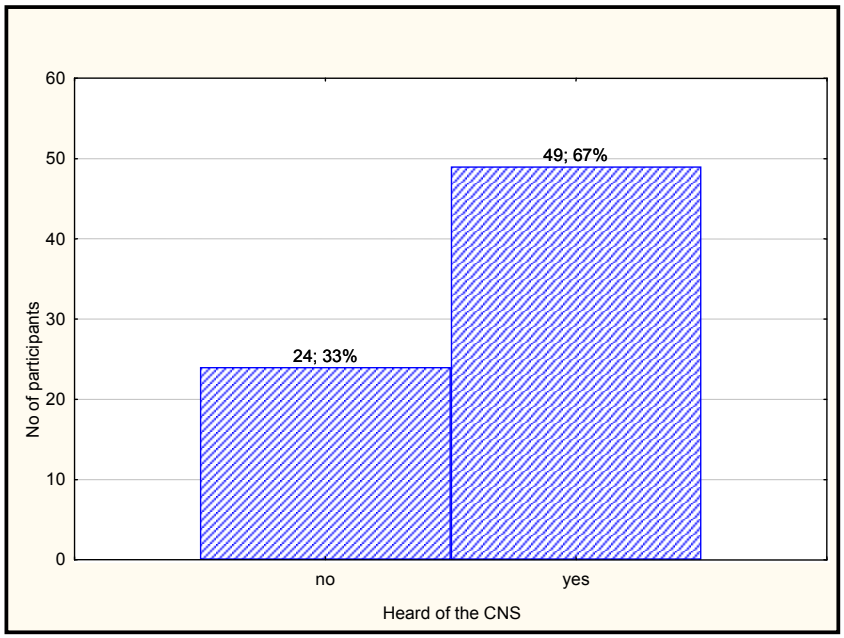
If a CNS were to be appointed out of these participants she/he would have to be selected from the four participants with master's degrees or from the group with the critical care diploma qualification if the latter are performing further studies to obtain master's degrees. These are critical care professional nurses with general master's degrees in nursing and not clinical master's degrees for CNSs as underwritten by

SAQA (2007). The numbers of qualified nurses with master's degrees (four participants in eight participating hospitals) are low. It could have added value to determine in which particular areas these master's degrees have been obtained.

4.3.1.5 Participants who heard of the CNS prior to this research

This question was raised by the researcher to determine the awareness of the sample regarding the CNS in the critical care nursing environment.

Figure 4.6 Heard of the CNS prior to this research



Section A, Question 5

Forty-nine (67%) (n/N=49/73) responded that they have heard of the CNS prior to reading the attached information to the survey tool. Twenty-four participants (33%) (n/N=24/3) commented that they have never heard of the CNS before. According to Marshall and Luffingham (1998) the CNS's role is poorly understood by other health care professionals and persons managing the CNS services. It might be assumed that the international 'powers that be' also have not heard of, or studied the research regarding the CNS to the correct degree to make final and proper decisions with

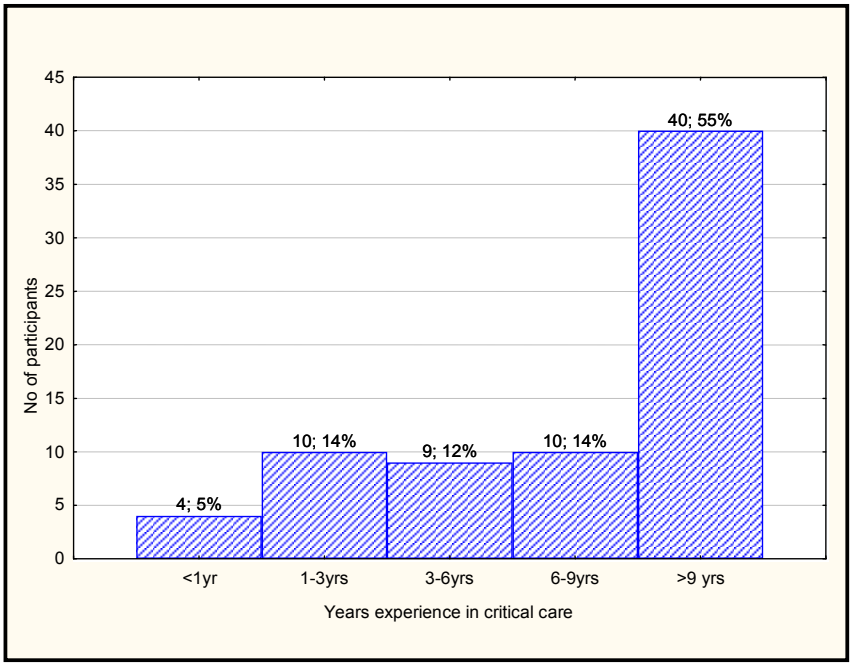
respect to the role and functions of the CNS. The confusion regarding the role of the CNS is aggravated by overlapping roles and the variety of titles resembling that of the CNS, such as *Nurse Clinician* (The National Joint Practice Commission, 1977); and *Clinical Nurse Leader* (NACNS, 2005). Years of international research (1970 to 2009) has not come up with a final degree of uniformity or a solution regarding a clear and final job description, licensure, educational path and sensible safeguarding of the title 'CNS'.

4.3.1.6 Years of experience in critical care units

Four participants (5%) (n/N=4/73) have less than one year experience in the critical care environment. Ten participants (14%) (n/N=10/73) are in the group with one to three years experience in the critical care units of the eight hospitals. Nine participants (12%) (n/N=9/73) represent the group with three to six years' experience. Ten participants (14%) (n/N=10/73) represent the group with six to nine years' experience.

The majority of participants, 40 (55%) (n/N=40/73), are in the age group with more than nine years' experience in the critical care environment. Their years of experience should make their comments more valuable to the study than that of inexperienced, young nurses.

Figure 4.7 Years experience in CCUs



Section A, Question 6

4.3.2 Section B: The Clinical Nurse Specialist (CNS) in a critical care unit

Section B comprises 41 expectation statements regarding the CNS that the participants had to rate by marking them with an x according to a scale of six options:

- Strongly agree
- Agree
- Slightly agree
- Slightly disagree
- Disagree
- Strongly disagree

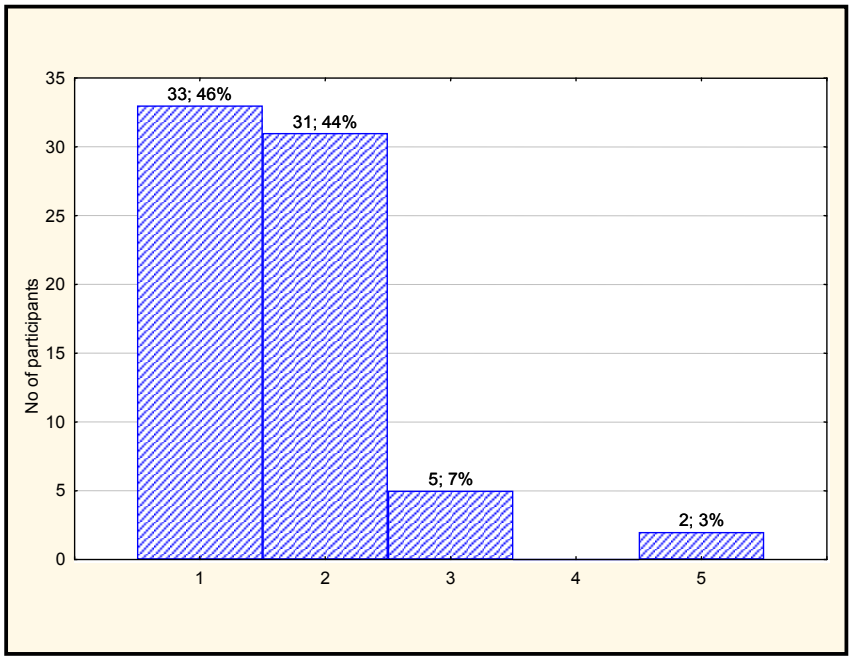
The statements of section B were compiled according to the subdivisions of the research objective, according to the literature review and the researcher's assumptions regarding proposed benefits or problems in relation to the appointment of a CNS. The statements were tabled without headings, but more or less grouped together in themes according to the research objective to improve the line of thought of the participants. For example, activities regarding positive patient outcomes which

reflect on quality care were grouped together in questions 1, 2 and 4. Some statements were in a positive fashion, 'will require …' and some in a negative fashion, 'will not require …' This urged the participants to think and make decisions and to not blindly select the options. There was only one statement per line.

The research objective states: describe the opinions of health care professionals working within the critical care environment regarding their expectations of the CNS role with respect to the following:

4.3.2.1 The scope of practice and professional status

Figure 4.8 Will require a clearly defined job description



Section B, Question 24

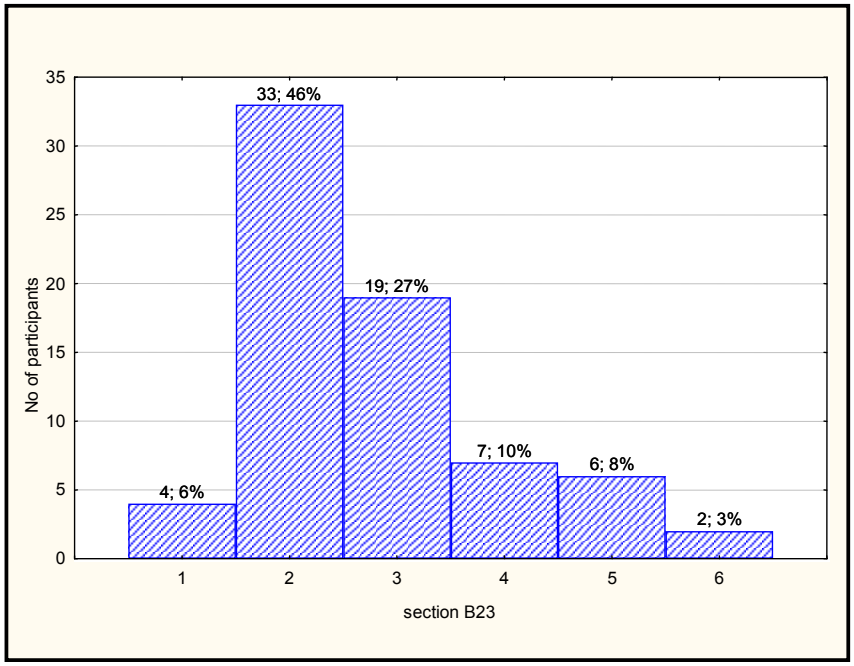
Thirty-three participants (48%) (n/N=33/73) strongly agreed, 31 participants (44%) (n/N=31/73) agreed and five participants (7%) (n/N=5/73) slightly agreed that the CNS would need a clearly defined job description. Thus, 99% (n/N=72/73) of participants agreed that the CNS will need a clear job description, which highlights the concern of the participants regarding the overlapping of roles and conflict in the critical care environment.

Only two participants (3%) (n/N=2/73) disagreed that the CNS would need a clearly defined job description.

Lorentzen and Hooker (1996) state that undeniable power struggles and conflict continue with regard to advanced nursing because of title confusion and blurred professional boundaries among health care professionals. Therefore the compilation of an effective job description and the selection of a CNS with good people skills and emotional intelligence will aid in preventing conflict among all the role players in the critical care unit and CNS sphere and thus improving the interdisciplinary relationships.

Dyson (1997, p. 728) underscores the importance of a clear job description by stating that *"standards of practice and outcome-based job descriptions will need to be developed to measure the efficacy of advanced nursing roles"*.

Figure 4.9 Will lead to the CNS reporting to the critical care intensivist or physician



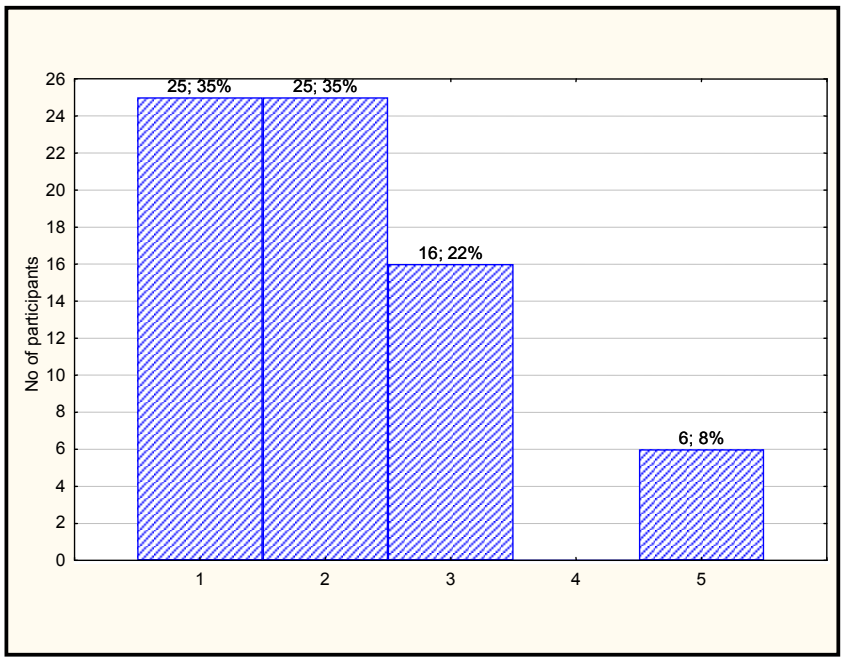
Section B, Question 23

Fifteen participants (21%) (n/N=15/73) felt that the CNS would not report to the intensivist/physician.

Four participants (6%) (n/N=4/73) strongly agreed, 33 participants (46%) (n/N=33/73) agreed and 19 participants (27%) (n/N=19/73) slightly agreed that the appointment of the CNS in the critical care unit will lead to her/him reporting to the critical care intensivist or physician. That resulted in 56 participants (79%) (n/N=56/73) that agreed to the CNS clinically reporting to the intensivist/physician. In 2004 there were only five intensivists in the Western Cape (Gillespie, 2005). Having the CNS reporting to the intensivist might lead to the mini-doctor instead of the maxi-nurse role that is expected from the CNS.

There is no clarity on this topic of the reporting structure for the CNS internationally and therefore the reporting structure for the CNS in South Africa requires further exploration.

Figure 4.10 Improvement of the professional status of nursing in the eyes of the patient and family

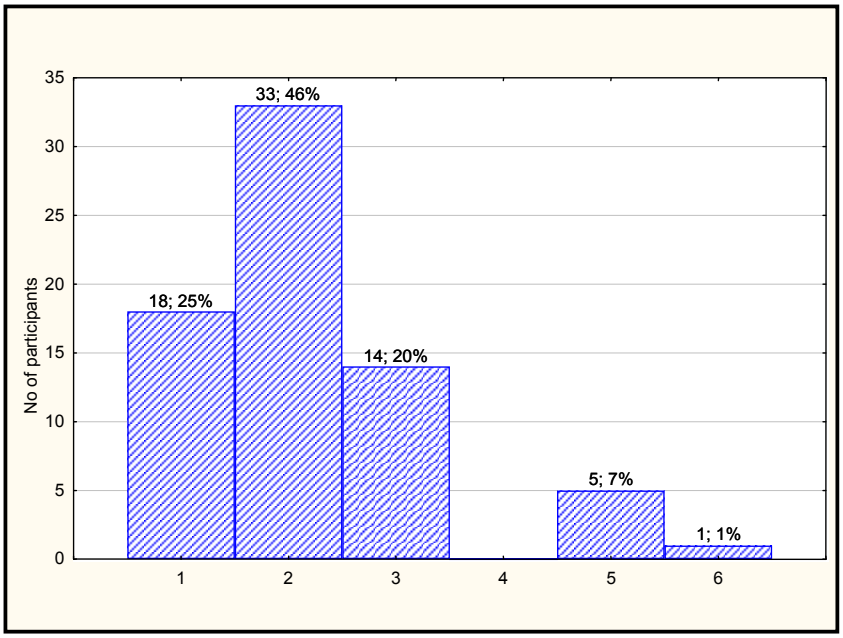


Section B, Question 3

Only six participants (8%) (n/N=6/73) indicated that the CNS will not improve the professional status of nursing in the eyes of the patient and family.

Twenty-five participants (35%) (n/N=25/73) reported that they strongly agree that the CNS will improve the professional status of nursing in the eyes of the patient and family. Twenty-five participants (35%) (n/N=25/73) agreed, and 16 (22%) (n/N=16/73) slightly agreed to the improved professional status of nursing in the eyes of the patient and family. Therefore 92% (n/N=67/73) agreed that the CNS will improve the professional image of nursing in the public eye. This is a high percentage and reflects the urgent need that the critical care unit nursing staff has for positive recognition of the role of nursing in the critical care unit and the strong opinion expresses that the CNS would assist in gaining recognition.

Figure 4.11 Will contribute to increased doctors` satisfaction with nursing care



Section B, Question 18

Eighteen participants (25%) (n/N=18/73) strongly agreed, 33 participants (46%) (n/N=33/73) agreed and 14 participants (20%) (n/N=14/73) slightly agreed that the

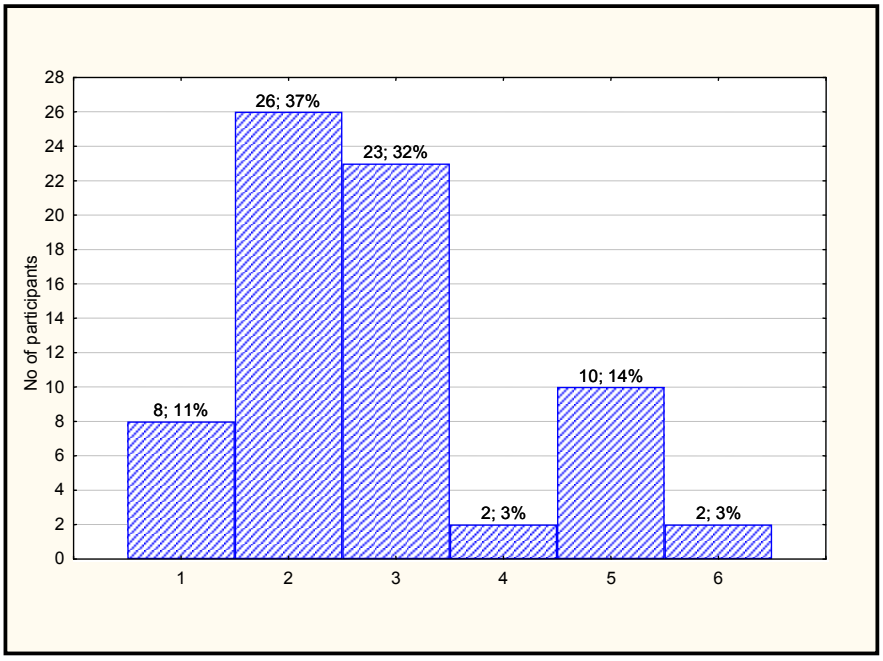
CNS in the critical care unit will contribute to increased doctors` satisfaction with nursing care.

Thus an added advantage will be that the professional status of the nursing staff will increase in the eyes of the doctors and more of them will want to work at the hospitals where CNSs are employed in the CCUs, according to the views of 91% (n/N=66/73) of the participants.

A responding doctor wrote in section D of the survey tool: *"The more qualified personnel in the critical care unit the better. Can you find this person?!"* This comment supports the space for this nursing specialist role to be developed and implemented in the CCUs in South Africa.

Six participants (8%) (n/N=6/73) felt that the CNS would not contribute to increased doctors` satisfaction with nursing care. This view can be accentuated by the response in the qualitative research section: *"She also will not be a good communicator to the doctors as she is not the one that spends 24/7 at the patient`s bedside."*

Figure 4.12 Will contribute to more doctors wanting to work at this institution



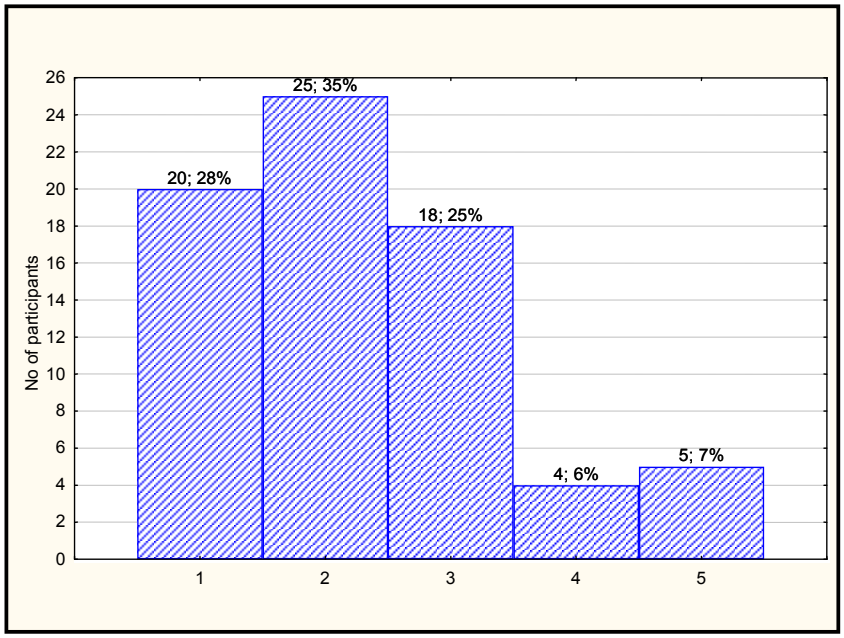
Section B, Question 19

Eight participants (11%) (n/N=8/73) strongly agreed, 26 (37%) (n/N=26/73) participants agreed and 23 participants (32%) (n/N=23/73) slightly agreed that a CNS in the critical care unit would contribute to more doctors wanting to work at this institution. Thus, the result is 57 participants (80%) (n/N=57/73) feeling that a CNS would contribute to more doctors working at the institution. Doctors in the critical care unit will experience the benefit of the CNS in the fashion of her/him being able to perform early recognition of the deteriorating patient with applicable interventions while the doctor is on his way, or on telephonic orders received from the doctor.

Fourteen participants (20%) (n/N=14/73) felt that a CNS would not contribute to doctors reacting more positively when working in a critical care unit where a CNS is employed. In contrast to their negative responses one doctor commented:

> *I think that the CNS could play a role in the CCUs. The extra input as regards patient care ranging from ventilation, fluids, antibiotics, and being proactive in so many areas will provide better patient outcomes, more satisfaction for all nursing staff …*

Figure 4.13 Will improve the reputation of the nursing profession amongst other health care professionals



Section B, Question 10

Twenty participants (28%) (n/N=20/73) strongly agreed, 25 participants (35%) (n/N=25/73) agreed and 18 participants (25%) (n/N=18/73) slightly agreed that the CNS would improve the reputation of the nursing profession amongst other health care professionals. Thus, 88% (n/N=64/73) agreed to improved reputation of the nursing profession.

Professional leadership, in combination with the other domains of practice in the Strong Model, namely direct comprehensive care, support of systems, education, research and publication will result in the novice turning into an expert nurse according to Mick and Ackerman (2000).

High quality expert nursing will result in improving the reputation of the nursing profession amongst other health care professionals as nursing staff, doctors and the other role players in the multidisciplinary team would want to work with this expert nurse and be part of such a winning team. Gerrish et al. (2003) states that this exclusive advanced nursing practice will ensure its place in the multidisciplinary team.

Nine participants (13%) (n/N=9/73) disagreed that the CNS would improve the reputation of the nursing profession amongst other health care professionals.

The interpretation of the role of the CNS in the critical care unit by this 13% of participants is reflected in the following comments by two different participants in section C of the survey tool: *"Important that CNS will not make rest of personnel feel incompetent. We already have enough 'leaders' that are fully qualified/equipped to have that position – shift leaders and unit managers. Another leadership position will only confuse matters of leadership."*

With reference to the above statement of the CNS, 'not making the rest of the personnel feel incompetent', Marshall and Luffingham (1998, p. 658) asked: "*Specialist Nursing: does the specialist nurse enhance or deskill the general nurse?"*

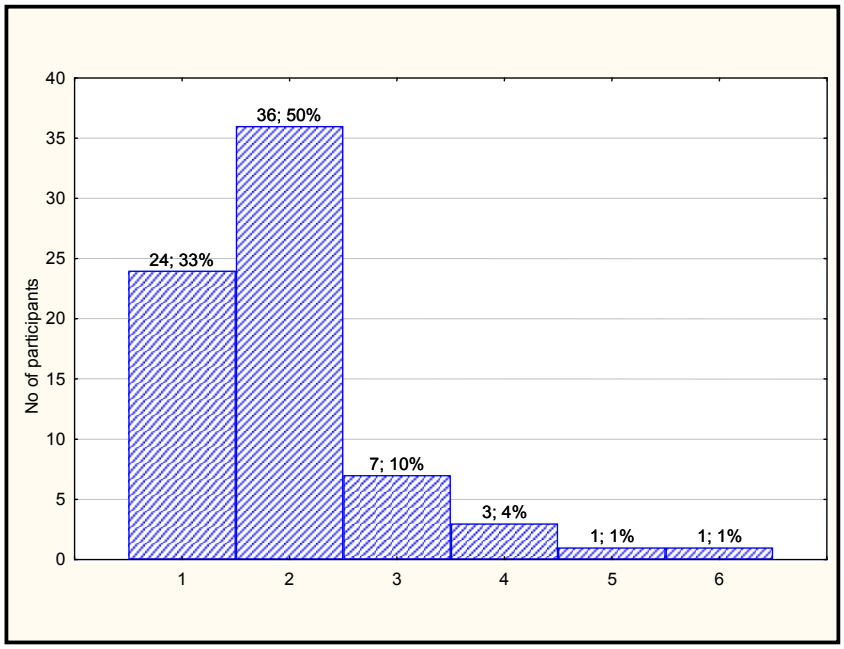
This demonstrates that it was of concern in the international arena of specialist nursing that the CNS might deskill the general nurse at the bedside.

Another participant in section D of the survey tool commented:

> *The CNS will have to be introduced slowly. ICU sisters can be very resistant to changes and this could cause some conflict initially because some staff with many years of experience but lacking the academic and clinical qualifications would probably react negatively when being lead by a CNS. That person (CNS) would also have to have good interpersonal skills (already a problem in the unit between ICU trained and non-trained).*

As early as 1989 Commerford et al. stated in South Africa that a proper career structure should be developed for the expert nurse who preferred to remain at the patient`s bedside, otherwise a continual loss of advanced trained nursing staff, for instance CNSs, into nursing administration or education as promotion would take place.

Figure 4.14 Will be a promotion post for a senior critical care expert



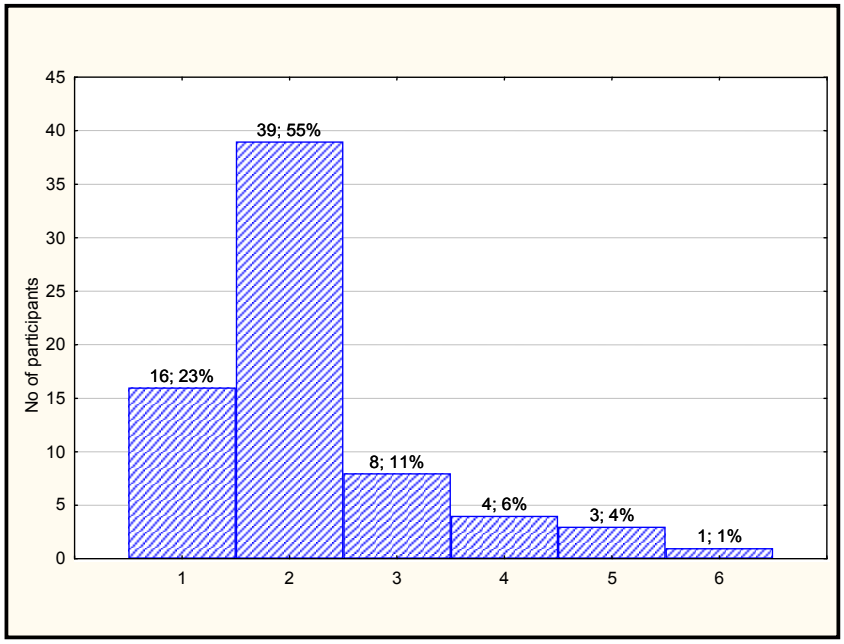
Section B, Question 35

Twenty-four participants (33%) (n/N=24/73) strongly agreed, 36 participants (50%) (n/N=6/73) agreed and seven participants (10%) (n/N=7/73) slightly agreed that the CNS post would be promotion for a senior critical care expert. Hence, 67 participants (93%) (n/N=67/73) agreed that the CNS post would be filled by a senior critical care expert.

This percentage (93%) (n/N=67/73) points toward insight by the participants in the requirements for the CNS. The researcher was concerned about misinterpretation by the participants regarding the academic and clinical requirements for the CNS, as a participant in the qualitative section (D) mentioned that "*it was of some concern that the CNS would not be critical care qualified*". The CNS must therefore follow the career path of completing the critical care course, gaining experience in the critical care unit and then proceeding with her/his clinical master`s degree.

Only five participants (6%) (n/N=5/73) indicated that they disagreed that the CNS post would be a promotion post for a senior critical care expert.

Figure 4.15 The CNS will provide a good role model to the critical care unit nursing staff



Section B, Question 14

Sixteen participants (23%) (n/N=16/73) strongly agreed, 39 (55%) (n/N=39/73) participants agreed and eight participants (11%) (n/N=8/73) slightly agreed that the CNS would provide a good role model to the critical care unit nursing staff. This is a total of 89% (n/N=65/73) participants agreeing that the CNS would be a good role model. If the CNS is a good role model a foundation standard is established to influence the practice of all other nurses within that environment and this may have a positive outcome on patient care in the unit and establish good interpersonal relationships to prevent conflict and encourage collaboration.

The CNS as a role model is expected to demonstrate *"superior leadership, communication, critical thinking, clinical decision-making, collaborative, ethical decision-making and mentoring skills"* according to the CACCN (2002, p. 1). By the guidance of other nursing staff and by developing innovative approaches to clinical practice, the nursing profession may advance. However, role modelling and mentoring will only be successful once the CNS has gained credibility (Urquhart, 2004). Therefore the CNS will have to uphold trustworthiness and integrity to maintain the support of the health care professionals in the critical care unit.

Eight participants (11%) (n/N=8/73) disagreed that the CNS would be a good role model in the critical care unit. In a quotation from the qualitative research section of the survey tool, a participant commented: *"I think that a CNS nurse is unnecessary and will only step on other personnel's toes."*

She/he should have insight in the risk for conflict and *"stepping on other personnel's toes"* as Coates (2001) remarks that specialty nurses tend to be type A personalities: very driven, dedicated and hardworking, but often this character type may give rise to conflict due to competitiveness, abruptness and insensitivity. Therefore the CNS should be emotionally mature with effective coping skills to provide good role modelling to the staff in the critical care environment, thus contributing to the professional status of the CNS.

4.3.2.2 Education and Qualification

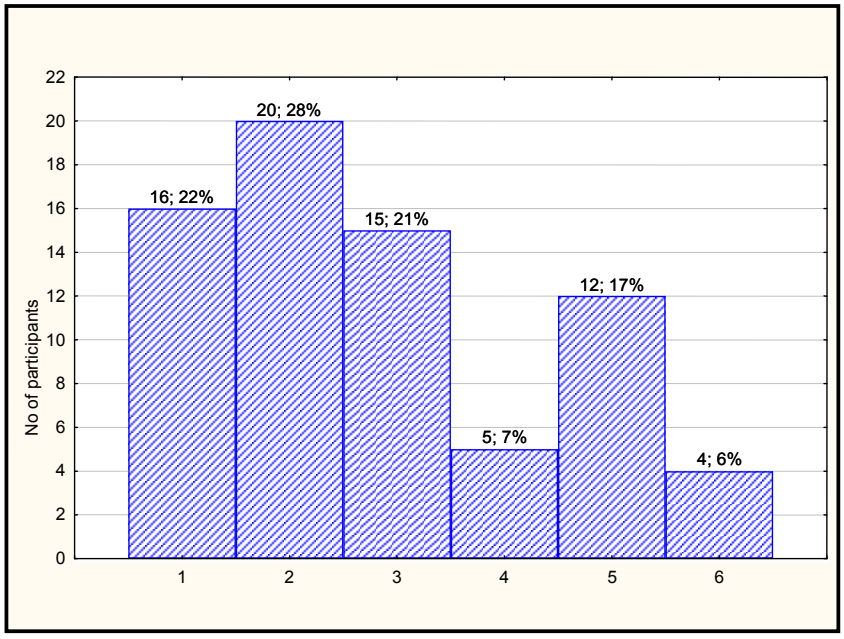
The South African Qualification Authority (SAQA, 2007) compiled the requirements for the education of the CNS in South Africa: The South African CNS would be expected to complete a clinical master`s degree in Nursing. The exit level outcomes of the CNS in adult critical care nursing have to demonstrate a practice-based knowledge and understanding of bio-medical technologies and nursing skills utilised in support of care of the critically ill person. The CNS must apply evidence-based knowledge and skills in understanding, interpreting and mediating the physical and emotional environment of the critical care unit for patients, their families and staff.

It will be a requirement for the CNS to demonstrate a coherent understanding of principles, theories and emerging national and global issues in critical care nursing. The interpretation and application of information and data to assess the critically ill adult will be an important expectation of the CNS`s work profile. Application of specialist knowledge and skills in the care and physiological support of the critically ill and high-risk adults and their families would be part of her/his scope of practice.

The South African Health Education Institutions are required to compile a curriculum for the clinical programme of the CNS in line with the purpose and rationale for the qualification of Master's of Nursing for the CNS by the South African Qualification Authority (SAQA 2007).

Dyson (1997) stated that standards of practice and outcome-based job descriptions will need to be developed to measure the efficacy of the advanced nursing roles. Therefore some form of practice audit for professional accountability for the CNS should be developed to evaluate the performance of the CNS.

Figure 4.16 Must have at least a clinical master's degree in Critical Care Nursing

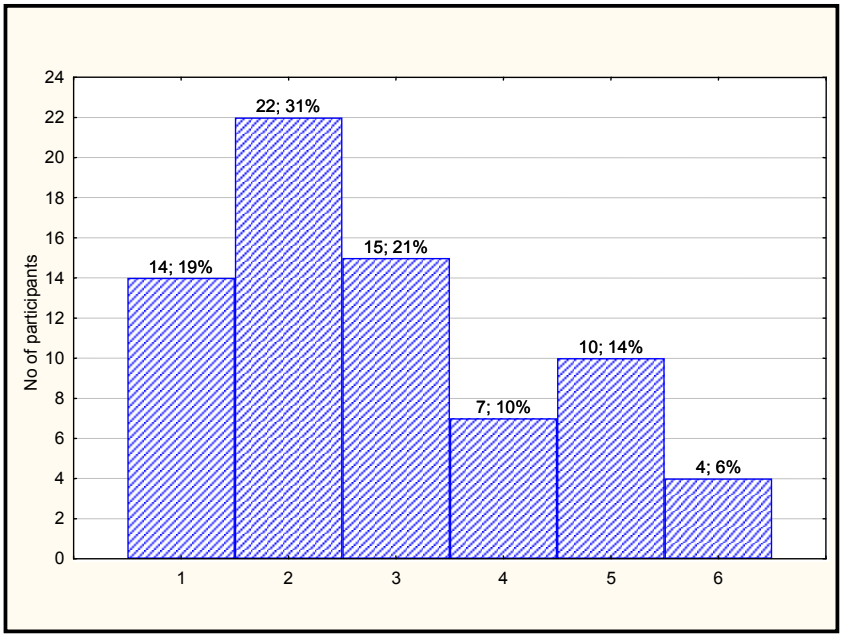


Question 38

Sixteen participants (22%) (n/N=16/73) strongly agreed, 20 participants (28%) (n/N=20/73) agreed and 15 participants (21%) (n/N=15/73) slightly agreed that the CNS must have at least a clinical master's degree in critical care nursing. Hence, 51 participants (71%) (n/N=51/73) agreed that the CNS in the critical care unit should at least have a clinical master's degree in Nursing.

Twenty-one participants (30%) (n/N=21/73) were of the opinion that it should not be a requirement that the CNS in the critical care unit should have a clinical master's degree in Nursing. The clinical master`s degree is important as it will render the required qualifications for the CNS in the critical care environment.

Figure 4. 17 Must have at least an honours degree in Critical Care Nursing



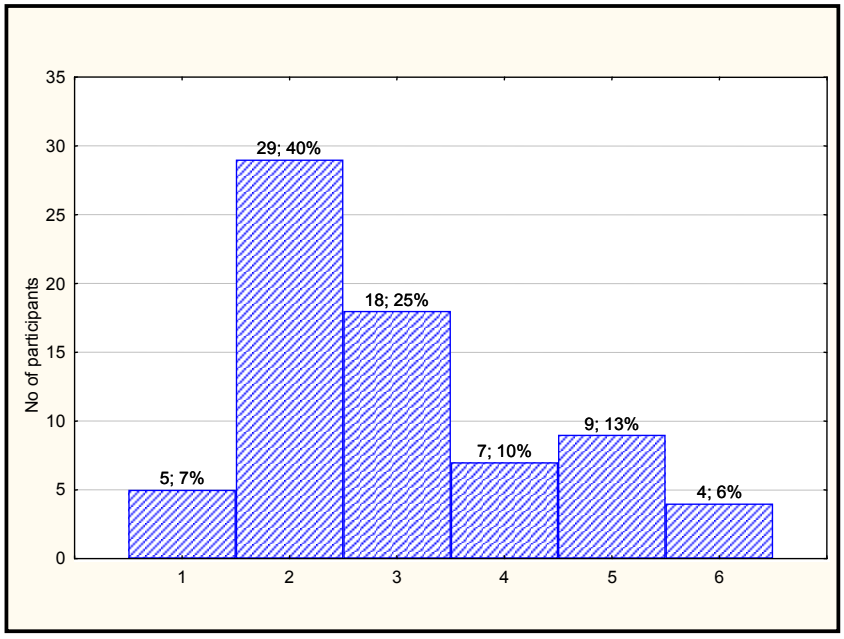
Section B, Question 39

Fourteen participants (19%) (n/N=14/73) strongly agreed, 22 participants (31%) (n/N=22/73) agreed and 15 participants (21%) (n/N=15/73) slightly agreed that the CNS should at least have an honours degree in critical care nursing. Therefore, 51 participants (71%) (n/N=51/73) agreed that the CNS in the critical care unit should at least have an honours degree in critical care nursing.

Twenty-one participants (30%) (n/N=21/73) disagreed that the CNS needed to have an honours degree in critical care nursing at least.

Due to the high expectations for the CNS as educator, mentor and researcher in the critical care unit it is important that her/his qualifications are up to date according to the requirements of SANC and SAQA. This question was included, as at present the honours degree in Nursing still exists; therefore the status quo will remain until changes take place.

Figure 4.18 Will lead to initial CNSs being employed without a clinical master's degree in Nursing



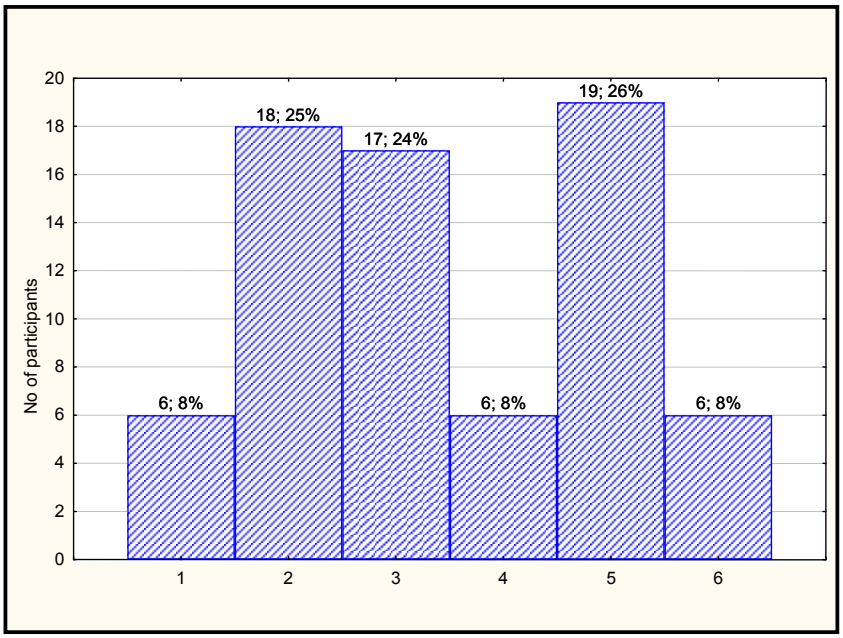
Section B, Question 40

Five participants (7%) (n/N5/73) strongly agreed, 29 participants (40%) (n/N=29/73) agreed and 18 participants (25%) (n/N=18/73) slightly agreed that initial CNSs would be employed without a clinical master's degree. In total fifty-two participants (72%) (n/N=52/73) agreed that the initial CNS in the critical care unit would be appointed without a clinical master's degree in Nursing.

Jitna (2007) commented that advanced nurses without the required academic qualifications should not be prevented from performing their advanced care. Contrary to Jitna (2007), the Board of Registered Nursing, Sacramento (2008) stated that an expert nurse in a given field, even if she/he has worked there for fifteen years, should not be called an advance practice nurse, unless she/he is qualified in the five component areas of competency for CNS certification and is in possession of a master`s degree.

Twenty participants (29%) (n/N=20/73) disagreed that the initial CNS would be appointed without a clinical master's degree in Nursing.

Figure 4.19 Will require that the CNS at least has any master's degree in Nursing



Section B, Question 41

Six participants (8%) (n/N=6/73) strongly agreed, 18 participants (25%) (n/N=18/73) agreed and 17 participants (24%) (n/N=17/73) slightly agreed that a requirement of the appointment of the CNS in the critical care unit would be to have at least any master's degree in Nursing. Thus, 41 participants (57%) (n/N=41/73) agreed that the CNS in the critical care unit should have at least any master's degree in Nursing.

Six participants (8%) (n/N=6/73) reflected that they slightly disagreed that the CNS should have at least any master's degree. Eighteen participants (25%) (n/N=18/73) disagreed and 17 participants (24%) (n/N=17/73) strongly disagreed that the CNS should have any master's degree. Consequently, 31 participants (42%) (n/N=31/73) disagreed to various degrees that it would be required of the CNS to have any master's degree in Nursing.

In summary: with regard to the proposed degree requirements for the appointment of the CNS in the critical care unit, the participants reflected their opinions as follows (Table 4.2):

Table 4.2 Proposed need for degree requirements for the CNS in the critical care unit according to the outcome of this research

DEGREE	YES	NO
Honours in Critical Care Nursing	71%	30%
Any master's in Nursing	57%	42%
Clinical master's in Nursing	71%	30%
Appoint without a clinical master's degree	72%	29%

Altogether 81% (n/N=59/73) of participants felt that the CNS should soon be appointed in the CCUs and 89% of participants (n/N=64/73) agreed that the appointment of a CNS in the CCU would contribute positively to the staff and patients in the CCU.

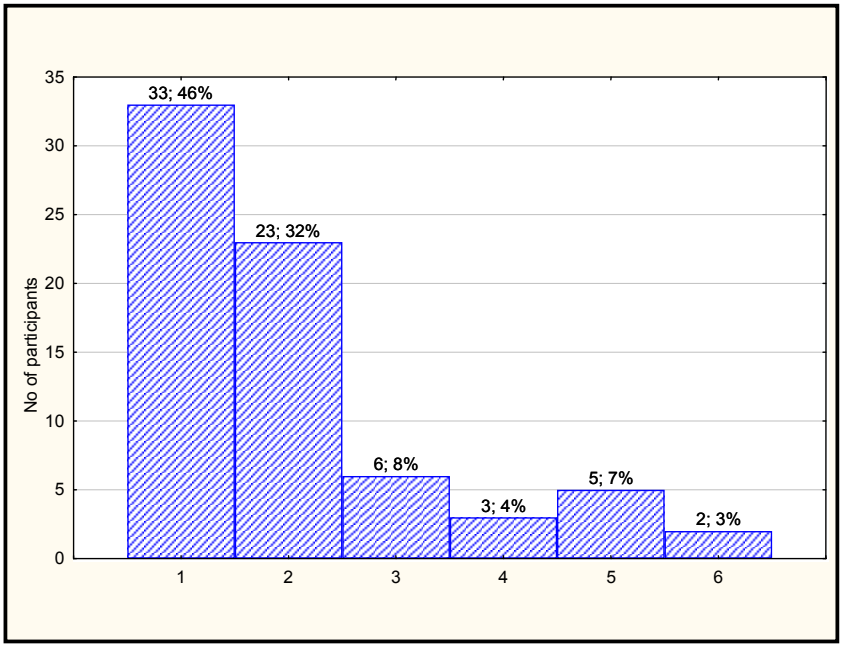
It was demonstrated in Table 4.2 that the participants regarded the proposed degree requirements for the CNS in the CCU as follows:

- Most agreed that the CNS should have at least an honours degree in critical care nursing (71%) (n/N=51/73) or a clinical master's degree in Nursing (71%) (n/N=51/73), but they contradicted themselves to an extent regarding the requirement of the CNS having any master's degree in Nursing (57%) (n/N=41/73).

- The appointment of the CNS in the CCU would be important regardless of the requirement of the clinical master's degree.

- Of the participants 72% (n/N=52/73) indicated that the initial CNSs would be appointed without a clinical master's degree.

Figure 4.20 Must be a member of the Critical Care Society of South Africa

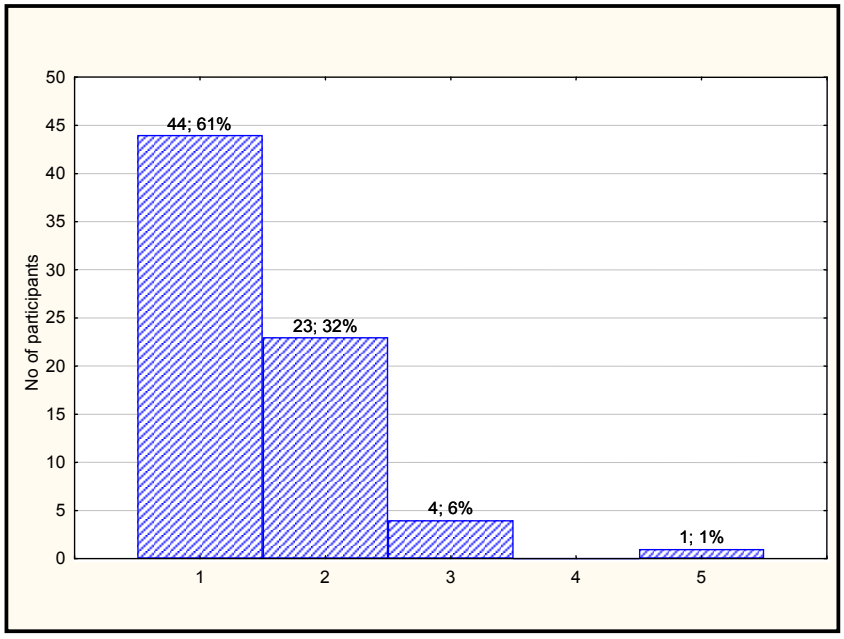


Section B, Question 33

Thirty participants (46%) (n/N=30/73) strongly agreed, 23 participants (32%) (n/N=23/73) agreed and six participants (8%) (n/N=6/73) slightly agreed that the CNS must be a member of the Critical Care Society of South Africa. Thus, 62 participants agreed to the statement that the CNS should be a member of the Critical Care Society of South Africa and 10 participants (14%) (n/N=10/73) disagreed with the statement.

This result was encouraging as it proved that the participants recognised the importance of the CNS being up to date with the latest research and decisions within the critical care sphere.

Figure 4.21 Will have to stay up to date with CNS development in South Africa and internationally



Section B, Question 34

This question closely relates to the previous question regarding the CNS being a member of the Critical Care Society of South Africa. This question also points to the need of the CNS being up to date with CNS development internationally and in South Africa. 'CNS development' could be seen as following and developing her/his job description, job expectations, clinical self-development and staying informed about the latest evidence-based research.

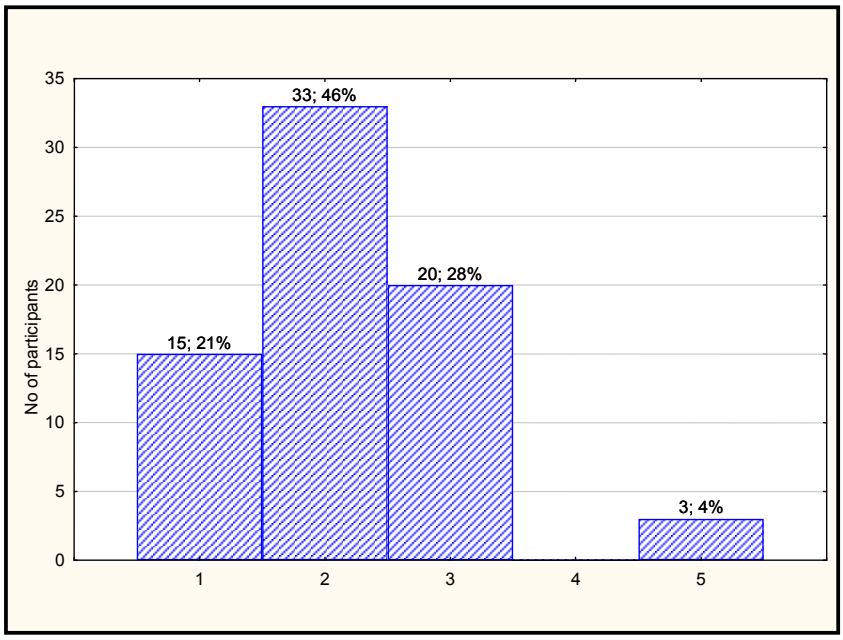
Forty-four participants (61%) (n/N=44/23) strongly agreed, 23 participants (32%) (n/N=23/73) agreed and four participants (6%) (n/N=4/73) slightly agreed that the CNS should stay up to date with CNS development.

Only five participants (7%) (n/N=5/73) disagreed that the CNS must stay up to date with CNS development,

4.3.2.3 Clinical Practice

Kelly et al. (2007, p. 4) state that the CNS should bring *"specialty care informed by the cutting edge of current knowledge"* to the critical care nursing staff. The CNS will create clinical practice environments in which nursing staff can practice excellence. Thus, teaching and mentoring by the CNS will be of utmost importance.

Figure 4.22 Will support clinical empowerment of the shift leaders

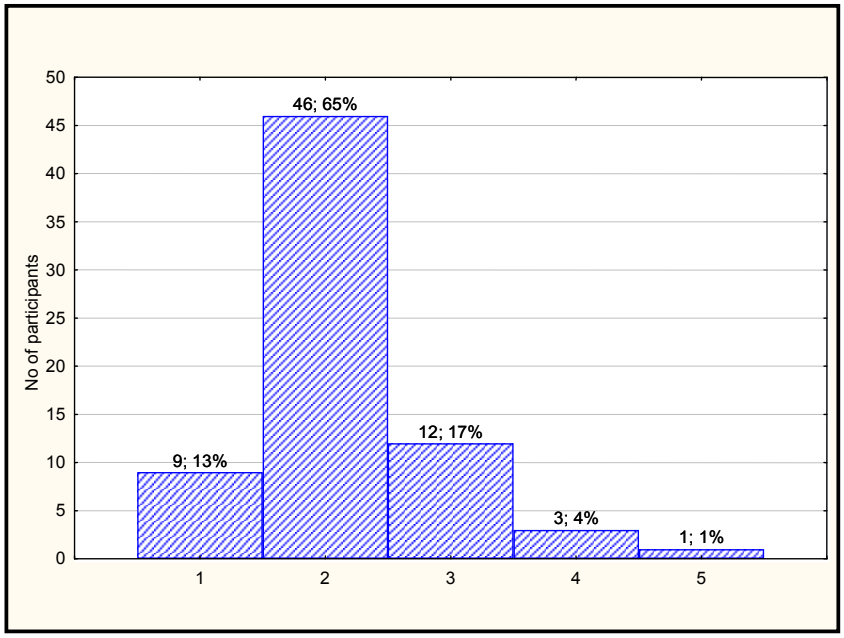


Section B, Question 15

A total of 68 (95%) (n/N=68/73) participants felt that the CNS would support clinical empowerment of the shift leaders. Only three participants (4%) (n/N=3/73) disagreed with this statement.

The reply to this question reflects well on the previous two questions about the CNS in the critical care unit and good collaboration and the positive effect of a good role model.

Figure 4.23 Will support clinical empowerment of the bedside nursing staff



Section B, Question 17

Nine participants (13%) (n/N=9/73) strongly agreed, 46 (65%) (n/N=46/73) participants agreed and 12 participants (17%) (n/N=12/73) slightly agreed that the CNS in the critical care unit will lead to clinical empowerment of the bedside nursing staff. This is a total of 67 participants (95%) (n/N=67/73) in favour of the fact that the CNS would clinically empower the nurses in the critical care unit.

Only four (5%) (n/N=4/73) participants were of the opinion that the CNS would not clinically empower the nurses in the critical care unit.

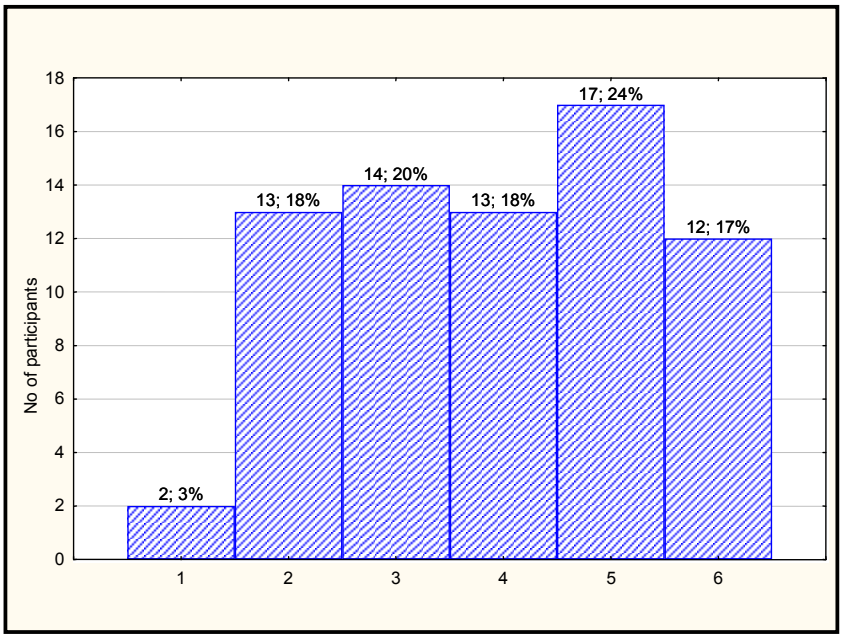
The above two graphs complement each other as they both cover the need for training of the nursing staff by the CNS in the critical care unit.

4.3.2.4 Financial and Quality impact on the hospital

4.3.2.4.1 Financial implications for the hospital when appointing the CNS

According to Cooper (2001) the health care system is changing and these non-physician clinicians (CNSs) provide care cost-effectively and with a high degree of patient satisfaction.

Figure 4.24 Will be a financial burden for the hospital as far as remuneration of the CNS is concerned



Section B, Question 22

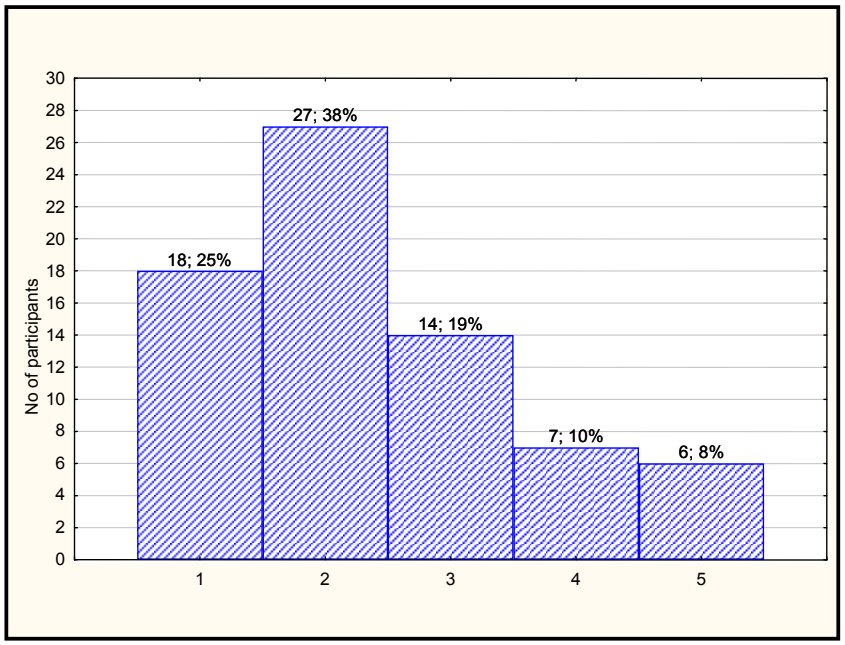
Twenty-nine participants (41%) (n/N=29/3) were of the opinion that the CNS would be a financial burden for the hospital, opposed to 42 participants (52%) (n/N=42/73) who felt that the CNS would not be a financial burden to the hospital as far as remuneration is concerned.

Although it would be expensive to remunerate the highly qualified, expert CNS, administrators should realise the benefits, value and cost-effectiveness of the CNS. Sinclair (1997) stated that the cost-effectiveness of the CNS is attributed to lower

salaries than physicians, fewer invasive procedures, greater compliance by patients, less follow-up or length of hospital stay needed and increased non-pharmacological treatment.

In the qualitative section a participant commented regarding finances: "*Should this merely be a 'designation' with no added responsibilities we may find that the cost factor may become too large.*" Therefore it is imperative to have a good job description with a method of evaluating the outputs of the CNS to assure cost-effective services.

Figure 4.25 Improved managed care



Section B, Question 5

Eighteen participants (25%) (n/N=18/73) strongly agreed that improved managed care will result from the appointment of the CNS in the critical care unit. Twenty-seven (38%) (n/N=27/73) agreed and 14 (19%) (n/N=14/73) slightly agreed that the CNS will improve managed care. Thus, 82% agreed that improved managed care will be an outcome of the CNS in the critical care unit. The fact that positive patient outcomes with shorter hospital stay had been proven by research (Lombness, 1994) is an indication that the appointment of a CNS would result in less patient

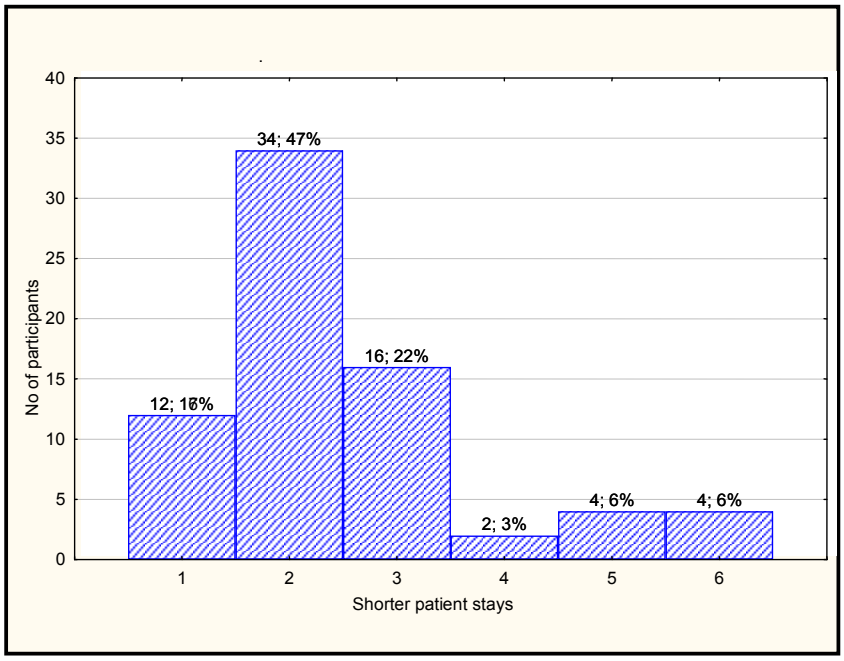
complications, shorter hospital stays and improved outcomes, which would reduce medical aid cost.

In total, 13 participants (18%) (n/N=13/73) disagreed that the CNS will contribute to improved managed care. The fact that 24 participants (33%) (n/N=24/73) indicated that they had not heard of the CNS before this survey tool, could have affected the response to this question negatively. Thus, it could be that the information regarding the CNS was not sufficient.

4.3.2.4.2 Quality impact

The following group of nine graphs form a group of graphs reflecting the pressing need expressed by the participants for a CNS in the critical care unit to improve patient outcomes and thus improve the quality care that the critical care nurse renders to the patient.

Figure 4.26 A CNS will contribute to shorter patient stay in the critical care unit



Section B, Question 1

In the above graph twelve (16%) (n/N=12/73) of the participants strongly agreed, 34 (47%) (n/N=34/73) agreed and 16 (22%) (n/N=16/73) slightly agreed that the CNS will contribute to shorter patient stay in the critical care unit. This is a total of 62 (86%) (n/N=62/73) of the participants agreeing to different degrees that a CNS will contribute to shorter patient stay in the critical care unit.

Two (3%) (n/N=2/73) of the participants slightly disagreed, four (6%) (n/N=4/73) disagreed and four (6%) (n/N=4/73) strongly disagreed that the CNS will contribute to shorter patient stay in the critical care unit. Thus, a total of 10 participants (15%) (n/N=10/73) disagreed to different degrees that the CNS will not contribute to shorter patient stay in the critical care unit. Some of these opinions are skewed as some participants did not understand that the CNS will be critical care qualified, therefore they were sceptical about her/his benefit to the critical care environment.

Bell (2005) noted that if the novice nurse is left to develop her or his own set of rules regarding nursing in the critical care environment without proper guidance, she or he may then learn from medical practitioners or critical care technicians and thus lose their focus on patient care. This accentuates the need for an expert leader and mentor (the CNS) for the inexperienced, younger nurses to guide them to nurse the patient in a holistic fashion, thus covering all the aspects of good nursing care.

The fact that 24 (33%) (n/N=24/73) of the participants had not heard of the CNS prior to this survey might have played a role in their decision regarding this question as they might have had doubts about the role of the CNS.

The first six questions on the survey tool were all related to having the CNS in the critical care unit for quality patient care (safer nursing care, shorter patient stay, improved patient and family care and reduced medico-legal claims) with the motif of improved patient outcomes.

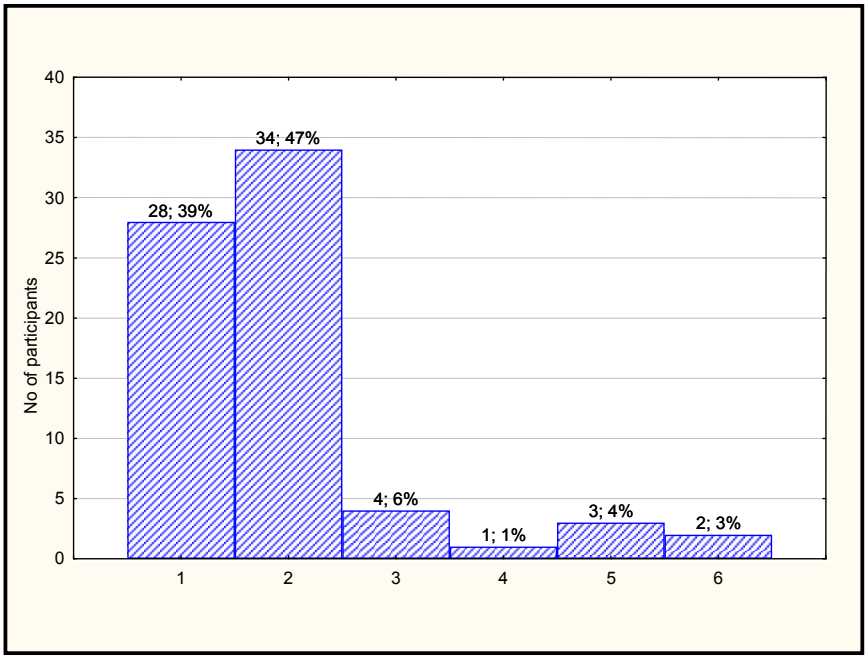
Huston (1996) stated that the health care market forces were downsizing hospitals and eliminating registered nurse positions, while procuring larger numbers of

unlicensed assistant staff. The fact that management opts for unlicensed staff also shows the preference for cheaper labour which could impact the position of the CNS negatively. This is a grim picture as the current tendency is to discharge patients earlier; therefore the patients actually require advanced care to assure fast and effective recovery. In the light of Huston's statement as well as the pressure from managed care to transfer the patient from the critical care environment as soon as possible, the CNS will contribute in effective interventions and decision-making to reduce patient stay in the critical care environment (Figure 4.10).

The CNS will contribute to improved nursing interventions, which will result in more effective and responsible decision-making resulting in improved patient outcomes. The CNS plays an important role internationally as empirically documented positive outcomes are associated with CNS interventions. The researchers (Wheeler, 2000; Lombness, 1994; Crimlisk et al., 1997) conducted research providing evidence that the role of the CNS in the critical care unit contributes to shorter patient stays with resulting positive patient outcomes.

According to Lombness (1994) significant lower length of stay was shown in the CNS-managed group versus the physician-managed group of patients. An estimated cost saving achieved by reduction in patient days was almost $500 000 during the six months of this study. These findings accentuate the benefit of the CNS in the critical care unit regarding shorter patient stay in the hospital. The opinions expressed by the study participants are supported by these studies.

Figure 4.27 Contribution to safer nursing care



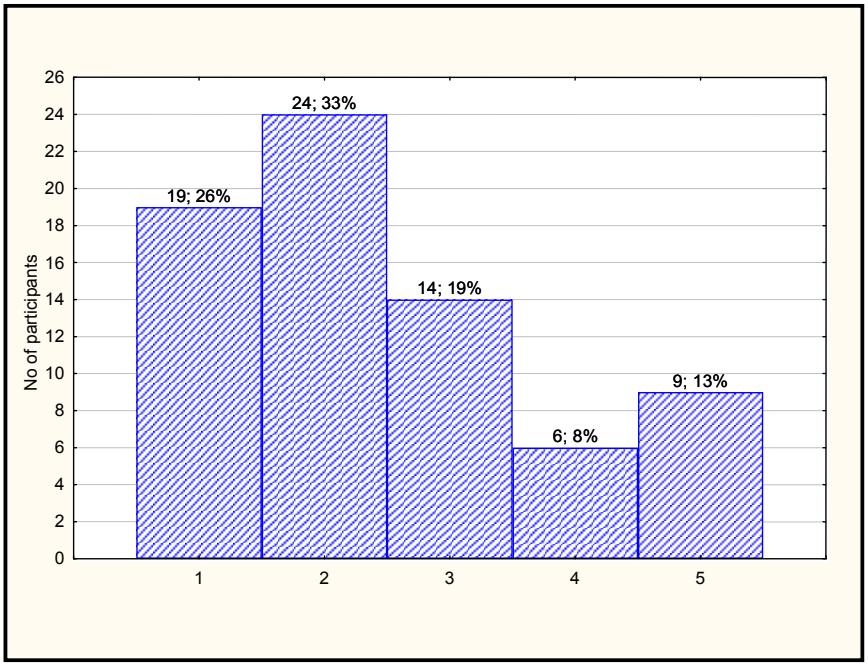
Section B, Question 2

Twenty-eight participants (39%) (n/N=28/73) strongly agreed that the CNS in the critical care unit will contribute to safer nursing care. Thirty-four participants (47%) (n/N=34/73) agreed that the CNS will add to safer nursing care and four participants (6%) (n/N=4/73) slightly agreed. Thus 92% agreed to different levels that the CNS will contribute to safer nursing care. Ten participants (14%) (n/N=10/73) disagreed to various degrees that the CNS will contribute to safer nursing care. Thus, the majority of participants reflected that a CNS will contribute to safer nursing care.

This need among nursing staff to improve nursing care is a positive sign. In the agreement of the necessity for a CNS in the critical care unit the participants actually gave the solution to safer nursing care with improved patient outcomes.

The mentorship and role modelling by the CNS, resulting in effective critical clinical decision-making in the critical care unit, will result in safer nursing care. The CNS should promote excellence in the nursing practice by developing, implementing and evaluating evidence-based nursing protocols, policies, procedures and standards of care (Urquhart et al., 2004).

Figure 4.28 Reduce medico-legal claims against the hospital



Section B, Question 6

In this graph the participants confirm that a CNS is needed in the critical care unit to prevent and reduce medico-legal claims against the hospital and this has a direct bearing on the safe nursing care to the patient in Figure 4.11. Nineteen participants (26%) (n/N=19/73) strongly agreed, 24 participants (33%) (n/N=24/73) agreed and 14 participants (19%) (n/N=14/73) slightly agreed that the CNS in the critical care unit will reduce the medico-legal claims against the hospital.

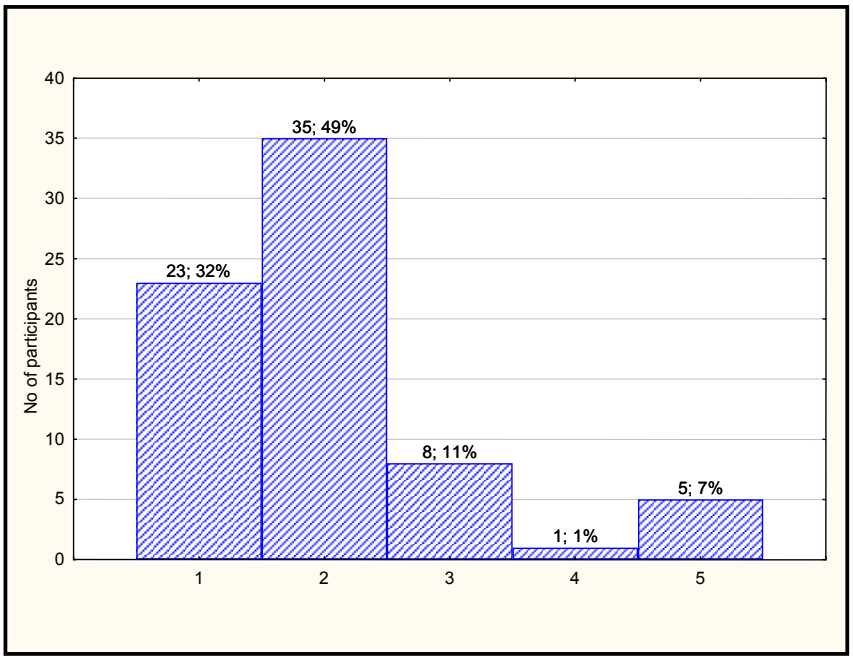
In support of this data a participant wrote in section C of the survey tool:

> *I think a CNS can help with the quality of patient care because nursing personnel will have a better insight in patients` illness/condition and what must be done. CNS can help picking up problems maybe faster and report it to doctor, patient care will improve (less medical-legal claims/incident rate).*

Twenty-nine participants (40%) (n/N=40/73) disagreed that the presence of a CNS will reduce medico-legal claims against the hospital. It is of some concern that 40% of the participants did not agree that the presence of a CNS will reduce the medico-legal claims against the hospital. They either misinterpreted the question or they lacked understanding of and insight into prevention of medico-legal risks, which is

then another indication of how valuable the contribution of the CNS in the critical care environment can be.

Figure 4.29 Improved patient and family care



Section B, Question 4

Twenty-three participants (32%) (n/N=23/73) strongly agreed that the CNS in the critical care unit will lead to improved patient and family care. Thirty-five participants (49%) (n/N=35/73) agreed and eight participants (11%) (n/N=8/73) slightly agreed that the CNS will improve patient and family care.

In the qualitative part (section D) of the research a participant recorded:

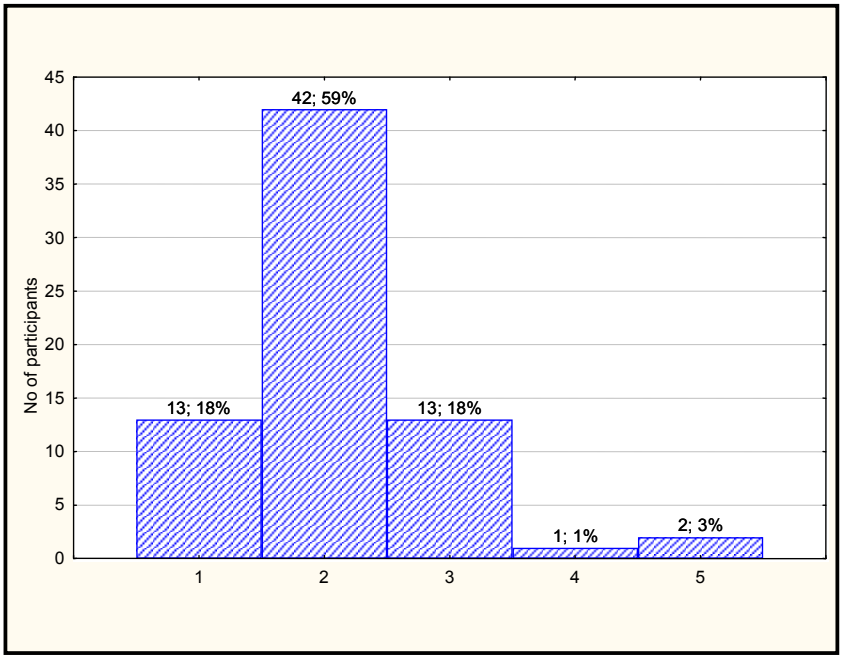
> *The role play of CNS will support the bedside nurse, shift leader and unit manager. She or he will contribute to improve the outcome of the patient with the support of other nursing professionals. She will think of the cost effectiveness in ICU and reduce it instead of using expensive stock. She should be a role model for other nursing professionals.*

This comment is supported by the literature as Hamric et al. (2005) underpinned the core competencies of advanced nursing as clinical expertise, expert guidance and coaching, clinical and professional leadership and collaboration.

Only six participants (8%) (n/N=6/73) did not agree that the CNS will contribute to improved patient and family care.

By performing research and applying evidence-based nursing the CNS will keep the critical care unit up to date with research results which will impact on the positive patient outcomes.

Figure 4.30 Awareness of the nursing team about the importance of evidence-based nursing



Section B, Question 26

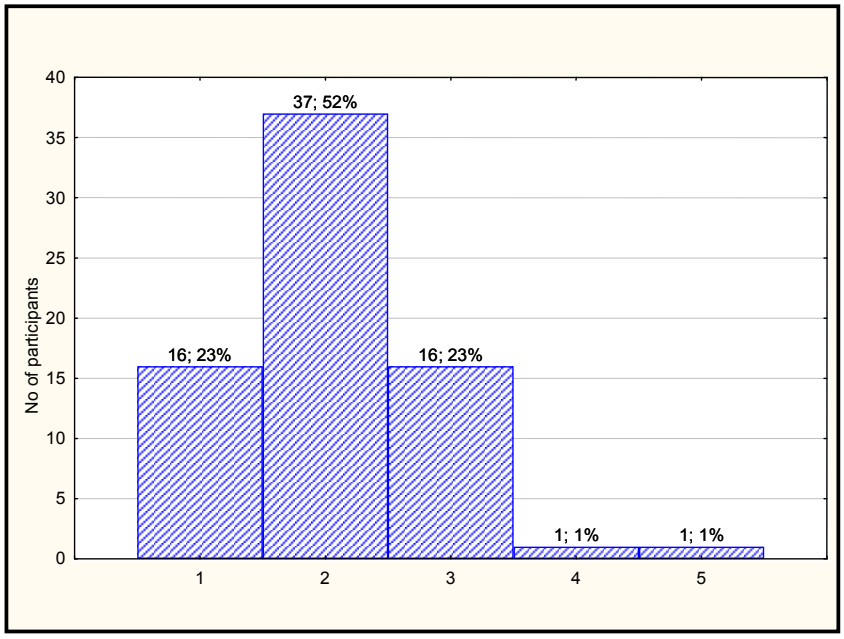
Urquhart et al. (2004) commented that the CNS should promote excellence in nursing practice by developing, implementing and evaluating evidence-based nursing protocols, policies, procedures and standards of care.

Thirteen participants (18%) (n/N=13/73) strongly agreed, 42 participants (59%) (n/N=42/73) agreed and 13 participants (18%) (n/N=13/73) slightly agreed that the

awareness of the nursing team regarding the importance of evidence-based nursing would be underwritten by the CNS.

Three participants (4%) (n/N=3/73) disagreed with the above statement. It is a positive sign that the participants, irrespective of their years of experience or their age, have rated the contribution of the CNS in the critical care unit to research and evidence-based nursing highly, as these are two important components of modern nursing.

Figure 4.31 Will lead to nursing research being done in the critical care unit

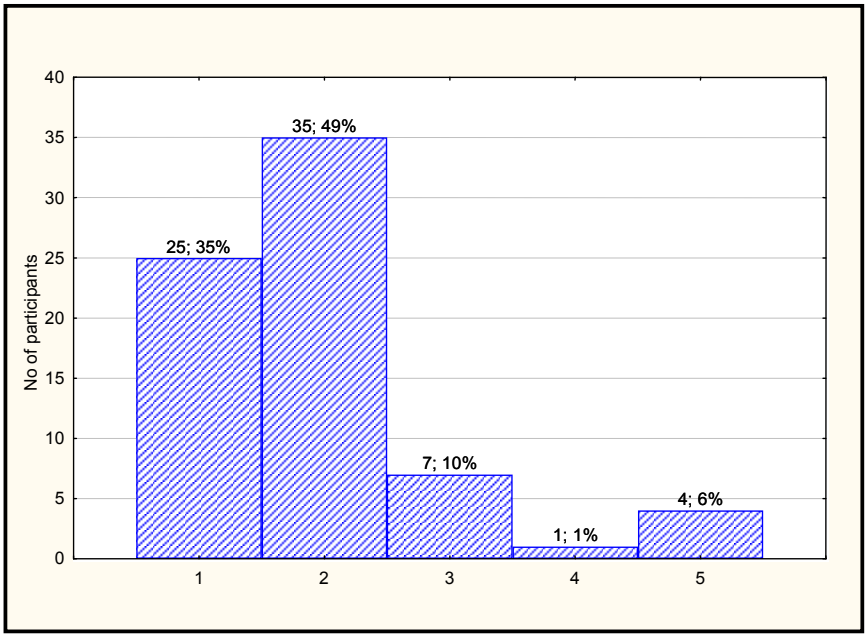


Section B, Question 25

Sixteen participants (23%) (n/N=16/73) strongly agreed, 37 participants (52%) (n/N=37/73) agreed and 16 participants (23%) (n/N=16/73) slightly agreed that the appointment of the CNS in the critical care unit would lead to nursing research being done in the critical care unit. Only two participants (2%) (n/N=2/73) disagreed with this statement.

According to the CACCN (2002) the CNS should have expert research skills and should encourage research in the critical care unit.

Figure 4.32 Will have to do research into nursing practice and patient care



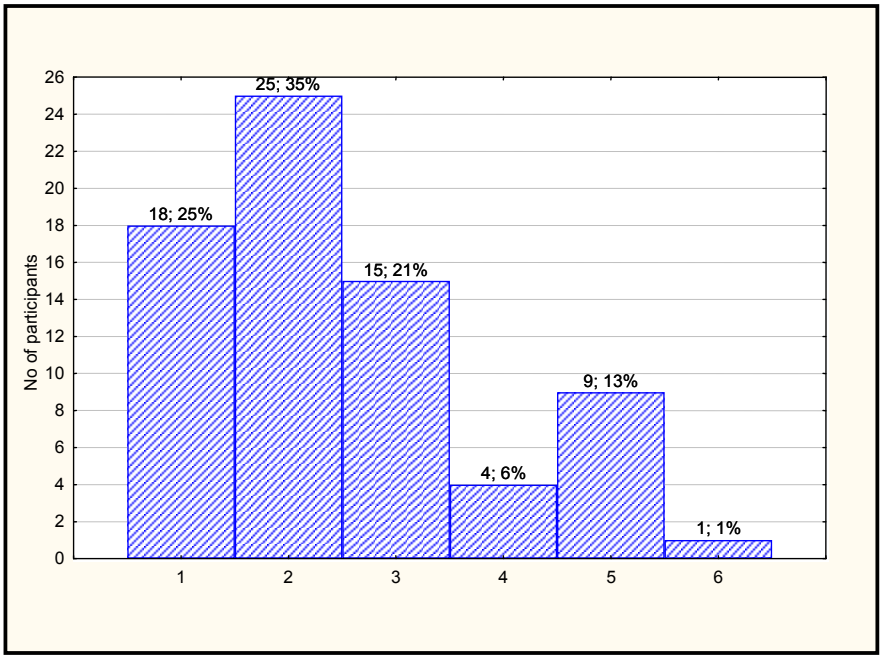
Section B, Question 36

Twenty-five participants (35%) (n/N=25/73) strongly agreed, 35 participants (49%) (n/N=35/73) agreed and seven participants (10%) (n/N=7/73) slightly agreed that the CNS would have to perform research into nursing practice and patient care. Consequently, 67 participants (94%) n/(N=67/73) agreed that the CNS would have to do research into nursing practice and patient care.

On the other hand, 12 (17%) (n/N=12/73) disagreed that the CNS needed to perform research.

The high percentage (94%) n/(N=68/73) that agreed that the CNS would have to perform research, indicates that the participants grasped that research is an important component of the CNS`s job description.

Figure 4.33 The CNS must be appointed soon in critical care units in South Africa



Section B, Question 37

Eighteen participants (25%) (n/N=18/73) strongly agreed, 25 participants (35%) (n/N=25/73) agreed and 15 participants (21%) (n/N=15/73) slightly agreed that the appointment of the CNS should happen soon in the critical care units of South Africa. A total of 58 participants (81%) (n/N=58/73) agreed that it is necessary to appoint the CNS in the critical care units of South Africa soon.

Fourteen participants (20%) (n/N=14/73) disagreed that the CNS must soon be appointed in the critical care units of South Africa. This reaction is of some concern for the researcher. However, an average of 50% (n/n=36/73) of the participants were concerned about the possibility of conflict between the CNS and the unit manager, shift leaders, bedside nurses and doctors in previous graphs, therefore the concern for conflict could have played a role in the decisions regarding the proposed urgency in appointing CNSs in South Africa.

As shown in this graph 81% (n/N=59/73) of the participants agreed that the CNS should soon be appointed in the critical care units of South Africa. This reflects the

cascading effect of the one nursing action leading to the other, for example safer nursing care leading to less medico-legal risks and contributing to more doctors wanting to work at these hospitals, according to the participants. Thus, in the event of having a CNS in the critical care unit, the majority of the participants agreed in the above nine graphs that the benefits will be:

- Safer nursing care
- Less medico-legal claims
- Improved patient and family care
- Shorter patient stays
- Improved professional status in the eyes of the patient and family
- Having a good role model for the critical care unit nursing staff
- Increased doctors` satisfaction with nursing care
- More doctors wanting to work at the institution
- Improved reputation of the nursing profession amongst health care professionals

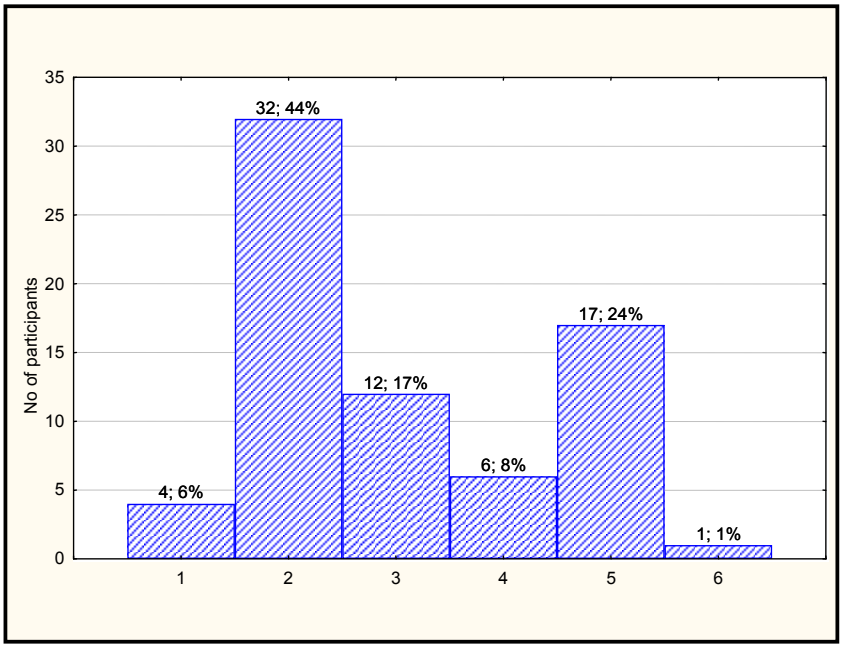
4.3.2.5 Impact on collaborative interdisciplinary relationships

Urquhart et al. (2004) states that the role confusion of the CNS can be detrimental to the work environment and can create duplication of work and ineffective professional relationships. The same author also stipulated that mentoring by the CNS will only be successful once she or he has gained credibility. According to the Strong model of advanced practice (Mick & Ackerman, 2000) collaboration or the lack thereof, has a direct effect on the patient.

The relieve of stress (Bell, 2005), the reduction of conflict and reduced responsibilities of other critical care leaders (unit manager and shift leader) by the role of the CNS will result in improved collaboration and improved patient care in the critical care unit. Redekopp (1997) states that clear boundaries and specific job descriptions have not been laid down for all advanced nursing professionals; as such the role of the CNS remains a cause of disagreement and confusion internationally.

The CNS will require a good support system to prevent loneliness ‘at the top’ of the work ladder. The role of the CNS often entails lack of support from organisations, managers and peers, which might result in demotivation. Due to self-imposed demands, stress and organisational expectations burnout is a risk for the CNS. The nature of her/his job may result in no direction or support from managers, leading to loneliness and isolation (Bousfield, 1997).

Figure 4.34 Support system for the CNS to prevent loneliness at the top of the work ladder



Section B, Question 31

According to Bousfield (1997) it is a concern that the CNS might be lonely at the top of the career structure, not having close colleagues to relate to. Forty-eight participants (67%) (n/N=48/73) were of the opinion that a good support system would be necessary to prevent this loneliness.

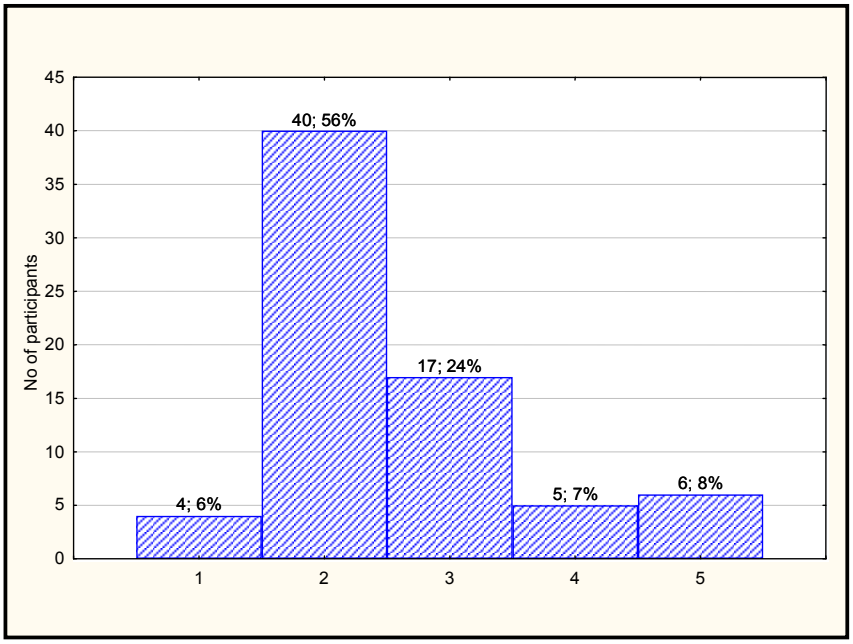
Twenty-four participants (33%) (n/N=24/73) reflected that a good support system was not of utmost importance to prevent loneliness of the CNS.

According to Coates (2001, p. 5*) "the specialty areas are higher stress and this can cause burnout in many nurses. Specialty nurses tend to be Type A personalities – very driven, dedicated and hardworking. It is tough to do this for a too long."* Hence the risk for burnout is high in specialty nurses in the critical care units, including the CNS.

During nine years in the critical care environment the researcher has observed that burnout takes its toll among critical care unit managers and shift leaders. Many resign from their specialty posts after a few years to be agency nurses with less responsibility. Agency nursing is interpreted as come and go without involvement in the critical care unit's internal affairs (responsibilities, stress and conflict). Thus, burnout will be a high risk for the CNS as specialty nurse. However, her/his appointment would contribute to shared responsibilities, easing the stress and work load for all nursing staff. Therefore the appointment of a CNS should decrease burnout for all in the critical care unit.

Redekopp (1997) states that clear boundaries and specific job descriptions have not been laid down for all advanced nursing professionals; as such the role of the CNS remains a cause of disagreement and confusion internationally.

Figure 4.35 Improved collaboration of nursing staff in the critical care unit



Section B, Question 13

Sixty-one participants (86%) (n/N=61/73) agreed that the appointment of a CNS in the critical care unit would improve the collaboration of the nursing staff in the critical care environment. Therefore, the majority of participants reflected the positive input that a CNS could have in the critical care unit regarding the improvement of collaboration of the nursing staff.

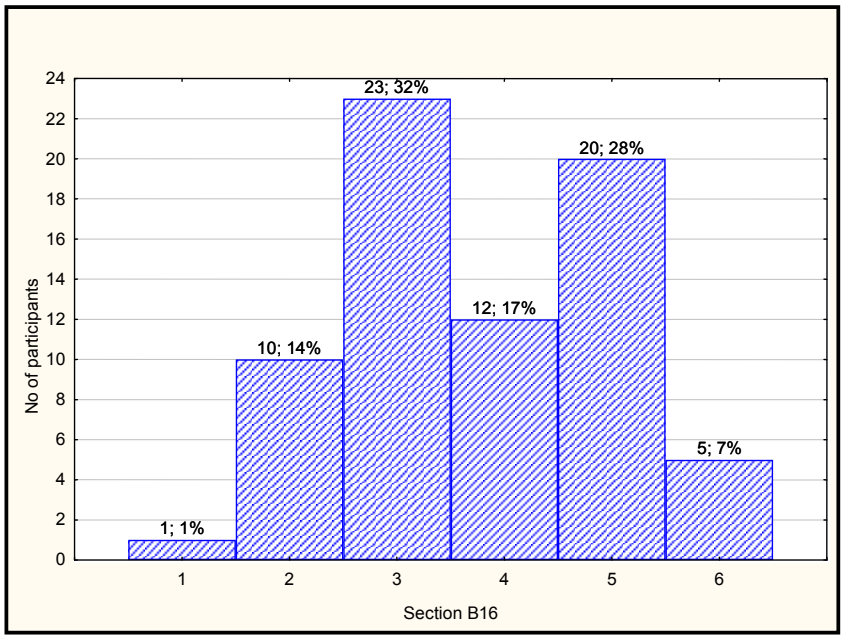
Twenty-eight participants (39%) (n/N=28/73) reflected that the CNS would not improve collaboration of the nursing staff in the critical care unit. A comment of a participant in the qualitative section highlights the view of this group:

> *Not all persons with doctorates have the ability to give practical tuition. Sometimes the person with many years' experience is able to communicate more effectively. Not everybody will regard the CNS as a 'helper'; some would rather see the CNS as a threat.*

The promotion of effective collaboration between all the team players in the critical care unit is of utmost importance for harmony and good clinical work.

According to Urquhart, et al. (2004) the CNS plays a major role in the development of policies, standards of care and clinical programmes. The CACCN (2002) stipulated that one of the five interrelated components of the scope of practice of the CNS is that of being an educator and leader. Therefore it is important for the CNS to convey her/his knowledge and skills in an effective manner to the nursing staff in the critical care unit.

Figure 4.36 Will give rise to conflict between the nurse allocated to the care of the patient and the CNS



Section B, Question 16

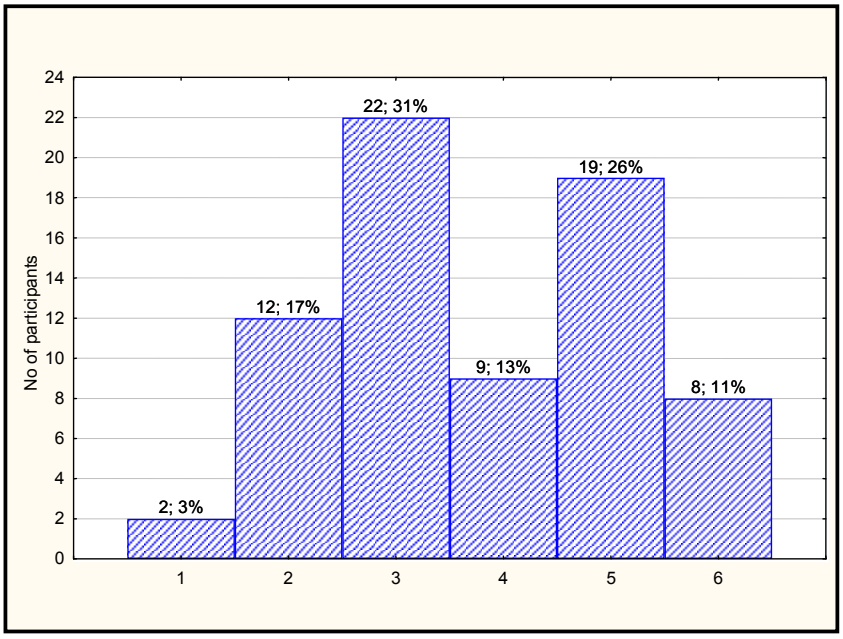
One participant (1%) (n/N=1/73) strongly agreed, 10 participants (14%) (n/N=10/73) agreed and 23 (32%) (n/N=23/73) participants slightly agreed that the appointment of the CNS in the critical care unit would lead to conflict between the nurse allocated to the care of the patient and the CNS. This is a total of 34 participants (47%) (n/N=34/73).

Twelve participants (17%) (n/N=12/73) slightly disagreed, 20 participants (28%) (n/N=20/73) disagreed and five participants (7%) (n/N=5/73) strongly disagreed that the CNS in the critical care unit will give rise to conflict between the nurse allocated

to the care of the patient and the CNS. This is a total of 37 participants (52%) (n/N=37/73).

The difference between the two sides of the graph is 5%, which indicates that the participants were careful to be optimistic, as 47% (n/N=34/73) thought that conflict might arise with the CNS in the critical care unit, opposed by 42% (n/N=30/73) reflecting that conflict between the nurse at the bedside and the CNS would not be a problem.

Figure 4.37 Will cause conflict between the unit manager and the CNS



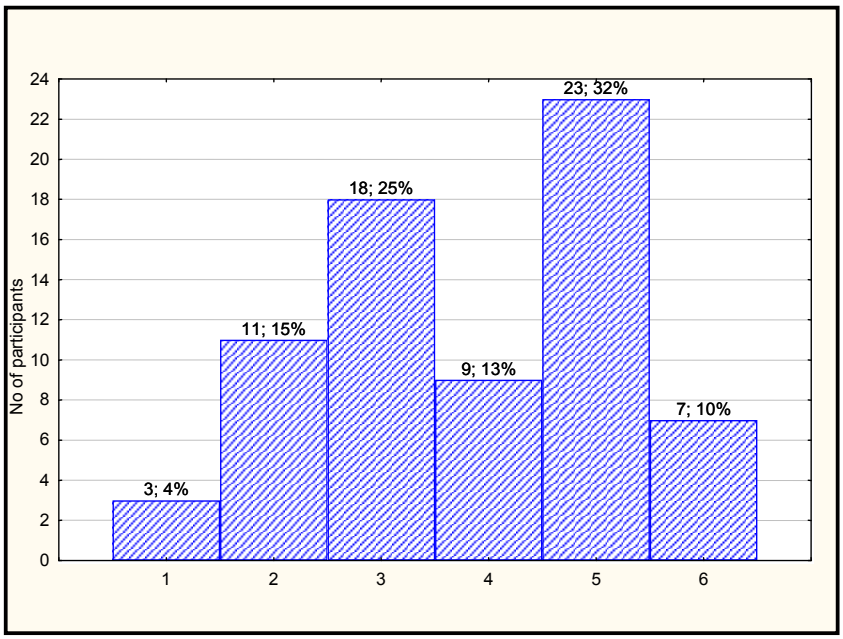
Section B, Question 29

Two participants (3%) (n/N=2/73) strongly agreed, 12 participants (17%) (n/N=12/73) agreed and 22 participants (31%) (n/N=22/73) slightly agreed that the appointment of the CNS in the critical care unit would cause conflict between the unit manager and the CNS. This resulted in 36 participants (51%) (n/N=36/73) who agreed that conflict could be caused between the unit manager and the CNS.

Nine participants (13%) (n/N=9/73) slightly disagreed, 19 participants (26%) (n/N=19/73) disagreed and eight participants (11%) (n/N=8/73) strongly disagreed that the appointment of the CNS in the critical care unit would lead to conflict between the unit manager and the CNS. Therefore, 36 participants (50%) (n/N=36/73) were of the opinion that the CNS in the critical care unit would not cause conflict between the unit manager and the CNS.

It is of interest that in all the questions regarding conflict, the participants reacted more or less 50% to 50% in their opinions. This could be of importance as, although most participants were of the opinion that the CNS could be of value in the critical care unit, 50% of the participants were also concerned about possible conflict in the critical care unit. It would therefore be important to appoint a CNS with personal skills, maturity and a high degree of emotional intelligence to prevent conflict. However these qualities also apply to the unit manager. Therefore the job description is important.

Figure 4.38 Will give rise to conflict between doctors and the CNS



Section B, Question 20

Three participants (4%) (n/N=3/73) strongly agreed, 11 participants (15%) (n/N=11/73) agreed and 18 participants (25%) (n/N=18/73) slightly agreed that a CNS in the critical care unit would give rise to conflict between the doctors and the CNS. Therefore a total of 32 participants (44%) (n/N=32/73) agreed that the CNS in the critical care unit would give rise to conflict between the doctors and the CNS.

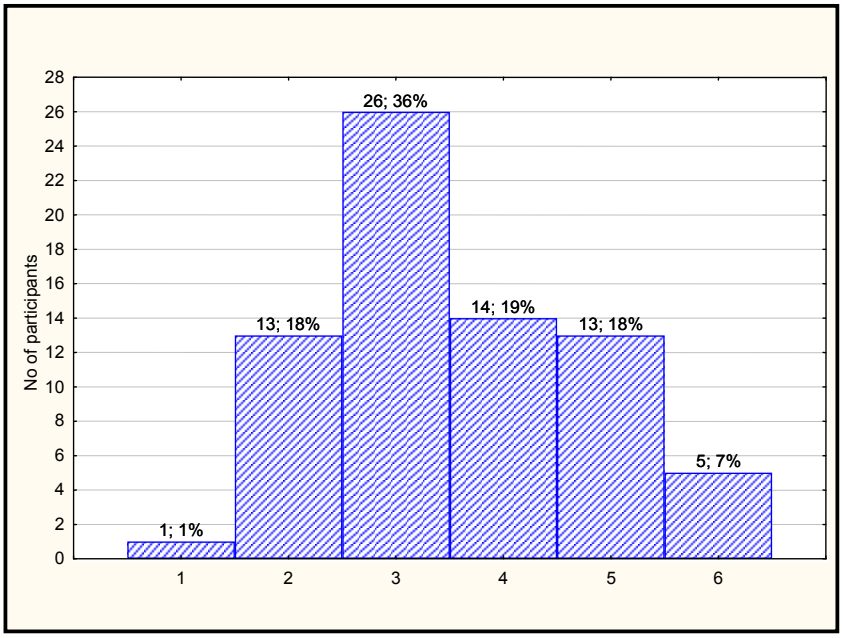
Nine participants slightly disagreed, 23 participants disagreed and seven participants strongly disagreed that the CNS in the critical care unit would give rise to conflict between the doctors and the CNS.

A majority of 39 participants (55%) (n/N=39/73) were of the opinion that the CNS in the critical care unit would not give rise to conflict between the doctors and the CNS. However the distribution between conflict (44%) and no conflict (55%) is narrow. It is possible that certain doctors might interpret the CNS as intrusive or as a threat to their scope of practice, especially when the CNS is clinically highly skilled and competent, performing endotracheal intubations and taking initiative in patient treatment within the boundaries of her/his clinical expertise.

Other doctors might appreciate the initiative and skills of CNSs as their competencies might reduce doctors` workloads and result in instant patient interventions in emergencies with improved patient outcomes.

However McGee and Castledine (2003) warn nurses about the negative effects of a role resembling that of a *“mini doctor”* instead of a *“maxi nurse”*. Donnelly (2003) states that advanced nursing practice, for example the CNS, should not be overshadowed with medical functions. McGee and Castledine (2003) warn advanced practice nurses about the negative effect of a role resembling that of a mini-doctor instead of a maxi-nurse.

Figure 4.39 Will give rise to conflict between shift leader and the CNS



Section B, Question 11

Forty participants (55%) (n/N=40/73) reported that the appointment of the CNS would give rise to conflict between the shift leader and the CNS. A total of 55% (n/N=40/73) was concerned about conflict between the shift leader and the CNS.

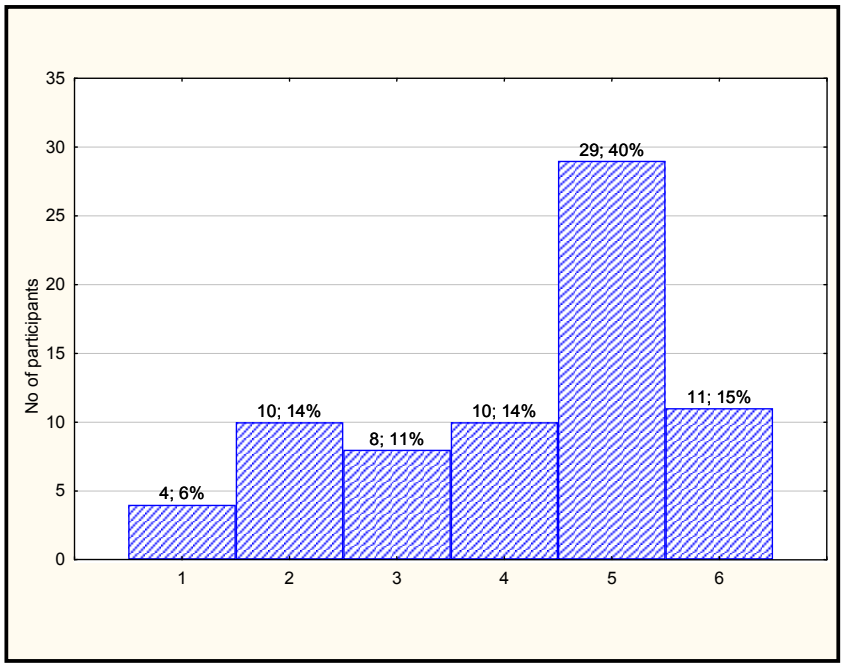
However, 36% (n/N=26/73) only slightly agreed that the appointment of the CNS would give rise to conflict between the shift leader and the CNS, opposed to 1% that strongly agreed.

Thirty-two participants (44%) (n/N=32/73) were of the opinion that there would not be conflict between the shift leader and the CNS.

These participants` reaction of 55% (n/N=40/73) stating that conflict will arise between the shift leader and the CNS, and 44% (n/N=32/73) stating that conflict will not arise between them could point toward indecisiveness or cautiousness regarding the topic of conflict. A possible explanation for the caution can be seen in the next graph where participants foresaw possible conflict in overlapping of roles between

the CNS and the shift leader. This accentuates the importance of the need for a clear job description as indicated in Figure 4.27 by 97% (n/N=70/73) of participants.

Figure 4.40 Will not relieve the work stress of the shift leaders



Section B, Question 7

The researcher deliberately formulated this question in the negative, thereby encouraging the participants to think more critically prior to answering. Therefore, the highest participant bar was shifted to the right side of the graph.

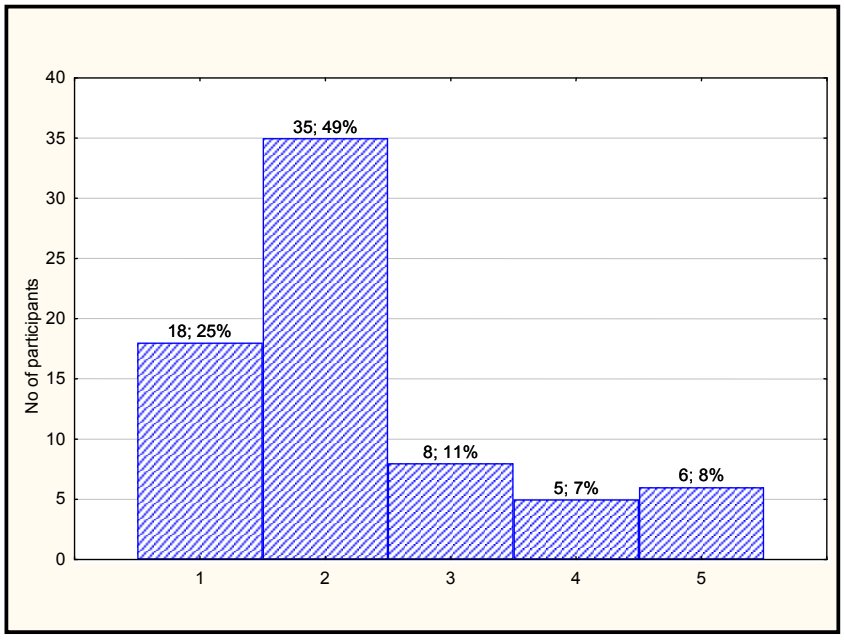
Twenty-nine participants (40%) (n/N=29/73) disagreed that the CNS will not relieve the stress of the shift leaders. Thus, by adding up the three bars to the right, it can be noted that 50 participants (69%) (n/N=50/73) were of the opinion that the CNS will relieve the stress of the shift leaders.

Zondagh (2004) states that insufficient staffing results in increased errors and patient risk, thus increasing concern and stress on the shift leaders and bedside nurses in the critical care unit. According to Bell (2005) staff shortages, budget constraints, increasing patient volumes and loss of professional nurses and experienced critical care doctors increase the responsibilities of the nurse in the critical care unit while

the resources and support systems decrease. This decrease points toward the need for the CNS, as far as role modelling and mentoring with effective clinical decision-making are concerned, to relieve the stress of the critical care staff.

Twenty-two (31%) (n/N=22/73) indicated that the CNS will not relieve the stress of the shift leaders. It is of concern that this is quite a high percentage, but the fact that the participants were concerned about confusion regarding overlapping of roles (Figures 4.26 & 4.32) and conflict between the CNS and the shift leader (Figure 4.25), bedside nurses (Figure 4.29), the doctors (Figure 4.24) and the unit manager (Figure 4.31), might have contributed to this higher amount (31%) (n/N=22/73) of participants commenting that the CNS will not relieve stress in the critical care unit.

Figure 4.41 Will relieve the work stress of the shift leaders



Section B, Question 8

This graph is a repetition of the previous question, but in a different format. The positive answers are now reflected on the left side of the graph. On inspection of the graphs the objective of critical thinking from the participants was achieved, as the

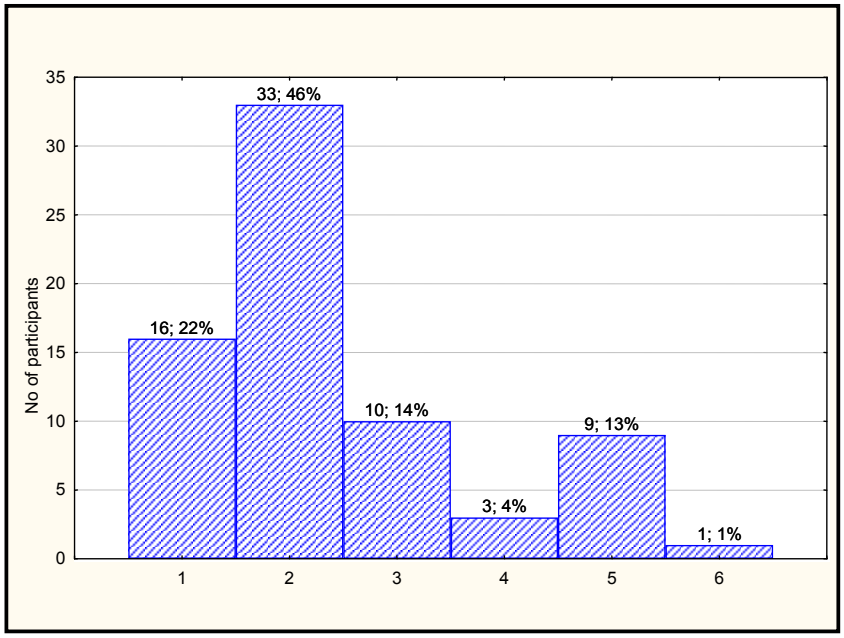
bars on the graphs are highest on the expected directions, pointing in both graphs toward the relief of stress for the shift leaders by 69% and 85%.

Eleven participants (15%) (n/N=11/73) felt that the CNS will not relieve the stress of the shift leaders. This is a difference of eleven participants (15%) (n/N=11/73) to the previous question with the same theme. From the results of the answers it appears that the participants did not think critically enough prior to responding. The expectation was that the number of participants not agreeing to the CNS relieving the stress of the shift leaders would correspond between the two questions.

Eighteen participants (25%) (n/N=18/73) strongly agreed, 35 participants (49%) (n/N=35/73) agreed and eight (11%) (n/N=8/73) slightly agreed that the CNS will relieve the stress of the shift leaders. Thus, 85% (n/N=62/73) agreed that the stress of the shift leader will be relieved with a CNS as part of the team.

One of the nursing participants commented in the qualitative research section: "*Shift leaders in critical care units work under tremendous stress and anything to relieve stress will be appreciated.*" This comment points toward the desperate need for the CNS in the critical care unit, in the light of the fact that the participants stated *"anything to relieve the stress".*

Figure 4.42 Will relieve work stress of the bedside clinical nurses



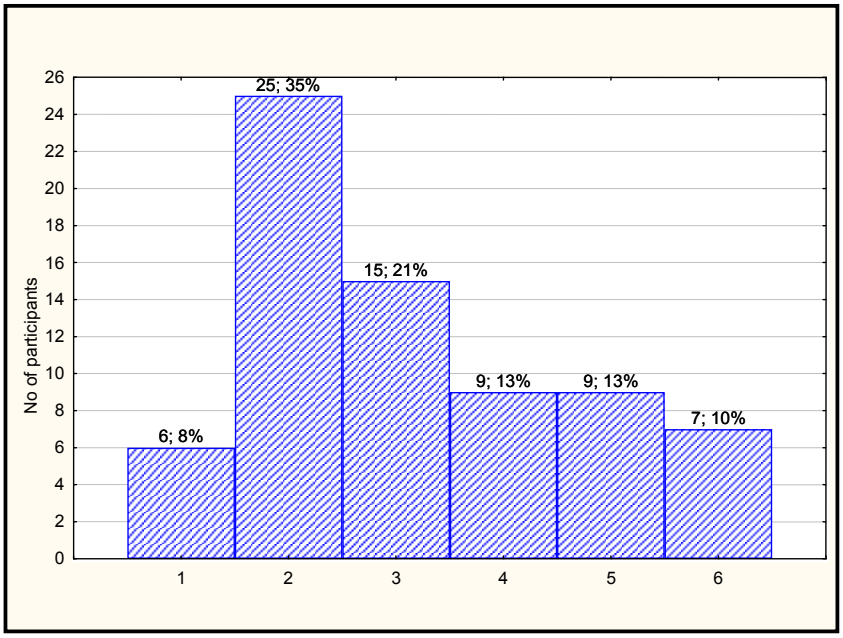
Section B, Question 9

Sixteen participants (22%) (n/N=16/72) strongly agreed, 33 participants (48%) (n/N=33/72) agreed and 10 participants (14%) (n/N=10/72) slightly agreed that the CNS would relieve the work stress of the bedside clinical nurses. Thus, 84% (n/N=61/73) agreed that the CNS would relieve the work stress of the bedside clinical nurses.

One participant commented in section D of the survey tool: *"Being pro-active (the CNS) in so many areas will provide better patient outcomes, more satisfaction for all nursing staff and so better harmony in a stressful and taxing environment."* It is noteworthy that the doctor is also aware of the *"stressful and taxing environment"* of the critical care unit and that the appointment of a CNS could contribute to *"more satisfaction for all nursing staff".*

Thirteen (18%) (n/N=13/72) responded negatively about the CNS relieving stress of the bedside clinical nurses.

Figure 4.43 Will reduce some stress and responsibility of the doctors

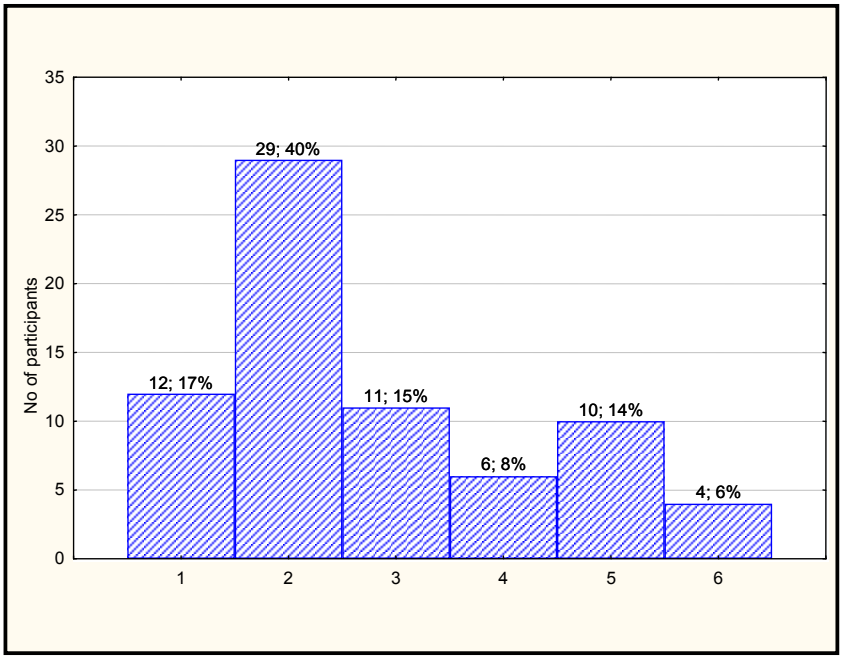


Section B, Question 21

Six participants (8%) (n/N=6/73) strongly agreed that the CNS would reduce some stress and responsibility of the doctors, 25 participants (35%) (n/N=25/73) agreed and 15 participants (32%) (n/N=15/73) slightly agreed. Forty-six participants (74%) (n/N=46/73) agreed that a CNS could be of benefit in reducing some stress and responsibility of the doctors.

Twenty-five participants (36%) (n/N=25/73) were of the opinion that the CNS would not be of benefit in reducing stress for the doctors in the critical care unit.

Figure 4.44 Will reduce the responsibilities of the unit manager

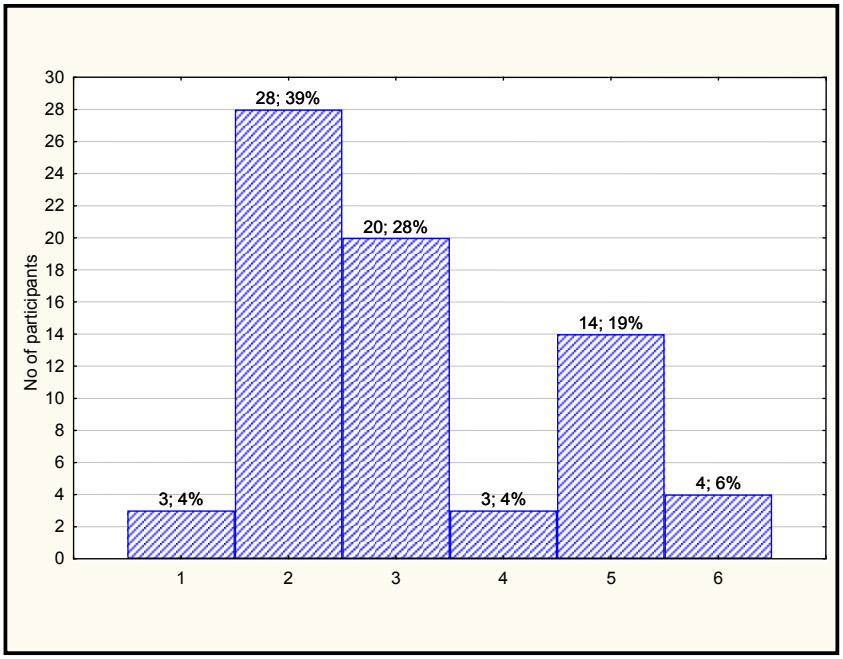


Section B, Question 28

Twelve participants (17%) (n/N=12/73) strongly agreed, 29 participants (40%) (n/N=29/73) agreed and 11 participants (15%) (n/N=11/73) slightly agreed that the CNS in the critical care unit would reduce the responsibilities of the unit manager.

Twenty participants (28%) (n/N=20/73) were of the opinion that the CNS in the critical care unit would not reduce the responsibilities of the unit manager.

Figure 4.45 Will result in overlapping of roles with the shift leader



Section B, Question 12

In total fifty-one participants (71%) (n/N=51/73) reflected that the appointment of the CNS will result in overlapping of roles with the shift leader. In contrast to this, 21 participants (29%) (n/N=21/73) felt that it would not lead to overlapping of roles with the shift leader.

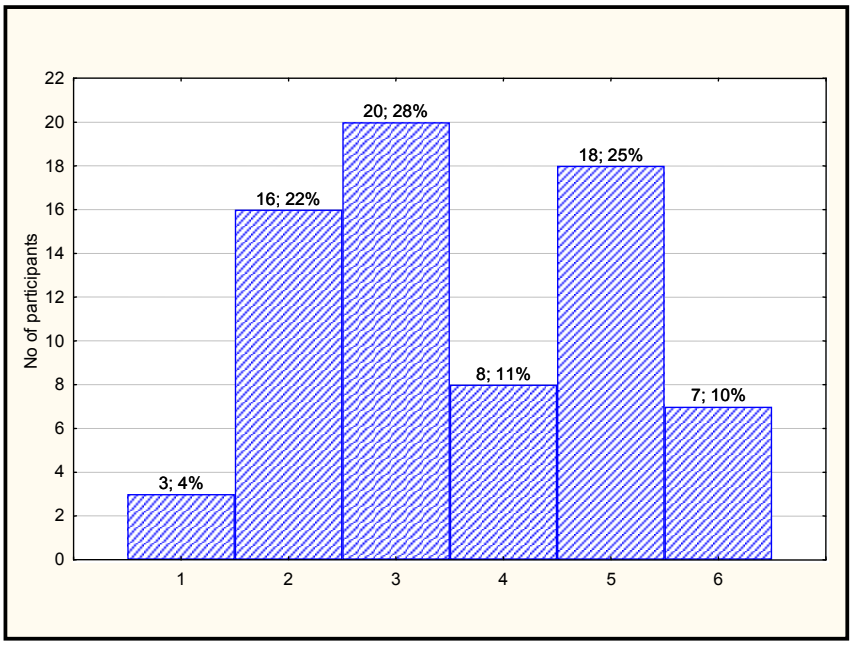
The significant 71% (n/N=51/73) participants reflecting that overlapping of roles would take place, points towards the importance of defining a clear job description for the CNS to prevent role overlapping. In the qualitative research section a participant reflected as follows:

> *All depends on the job description of the position. Will the person (CNS) overrule the shift leader? Will the CNS have management functions? My perception is that the CNS should concentrate on high quality patient care and nursing standards. The primary function of the CNS is nursing care. The shift leader has a leadership function. The CNS should support the shift leader. Ensure that the job description is clear and does not overlap with that of the shift leader or the unit manager and that the salary meets the required standards.*

The above comment illustrates that the participants are concerned about the confusion regarding unclear boundaries for the work of the CNS. Thus the job description will have to be very clear. The goal should be for collaborative discussion in the best interest of the patient.

The CNS is supposed to overrule the shift leader as the CNS is appointed for her/his expert skills in clinical decision making; however this should be done with great insight and consideration for the shift leader and bedside staff. Harmony and cooperation will have to be maintained in the critical care unit.

Figure 4.46 Will result in overlapping of roles with the unit manager



Section B, Question 30

Three participants (4%) n/N=3/73) strongly agreed, 16 participants (22%) (n/N=16/73) agreed and 20 participants (28%) (n/N=20/73) slightly agreed that the appointment of the CNS in the critical care unit will result in overlapping of roles with the unit manager. This resulted in 39 participants (54%) (n/N=39/73) of the opinion that the CNS`s role would overlap with that of the unit manager. This emphasises the importance of a clear job description for the CNS.

The CNS performing the role of educator and mentor at the bedside renders more time for the unit managers to manage the critical care unit effectively. From personal experience of the researcher it is a large source of stress for the unit manager to be responsible for orientation of new staff and in-service training of the nursing staff as well as the administration of the critical care unit.

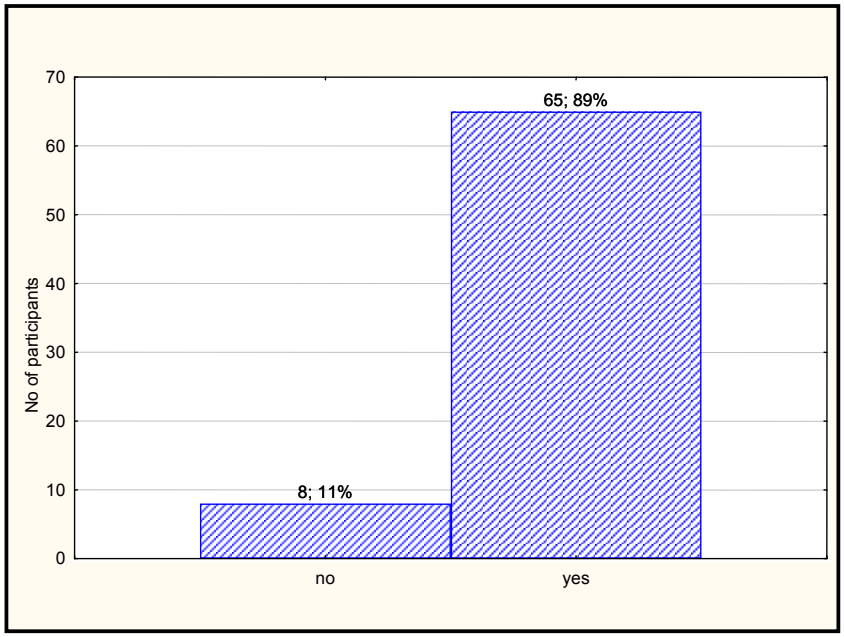
Eight participants (11%) (n/N=8/73) slightly disagreed, 18 participants (25%) (n/N=18/72) disagreed and seven participants (10%) strongly disagreed that the role of the CNS would overlap with that of the unit manager. Therefore, 33 participants (46%) (n/N=33/73) disagreed that the roles of the CNS and the unit manager would overlap.

4.3.3 Section C

In section C the participants were required to answer three questions. Section C was added to gain clarity on the participants` decisions in section B. The participants had to select ‘yes’ or ‘no’ as response to the question whether they thought that the appointment of the CNS in a critical care unit would contribute positively to the staff and patients in the critical care unit. Following on the above, the participants had to select the three most important benefits out of an option of six that would support the appointment of a CNS in a critical care unit. In section C the options comprised some of the same themes derived from the objective and literature review that were utilised to compile the 41 questions in section B of the survey tool.

The questions in section C were compiled as a summary of the questions in section B to have the participants reflect on the questions of Section B.

Figure 4.47 The appointment of a CNS will contribute positively to the staff and patients in a critical care unit



Section C, Question 42

The majority of the sample, 65 (89%) (n/N=65/73) of the participants agreed that the CNS should be appointed in the critical care environment. From the qualitative research section a participant is quoted:

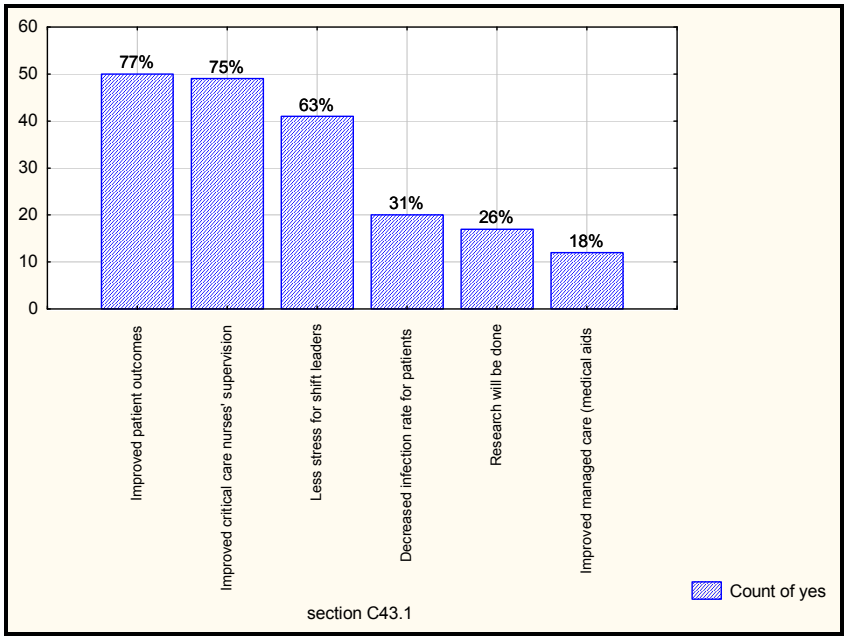
> *It (the CNS) would be a great improvement in unit. Also what is worrying, most of the ICU experienced people are over 40 (mostly) and do not feel to study in that direction. ICU is a tiring field to work in, but it (the CNS) would definitely contribute to better nursing outcomes.*

Eight participants (11%) (n/N=8/73) were of the opinion that the appointment of the CNS in the critical care environment will not contribute positively to the staff and patients in the critical care unit. Following is a response regarding a nursing staff member thinking that a CNS will not be of benefit:

> *I think that a CNS nurse is unnecessary and will only step on other personnel's toes. The only positive contribution that she will have is in research. She also will not be a good communicator to the doctors as she is not the one that spends 24/7 at the patient`s bedside.*

Although one CNS per critical care unit will not reduce the work load as such, it is reflected in the data that the participants have the expectations that the CNS, in the current challenging circumstances of nursing shortages, will contribute to safer nursing care (Figure 4.11), shorter patient stays in the critical care environment (Figure 4.10), reduce medico-legal risks (Figure 4.12) and improve the reputation of the nursing profession amongst other health care professionals (Figure 4.18).

Figure 4.48 Select the three most important benefits you think the appointment of a CNS will support



Section C, Question 43.1

The totals of this histogram did not result in 100% as each participant was supposed to select three benefits of the CNS.

Fifty of the participants (77%) (n/N=50/73) agreed that the appointment of the CNS will lead to improved patient outcomes. This reflects on a correct perspective as internationally (Wheeler, 2000; Lombness, 1994) this is the most important reason for appointing the CNS.

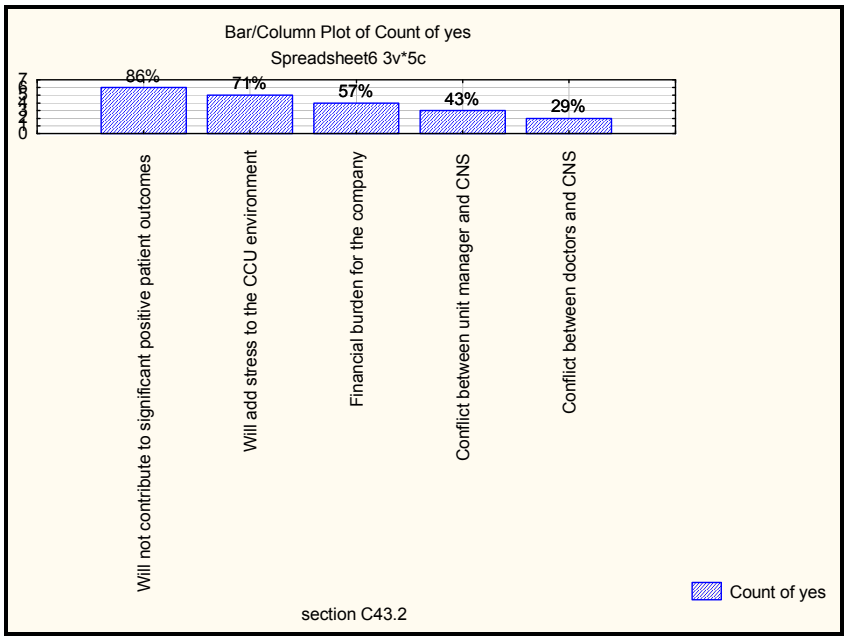
Forty-eight of the participants (75%) (n/N=48/73) agreed that the appointment of the CNS in the critical care environment will lead to improved supervision by critical care nurses. In the light of the scarcity of nurses (Subedar, 2005) this reflects a valid priority, as with fewer nurses at the bedside effective supervision and mentoring should make a difference to patient care.

Forty-two participants (63%) (n/N=42/73) reflected that the appointment of the CNS will result in less stress for the shift leaders. This point refers back to the fact that the participants rated the need for supervision of critical care nurses high. One can then assume that, because there are currently neither enough nurses (Subedar, 2005) nor enough supervision according to the participants` opinions, it all adds to stress on the shift leaders.

Eighteen participants (31%) (n/N=18/73) rated the decreased infection rate for the patients as a positive contribution of appointing a CNS in the critical care environment. This statement is actually overlapped by the positive patient outcomes, as infection control is part of good patient outcomes.

Nineteen participants (26%) (n/N=19/73) agreed that appointing a CNS will result in research being done in the critical care environment. According to the literature (Hamric, 2005) this is an important aspect of the CNS`s job description. Thirteen participants (18%) (n/N=13/73) were of the opinion that improved managed care regarding medical aids was of importance. It can be interpreted that the participants were ignorant about medical aids, or it can be that this point counted lowest on their priority list for the CNS.

Figure 4.49 Select three most important statements that support your choice for disagreeing that the appointment of a CNS will contribute positively to the staff and patients in the critical care unit



Section C, Question 43.2

The totals of this histogram resulted in more than 100% as each participant was supposed to select three benefits. This section was available for the participants who disagreed with the appointment of the CNS in the critical care environment.

Eight participants felt that the appointment of a CNS will not contribute positively to the staff and patients in a critical care unit. Altogether 86% (n/N=6/8) were of the opinion that a CNS will not contribute to positive patient outcomes. Of these participants, 71% (n/N=5/8) reflected that the appointment of a CNS will add stress to the critical care unit environment and 57% (n/N=4/8) indicated that the CNS will be a financial burden to the company. Of the eight participants 43% (n/N=3/8) commented that conflict between the unit manager and the CNS will arise and 29% (n/N=2/8) of the eight participants were of the opinion that conflict between the doctors and the CNS will be a problem.

Eight participants out of 73 (n/N=8/73) represent 10% of the sample. Although this is a small number their opinions need to be taken into account when employing a CNS in a critical care unit. When spreading awareness and when explaining the expected benefits of the CNS, it will be imperative to involve this 10% of the nursing staff, having a negative connotation regarding the CNS, in the discussion.

4.3.4 Section D: Describe your opinions and ideas of the role that the CNS could play in your critical care unit

Burns and Grove (2007, p. 91) state that rigour in qualitative research is

> *associated with openness, scrupulous adherence to a philosophical perspective, thoroughness in collecting data, and consideration of all the data in the subjective theory development phase. Evaluation of the rigor of a qualitative study is based in part on the logic of the emerging theory and the clarity with which it sheds light on the studied phenomenon.*

Qualitative data collection in the event of this study was done by the method of examining written text by the participants. Text can be considered a rich source of data according to Burns and Grove (2007).

During the data analysis in qualitative research, dynamic interaction should occur between the researcher and the data. This process of the researcher familiarising her/him with the research through exploring personal feelings and experiences that may influence the study, is called reflexive thought. The researcher must have a conscious awareness of self. Qualitative approaches involve the beliefs that there is not a single reality, and the meaning of what is known is defined by the situation or context (Burns & Grove, 2007).

Section D of the survey tool gave the participants the opportunity to describe their opinions and ideas of the role that the CNS could play in their critical care units. Out of 73 participants 50 (n/N=50/73) recorded their expectations of the CNS on the page provided. The researcher argues that the participants either did not have enough time in the critical care unit to think about the subject and complete the qualitative

section or they did not want to give their opinion. It is always easier to tick the boxes of the quantitative part of the survey tool, but more of a challenge to comment on the qualitative questions.

The first step in analysing the qualitative data was to organise it. The researcher read and reread the participants' comments. All the qualitative comments were captured on the computer. A professional nurse read the comments while the researcher typed them.

Bracketing (the laying aside of what the researcher knows about the experience being studied) was not used, but assumptions were identified about the research topic. These were discussed at the beginning of the study for *"self-reflection and external review"* (cf. Burns & Grove, 2007, p. 81). Openness and new insight are intended by these procedures.

Consequently, the corresponding comments were grouped together by coding the participants' comments through identifying common words or phrases (for example, training, patient outcomes, collaboration, research, stress, job description and conflict). Coding simplifies and reduces the data (cf. Burns & Grove, 2007). Coding is criticised for seeking to transform qualitative data into quantitative data, thereby draining the data of its variety, richness and individual character.

Themes were recognised as the coding was finalised and the participants' comments were grouped together according to the corresponding ideas of the participants. Seven recurring main themes were derived after the coding and the reduction of the data (Polit et al., 2005).

The comments of the participants were sorted under the seven themes (Table 4.3). Many of the comments overlapped and had the same wording. Consequently the most descriptive comments were recorded and discussed to illustrate the themes.

Table 4.3 Themes

Themes
1. Teaching and clinical guidance of staff in the critical care unit
2. Improved patient outcomes (standards, protocols, bedside infection control) and improved patient care
3. Collaboration
4. Evidence-based practice and research
5. Decreased workload and decreased stress in the critical care units
6. Clear job description to prevent overlapping of roles
7. Conflict and remarks opposing the appointment of the CNS

4.3.4.1 Theme 1: Teaching and clinical guidance of staff in the critical care unit

Many participants described the teaching aspect as a high priority of the role of the CNS. Better training of the critical care nurse at the bedside was linked to improved patient outcomes. Noted as important was that critical care nurses should be continuously updated through in-service training and that they should be guided to be competent in clinical skills. This is accentuated by Kelly et al. (2007), who reported on the importance of protocols, pathways and knowledge of technology at the bedside. The following comments from the survey tool demonstrate the need for the CNS to teach and empower the bedside nurses in the critical care units:

> *I think that CNS could play a role in the ICUs. The extra input as regards patient care ranging from ventilation, fluids and antibiotics. Being pro-active in so many areas will provide better patient outcomes, more satisfaction for all nursing staff and so better harmony in a stressful and taxing environment.*
>
> (Participant 1)

> *I think it is good to have a CNS to be able to help new staff with their patients and to teach them, because clinical facilitators are not always available and other*

colleagues not having the time. Also to share their knowledge to other professional nurses about things they are doing.

(Participant 2)

… support bedside staff in their clinical development, ensure consistency and continuity of care particularly preparation of intravenous drugs.

(Participant 3)

The importance of clinical guidance by the CNS in the critical environment was raised by many participants. The participants were of the opinion that a CNS would support clinical empowerment of the nursing staff. The need for clinical guidance came through strongly:

The CNS has a huge advantage in the CCU because they can provide "security" by sharing their knowledge and accompanying newly qualified professional nurses if the CNS is approachable.

(Participant 4)

She/he will assist bedside nurses to maintain optimal care and gain knowledge regarding specific aspects.

(Participant 5)

Most of the participants commented on this theme regarding training and clinical guidance, which emphasises that it is of great importance for critical care unit professional nurses to have a role model (as discussed in Urquhart et al., 2004) and a mentor (as stated in Bruce, 2006) in the critical care environment.

The CNS will be an encouragement and role model for other nurses to improve their own training and keep up to date with the newest research and technology if she has the right attitude.

(Participant 6)

Teach by example – could turn into inspiration for staff working alongside them. CNS will help doctors in assessment of patients – particularly when doctors not immediately available. Will be able to intubate in case of emergency?

(Participant 7)

The prevention of stagnation in the critical care environment was a concern for the participants and the CNS should through clinical rounds, in-service training, infection control and procedure evaluations improve the continuity and quality of patient care. Urquhart et al. (2004) argue that the CNS should promote excellence in nursing, act as a role model and mentor and develop innovative approaches to clinical practice.

In-service training and demonstrations. Good role model for all. Keep skills of permanent staff up to date. Expert person to consult in special/difficult situations. Improve quality of care. Do special procedure evaluations.

(Participant 8)

… challenge the thinking of staff to prevent stagnation and promote career progression.

(Participant 8)

High-quality care, student accompaniment and teaching received high priority from the participants. These qualitative comments correspond with Figures 4.34 and 4.35 in the quantitative data where the participants agreed that the role of the CNS in the critical care unit will support clinical empowerment of shift leaders and bedside nursing staff.

4.3.4.2 Theme 2: Improved patient care and improved patient outcomes

The participants showed awareness of the importance of improved patient outcomes. Standards, protocols, scoring systems and infection control at the bedside were prioritised as important for better patient outcomes. The role of the CNS was valued as important to prevent medico-legal risks. The shared responsibility for the patient between the CNS and the bedside nurse should ensure effective patient assessment,

improved critical clinical decision-making with resulting high-quality patient care. Positive patient outcomes where the CNS was involved in the critical care unit were reported by Wheeler (2000), Lombness (1994), Kaye et al. (1999) and Crimlisk et al. (1997).

> *The CNS would be responsible for coordinating ICU scoring systems on all ICU patients (e. g. Apache).*
>
> (Participant 9)

> *The CNS could be responsible for monitoring, publishing and analysing infection data in the ICU.*
>
> (Participant 10)

> *I think a CNS can help with the quality of patient care because nursing personnel will have a better insight in patients` illness/condition and what must be done. CNS can help picking up problems maybe faster and report it to doctor, patient care will improve (less medical-legal claims/incident rate).*
>
> (Participant 10)

> *Safer nursing care. Improve the professional status of nursing in the eyes of the patient and family. Will contribute to shorter stay of the patient in ICU.*
>
> (Participant 11)

Interesting was the comment that high-risk patients should be evaluated by the critical care unit CNS in the wards to have early admission to the critical care unit. The researcher has witnessed a hospital where this process was implemented and the CNS, by performing daily rounds in the wards, observed the deteriorating patients, had them admitted to the high care or critical care unit and prevented them from total collapse. Thus, early critical clinical decision-making by the CNS could prevent the patient from deteriorating and haemodynamic instability in the ward.

> *Early evaluation of patients in the ward setting to prevent 'crashing' of patients.*
>
> (Participant 12)

Outreach to wards if ward staff are worried about their patients` condition.

(Participant 12)

There is consensus among the comments from the participants that the presence of the CNS in the critical care environment will result in improved patient care and patient outcomes. This is supported by Figures 4.10, 4.11 and 4.14 in the quantitative data (Chapter 4).

4.3.4.3 Theme 3: Collaboration

The participants were of the opinion that the CNS should be involved in wide collaboration between unit manager, bedside nurses, shift leader and critical care unit doctors (the complete multi-disciplinary team). Collaboration is of great importance in the critical care environment in the view of the fact that staff work in shifts. According to the CACCN (2002) the CNS should demonstrate "superior leadership, communication, critical thinking, clinical decision-making, collaborative, ethical decision-making and mentoring skills."

Therefore the nursing team has to collaborate between shifts for proper hand over of patients to ensure effective patient care as well as continuity in patient care. Collaboration amongst the complete multi-disciplinary team (dieticians, physiotherapists, radiographers, nurses and doctors) is essential to improve shorter patient stay in the critical care unit, thus to improve patient outcomes.

Expected to liaise, advise, supervise especially students, junior staff etc. Should have complementary role to shift leaders and unit managers – collaborative effort.

(Participant 13)

Liaison and collaboration by the CNS with the rest of the multi-disciplinary team was rated highly by the participants. This should lead to improved teamwork and harmony in the critical care environment. The participants interpreted these aspects of collaboration important for positive patient outcomes.

Collaboration; especially with regard to the critically ill patient, to achieve greater intellectual involvement and improve patient outcome.

(Participant 14)

The role play of CNS will support the bedside nurse, shift leader and unit manager. She or he will contribute to improve the outcome of the patient with the support of other nursing professionals. She will think of the cost effectiveness in ICU and reduce it instead of using expensive stock. She should be a role model for other nursing professionals.

(Participant 15)

A strong thread runs through the participants' comments relating to this theme of collaboration and a liaison between the CNS and the rest of the multi-disciplinary team. It is worth noting that the participants held the importance of good collaboration in high esteem with regard to the positive outcomes for patients.

4.3.4 4 Theme 4: Evidence-based practice and research

According to the participants there is a gap regarding evidence-based practice and research in the critical care units and they regard the CNS as an important link in managing the research aspect. The nursing staff in the critical care environment has limited time for performing research as they are occupied with clinical work. The input of the CNS and her/his constant visibility and presence will contribute to recognising gaps for research, selecting topics and guiding the nursing team effectively and productively in the research process. The CACCNS (2002) recommends that the CNS will thus have the responsibility to initiate research and motivate the nursing team to participate in research.

The following comments were made by the participants regarding the need for research to be done in the critical care environment:

Help coordinating research projects relating to ICU management

(Participant 15)

I believe that the need for CNSs exist in the critical care environments. There is an increased need for evidence-based research in nursing and the CNS will be able to contribute to this aspect in nursing.

(Participant 15)

The current education situation in the USA should be examined … their master's requires advance physiology, patho-physiology, etc. Should this post entail teaching and research, which is what I foresee, then it is essential that the CNS has good people skills, is current with teaching practices, etc.

(Participant 16)

These comments are supplemental to the quantitative data in Figures 4.38, 4.39 and 4.40 where the participants reflected that research is an important facet of the work requirements of the CNS in the critical care environment.

4.3.4.5 Theme 5: Decreased workload and decreased work stress

Stress and work load were major concerns of many participants. It was mentioned that the CNS should be supernumerary to have time to train, guide and assist the nursing staff. This will presumably result in reduction of staff turnover and improvement of continuity of patient care. The CNS will only be one supernumerary person per critical care unit, but with her/his expert knowledge the planning for patient care and the critical clinical decision-making will be of such a high standard that unnecessary work will be avoided and the nursing team will be more productive and focused, resulting in decreased work load and decreased work stress for the bedside nurses and shift leaders.

Coates (2001) states that the specialty areas in nursing are higher stress areas which may cause burn-out, as many critical care nurses are very driven, dedicated and hard working (type A personalities).

The following quotations indicate the responses of the participants regarding the positive effect of the CNS on the relief of work load and work stress:

> *Support for shift leader and unit manager. Less stress for shift leader and unit manager.*
>
> (Participant 17)

> *Decrease the staff stress in job distribution.*
>
> (Participant 17)

> *Less stress for all ICU staff, will improve the reputation of the nursing profession among other health care professionals.*
>
> (Participant 18)

> *Shift leaders in CCU work under tremendous stress and anything to relieve stress will be appreciated.*
>
> (Participant 19)

It is noticed that the participants commented on stress for the entire nursing team in the critical care environment, namely 'staff', 'shift leaders' and the 'unit manager'. This response was reflected in Figures 4.21 and 4.22 where the majority of the participants agreed that the CNS will relieve the work stress. Thus, the qualitative responses support the quantitative data.

4.3.4.6 Theme 6: Clear job description to prevent overlapping of roles and conflict

Concerns were raised by the participants regarding clear distinction between the roles of the shift leader and the CNS. There was not clear understanding amongst all participants about the seniority of the CNS as it was mentioned that she/he should be supportive of the shift leader, but that the shift leader has the leadership function.

Some participants thought the CNS to be the same as a clinical coordinator, who is allocated to perform only training and evaluation in wards and critical care units. This is of some concern as one of these participants was a nursing manager. Therefore the spreading of awareness of the functions of the CNS is important as nursing managers have to appoint the CNSs.

It was pointed out by the participants that the CNS should not be involved in managing a critical care unit, but be dedicated to training nursing staff and concentrate on patient care.

> *All depends on the job description of the position. Will the person (CNS) overrule the shift leader? Will the CNS have management functions? My perception is that the CNS should concentrate on high quality patient care and nursing standards. The primary function of the CNS is nursing care. The shift leader has a leadership function. The CNS should support the shift leader. Ensure that the job description is clear and does not overlap with that of the shift leader or the unit manager and that the salary meets the required standards.*
>
> *It will be important though, to define the role of the CNS, in collaboration with shift leaders and unit managers, in order to prevent overlapping of their roles which will ultimately result in conflict arising.*
>
> (Participant 21)

> *She must have a clearly defined job description. Must include total teaching responsibilities aimed at improving patient care and standards. This is a teaching post. Thus no decision-making in running of a unit rather to concentrate on patient care and training of nursing staff.*
>
> (Participant 21)

> *Will need to be well defined as to not overlap with role of unit manager.*
>
> (Participant 22)

In the quantitative section the importance of a clear job description is reflected in Figure 4.27 where the majority of the participants agreed that a clear job description for the CNS is required to prevent overlapping of roles and conflict.

4.3.4.7 Theme 7: Conflict and remarks opposing the appointment of the CNS

Marshall and Luffingham's view (1998) can be taken into consideration in the context of the view of the following two participants. These authors were also concerned about the risks that specialist nurses might deskill instead of enhance the general nurse.

> *Important that CNS will not make rest of personnel feel incompetent. We already have enough 'leaders' that are fully qualified/equipped to have that position – shift leaders and unit managers. Another leadership position will only confuse matters of leadership. Better to only have critical care qualified leaders only, not people in leadership roles/position that does not have critical care. A lot of our shift leaders have not done critical care – I think this must be a requirement to be a shift leader or unit manager.*
>
> (Participant 23)

> *I think that a CNS nurse is unnecessary and will only step on other personnel's toes. The only positive contribution that she will have is in research. She also will not be a good communicator to the doctors as she is not the one that spends 24/7 at the patient`s bedside.*
>
> (Participant 24)

> *CNS will have to be introduced slowly. critical care unit sisters can be very resistant to changes and this could cause some conflict initially because some staff with many years of experience but lacking the academic and clinical qualifications would probably react negatively when being lead by a CNS. That person (CNS) would also have to have good interpersonal skills (already a problem in the unit between ICU-trained and non-trained).*
>
> (Participant 25)

The above comment will have to be taken seriously as the researcher has experienced the effect of this resistance that the participant writes about. It is only by good role modelling, expert guidance and effective collaboration (Hamric et al., 2005) that the CNS will be able to make impact in the critical care environment and win the support of the bedside nursing staff.

> *It seems like there will be a lot of confusion about the position of the CNS on the corporate ladder.*
>
> (Participant 25)

> *It will depend on the person's personality and integrity. In the role of the CNS she is required to have a strong personality and must be able to take a strong stand.*
>
> (Participant 26)

It is obvious that the bedside nurses are concerned about the personality of the CNS and the manner in which she will approach them. The CNS will have to be a person of integrity with experience of leadership. The nursing managers appointing the CNS will have to be aware of the requirements for good people skills.

> *With today's shortages of nursing staff the CNS will be expected to be part of the nursing force and take a patient. She will then not really fulfil the role of a CNS.*
>
> (Participant 26)

It is of concern that this participant views the effort of appointing a CNS in vain as she/he will only be added to the depleted nursing corps to attend to patients and thus will not be able to fulfil her/his job description. A paradigm shift regarding the duties of the CNS will have to occur with unit and nursing managers to ensure that the CNS fulfils her/his required job description and will not be assimilated into the daily staff allocations.

4.3 Summary

In summary of the above themes, most participants were of the opinion that the CNS is wanted in the critical care environment. However, the participants came over strongly that the CNS would need a clear job description as to prevent overlapping of roles and conflict in the critical care unit. Concerns were raised regarding the following:

- Some staff with many years of experience would be resistant to the introduction and changes relating to this CNS post. Recommendations were made by some participants that the CNS will have to be phased in effectively.

- The CNS would be regarded as part of the nursing staff and management would utilise her/him to be an allocated bedside nurse in the event of staff shortages. It was recommended that she/he should have a strong personality and be able to be firm regarding her role.

- South African nurses do not always know that they have the choice of a clinical master's degree. A clinical master's degree contains advanced physiology and patho-physiology, which is much needed for training purposes by the CNS in the critical care environment. Awareness regarding this clinical master`s degree should be spread amongst critical care professional nurses.

- Most of the participants commented about the training skills and benefits of the CNS in the critical care environment and maintained that the CNS will require a clear job description to prevent overlapping of roles and conflict. Therefore, these two aspects of training and a clear job description are prominent in this qualitative section of the research.

The next chapter provides the conclusions and recommendations of the study after the data analysis presented in this chapter (Chapter 4).

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter the significance of the findings of the study are explored, generalised and summarised, recommendations are presented, the limitations discussed and the study concluded.

As stated in Chapter 1, the objective of the study was to describe the expectations of critical care health professionals regarding the role of the Clinical Nurse Specialist (CNS) within the context of critical care nursing with respect to the following:

- the scope of practice and professional status
- education and qualifications
- clinical practice
- financial and quality impact on the hospital
- impact on collaborative interdisciplinary relationships

Each of these subdivisions of the objective will be discussed under 'Conclusions' in the context of the research findings presented in Chapter 5.

5.2 Conclusions

5.2.1 Objective: Describe the expectations of critical care health professionals regarding the role of the Clinical Nurse Specialist (CNS) within the context of critical care nursing with respect to the following:

5.2.1.1 The scope of practice and professional status

According to the conceptual framework in Chapter 1 (Diagram 1.1) it is illustrated that the CNS fulfils her multi-faceted job description within the parameters of the Scope of

Practice R2598 (SANC, 2006). According to Regulation 2598 the Scope of Practice for a professional nurse, in this event the CNS, entails performing scientifically-based physical, psychological, social, educational and technological means which apply to health care practices. These aspects listed in the Scope of Practice encompasses the foundation for the work requirements and performance of the CNS as described by the CACCN (2002), namely that of expert nursing, critical decision making, compilation of protocols and policies, leadership, mentorship, communication, collaboration and research. Thus the Scope of Practice (R2598) guides the CNS, as registered nurse, to fulfil her responsibilities in a professional manner.

Ninety-two per cent of participants (n/N=67/73) agreed that the CNS will improve the professional image of nursing in the public eye (Figure 4.10). This is a high percentage and it reflects the urgent need of the nursing staff in the critical care unit for positive recognition of the role of nursing in the critical care unit and the strong opinion expressed that the CNS would assist in gaining recognition.

The professional status of the CNS is reflected in the fact that more doctors will want to work at an institution where a CNS is appointed (Figure 4.12). Of the participants 88% (n/N=64/73) reflected that the reputation of the nursing profession will be improved amongst other health care professionals by having the CNS as part of the team in the critical care unit (Figure 4.13).

Figure 4.15 shows that 89% (n/N=64/73) of participants reflected that the CNS will provide a good role model to the nursing staff in the critical care environment. This illustrates that current nursing staff in the critical care environment have the expectation that the CNS will be a good role model and that she/he should be of benefit to the quality of nursing and the patient outcomes.

Thus, the participants have the expectation that the appointment of the CNS in the critical care unit will improve the professional status of nursing. In the themes section in Chapter 4 (qualitative section) the participants reflected their expectations that the CNS will *“support bedside staff in their clinical development, ensure consistency and*

continuity of care particularly preparation of intravenous drugs". The CNS will *"challenge the thinking of staff to prevent stagnation and promote career progression".* Moreover, *"(s)he/he will assist bedside nurses to maintain optimal care and gain knowledge regarding specific aspects".*

These quotations support the need for an expert nurse in the critical care environment to contribute to the improvement of the professional status of nursing.

5.2.1.2 Education and qualifications

According to the CACCN (2002) the critical care CNS is a professional nurse who is prepared at the graduate level with the minimum of a master`s degree in Nursing containing course work and clinical experiences which support the development of the CNS in the critical care environment. She/he must have current expertise in the critical care specialty.

According to the South African Qualifications Authority (SAQA, 2007) the position of the registered critical care CNS opens up a career path for professional nurses who want to remain in a clinical context, but wish to specialise and focus on a specific area and expand their expertise and competence. This qualification of a clinical master`s degree in South Africa renders the opportunity for the CNS to proceed with a doctoral study, thus increasing the leadership pool in the critical care environment.

The majority of participants agreed that the CNS requires post-basic training to fulfil the role of the expert nurse. It was agreed by 71% (n/N=51/73) of the participants that the CNS should have at least an honours degree in Nursing (figure 4.17). Most participants (n/N=51/73) agreed that the CNS should have a clinical master`s degree in Nursing (figure 4.4.16). Only 57% (n/N=41/73) of participants were in favour of the CNS having any master`s degree in nursing (figure 4.19), thus indicating that they ranked the requirement of a clinical master`s degree high. Through analysis of the data the researcher found that 72% (n/N=52/73) of the participants agreed that initial CNSs will be employed without a clinical master`s degree (figure 4.18) until the

education and required qualifications of the CNS are clarified by SAQA and obtained by the CNSs.

The South African Qualifications Authority (SAQA, 2007, pp. 1-3) listed the purpose and rationale of the Qualification Master of Nursing (NQF Level 8 and above) for the CNS, stating that the CNS is an independent practitioner contributing to the continuous development I specialised areas. The fact that the CNS has the opportunity to perform a doctoral degree increases the leadership pool in nursing.

By compiling the requirements for the education of the CNS, an effort is therefore being made to retain the highly skilled, critically care qualified professional nurses with a master`s degree in the clinical nursing field and not lose these CNSs to nursing administration as a career ladder of promotion.

According to the SAQA documentation (2007, p. 8) the exit level outcomes of the CNS in adult critical care nursing are “to demonstrate practice-based knowledge and understanding of bio-medical technologies” and nursing skills, to apply evidence-based knowledge and skills, to apply a good understanding of principles, theories and current critical care nursing information and to apply specialised care to the critically ill and their families.

Irrespective of what type of master`s degree is done by a critical care qualified professional nurse, she/he will not be able to practise as a registered CNS with SANC until the SANC legalises the requirements and process of registration.

As part of remaining up to date with critical care expert knowledge it is important that the CNS should be a member of SACCS (South African Critical Care Society) and that she/he attends their meetings and training sessions monthly (figure 4.20). It is recommended that the CNS stays up to date with international and national development in the critical care sphere (figure 4.21).

5.2.1.3 Clinical practice

Hamric et al. (2005) highlight clinical practice expertise as well as clinical and professional leadership as some of the core competencies of the CNS in the critical care environment. The analysis of the data of this study revealed that 89% (n/N=64/73) of participants agreed that the CNS would be a good role model (4.15) for the critical care nursing staff and 95% (n/N=9/73) of participants agreed that the CNS would support clinical empowerment of the shift leaders and the bedside nurses in the critical care unit (figures 4.22 & 4.23).

Some participants were concerned and sceptical that the CNS would just be utilised as an ordinary bedside nurse in view of the nursing shortages. These participants were also concerned that the CNS would 'interfere' in the nursing care and decision making of the bedside nurse. In the qualitative section of the survey tool the participants reflected that the CNS would be of benefit for the following:

- in-service training
- evidence-based practice in the critical care unit, combined with research
- improved nursing outcomes (by guiding and training the nursing staff)
- improved patient outcomes (early evaluation of sickest patients, hands-on with expert advice)
- the development of protocols for improved clinical practice

5.2.1.4 Financial and quality impact on the hospital

5.2.1.4.1 Financial impact

Sinclair (1997) notes that the CNSs receive lower salaries than physicians, thus they are cost-effective. Furthermore, the work of the CNS contributes to fewer invasive procedures, greater compliance by patients; less follow-up or length of hospital stay needed and increased non-pharmacological treatment. However, nursing managers who have to appoint CNSs might see them as an expensive commodity (figure 4.24) because their remuneration will be higher than that of a critical care qualified nurse.

Therefore nursing managers need to be aware of the benefits of appointing a CNS in the critical care environment to improve the quality of nursing care and consequently have positive patient outcomes (Kaye, 1999; Wheeler, 2000).

Forty-two per cent (n/N=30/73) of participants agreed that the CNS would be a financial burden for the hospital as far as remuneration is concerned, with 59% (n/N=43/73) indicating that the CNS would not be a financial burden (figure 4.24). The 59% of participants, who agreed that the CNS would not be a financial burden to the company, might have argued that the advantages of the CNS would outweigh the financial implications.

Eighty one per cent (n/N=9/73) of participants reflected that the CNS should be appointed in the critical care units in South Africa as soon as possible, thus indicating that the CNS is needed for guidance and support of the nursing staff, which would lead to improvement of quality care to the patient, irrespective of the financial impact on the hospital in terms of the CNS's salary. The benefit of having fewer medico-legal risks with less litigation and more improved patient outcomes would outweigh the disadvantage of remunerating the CNS.

Improved managed care will also result in financial benefit for the hospital and the patient (figure 4.25).

5.2.1.4.2 Quality impact

The participants had the expectations that the CNS in the critical care environment will have the benefit of promoting quality nursing care by decreasing medico-legal risks (see Figure 4.28) and safer nursing care (see Figure 4.27) with resulting shorter patient stays (see Figure 4.26).

As underpinned by the Strong Model (chapter 2, diagram 2.3), in Mick and Ackerman (2000) and according to the conceptual framework (chapter 1, diagram 1.1), close collaboration with the interdisciplinary team (unit manager, shift leaders, bedside nurses and doctors) will lead to improved patient outcomes. Improved patient

outcomes (figure 4.29) are demonstrated by decreased hospital days and increased patient satisfaction (as described by Wheeler, 2000 and Lombness, 1994). Improved patient outcomes reflect higher professional status for the nurses in the critical care units.

It is expected that improved patient outcomes (Kaye, 1999; Wheeler, 2000) and the improved staff satisfaction will be brought about by the development of the CNS role. This combined with the opinion of the participants that the CNS would be a positive addition (figure 4.33) to the staff complement of the critical care unit, should be noted by health care service providers and in particular nursing managers.

5.2.1.5 Impact on collaborative interdisciplinary relationships

The Strong Model (Ackermann et al., 1996) (Chapter 2, page 35) supports the data showing that collaboration is an important part of the competencies required by the CNS in her/his scope of practice.

The quantitative data indicates that 72% (n/N=52/73) of the participants agreed that a CNS would reduce the responsibilities of the unit manager (figure 4.44) in the critical care unit. Clear boundaries and job descriptions are critical for collaboration between two expert leaders, namely the CNS and the unit manager. It is imperative that these two leaders (unit manager and CNS) understand their own as well as the other's role so that the nursing staff is not confused by contradictory instructions. The unit manager and CNS should exhibit mutual respect and collaboration to ensure camaraderie in the critical care environment to the benefit of the nursing staff and quality patient care reflected in positive patient outcomes.

Eighty-six per cent (n/N=62/73) of participants noted that the CNS would improve the collaboration of the nursing staff in the critical care unit (see Figure 4.35). It can thus be deduced that these percentages reflect that the CNS can be of great benefit for effective collaboration within the interdisciplinary team and that the participants valued this competency as an important requirement for the CNS.

Reflected in the conceptual framework as another predicted positive result of the role of the clinical nurse specialist in the critical care unit, are improved staff outcomes in the form of reduced stress and increased staff satisfaction (figures 4.40 to 4.43) as reported by Bell (2005) and Coates (2001).

5.3 Discussion of the outcomes of the assumptions made by the researcher in Chapter 1 regarding this study

5.3.1 Assumption 1: The financial cost involved in appointing an 'expensive' expert CNS might impact on the decision by hospital management to appoint the CNS.

It is a positive contribution to note that a slight majority of 52% (n/N=37/73) of the participants indicated that the appointment of the CNS would not be a financial burden to the hospital (see Figure 4.24). This indicates that the majority of participants did not support this assumption that the CNS would be a financial burden to the hospital as far as remuneration is concerned. However, it is important to note that the CNS will be appointed by nursing managers. Since only 6% (n/N=/73) of nursing managers participated in the survey, this 52% response mostly reflects the view of critical care nurses. As the nursing managers will make the decision regarding appointment and remuneration of the CNS, their 6% response is not large enough to have a valid influence regarding this assumption. Thus a true conclusion regarding this assumption cannot be made.

Of the participants, 41% (n/N=29/73) reflected that the appointment of the CNS will be a financial burden for the hospital as far as remuneration in concerned. Since not all nursing managers have knowledge and experience of the benefits of having a CNS in the critical care environment, it may impact on the appointment of CNSs in critical care units. In the light of the current economic recession nursing managers will think twice before appointing an 'expensive' CNS.

However, if unit managers in critical care units and nursing managers are made aware of the benefits of the CNSs and their contribution to positive patient outcomes in the critical care environment, they might consider appointing CNSs irrespective of the cost. Although the CNS is an expensive commodity, the positive results derived from her/his work output should outweigh the cost.

5.3.2 Assumption 2: A lack of knowledge by nursing managers, unit managers and doctors of the functions and benefits of having a CNS in a critical care unit may contribute to the absence of the CNS in most critical care units in South Africa.

Of the participants 67% (n/N=48/73) indicated that they had heard of the role of the CNS before; however only 7% (n/N=5/73) of participants were unit managers, 6% (n/N=4/73) nursing managers and 7% (n/N=5/73) doctors. Therefore the data in this research cannot be a true reflection of the opinions of these specific health care professionals regarding the need to appoint a CNS, as their response rate was too low.

Some nursing managers misinterpreted the information page on the CNS, which indicates that the CNS in the critical care environment still needs more extensive introduction. Thirty-three per cent (n/N=24/73) of participants from the critical care environment indicated that they had not heard of the CNS before (figure 4.6). Therefore there is much scope to spread more awareness regarding the CNS amongst health care professionals in the critical care environment.

Unless active education regarding the CNS continues, for example by the Critical Care Society of South Africa, and by utilising this study as well as others on the CNS in presentations, the benefits of the CNS in the critical care environment will disappear into oblivion as it happened after the international congress on the CNS and the compilation of the Monograph in 1988 in Durban.

It is recommended that awareness concerning CNS should be applied aggressively through publications, seminars, congresses, workshops and presentations to prompt

nursing managers, unit managers, doctors and the interdisciplinary team to start debate on the topic of the CNS. A greater awareness of this topic should accelerate the appointment of CNSs in critical care units.

5.3.3 Assumption 3: A lack of knowledge and trust of the role of the CNS by the nursing staff in the critical care unit may contribute to the slow process of incorporating these expert CNSs into the critical care teams. Fear of conflict at the bedside and ambiguous instructions may lead to the critical care nursing staff being wary of and prejudiced towards these expert CNSs in their midst.

Of the participants 55% (n/N=0/73) noted that the appointment of a CNS in the critical care unit would give rise to conflict between the shift leader and the CNS (figure 4.39). However, 95% (n/N=69/73) agreed that the CNS would support clinical empowerment of the shift leader (figure 4.22), which may be indicative of indecisiveness on behalf of the participants regarding the benefits of the CNS.

The participants were divided about the risk of conflict between the unit manager and the CNS (figure 4.37), as 51% (n/N=37/73) agreed that the CNS in the critical care unit would lead to conflict and 50% (n/N=36/73) noted that there would not be conflict between the unit manager and the CNS. However, 81% (n/N=59/73) of the participants reflected that CNSs should be appointed soon in the critical care units (figure 4.33).

The participants were also divided about the possibility of conflict between the nurse allocated to the care of a patient and the CNS (figure4.36), as 47% (n/N=34/73) agreed that there would be conflict and 52% (n/N=37/73) noted that there would not be conflict. These responses might reflect the doubt regarding the benefits of the CNS as the participants had no practical experience of the contributions of the CNS in a critical care unit. They might have been in two minds about the possibility of conflict at the bedside and the desirability of having the CNS. With regard to the themes of the qualitative section, some participants commented as follows:

I think that a CNS is unnecessary and will only step on other personnel's toes.

[It is] important that CNS will not make rest of personnel feel incompetent.
CNS will have to be introduced slowly. CCU sisters can be very resistant to changes …

This illustrates a lack of knowledge and trust regarding the functions of the CNS in the critical care environment.

In the light of the above it can be stated that the participants did not have strong opinions on this topic, which possibly contributed to the lack of enthusiasm and the slow process of incorporating expert CNSs in the critical care environment as assumed by the researcher.

5.3.4 Assumption 4: The appointment of the CNS in the critical care unit in SA might lead to the return of nurses qualified in critical care who have left the stressful environment of the critical care unit to work either overseas or in the alternative fields of nursing as medical representatives, occupational health nurses or research nurses.

The following responses by the participants might indirectly indicate that critical care qualified nurses who have left the stressful environment of the critical care units might return as the CNS would alleviate many of the problems. There was agreement among 95% (n/N=69/73) that the CNS would support the clinical empowerment of the shift leaders (figure 4.22). It was agreed by 95% (n/N=69/73) that the CNS would support clinical empowerment of the bedside nursing staff (figure 4.23). The response of 91% (n/N=66/73) was that the CNS would contribute to increased doctors` satisfaction with nursing care.

Altogether 95% (n/N=69/73) of participants agreed that a CNS in the critical care unit would lead to the awareness of the nursing team about the importance of evidence-based nursing, and 81% (n/N=59/73) agreed that CNSs must be appointed soon in critical care units in South Africa. It was agreed by 85% (n/N=62/73) that a CNS would relieve the work stress of the shift leaders (figure 4.41). Eighty-two per cent (n/N=59/73) agreed that the CNS would relieve stress for the bedside clinical nurses.

The above results indicate that the critical care nursing staff interpreted the appointment of the CNS as a high priority as they believed that it would contribute to the clinical empowerment of shift leaders and bedside nurses and it would bring relief in terms of work stress. It would also contribute to doctors` satisfaction with the nursing care in the critical care environment, as indicated by the quantitative data.

In the past five years many nursing staff who was trained in critical care related to the researcher that they could not handle the stress of leading a shift any longer and therefore accepted positions as agency nurses. Some left the critical care environment to work as medical sales representatives, research nurses or occupational health nurses.

It can therefore be deduced from the abovementioned percentages of the participants (varying between 81% and 95%) that they agreed that the CNS would be of great value to the critical care environment and the critical care nursing staff. The researcher further assumes that many qualified critical care nursing staff and have left the critical care environment due to stress and burnout might return from their current positions as medical sales representatives, research nurses or occupational health nurses to take up permanent posts as shift leaders again if CNSs were to be appointed.

5.4 Limitations of the study

Burns and Grove (2007, p.545) state that *"limitations are theoretical and methodological restrictions in a study that may decrease the credibility and generalisability of the findings"*.

5.4.1 Survey tool

The nursing participants were on duty when the survey tool was handed out. Due to work constraints the tool could have been completed in a hurried fashion, which might have caused responses that were not well considered.

The researcher compiled some of the biographical data in a clumsy fashion. This caused overlapping and ambiguity and seemed to confuse the participants. Although No. 2a gave the instruction to 'mark the applicable boxes', some participants only ticked one box when they should have ticked 'shift leader' as well. The participants' status in their present position (No. 2b) also caused confusion, as they did not realise that they could select more than one tick box (permanent staff, agency staff, night staff, day staff). The researcher omitted a tick box for 'certificate in critical care as highest qualification' (No. 4), which the participants then recorded under 'other'. The confusion or misinterpretation in the biographical data could have led to the participants underestimating the value of the rest of the questions on the survey tool.

Data collection for this study was conducted during six weeks over the holiday period in December 2008. More doctors could have been involved in completing the survey tool, but it was distributed in December over the holiday period.

5.4.2. Participant information regarding the CNS in the qualitative section

Out of 73 participants only 50 (68,5%) (n/N=50/73) answered the open-ended, qualitative question on the last page regarding their opinions and ideas of the role that the CNS could play in their critical care units. This could be because

- it was on the last page;
- they did not know what to write (not sufficient information); or
- they only wanted to mark off in the blocks (quantitative) and did not want to elaborate on the topic as it would be time-consuming to do so.

Some participants said that they had too little information regarding the CNS to make informed decisions regarding the questions. The researcher was cautious of giving too much information regarding the CNS lest she would lead or influence the decisions of the participants. Therefore the supplied information regarding the CNS was limited to one page. This could have affected the responses as one participant indicated that she/he thought that a CNS was a nurse not qualified in critical care.

5.4.3 Generalisability

According to Polit and Beck (2004) generalisability is the criterion used in a quantitative study to determine the extent to which the findings can be applied to other settings or groups. Burns and Grove (2007, p. 541) state that generalisation is the *"extension of the implications of the findings from the sample or situation that was studied to a larger population or situation"*.

The generalisation of the results of this study to the broader South African private critical care units could have been influenced by the fact that the study was limited to critical care professional nurses working in two hospital groups (eight hospitals) in the Cape Peninsula. However, the sample was large enough and representative of the critical care environment.

In this study 73 participants from a population of 170 completed the survey tool. They were from critical care units in eight private hospitals in the Cape Peninsula of South Africa. Due to the time limitations associated with the MCur programme, the third private health care group was excluded as they have a very lengthy permission for research process that would have significantly delayed the completion of the study. The fourth private health care group was omitted due to time constraints. Therefore the study cannot be generalised to the critical care environment of all critical care units in South Africa. More research by other researchers regarding the CNS is therefore recommended.

5.5 Recommendations

According to the *Oxford English Dictionary* (2009), to recommend is to *"suggest as fit for some purpose or use; advise as a course of action".*

The recommendations will be discussed in two sections, namely recommendations to SAQA, SANC and private hospital nursing management and recommendations for further research.

5.5.1 Recommendations for SAQA, SANC, private hospital nursing management and critical care nurses

The following recommendations are made with regard to SAQA, SANC, private hospital nursing management and critical care nurses:

- Opportunities should be created for researchers to do presentations on the benefits of the CNS in the critical care environment to increase an awareness regarding this expert nurse. As much information as possible should be made available regarding the CNS to eliminate all possibility of confusion regarding the role of the CNS and to elucidate the concept of the CNS.

- The professional body seriously has to consider and develop regulations/recommendations regarding the CNS to avoid the misuse/inappropriate application of the term CNS. For example, it should be clear whether the term specialist should be reserved for nurses with a master`s degree or not. There should be consistency regarding the career development of the critical care nurse in any sector.

- The appointment of the CNS in critical care units of private hospitals should be done as soon as possible to improve staff satisfaction in the critical care units, to improve patient satisfaction and to encourage positive patient outcomes, as indicated by the participants (see Figures 4.26 to 4.29).

- Nursing and unit managers must know what the requirements of the education for the CNS (SAQA, 2007) are in order to compile an effective and accurate job description for the CNS (see Figure 4.8). This compilation of the CNS`s job description will have to be done in cooperation with SAQA and SANC as the CNS`s training and qualifications are on a higher level than those of the professional nurse who has been qualified in critical care.

- Before a CNS is appointed, a thorough interview should be conducted to ensure that best candidate is appointed. The CNS needs to have emotional maturity to cope with the stress involved in the position. These stressors are loneliness at the top of the career ladder (Figure 4.34), hostility, wariness and prejudice from bedside nursing staff, as indicated by participants in the qualitative section as well as by the literature (Bousfield, 1997). One participant's negative comment was that the CNS *"will make rest of staff feel incompetent and will step on other people's toes"*. The participant commented that the CNS will be competition for the unit manager (see Figures 4.37) and may cause conflict with the doctors (see Figure 4.38).

- Extensive information-sharing and discussion groups should be organised so that the role of the critical care CNS can be discussed and developed by the nurses who will eventually fill the CNS position and those critical care nurses who will work with the CNS. Critical care nurses have to take ownership of this process of spreading awareness and discussing the need for and the role of the critical care CNS. This will require collaboration between clinical, academic and professional groupings and should be initiated by nurses.

- The nursing and unit management should compile an evaluation tool for the CNS in consultation with SANC and SAQA, by which her/his performance can be measured to prevent misunderstandings after employment. This liaison with SANC and SAQA is of importance as many nursing managers are not trained in critical care and do not have the qualifications and insight to compile such an evaluation tool. An example of such an evaluation tool is Diagram 2.4 in Chapter 2.

- SANC should develop and finalise the professional requirements for registration as a critical care CNS. The relevant hospital nursing and unit managers can then customise the role to meet their corporate requirements. SANC needs to state whether nurses with a current master`s degree can up skill to a CNS by performing the clinical modules which are a requirement for the clinical master`s degree of the CNS. In this fashion a hospital can assist its own critical care qualified professional nurses to be further developed and empowered.

- Researchers on the subject of the CNS should give presentations to the doctors of the critical care units regarding the benefits and proposed problem areas surrounding the appointment of the CNS to ensure that the doctors are prepared and informed when the CNS is appointed (see Figures 4.26 to 4.29, 4.33 & 4.35).
- The unit manager should be empowered with information regarding the CNS in order to inform and prepare the nursing staff in her/his critical care unit to receive the CNS in a positive fashion (see Figures 4.11, 4.12, 4.13, 4.15, 4.22, 4.23, 4.26 to 4.29, 4.33, 4.41, 4.42 & 4.44)

5.5.2 Recommendations for further research

- Once the abovementioned recommendations have been implemented, further research should be done on the specific role and function of the CNS as well as on the impact of this role in the critical care units, on the critical care staff and on the patients in the crit5ical care units.

- An area for additional research could be the further investigation into the statements where a negative impact of the CNS role was described by the participants, for example:

[T]he CNS will have to be introduced slowly as critical care sisters can be very resistant to changes.

[The CNS] will make the rest of the personnel feel incompetent. We already have enough leaders."
She/he will be stepping on other people's toes.

- This research regarding the expected role of the critical care CNS should also be extended into the state hospital sector.

5.5 Summary

In view of the fact that little research has been done on the role of the CNS in the critical care units in South Africa, the researcher believes that this study has helped to create an awareness of the CNS amongst nursing staff, nursing managers, nurse educators and doctors in the critical care environment.

Critical care professional nurses should be inspired to drive the need for the inclusion of a CNS in their critical care unit. Through this study it has been shown that the most critical care professional nurses and other health care professionals (nurse educators, clinical coordinators and clinical facilitators, nursing managers, CNSs and doctors) of the critical care units in the eight private hospitals in the Cape Peninsula agreed that a CNS in the critical care unit is needed for improved circumstances and outcomes for the bedside professional nurses, the shift leaders and the patients.

It is hoped that both unit managers and nursing managers will take note of this research and attempt to appoint a CNS in their critical care units as soon as possible to alleviate the stress of the shift leaders and the nurses at the bedside. This process should be an attempt to improve staff satisfaction and facilitate the return of other critical care-qualified nursing staff that has left hospitals due to burnout. The utilisation of the critical clinical decision making, collaboration, leadership and role modelling of the CNS should result in greater staff and patient satisfaction and

positive patient outcomes as has been proven by research studies done internationally.

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ADDENDUM A: PARTICIPANT CONSENT

STELLENBOSCH UNIVERSITY
PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM

TITLE OF THE RESEARCH PROJECT:

An investigation into the expectations of critical care health professionals regarding the prospective role of the Clinical Nurse Specialist in the critical care environment in private hospitals in the Northern and Southern Suburbs of the Cape Peninsula, South Africa.

REFERENCE NUMBER: student number 15264076; project number N08/06/173

PRINCIPAL INVESTIGATOR: Lettie Prins

ADDRESS: ICU, Kingsbury Hospital, Wilderness Rd, Claremont.

CONTACT NUMBER: 021 6704100 (work)

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the investigator any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the Committee for Human Research at Stellenbosch University and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.

What is this research study all about?
Studies in SA on the role of the Clinical Nurse Specialist (CNS) in the critical care environment are meagre. Many professional nurses practise as CNSs in South Africa (cardiac rehabilitation, oncology, rheumatology, stoma therapy, ICUs, etc.) without a master's degree, which is recommended internationally. Currently experienced nurses leave the critical care environment into training and management as the only alternative for promotion. The study will assist in defining the role of the CNS to allow for development of an alternate clinical career path in critical care nursing.

Objectives of the study:
1. To investigate the opinions of health care professionals working within the critical care environment regarding their expectations of the CNS with respect to:
   1.1 the scope of practice and professional status.
   1.2 education and qualifications.
   1.3 clinical practice.
   1.4 financial and quality impact on the hospital.
   1.5 impact on collaborative interdisciplinary relationships (nursing management, doctors and nurses)
   1.6 recommendations based on the outcome of the research.

2. To make recommendations for the context and development of the CNS role based on the outcome of the research.

Why have you been invited to participate?
You are currently working in a critical care environment. Your opinion regarding the role of the Clinical Nurse Specialist can have an impact on the quality of nursing and patient outcomes in the future in South Africa.

What will your responsibilities be?
1. Read the Participant information leaflet and consent form.
2. Think about (reflect on) your opinions and ideas about the CNS.
3. **Complete and sign the consent form and deposit it separately (to keep the study anonymous) into the sealed box in the unit manager's office, or in the ICU or High Care.**
4. Remove your section of the consent to keep with this Participant Information leaflet for your own records.
5. You have one week within which you need to complete the survey tool (questionnaire).
6. Complete the four sections of the survey tool (questionnaire) as accurately as possible.

7. Place the completed survey tool **in the sealed box in the unit manager's office or in the nurses` station in the ICU or high care by the end of one week after receiving it.**
8. Contact the researcher by telephone (see number at end of letter) should you want to ask any questions.

Are there any risks involved in you taking part in this research?
There are no foreseen risks as you will partake voluntarily and anonymously. The only discomfort that might arise is that it will take some of your time to complete the survey tool.

Confidentiality
Confidentiality will be maintained by means of handing in the consent form with your signature completely **separate** from the anonymous survey tool (questionnaire). Take note that your survey tool results will be published anonymously.

Rights of Research Subjects
You can choose to participate in this study. If you choose to participate, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you do not want to answer and still remain in the study. Should you withdraw you are not waiving any legal claims, rights or remedies because of your participation in this research study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

If you do not agree to take part, what alternatives do you have?
Seeing that no treatment or medication is involved, you may either complete the survey or choose not to do so.

Who will have access to your medical records?
No medical records will be involved in this study. (The information collected from health care professionals will be protected and treated as confidential. When the information is used in the thesis, the identity of the participant will remain anonymous. Only the investigator, statistician and supervisor of the study will have access to the information of the survey tool and will treat it as confidential.)

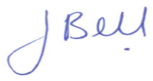
What will happen in the unlikely event of some form of injury occurring as a direct result of your taking part in this research study?
This question is irrelevant as no medication, treatment or exercises will be part of this study.

Will you be paid to take part in this study and are there any costs involved?
You will not be paid to take part in the study as it is not expected of you to travel. There will be no costs involved for you, if you do take part.

Is there anything else that you should know or do?
1. You can contact the Committee for Human Research at 021-938 9207 if you have any concerns or complaints that have not been adequately addressed by the researcher.
2. You may keep this copy of information and one consent form for yourself.
3. Please deposit the completed form (questionnaire) and the Declaration by Participant (consent form) separate from each other into the sealed box in the unit manager's office or in the nurses` station.

Thank you

Lettie Prins (Researcher. Tel. at work: 021-6704100)



Mrs. Janet Bell (Supervisor. Tel. at work: 021-9389299)

1a. CONSENT DUPLICATE:

Declaration by participant (COMPLETE AND KEEP). Either the English or Afrikaans section.

By signing below, I ……..…….. agree to take part in a research study titled:
An investigation into the expectations of critical care health professionals regarding the prospective role of the Clinical Nurse Specialist (CNS) in private hospitals in the critical care environment in the Northern and Southern Suburbs of the Cape Peninsula, South Africa.
I declare that:

1. I have read or had read to me this information and consent form and it is written in a language with which I am comfortable.
2. I may ask questions per telephone. I may contact the researcher: Lettie Prins tel. 021-6704100.
3. I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
4. I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
5. I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) .....…..…….. on (*date*) ……...……. 2008.

…… ……..

Signature of participant **Signature of witness**

Verklaring deur deelnemer (VOLTOOI EN BEHOU)

Met die ondertekening van hierdie dokument onderneem ek, ……..……...……...……., om deel te neem aan 'n navorsingsprojek getiteld: **"An investigation into the expectations of critical care health professionals regarding the prospective role of the Clinical Nurse Specialist (CNS) in the critical care environment in private hospitals in the Northern and Southern Suburbs of the Cape Peninsula, South Africa"**
Ek verklaar dat:

1. Ek hierdie inligtings- en toestemmingsvorm gelees het en dat dit in 'n taal geskryf is waarmee ek gemaklik is.
2. Ek mag vrae stel per telefoon. Ek mag die navorser kontak: Lettie Prins tel. 021-6704100.
3. Ek verstaan dat deelname aan hierdie navorsingsprojek **vrywillig** is en dat daar geen druk op my geplaas is om deel te neem nie.
4. Ek te eniger tyd aan die navorsingsprojek mag onttrek en dat ek nie op enige wyse daardeur benadeel sal word nie.
5. Ek gevra mag word om van die navorsingsprojek te onttrek voordat dit afgehandel is indien die navorser van oordeel is dat dit in my beste belang is, of indien ek nie die ooreengekome navorsingsplan volg nie.

Geteken te *(plek*) .....…….. op *(datum*) ……...……. 2008.

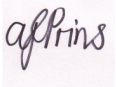
....
Handtekening van deelnemer **Handtekening van getuie**

Declaration by investigator

I, Lettie Prins, declare that:

1. I explained the information in this document to the participant by means of the information leaflet.
2. I was available to answer questions per telephone. At work: 021 6704100
3. I did not use a translator.

Signed at Bellville on 13th Nov. 2008.



Signature of investigator

CONSENT

1b. COMPLETE AND PLACE IN THE SEALED BOX IN THE UNIT, OR IN THE UNIT MANAGER`S OFFICE AS SOON AS POSSIBLE - WITHIN A WEEK OF RECEIVING THE SURVEY TOOL.

Complete either the English or Afrikaans section:

Declaration by participant

By signing below, I ……..…….. agree to take part in a research study titled:
An investigation into the expectations of critical care health professionals regarding the prospective role of the Clinical Nurse Specialist (CNS) in private hospitals in the critical care environment in private hospitals in the Northern and Southern Suburbs of the Cape Peninsula, South Africa.
I declare that:

1. I have read or had read to me this information and consent form and it is written in a language with which I am comfortable.
2. I may ask questions per telephone. I may contact the researcher: Lettie Prins tel. 021-6704100.
3. I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
4. I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
5. I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) .....…..…….. on (*date*) ……..……. 2008.

…… ……
Signature of participant **Signature of witness**

Verklaring deur deelnemer

Met die ondertekening van hierdie dokument onderneem ek, ……..……..……..……., om deel te neem aan ’n navorsingsprojek getiteld**: “An investigation into the expectations of critical care health professionals regarding the prospective role of the Clinical Nurse Specialist (CNS) in private hospitals in the critical care environment in the Northern and Southern Suburbs of the Cape Peninsula, South Africa”**
Ek verklaar dat:

1. Ek hierdie inligtings- en toestemmingsvorm gelees het en dat dit in ’n taal geskryf is waarmee ek gemaklik is.
2. Ek mag vrae stel per telefoon. Ek mag die navorser kontak: Lettie Prins tel. 021-6704100.
3. Ek verstaan dat deelname aan hierdie navorsingsprojek **vrywillig** is en dat daar geen druk op my geplaas is om deel te neem nie.
4. Ek te eniger tyd aan die navorsingsprojek mag onttrek en dat ek nie op enige wyse daardeur benadeel sal word nie.
5. Ek gevra mag word om van die navorsingsprojek te onttrek voordat dit afgehandel is indien die navorser van oordeel is dat dit in my beste belang is, of indien ek nie die ooreengekome navorsingsplan volg nie.

Geteken te *(plek*) .....…….. op *(datum*) ……..……. 2008.

....
Handtekening van deelnemer **Handtekening van getuie**

Declaration by investigator

I, Lettie Prins, declare that:

1. I explained the information in this document to the participant by means of the information leaflet.
2. I was available to answer questions per telephone. At work: 021-670410.
3. I did not use a translator.

Signed at Bellville on *13th Nov.* 2008.

Signature of investigator

ADDENDUM B: PROJECT NUMBER

11 September 2008

Ms M Davids

Research Development and Support

Tygerberg

Dear Ms Davids

RESEARCH PROJECT:

"AN INVESTIGATION INTO THE EXPECTATIONS OF THE CRITICAL CARE HEALTH PROFESSIONALS REGARDING THE PROSPECTIVE ROLE OF THE CLINICAL NURSE SPECIALIST IN THE CRITICAL CARE ENVIRONMENT IN THE NORTHERN AND SOUTHERN SUBURBS OF THE CAPE PENINSULA, SOUTH AFRICA"

PROJECT NUMBER: N08/06/173

Thank you for sending a project number and feedback on this proposed study.

Enclosed are the Participant Information/Consent Form and the Research Proposal. I have indicated the applicable corrections in pink ink, regarding:

1. Permission from the DOH with regard to involving state hospitals: explanation on page 8 of the Research Proposal.
2. Changes have been done to the informed consent form to remove the leading paragraphs.
3. Motivation for why only English is used in the study: see "Verklaring deur deelnemer" on pages 4 and 5 of the informed consent form and page 11 in the Research Proposal.

Kind regards

Mrs AJ (Lettie) Prins

DIVISION OF NURSING, DEPARTMENT OF INTERDISCIPLINARY HEALTH SCIENCES

Tel: 0837175432 / E-mail: lettieprins@isp247.co.za

ADDENDUM C: FINAL PERMISSION FOR RESEARCH

UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvennoot • your knowledge partner

14 November 2008

Mrs AJ Prins
Division of Nursing
Dept of Interdisciplinary Health Sciences

Dear Mrs Prins

RESEARCH PROJECT: **"AN INVESTIGATION INTO THE EXPECTATIONS OF THE CRITICAL CARE HEALTH PROFESSIONALS REGARDING THE PROSPECTIVE ROLE OF THE CLINICAL NURSE SPECIALIST IN THE CRITICAL CARE ENVIRONMENT IN THE NORTHERN AND SOUTHERN SUBURBS OF THE CAPE PENINSULA, SOUTH AFRICA"**
PROJECT NUMBER : N08/06/173

My letter dated 23 September 2008 refers.

At a meeting that was held on 10 November 2008, the Committee for Human Research ratified the approval of the above project by the Chairperson.

Kind regards

pp
Prof PJT de Villiers
Chairperson: Committee for Human Research
RESEARCH DEVELOPMENT AND SUPPORT (TYGERBERG)
Tel: +27 21 938 9207/ E-mail: mertrude@sun.ac.za

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Fakulteit Gesondheidswetenskappe • Faculty of Health Sciences

Verbind tot Optimale Gesondheid • Committed to Optimal Health
Afdeling Navorsingsontwikkeling en -steun • Research Development and Support Division
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ADDENDUM D: TARGET POPULATION

An Overview of the international role and functions of the Clinical Nurse Specialist

The **Clinical Nurse Specialist** (CNS) and the **Nurse Practitioner** (NP) are categorised as **Advanced Practice Nurses** (APNs). "Synonyms" used for the CNS are **Clinical Nurse Leader, Clinical Coordinator, Clinical Facilitator and Nurse Clinician.** However these "CNSs" do not all have the same job descriptions, but all aspire for improved nursing interventions at the bedside of the critically ill, and improved patient outcomes. The **CNS** first emerged in North America in 1910 and took a modern form since 1960, reaching the United Kingdom in the early 1970s. **NPs,** on the other hand, have been found to be more effective in primary health care and in tertiary settings. Internationally, from country to country, the role and functions of these advanced nurses vary.

Highly experienced and skilled clinical critical care qualified professional nurses who aspire for promotion are often lost from the patient's bedside into the only other possible advancement routes of education and nursing management. Therefore the appointment of these critical care qualified professional nurses as CNSs (as promotion for expert nurses) should retain their clinical skills and knowledge at the patient's bedside.

In South Africa in the past years some professional nurses have practiced as CNSs (e.g. in infection control, cardiac rehabilitation, stoma therapy, etc.), but without having the required **clinical** master's degree. Few published studies regarding the role and functions of the CNS in South Africa are available. The South African Qualification Authority (SAQA) released the requirements for the CNS stating that "this qualification provides a career path for Professional Nurses who want to stay in a clinical context, but who would like to specialise, focus on an area and add to their depth of knowledge and skill". SAQA states that these CNSs are required to work with highly unstable patients, to provide "leadership of the health team, rather than just the nursing team". Complex technology and increasing acuity levels of the patients warrant the input of a nursing specialist (CNS).

ADDENDUM E: SURVEY TOOL

Survey of the expectations of critical care health professionals regarding the prospective role of the Clinical Nurse Specialist (CNS) in private hospitals in the Northern and Southern suburbs of the Cape Peninsula, South Africa.

The survey is anonymous and you are under no obligation to participate

Abbreviations : CCU - Critical Care Unit; CC - Critical Care; CNS : Clinical Nurse Specialist

SECTION A : BIOGRAPHICAL DATA

Mark with X in the box of your choice:

1 Indicate your age group:

☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60 +

2a The following two questions are applicable to Professional Nurses: mark the applicable box/es

☐ CC trained ☐ CC experienced ☐ Unit Manager ☐ Bedside Professional Nurse

☐ Shift Leader ☐ Nursing Manager ☐ Nurse Educator ☐ Lecturer ☐ CNS

☐ Clinical Coordinator ☐ Clinical Facilitator

2b Tick the boxes that best describe your status in your present position

☐ Permanent Staff ☐ Agency Staff ☐ Night Staff ☐ Day staff

3 Doctors: please mark the applicable box:

☐ Physician ☐ Surgeon ☐ Anaesthetist ☐ Other.....

4 Nurses and Doctors: indicate your HIGHEST nursing/medical qualification

☐ Honours degree in Nursing ☐ Diploma in Nursing

☐ Diploma in Critical Care Nursing (post basic) ☐ Masters degree in Nursing

☐ Baccalaureus Degree Nursing ☐ Other.....

☐ MB ChB and Specialist ☐ MB ChB

5 Have you heard of the CNS prior to reading the attached information?

☐ Yes ☐ No

6 Indicate the number of years experience you have in critical care

☐ <1yr ☐ 1-3yrs ☐ 3-6yrs ☐ 6-9yrs ☐ >9 yrs

SECTION B : THE CLINICAL NURSE SPECIALIST (CNS) IN A CRITICAL CARE UNIT (CCU)

Select the answer closest to your opinion on this scale from 1 to 6 by marking the applicable box with an X:

	In my opinion a Clinical Nurse Specialist in a CCU:	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
1	Will contribute to shorter patient stay in the CCU	1	2	3	4	5	6
2	Will contribute to safer nursing care	1	2	3	4	5	6
3	Will improve the professional status of nursing in the eyes of the patient and family	1	2	3	4	5	6
4	Will improve patient and family care	1	2	3	4	5	6
5	Will contribute to improved managed care (improved communication with the medical aids)	1	2	3	4	5	6
6	Will reduce medico-legal claims against the hospital	1	2	3	4	5	6
7	Will not relieve the stress of the shift leaders	1	2	3	4	5	6
8	Will relieve work stress of the shift leaders	1	2	3	4	5	6
9	Will relieve work stress of the bedside clinical nurses	1	2	3	4	5	6
10	Will improve the reputation of the nursing profession amongst other health care professionals	1	2	3	4	5	6
11	Will give rise to conflict between the shift leader and the CNS	1	2	3	4	5	6
12	Will result in overlapping of roles with the shift leader	1	2	3	4	5	6
13	Will improve collaboration of the nursing staff in the CCU	1	2	3	4	5	6
14	Will provide a good role model to the CCU nursing staff	1	2	3	4	5	6
15	Will support clinical empowerment of the shift leaders	1	2	3	4	5	6
16	Will give rise to conflict between the nurse allocated to the care of a patient and the CNS	1	2	3	4	5	6
17	Will support clinical empowerment of the bedside nursing staff	1	2	3	4	5	6
18	Will contribute to increased doctors' satisfaction with nursing care	1	2	3	4	5	6
19	Will contribute to more doctors wanting to work at this institution	1	2	3	4	5	6
20	Will give rise to conflict between doctors and the CNS	1	2	3	4	5	6
21	Will reduce some stress and responsibility of the doctors	1	2	3	4	5	6
22	Will be a financial burden for the hospital as far as remuneration of the CNS is concerned	1	2	3	4	5	6
23	Will lead to her/him reporting to the critical care intensivist or physician	1	2	3	4	5	6
24	Will require a clearly defined job description	1	2	3	4	5	6
25	Will lead to nursing research being done in the CCU	1	2	3	4	5	6
26	Will lead to the awareness of the nursing team about the importance of evidence-based (research-based) nursing	1	2	3	4	5	6
27	Will lead to the necessity to revise the CCU organogram (where the CNS should fit in)	1	2	3	4	5	6

Select the answer closest to your opinion on this scale from 1 to 6 by marking the applicable box with an X:

	In my opinion a Clinical Nurse Specialist in a CCU:	Strongly agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
28	Will reduce the responsibilities of the Unit Manager	1	2	3	4	5	6
29	Will cause conflict between the Unit Manager and the CNS	1	2	3	4	5	6
30	Will result in overlapping of roles with the Unit Manager	1	2	3	4	5	6
31	Will require a good support system to prevent loneliness "at the top" of the work ladder	1	2	3	4	5	6
32	Will lead to her/him writing her/his own job description	1	2	3	4	5	6
33	Must be a member of the Critical Care Society of Southern Africa	1	2	3	4	5	6
34	Will have to stay up to date with CNS development in South Africa and internationally	1	2	3	4	5	6
35	Will be a promotion post for a senior critical care expert	1	2	3	4	5	6
36	Will have to do research into nursing practice and patient care	1	2	3	4	5	6
37	Must be appointed soon in CCUs in South Africa	1	2	3	4	5	6
38	Must have at least a clinical Master's degree in Critical Care Nursing	1	2	3	4	5	6
39	Must have at least an Honour's degree (Critical Care Nursing)	1	2	3	4	5	6
40	Will lead to initial CNSs being employed without a clinical master's degree	1	2	3	4	5	6
41	Will require that s/he at least has any Master's degree (Nursing)	1	2	3	4	5	6

Section C

42 Do you think that the appointment of a CNS will contribute positively to the staff and patients in a CCU?

☐ Yes ☐ No

43.1 If you selected "yes", tick (X) the **3 (three)** most important benefits you think the appointment of a CNS will support:

☐ Improved critical care nurses' supervision ☐ Improved patient outcomes ☐ Improved managed care (medical aids)

☐ Decreased infection rate for patients ☐ Research will be done ☐ Less stress for shift leaders

43.2 If you selected "no", tick (X) the **3 (three)** most important statements that support your choice:

☐ Conflict between doctors and CNS ☐ Will add stress to the CCU environment ☐ Financial burden for the company

☐ Conflict between unit manager and CNS ☐ Will not contribute to significant positive patient outcomes

Section D

44	Describe your opinions and ideas of the role that the CNS could play in your CCU:

Thank you for your participation

Lettie Prins (Researcher)

Tel (work) 021 670 4100

1. Please place the consent letter in the sealed box after completion.
2. Please place the completed survey tool (questionnaire) in the sealed box in the CCU or High Care. OR REPLY ON-LINE

Thank you.

ADDENDUM F: HOSPITAL CONSENT (LIFE HEALTHCARE)

Life HEALTH CARE Group

Life Healthcare Head Office
21 Chaplin Road, Illovo 2196
Private Bag X13, Northlands 2116, South Africa
Telephone +27 11 219 9000
Facsimile +27 11 219 9001

21 October 2008

Lettie Prins
Kingsbury ICU

Dear Lettie

You are hereby given permission to conduct your research in the Critical Care Clinical Nurse Specialist in the units of the Life Healthcare hospital group under the following conditions:

- Participation in your research project must be stated as voluntary to the potential participants
- Your research findings to be submitted to me
- Your research recommendations to be submitted for consideration in our strive for continuous improvement

I wish you luck with your study.

Kind Regards

Dr Eloise van Niekerk
National Nurse Manager
Life Healthcare

ADDENDUM G: HOSPITAL CONSENT (KINGSBURY)

Life Group
HEALTH CARE

Kingsbury Hospital
Wilderness Road, Claremont 7700
PO Box 23005, Claremont 7735
Telephone +27 21 670 4000
Facsimile +27 21 683 5135
www.kingsburyhospital.co.za

31 October 2008

Sr L Prins
Unit Manager
ICU
Life Kingsbury Hospital
Wilderness Road
Claremont

Dear Lettie

I hereby grant permission for you to proceed with the research project for your course of study. You can distribute the survey tools to the ICU/HC nursing staff in the Life Kingsbury/Claremont Hospitals.

As indicated by Eloise van Niekerk in her letter to you, it will be appreciated if you would share your results and recommendations with us.

Yours sincerely

Fatima Khan
Nursing Manager

ADDENDUM H: HOSPITAL CONSENT (VINCENT PALLOTTI)

Vincent Pallotti Hospital
Alexandra Road, Pinelands, Cape Town 7405
PO Box 103, Howard Place 7450
Telephone: +27 21 506 5111
Facsimile: +27 21 531 0116
www.vincentpallottihospital.co.za

Me Lettie Prins

30 Oct 2008

Dear Lettie,

RE: Permission for Research Survey

We are comfortable for you to proceed with your research project, provided that the confidentiality of the participants and the hospitals are adhered to.

We wish you well with the study and would like to be informed of the results when you have completed your studies.

Best Wishes

Regards

Alta Dorse
Nursing Manager

ADDENDUM I: HOSPITAL CONSENT (MEDI-CLINIC)

MEDI-CLINIC LIMITED
Private hospital group
Reg. No. 1969/009218/06
Medi-Clinic Offices, PO Box 456, Stellenbosch 7599 • T +27 21 809 6500 • F +27 21 809 6756
Strand Road, Stellenbosch 7600 • www.mediclinic.co.za

20 October 2008

Mrs Lettie Prins
4 Saasveld Villas
Saasveld Street
BELLVILLE
7530

Dear Mrs Prins

The Nursing Managers at Panorama, Durbanville, Cape Town, Milnerton and Constantiaberg, and Deputy Nursing Manager at Louis Leipoldt, have approved your request. You have fulfilled all the requirements in terms of the Medi-Clinic Research policy and can therefore proceed with your research at those hospitals. It will be loaded onto our research register in the coming week.

Please contact the Nursing Managers at the various hospitals to arrange access to the staff.

All the best with your research.

Kind regards

Estelle Jordaan

Estelle Jordaan
General Manager: Nursing

ADDENDUM J: HOSPITAL CONSENT (PANORAMA MEDI-CLINIC)

PANORAMA MEDI-CLINIC
Private hospital

25 Years of Quality Care

Rothschild Boulevard, Panorama, Parow 7500 • T +27 21 938 2111 • F +27 21 938 2146
PO Box 15841, Panorama 7506 • www.panoramamc.co.za

22 October 2008

Mrs Lettie Prins
4 Saasveld Villas
Saasveld Street
BELLVILLE
7530

Dear Mrs Prins

REQUEST: RESEARCH IN THE ICU'S

Your application to conduct research among the staff our ICU's has been considered and you are hereby given permission to approach the staff.

Please contact me before you start your research to enable us to make suitable arrangements.

Kind regards

MRS ANNMARIE SIEBRITS
NURSING MANAGER

Hospital Manager: GH Harris
Company Secretary: TA Lockyer

ADDENDUM K: HOSPITAL CONSENT (MILNERTON MEDI-CLINIC)

MILNERTON MEDI-CLINIC
Private hospital

Medi-Clinic Limited • Reg. No. 1969/009218/06
Cnr Racecourse & Koeberg Roads, Milnerton 7441 • T +27 21 529 9000 • F +27 21 529 9040
Private Bag X16, Milnerton 7435 • www.milnertonmc.co.za

30th October 2008

Ms L Prins
4 Saasveld Villas
Sassveld Street
Bellville
7530

Dear Mrs Prins

Re: M. Cur Research: Project No: N08/06/173

You have my permission to conduct research regarding the prospective role of a Clinical Nurse Specialist in our Critical Care Unit.

Kind Regards

Jill Layton-McCann
Nursing Manager

ADDENDUM L: HOSPITAL CONSENT (DURBANVILLE MEDI-CLINIC)

DURBANVILLE
MEDI-CLINIC
Privaat hospitaal

Medi-Clinic Beperk • Reg. No.1969/009218/06
Wellingtonweg 45, Durbanville 7550 • T +27 21 980 2100 • F +27 21 975 1880
Privaatsak X15, Durbanville, 7551 • www.durbanvillemc.co.za

15 October 2008

Ms L Prins
4 Saasveld Villas
Saasveld Street
BELLVILLE
7530

Dear Ms Prins

Re: M. Cur Research: Project No: N08/06/173

You have my permission to conduct research regarding the prospective role of a Clinical Nurse Specialist in our Critical Care Unit.

With best wishes

MERCIA RIX
Nursing Manager

ADDENDUM M: HOSPITAL CONSENT (LOUIS LEIPOLDT)

LOUIS LEIPOLDT MEDI-CLINIC

Private Hospital

Broadway Road, Bellville 7530 • T +27 21 957 6000 • F +27 21 948 7180
PO Box 369, Bellville 7535

20 October 2008
BRIEWE/HKRIEL/SDP

Mrs L. Prins
4 Saasveld Villas
Saasveld Street
BELLVILLE
7530

Dear Lettie

RE: NURSING RESEARCH

I hereby give my permission to you, Letlie Prins, to proceed with Nursing Research at Louis Leipoldt Medi-Clinic.

All the best with your research.

Kind Regards

....
MISS HESTER KRIEL
Deputy Nursing Manager

ADDENDUM N: HOSPITAL CONSENT (CONSTANTIABERG MEDI-CLINIC)

CONSTANTIABERG
MEDI-CLINIC
Private hospital

Medi-Clinic Limited • Reg. No. 1969/009218/06
Burnham Road, Plumstead, 7800 • T +27 21 799 2911 • F +27 21 797 1107
PO Box 179, Plumstead 7800 • www.constantiabergmc.co.za

October 08, 2008

Ms L. Prins
4 Saasveld Villas
Saasveld Street
Bellville
7530

Re: M. Cur Research: Project No: N08/06/173

Dear Mrs Prins

You have my permission to conduct research regarding the prospective role of a Clinical Nurse Specialist in our Critical Care Unit.

With best wishes

A SMIT (MRS)
NURSING MANAGER

as879/09