CHAPTER ONE

1.0 OVERVIEW OF THE STUDY

This chapter will provide an overview of the planned study. The background is described, including a statement of the problem, purpose, objectives, importance of the study, paradigmatic perspectives, relevant definitions and an overview of the research process in an attempt to clarify the role of the emergency nurse in the pre-hospital environment and the emergency room.

1.1 Background to the Study

Emergency health care has been rendered throughout the ages and became an established practice during the late 1960's and 1970's in the United States of America (USA). Military experiences with traumatic injuries and shock led to a more efficient systematically organized emergency health care system approach (McQuillan et al 2000:4). The Vietnam War established the importance of minimizing time from injury to definitive care that was extended to civilian care. Morbidity and mortality profiles of trauma patients with major injuries improved. Medical specialities learnt from this experience and the importance of quick response times to emergencies was recognized. The emergency systems approach required a team of members with the appropriate knowledge and skills. This gave rise to the development of emergency nursing as a speciality.

As a recognized specialty in South Africa emergency nursing is relatively unexplored and unknown by those not involved in emergency health care services. It has been practiced as a speciality since 1985 when a 12-month certificate course was developed at Tygerberg hospital in the Cape Province and in 1986 when a six-month certificate course was

developed at Johannesburg hospital. In the late 1990's it was expanded into a 12-month diploma course and, in this decade, degree, masters and doctoral programmes have been developed. Despite this speciality being relatively unknown it has not detracted from the valuable contribution made by emergency nurses throughout the country, within both the pre-hospital environment and in the emergency rooms.

Emergency nurses have and are working successfully within various sectors of the emergency medical service milieu such as flight services, occupational services, pre-hospital emergency services, emergency rooms, critical care units and intermediary services such as surgical wards etc. Traditionally emergency nurses are expected to render their services within the hospital emergency rooms, which detract from the value they can bring to other areas where emergency health care services are required. This is especially important in the rural hospitals or clinics where medical resources are inadequate.

Due to a lack of knowledge regarding the educational and skills preparation and/or appropriate legislative support of emergency nurses their services are often inappropriately and/or under utilized. For emergency nurses to work in the pre-hospital environment where the services are dominated by emergency medical technicians or paramedics is extremely difficult as the qualifications of an emergency nurse is deemed to be inadequate by the other health care practitioners. Registered emergency nurses working in this environment or who would like to work in this environment have become very frustrated and disillusioned with the current state of affairs. Attempts have and are being made to correct this situation. However, nothing has been done to correct the perceptions within the hospital setting, where even within the emergency room emergency nurses experience problems. Many work with medical practitioners who do not know what they have been

trained to do or will not allow them to practice according to their level of training as they themselves (medical practitioners) often do not have the necessary advanced life support capacity. Similarly a lack of insight by hospital management exacerbates the problem. These problems lead to questions regarding the professional integrity of this specialist nurse.

The emergency medical health care services require a team approach where each service is linked to the other, as are the links of a chain and this gives it its strength. According to Caroline (1995:14) it consists of the following:

- recognition of the emergency by people in the community
- initiation of the response team
- treatment at the scene and transportation with advanced life support by paramedics, **nurses** and a medical command.
- treatment in hospital by the physicians, nurses and health care technicians
- communication between all stakeholders
- education and training of the lay public by emergency medical technicians, nurses, physicians
- planning and organizational services
- evaluation and research teams

The emergency nurse has a vital role to play throughout the above and should be empowered both intrinsically and extrinsically to fulfill that role.

1.2 Rationale for the Study

1.2.1 Legislative concerns regarding practice

The South African Nursing Council (SANC) has been responsible for the development and control of all nursing courses, as well as the development of a scope of practice for all categories of nurses. The current Scope of Practice (R2598 of 1984 as amended) and the regulation setting out the Acts and Omissions (R387 0f 1985 as amended), in respect of which the SANC may take disciplinary steps, does not give direct guidance for the specialist nurse practitioner as to their role expectations. It states what the responsibilities of all registered nurses and midwives are without clarification of the responsibilities of the specialist nurse thereby enabling them to function at a more advanced level in accordance with the training received. This advanced level of functioning, being a logical expectation of a specialist nurse who has received advanced education and training, is exactly what the courses were developed for. A new scope of practice in the Professional Nurses Charter is currently being developed (SANC, 2004) which takes cognisance of the need for emergency management but this is still not adequate for the emergency nurse. Nurses who give care beyond defined practice limits become vulnerable to violation of the Nursing Act (Act 50 of 1978 as amended). Other legislation such as Common Law, Statutory Law, and the Constitution needs to be considered as well in this regard. This can become extremely complex in an environment where clear directives are not in place.

With Emergency Medical Services (EMS) personnel being lured to more lucrative employment especially away from the rural areas, many registered nurses are called upon to assist patients outside of the hospital environment. This has created a huge sense of insecurity and concern regarding the possibility of unsafe practice, as they have not been trained for pre-hospital emergency care management. Many registered or certified

emergency nurses have successfully and by choice worked in the pre-hospital environment and would like to advance their careers in this field. This is an area that needs attention as nursing has traditionally been identified as a profession that is practiced within a hospital. The need within this country as well as that identified by many emergency nurses requires that the role of the emergency nurse be extended to the pre-hospital environment. Currently emergency nurses must be registered with the Health Professions Council of South Africa (HPCSA) after completing a Basic Ambulance Assistants (BAA) course or emergency medical technicians course (EMT) at the first level, to allow a highly qualified emergency nurse to work in the pre-hospital environment (discussion document of a group of concerned Emergency Nurses, n.d.:n.p). This creates enormous problems for the emergency nurse as the scope of practice of the registered nurse dictates that the minimum expectations and responsibilities are beyond that of a BAA, emergency medical technician –Basic (EMT-B) even an emergency medical technician – Intermediary (EMT-I). This also means that the emergency nurse needs a dual qualification with the South African Nursing Council (SANC) and HPCSA, which can create role ambivalence and confusion.

1.2.2 Legislation regarding education

Current educational legislation related to the South African Qualifications Authority (SAQA) Act 58 of 1995 has resulted in the development of unit standards for all specialist nursing courses that are registered with SAQA. The proposed unit standard compiled by the Nursing Standards Generating Body (SGB) for the Diploma in Emergency Nursing states that emergency nurses must be experts and intellectually and practically competent, to provide evidence-based emergency care in collaboration with other health care team members. The unit standards describe exit level outcomes, critical cross-field outcomes and the embedded knowledge that this emergency nurse must successfully complete to

enable intellectual and practical competence (Standards Generating Body:2003). These consist of broad statements that need to be analyzed and clarified for it to serve as guidelines for education and training of emergency nurses. Thus the need for the relevant stakeholders to be consulted more widely and together with expert emergency nurses they need to clarify what the roles of the emergency nurse is in reality. Role clarification of the emergency nurse will assist with the development of appropriate curricula and emergency nurses in training will therefore be appropriately educated and skilled. Guidelines can then be developed for appropriate assessment criteria for competency and a scope of practice that will enable safe practice with the necessary legislative support. This will also be in line with international trends where expert registered nurses within the specialty develop their own guidelines for education and a scope of practice (American ENA, 1999:1-9).

1.2.3 Need in the emergency room and pre-hospital environment

South Africa is a country, which delivers health care on a continuum from first to third world level, where most people only have access to primary health care. Health care services are a scarce resource with emergency rooms being overextended all of the time. In the Gauteng Province alone during the period 01 April 2001 to 31 March 2002, 964,286 casualties were treated in 28 hospitals, of which only three are academic hospitals (telephonic information from Mrs Wastie: Gauteng Department of Health). These statistics indicate the enormity of the problem considering that this province is relatively better equipped with regard to health care services as compared to the other provinces. The need for emergency health care is increasing due to geopolitical and economic factors. Together with the shrinking of all categories of health care workers, especially the shortage of physicians trained in emergency health care and paramedics, it has a major impact on the need for appropriately trained emergency nurses who understand and can cope with the

special demands and needs of the patient requiring emergency health care intervention, including their families and the community.

Registered nurses working in this environment are increasingly expected to fulfill roles normally done by other categories of health care personnel and for which they are not adequately trained. Coupled with this a lack of experienced or registered emergency nurses as role models has lead to an increasing demand for education and training to enable nurses working in this emergency environment to function effectively and safely in situations that require emergency health care intervention. Emergency health care management protocols based on best practice principles are used extensively in this milieu and need to be clarified so emergency nurses can identify their responsibilities with regard to its use. It also demands that current legislation be reassessed and developed to enable the emergency nurse to function within an appropriate legal and ethical framework.

The need for professional recognition and clarification of the emergency nurses' role by both nurses and other members of the emergency health care team is becoming more and more apparent. Managers within the various health care institutions do not know what this speciality prepares the nurse for. Some emergency nurses after completing their studies cannot implement what they have been trained for, as the management believes that it is beyond their scope of practice. Communication with the EMS to plan for pre-hospital clinical experience is problematic as the managers in that field also do not know what the role of the emergency nurse entails or will not accept their role. This situation could potentially exclude the emergency nurse from a vital part of training. It has become necessary that we clarify what the role of this nurse is so all stakeholders can be better informed and that appropriate legislative support can be motivated for. Role clarification

will improve the collaborative functioning of the multi-disciplinary health care team as the role players will have clarity and perhaps, more acceptance of what the emergency nurse should be doing. In turn, emergency nurses will become more confident and secure if they have appropriate guidance for safe nursing practice, which will boost their morale and this can have a positive effect on nursing practice and ultimately patient outcomes.

1.2.4 Responsibility as a specialist emergency nurse

The development of emergency nursing as an advanced nursing speciality advocates that the nurse will be able to function autonomously, with advanced intellectual and clinical competencies in any situation requiring emergency health care intervention throughout all the phases of health care, which includes both the pre-hospital environment and the emergency room. We therefore need to identify, clarify and validate the expected role of this specialist nurse, for acceptance of these expanded roles by this specialist nurse and with it the accompanying responsibility for what is known. This may prevent the role conflict and confusion currently experienced in the South African context and enhance the practice of the emergency nurse. It could encourage a more responsible attitude towards continuous professional development and competency.

1.3 Problem Statement

The rapidly increasing demand for emergency health care due to violence, accidents, other trauma as well as medical casualties combined with dwindling fiscal, personnel and physical resources has become a global phenomenon. In South Africa this phenomenon has made it essential to evaluate the emergency nurses role towards the contribution, improvement and development of good emergency health care practices, as well as to

ensure that the nurses accept their expanding role and responsibilities to enhance safe practice within the existing constraints.

Emergency nursing is part of a dynamic and cutting edge service involving professionals from other spheres of the health care profession aimed at providing the best care to emergency patients, their families and the community. The processes involved are evolutionary and undergoing continuous change/improvements due to the application of sophisticated technology, application of the results of scientific research and an increasing demand for service delivery. Unless emergency nurses actively influence the processes that determine their roles, other health care professionals will determine their future thus delimiting or creating unrealistic role expectations and decreasing the effectiveness of the emergency nurse in both the pre-hospital environment and emergency room. Therefore, as emergency nurses they will not be able to achieve their full potential nor contribute effectively to the provision of care within this dynamic emergency health care milieu.

Currently the role of the Emergency Nurse in South Africa is not clearly defined. The Scope of Practice (R2598 of 1984 as amended) is very general and was developed for all registered nurses. Specificity for the specialist emergency nurse is lacking especially with regard to the responsibilities within the pre-hospital environment, thereby creating role confusion and conflict. Current nursing legislation does not effectively guide these nurses to enable them to cope with the demands for emergency health care, nor does it provide adequate legislative protection. Emergency nurses work in the pre-hospital environment and together with the country's need, due to a lack of paramedics in the emergency medical services necessitates a possible expansion of their current role. However there is no legislative confirmation that this is acceptable or not, which allows other health care

professions to dictate where emergency nurses are allowed to practice or not to practice. These problems combined with new legislation such as the SAQA Act 58 of 1995, Higher Education Act 101 of 1997, African National Congress (ANC) National Health Care Plan of 1994 and the needs identified in this country have made it imperative and urgent for emergency nurses to clarify their roles.

1.4 Purpose of the Study

This study aimed to explore and describe the role of the South African emergency nurse in the pre-hospital environment and the emergency room in order to develop guidelines for education of this nurse and to influence the development of an appropriate Scope of Practice.

1.5 Objectives

In order to meet the purpose of the study the following objectives were developed:

- to explore and describe the role of the emergency nurse in the pre-hospital environment
- to explore and describe the role of the emergency nurse in the emergency room
- to formulate an instrument that can be used for policy formation, education, training and evaluation

1.6 Central Theoretical Statement

Clarification of the role of emergency nurses by emergency nurses themselves will provide the essential content and insight for the development of guidelines to enhance their education and practice. These guidelines can also be utilized to motivate for appropriate legislative changes governing where and how emergency nurses should practice. The

experiences of emergency nurses in practice are fundamental to the development of appropriate and realistic guidelines.

1.7 Researcher's Assumptions

1.7.1 Meta-theoretical assumptions

Meta-theoretical assumptions are derived from philosophical beliefs and understanding which influence the researcher's perceptions and resultantly serve as determinants for their research decisions. These are non-epistemic statements, though not meant to be tested nor declarative statements regarding the nature of knowledge and knowing, however they serve as a framework for theoretical statements (Botes, 1994:7). The researcher's meta-theoretical assumptions regarding person, emergency patient, health, environment and nursing are stated below.

1.7.1.1 Person

The person is viewed from a variety of perspectives and is inclusive of the nurse, patient, and family. The patient being the essential unit in the interrelationship. The person is a living unity, a whole who is more than the sum of the parts (Fitzpatrick & Whall, 1983:247), and in a co-existential relation with the universe. They are open systems that are continuously in communication with the environment with which they exchange energy and matter and moving towards greater complexity and diversity thus co-creating their world (Fitzpatrick & Whall, 1983:278). People are affected by and affect their environments.

They are living bio-psychosocial beings who are subject to internal and external stressors with the innate ability to adjust or adapt physiologically, psychologically, emotionally and

socio-economically to varying degrees. They are sometimes passive and dependent recipients, at other times participating with health care givers and at other times directors of own care (Burns & Grove 2001:63). When the patient is unable to cope with or adapt to the internal or external environmental stressors the nurse must apply the impetus to enhance the adaptive capabilities or provide the necessary support until independent functioning is restored. If this is not possible the nurse will assist through support and understanding, until the acceptance of limitations are achieved. The person is a human being who is rational, responsible and desires health and quality of life (Burns & Grove, 2001:14).

1.7.1.2 Emergency patient

The emergency patient is a person who has the same makeup and needs as discussed above and who is now placed in a position where they need emergency health care interventions to assist them to meet their health care needs. Due to an overwhelming illness or injury the ability of the person to adapt is negatively affected resulting in numerous changes to the person, family and/or community. These changes could be to the biophysical, psychological, socio-economic and/or spiritual being and impacts on their ability to adapt or institute self-care and decision-making.

Severe illness and/or injuries result in multi-system disruptions requiring rapid decision making and interventions by one who is knowledgeable about life- threatening emergencies and the management required in an environment that is unpredictable with time constraints. The emergency patient has additional demands as they need support of vital life functions as insults from injury, infections, foreign bodies etc. stimulates

responses of the body which can lead to death or severe disabilities if not adequately treated. Thus what happens to the patient in the acute phase can have devastating results.

The emergency patient can be an adult or child, male or female and each has their own special needs that have to be considered including the circumstances of the patient prior to the incident and the impact of the biomechanics on the person.

1.7.1.3 Health

Health and illness is the dynamic result of failure or success to adapt to external or internal stressors. It is a state of being that involves the capacity to live as a human being within one's bio-psycho-social environment which is influenced by individual and collective beliefs, values and culture. It is a societal priority that involves growth and development, which according to Imogene King is not always smooth and without conflict and implies continuous adjustment to stressors in the internal and external environment (Fitzpatrick & Whall, 1983:226). The basic right to high quality health care is one that is aspired to but often unrealistic as access to health resources are limited and unfairly distributed.

1.7.1.4 Environment

The environment is a dynamic open system that is continuously interacting with and exchanging energy with the person resulting in mutual change. The emergency health care environment is related to the cyclical events that occur throughout the various phases of emergency health care, from the time of incident, through resuscitation, critical, intermediate and rehabilitation phases of care to the return to the community. The persons, both patient with their significant others and nurse enter the emergency health care cycle from the community and re-enters it after rehabilitation or care giving. The interaction and

exchange of energy carries time and spatial influences from each phase of this cycle to the person, health and nursing.

1.7.1.5 Nursing

The aim of nursing is the facilitation of improved health and quality of life throughout all the phases of life and if this is not possible then the rendering of support of the person until death. It is a human developmental interaction between individuals that encompasses all realms of the human response to enable them to adapt and cope with their internal and external stressors, which is the essence of the science and art of nursing. Nursing involves the identification of all negative adaptive responses, behaviours and attitudes so as to guide the person's adaptation positively (Cardona et al,1994:12). The role of nursing depends on the need within that space and time and changes from supportive to directive according to the need. As a discipline it has its own dynamic blend of knowledge, skills and values to meet the changing demands for health care. However, it does not occur in isolation but includes the application of knowledge from other disciplines, both curative and caring, in conjunction with the nursing science and art. This ensures that patients are cared for as unique holistic beings who do not exist in isolation but as part of a family and community and who are influenced by environmental factors.

Emergency health care represents a complete cycle of phenomena that leads to a state of well-being, which is the goal of emergency nursing (Cardona et al, 1994:15). Emergency nursing is a speciality field within the larger health care system, which continues to develop to a higher level of organization with values unique to emergency nursing which reflects the society and their needs. It entails more than cognitive knowledge and professional skills of the speciality, but what this nurse becomes in the process of acquiring of the knowledge

and expertise throughout her professional life. It has a set of values specific to the speciality that influences the nurse-patient relationship and professional integrity.

1.7.2 Theoretical assumptions

These are epistemic statements that form the framework for the research domain. It is derived from existing theory of the discipline being researched (Botes, 1994:5). The assumptions form part of the theory of nursing but are more specific to the sub-speciality of emergency nursing.

1.7.2.1 Emergency health care

This involves the dynamic collaborative multidimensional health care that is rendered to the patient/patients requiring emergency health care interventions. Multidisciplinary collaborative co-operation is required as emergency health care is rendered in various environments throughout all the phases of health care need from the community or pre-hospital setting to the resuscitation and critical care needs in emergency rooms, operating theatres, critical care units; the intermediary care needs in wards and clinics; to rehabilitation care needs in rehabilitation centers and back into the community. Many variables impact on emergency health care, such as, the environments are unpredictable and unstable, varying numbers of patients, types of illness and/or injuries with different levels of acuity and lack of resources. This necessitates a team approach with emergency health caregivers who are adequately prepared to work in a volatile situation with time constraints. Emergency health care is a speciality that is rapidly expanding as societal changes and needs is growing. Technological advancements, expanding knowledge about disease processes, management alternatives, protocol development and evidence-based practice have made this a very challenging dynamic speciality and requires that the health

care providers are competent critical thinkers. The major role players are the paramedics, emergency nurses and medical doctors.

1.7.2.2 Emergency nurse

This is a registered professional nurse who has successfully completed a post-basic course whether on a certificate, diploma, degree, and/or masters level. These nurses have therefore undergone a level of education and training that should enable them to manage patients, their families and the community requiring emergency health care through all phases of acute need at a level above that expected of a basic registered nurse within both the pre-hospital and hospital milieu. The specific body of knowledge guides the thinking and behaviour of the professional, provides interpretation of science and theory for evidence-based practice and direction for further development necessary for the professional recognition by the society and other health care professionals (Burns & Grove, 2001:14).

This level of education and training creates the expectations by peers, the rest of the emergency health care team and others that this nurse will function as an emergency health care provider and have appropriately defined roles for practice to ensure that as specialists they function within a legal and ethical framework. They are key decision makers in selecting and deciding on priorities for health care and the appropriate health care to be rendered, including bringing the multidisciplinary team together through collaboration and co-ordination for holistic care.

1.7.2.3 Emergency nursing

Emergency nursing is a multidimensional, dynamic science and art, which is governed by a unique set of unwritten rules (Sheehy et al, 1998:3), that have come about due to environmental and societal/person changes and needs that demand urgent/immediate intervention. It commences within communities where the critical incident occurs (the pre-hospital environment), continues throughout the phases and ends back in the community where preventive care is rendered ensuring a holistic approach to nursing and health.

It involves the acceptance with/without prior warning, of any person of any age requiring emergency health care interventions. It demands emergency assessment, monitoring, planning, prescription, intervention, referral and evaluation, autonomous decision making with or on behalf of the patient and family and acting as an advocate to maximize health care and continuity of that care (Dolan & Holt, 2000:4). This requires a unique blend of knowledge and skills as interventions that are required may be minimal and can extend along a continuum from resuscitation to life support measures or allowing the dignity of death. All activities are initiated for the development of full human potential, dignity and well-being including the support of all significant others.

Various models of nursing have been utilized in emergency nursing but no single one has been utilized for this study. The medical model based on anatomical and physiological problems impact on emergency nursing as internal and external stressors have an impact on these. However nursing consists of much more as patients are more than bio-psycho-social-spiritual beings and thus have greater needs than those espoused to in the medical model. Thus the science and art of emergency nursing to denote the curative and caring

aspect involved. It requires the involvement of caregivers who can extend themselves beyond the professional knowledge and skills of the speciality.

Emergency health care is not rendered on a linear continuum rather in a cyclical fashion commencing in the community and ending in the community. The major emergency nursing practice settings according to Sheehy et al (1998:4) are:

- pre-hospital environment,
- hospital Emergency Rooms,
- air and ground transport units,
- military arena,
- health clinics,
- schools,
- occupational arena.

The emergency rooms could include the critical care units, as an extension of the emergency health care rendered in the trauma/medical/paediatric emergency rooms.

1.7.2.4 Definition of terms for the purpose of this research

Emergency nurse:

A professional registered nurse with advanced education and training, in the delivery of primary emergency health care, to adult and paediatric patients. This nurse specializes in emergency health care and has the responsibility and accountability for independent autonomous decision-making, collaboration and advocacy.

Pre-hospital environment:

This is the geographical area outside of a hospital/institution where a patient/s may require emergency health care assessment, management, referral and transportation to a clinic or hospital for definitive care.

Emergency Room:

A designated area inside of a hospital or clinic where primary emergency health care is rendered to patients with medical, surgical and/or traumatic emergencies which are life-threatening, where the first evaluation/assessment and management is instituted within the defined capabilities of that hospital or clinic.

Emergency rooms vary enormously in their capabilities and preparedness to deal with the different types of emergencies. Therefore for EMS planning a system was devised to categorize emergency rooms according to:

- The number of physicians and their availability
- Medical specialities of staff physicians
- The medical specialities of nurses
- Availability of life support equipment and supplies
- 24 hour physician coverage in the emergency room
- 24 hour availability of X Ray and laboratory services
- availability and adequacy of special care facilities

(Caroline, 1995:17)

Thus, the distinction between levels one to level four emergency rooms (trauma centers).

Level 1 trauma centers are regional resource centers that are tertiary care facilities central to the trauma care system.

Level 2 trauma centers are hospitals that provide initial definitive trauma care, regardless of the severity of injury. It may not be able to provide the same comprehensive care as the level I center.

Level 3 trauma centers serves communities that do not have immediate access to a level 1 or 2 institution. It can provide prompt assessment, resuscitation, emergency operations, stabilization and transfer to a level 1 or 2 centers for definitive care.

Level 4 trauma centers provide advanced trauma life support prior to patient transfer. May be a clinic and may/may not have a physician available.

Role of the emergency nurse:

The responsibilities and functions of the emergency nurse within the pre-hospital environment and the emergency room with regard to:

- The scientific nursing process
- Emergency preparedness
- Prioritization
- Resuscitation
- Stabilization
- Crisis intervention
- Provision of care in an uncontrolled environment

1.7.3 Methodological assumptions

These assumptions reflect the researchers views of the nature and structure of science in the research discipline in terms of the aim, methods and criteria for validity (Botes, 1994:5).

1.7.3.1 The scientific method

The changing situation inherent in all health care has lead to a need for scientific investigation for the generation of scientific knowledge. This involves assessment (data collection and recording), identification of needs, planning and recording, intervention and recording, evaluation and recording to meet legal, ethical, administrative, social and human requirements. It includes the ability to understand, observe, exercise judgement, conceptualize, diagnose, plan, implement and evaluate which is the process of the scientific method (Searle 1985:63). According to Burns & Grove (2001:26) various scientific methods can be incorporated to pursue knowledge, which includes both quantitative and qualitative methodologies. This is contrary to the pragmatist views that consider qualitative methodologies to be unscientific.

Action research differs from orthodox science as it is concerned with data encountered in the midst of perception and action that requires a high level of discipline and rigor (Denzin & Lincoln, 1994:331). This leads to collaborative enquiry and shared reflection by the researcher and practitioners. The research process presents an adequate scientific trail for replication and scientific scrutiny and evidence is given for judgments made. The whole process is approached with integrity and rigidity to provide valid, reliable and contextual data that can be used to bring about change in practice.

1.7.3.2 Evidence- based practice

This practice is based on the best available evidence of efficacy of interventions that comes from the need to provide a high quality and cost-effective health service (Hewitt-Taylor, 2004:45). Experts use their clinical and cognitive judgement together with research findings and patient experiences to gather evidence for evidence-based practice. This is

then utilized for the development of clinical care guidelines for implementation in the emergency care milieu. Clinical expertise and multidisciplinary collaboration is a fundamental requirement for current evidence–based practice. According to Prof van Niekerk a leader in nursing in South Africa, nursing as a science implies clinical practice based on a specific body of knowledge that is continuously expanding due to ongoing research (Young et al, 2003: 10).

Medical evidence is usually obtained through positivist research, which on it's own is not adequate for nursing as it lacks consideration of the person who is more than the sum of their parts. The multifaceted bio-psycho-social aspects of health and illness require the use of evidence obtained from qualitative research as well (Hewitt-Taylor, 2004:48). This was the motivation for the choice of methodology. Clinical expertise, cognitive expertise and quantitative and qualitative methodologies have been employed through action research to gather evidence for this study, to produce information that can be utilized in practice.

1.7.3.3 Theory of action science

Action science is a form of scientific enquiry, involving effective action that may contribute to transformation for greater effectiveness and justice (Denzin & Lincoln, 1994:330). It is concerned with the collection of data "in the midst of perception and action" and the development of awareness that perceptions are influence by assumptions that can be tested and transformed (Denzin & Lincoln, 1994:331). This can lead to empowerment and competence. Argyris developed two contrasting theories of action, one of which was utilized to guide the researcher's methodological assumptions (Denzin & Lincoln, 1994:331,332).

The governing variables of action science that comprise valid information, free informed choice and internal commitment, lead to **behavioural strategies for actively obtaining information and participation from others for greater effectiveness and transformation**. It focuses on the **implicit cognitive and verbal abilities of practitioners and outcomes that can be measured** empirically. For practice of action science valid knowledge of four "territories" are required. It includes knowledge of own purposes, cognitive knowledge of methodology, knowledge of behavioural choices and empirical knowledge of the consequences of behaviour. These create the link between the aim, methodology, operations and outcomes (Denzin & Lincoln, 1994:330), thus a scientific approach. For organizational action research collaborative, shared reflection about the aim, with systematic evaluation and feedback is essential.

The ontological perspective of action research is that the construction of reality occurs through reflective action to generate knowledge that is not only obtained from that action but to develop a science of action to bring about a change in the lived experiences of those involved (Denzin & Lincoln, 1994:333).

1.8 Methodology

The research methodology described includes the complete process of the study from identification of the problem to the presentation of the results. An overview of the research design and the research method is provided in Chapter 1 whilst a detailed description is provided in Chapter 3.

1.8.1 Introduction

Following a literature review an action research was embarked upon for the purpose of exploring and describing the role of the emergency nurse within the emergency room and the pre-hospital environment.

1.8.2 Overview of the Research Design and Research Method

The method chosen for this study was action research involving a quantitative and qualitative approach, which was exploratory, descriptive and contextual. This design was chosen as it aimed to solve a relevant problem within a given context through collaborative participation and democratic inquiry of the professional researcher and stakeholders and to seek for solutions and resultant self-determination (Denzin & Lincoln, 2000:96). It enables the investigation of a specific problem in practice. The researcher is actively involved with the people in the practice and together they formulate research procedures allowing the problem to be solved. The results are therefore immediately applicable for practice (Robert, 2005:2).

A combination of both a qualitative and quantitative approach was utilized to obtain a richer and more comprehensive picture of the problem being studied. A semi-structured workshop was held with a group of experts in the field of study to obtain consensus data on the expected roles of emergency nurses. This method was chosen as data collected in this way are enriched through group interaction and individual participation can be enhanced in a group setting (Morse, 1994:225) and is ideal for the exploration of health related issues. This behavioral strategy was used to actively obtain information and participation from significant persons for greater effectiveness and transformation. It involved qualitative research characteristics where discussion led to shared interpretation, discovery of

meaning, understanding and acceptance of the concepts. The data obtained from the expert focus group were utilized to develop an instrument to influence policy formation and for education, training and evaluation of the emergency nurse specialist.

An action research design was embarked upon to collect data in **four phases** after the problem was identified and a literature review was done. Action research involves bringing about change but this research has been delimited to the point where information is discovered which could be utilized and tested outside of this research in order to bring about change in both education and practice. This is presented as follows:

Phase One entailed an expert focus group interview that consisted of four steps. Step 1 was to establish whether the emergency nurse should work in the pre-hospital environment. Step 2 was to accept the concepts from the American ENA's Nursing Association's Scope of Practice as a starting point for role identification of the emergency nurse. Step 3 was the analysis, clarification and confirmation of the main items (roles). Step 4 was the identification and clarification of the sub-items (roles).

Phase two consisted of the focus group interview as a continuation of Phase One and consisted of two steps. Step 1 involved the subjective pair-wise weighting of all the main and sub-items (roles for the pre-hospital environment and the emergency room) identified and clarified during Phase One. This was done through the use of VASs'. Step 2 involved a competency rating through the use of a VAS. The intention was for each member of the focus group to do a four/five-point weighting that could lead to a Likert- Scale. However a three point Likert Scale was chosen.

Phase Three involved the development of a questionnaire that was sent to the rest of the population of emergency nurses to obtain information relevant to the data obtained in

Phase One and for validation and verification of the information developed by the expert focus group.

Phase Four. The roles identified and clarified by the focus group during Phase One was validated and verified during Phase Three. These roles were used to develop an instrument to be used for policy formation. Together with the results of the comparative weighting done of all the data in this document and the competency rating done during Phase Two, an instrument was developed for education, training and evaluation of the emergency nurse.

1.8.3 Validity and reliability

An overview of validity is provided. Refer to Chapter 3 for a more detailed description. Construct and content validity was obtained through a literature review regarding the constructs and phenomenon being studied. Contextual clarification, reflexive validity and practical relevance were achieved through the use of purposively selected experts, to increase the reliability and validity of the data identified. This was also achieved through the process of obtaining group consensus, which required critical, reflective, collaborative functioning. This was done to obtain valid, credible and reliable information.

Subjective judgments which appear to fit reality (Badger, 2000:204) were completed for practical relevance. This was necessary to obtain credible information for the contribution to the development and validation of the instrument. The focus group had a large collective knowledge and experiential base from which to make these judgements. Confirming data linked to reliability and validity was achieved through wide consultation and repetitive information obtained from multiple sources, which were achieved during Phase One and Three (Denzin & Lincoln, 1994:230).

An overview of the action research process is provided in Table 1.1 below:

Table 1.1: An Overview of the Action Research Process

Phase	*Objectives*	*Data Collection*	*Population and Sample*	*Data analysis*	*ReasoningStraegies*
	Identification of the problem	**Literature review Discussion with emergency nurses**	**Researcher and stakeholders**		**Collaborative, Cooperative, Reflective.**
	Development of conceptual and operational definitions	**Literature review**	**Researcher**		**Investigative Reflective, Developmental.**
One	**Step 1.To confirm whether emergency nurses should work in the pre-hospital environment** **Step 2.To accept the concepts taken from the American ENA's Scope of Practice as a starting point.** **Step 3. To identify and clarify the main items (roles) of the emergency nurse within the two environments** **Step 4. To identify and clarify the sub- items (roles) of the emergency nurse within the two environments**	**Focus group interview**	**Registered nurse experts in the field of emergency nursing and education (from Natal, Western, Cape and Gauteng Provinces)** **N = 9**	**Consensus**	**Collaborative, Cooperative, Reflective, Interpretive, Critical analysis, Investigative , Concept clarification.**

Two	**Step 1.To do a comparative weighting of the main and sub-items identified during Phase One** **Step 2. To do a competency rating**	**Focus group VAS for: comparative weighting of the main and sub-items** **Competency rating**	**Registered nurse experts in the field of emergency nursing and education (from Natal, Western, Cape and Gauteng Provinces)** **N = 8**	**Comparative weighting of the main and sub-items for Judgment Matrix Modeling** **Subjective judgment of competency: VAS** **Not competent = 0** **Highly competent = 1**	**Reflective, Interpretive, Critical analysis, Concept weighting.**
Three	**The development of a questionnaire, then validation and verification of the roles identified by the focus group.**	**Descriptive survey**	**Registered or certified emergency nurses in South Africa** **n = 416**	**Descriptive and inferential testing to evaluate the degree of agreement and disagreement**	**Reflective, Interpretive, Analytical.**
Four	**Instrument development and quantification of the instrument**	**Document 1 (results of Phase One validated during Phase Three)** **Comparative weighting (Phase Two)** **Competency rating (Phase Two)**	**Researcher**	**Judgement Matrix Modelling using a General Linear Model to develop a rating scale. These scaled weights were obtained for each main and sub-item within the pre-hospital environment and the emergency room.** **Competency rating**	**Reflective, Analytical, Interpretive, Developmental.**

1.8.4 Ethical Considerations

After undergoing peer review and presentation to the department of nursing education, permission to conduct the study was obtained from the following authorities:

- The Committee for Research on Human Subjects (Medical), University of the Witwatersrand
- The Postgraduate Committee, University of the Witwatersrand

Informed, written consent was obtained from participating registered/certified Trauma and Emergency trained nurses for both the focus group interview and the questionnaires. Permission from the SANC for access to the register was obtained for the names and addresses of the population for the study. Confidentiality, anonymity and autonomy of the participants were ensured. Code numbers were attached to all data obtained, consent forms were separated from the questionnaires and the data was stored in a secure place and will be destroyed on completion of the research. All information obtained will be used to advance scientific nursing knowledge and practice.

1.9 Pilot Study

A pilot study was commenced before the main expert focus group interview. It consisted of one expert emergency nurse with whom a semi-structured interview was held. The results found in the pilot study were not included in the results of the main study.

The pilot study tested the questions to be asked during the expert focus group interview. The responses obtained elicited discussion and helped to clarify the questions to be asked during the main study. These revisions were done, and it promoted the necessary

discussion during the expert focus group interview, so the phenomena being questioned could be clarified.

1.10 Plan of Research Action

The research dissertation is presented as follows:

Chapter 1: Overview of the study

Chapter 2: Literature Review

Chapter 3: Research Methodology

Chapter 4: Data Analysis and discussion

Chapter 5: Conclusions, Recommendations and Limitations

1.11 Summary

The increase in the per capita trauma and medical emergency rates precipitates an increase in demand for appropriate emergency services. Nursing services are the backbone of the health services in this country and we need to look at how we can develop nurses to fulfil their role within the emergency care environment to meet the increasing demand for appropriately trained nurses who will have the legislative support to perform as they should. This is what emergency trained nurses should be empowered to do.

The researcher has based this research on meta-theoretical assumptions about the person, emergency patient, health, environment and nursing. Theoretical assumptions about emergency care, emergency nurse specialist, emergency nursing and definitions are stated. Methodological assumptions about the scientific process, evidence-based practice and theory for action research are discussed.

An action research methodology was employed to explore and describe the role of the emergency nurse in two of the environments in which they would render emergency care. Data were gathered, analysed and synthesized in four phases. The information gathered was used to develop an instrument. This research was delimited to obtaining the required information that could be used afterwards to bring about change in both education and practice. Thus completing the requirements for action research. Validity, reliability and ethical considerations were addressed.

The following chapters will include a review of the literature, the methodology, data analysis, description and interpretation of research findings. Finally, the limitations of the study, summary of research findings, conclusions and recommendations for further research will be presented.