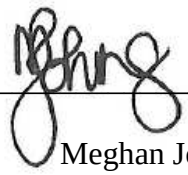
THE NEEDS OF FAMILY MEMBERS ACCOMPANYING PATIENTS INTO A TRAUMA CASUALTY

Meghan Johnson

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Science in Nursing

DECLARATION

I, Meghan Lavina Johnson, declare that this research report is my own work. It is being submitted for the partial requirements of the degree of Master of Science (Nursing) in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree in any other University.

Signature: 

Meghan Johnson

15 day of May 2014

Protocol Number : M130133

DEDICATION

Colossians 3:17

"And whatever you do in word or deed, *do* all in the name of the Lord Jesus, giving thanks to God the Father through Him"

I dedicate this work and all the work of my hands to my Lord and Saviour Jesus Christ.

ACKNOWLEDGEMENTS

I would like to acknowledge the following people who have supported and assisted me in completing this achievement:

Thank you to my supervisor Dr Gayle Langley for your support and guidance. Your input has been invaluable and is sincerely appreciated.

To my colleagues and mentors in the Department of Nursing Education, at the University of the Witwatersrand, thank you for your advice, direction, and support.

Kevin Botes, thank you for your love, time, support, patience and hands on assistance in compiling this report, I am grateful to live out my life work beside you.

To my parents and family, thank you for your support and encouragement, and for always believing in me to accomplish anything.

To Aunty Heather and Uncle Mark, thank you cheering me on from the first step until its completion, thank you for listening, and reading, and always having a genuine interest in my work.

To the staff of 163 and the trauma department, thank you for your assistance and support, I have found among you an anomaly to the norm of deteriorating care.

Thank you all for your prayers and encouragement.

ABSTRACT

Introduction and Background

Trauma Casualty is an environment of constant unpredictability which has an impact on the both the casualty staff, the patient and family. Family members are usually not prepared for the sudden crisis of having a loved one injured. The Trauma Nurse therefore, has a very important role with regards to meeting the needs of the family of patients brought into the unit. The needs of family members in the Intensive Care or Critical Care setting has been extensively researched using the critical care family needs inventory (CCFNI), however very little has been researched in the setting of a trauma or emergency setting. The needs of family members in the emergency setting has been researched in Australia, but no work has been done in South Africa. There is, therefore, a need for research in this area.

Purpose of the study

The aim of the study was to determine the needs of family members accompanying patients into trauma casualty, in order of importance as perceived by them, and to determine if these needs are being met. Identification of needs will inform the role of the nurse with regard to holistic nursing care including care of the family of the patient.

Research Method

The study made use of a quantitative descriptive exploratory design. The population (n=97) included family members of patients brought into casualty. The sample size was determined in consultation with a statistician from the Medical Research Council. The inclusion Criteria incorporated family members, over the age of 18, who were willing to complete a self administered questionnaire. Family members of patients who had died in the unit were excluded.

An Australian developed instrument, using a Likert Scale to categorise and quantify needs statements, was used. The tool was validated by review of a panel of experts and an inter rater agreement of 90% established. The tool was adapted for the South African context and validated on a subscale level using the Cronbach Alpha correlation test. Five major themes make up the critical care family needs inventory, these consist of “Meaning”, “Proximity”, “Communication”, “Comfort”, and “Support”. Two questionnaires were used, comprised of the same needs statements, however CCFNI-1 was used to determine the level of importance of needs statements, while CCFNI-2 sought to determine the level of satisfaction of needs met.

The study setting made use of a Level 1 Trauma Casualty in a Public Tertiary Academic Hospital, in which the pilot study was conducted before data collection in the same setting. The data analysis process made use of descriptive statistics. After cleaning and coding, the data were exported to STATA statistical software for values to be calculated and interpreted.

Data were analysed in three steps, namely analysis of demographic data, thematic organisation of analysed data and content analysis of open ended questions.

Main Findings

The main findings highlighted the importance of needs relating to the themes “Meaning” and “Communication”, while satisfaction was highest in the theme “Meaning”. A concerning finding was the low level of satisfaction with needs being met related to communication.

TABLE OF CONTENTS Page

LIST OF FIGURES

CHAPTER THREE

CHAPTER FOUR

CHAPTER FIVE

LIST OF TABLES

CHAPTER FOUR

CHAPTER FIVE

APPENDICES

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.0 Introduction

Chapter one serves as an overview of the study. The reader is introduced to the background of the study. The problem statement, objectives, research methodology and ethical considerations will be discussed.

1.1 Background to the study

Trauma is defined as "a harmful experience or situation that makes you feel upset or anxious" (Oxford Dictionary, 2005). Harmful experiences include traumatic injuries, such as assault, gun-shot wounds, stabbings, rape, burns, motor vehicle accidents, pedestrian vehicle accidents, motor cycle accidents, sporting accidents, accidental injuries, occupational injuries, and the like.

Traumatic experiences not only affect the injured person, but also their family or loved ones; who are often in shock from the sudden traumatic event. Research has shown that families experiencing the admission of a critically ill or injured patient can react with emotions such as shock, denial, anger, despair, guilt, and fear (Verhaeghe, Defloor, Van Zuuren, Duijnstee, & Grypdonck, 2005). The role of the nurse in this specialised unit is therefore complex in that it includes care for the distressed family.

Findings in South African literature have shown traumatic injuries to fall within the top ten leading causes of death nationwide (Norman, Bradshaw, Groenewald, Laubscher, Nannan, Nojilana, Pieterse, & Schneider, 2003). A study conducted in 2007 showed that nearly three quarters of the South African population had experienced a traumatic event while just under

half had experienced trauma to, or the unexpected death of, a loved one (Williams, Williams, Stein, Seedat, Jackson, & Moomal, 2007).

Families who are faced with the sudden tragedy of having a loved one seriously injured are dependent on the health professionals in trauma casualty not only to give acute care to their loved one but also to walk them through the process of dealing with the present crisis.

Researchers such as Verhaeghe, Defloor, Van Zuuren, Duijnstee & Grypdonck (2005) and many others have explored the needs of families within the ICU setting. The needs of families, identified by research have been grouped into 5 main categories namely: Proximity, Assurance, Information, Support, and Comfort (Carlson, 2009).

However, Emergency Department setting is fast paced and unpredictable in nature (Cardona, Hurn, Mason, Scanlon, & Veise-Berry, 1994).

The emergency nurse needs to have a unique ability to deal with a variety of stressors simultaneously while caring for the patient and the family. Emergency Nursing involves the management of diverse patients with undiagnosed, unpredictable conditions, therefore the emergency nurse must be capable of dealing with multiple stressors.
Stressors within the emergency unit include violence, heavy workload and poor mix of skill within the emergency care team , putting emergency nurses at risk for psychological distress and burn out as confirmed by two studies focusing on this area. (Ross-Adjie, Gillman, Leslie, 2007) (Healy, Tyrrell, 2011)

In South Africa, the challenges tend to be exacerbated by many factors. The emergency nurse is constantly dealing with the entry of new patients, while managing the existing pool of high acuity patients. This is often set in a backdrop of poor resources, few skilled nursing staff members and backlog of patient admissions. The Emergency nurse therefore needs to be able

to prioritise emergencies while simultaneously dealing with the anxieties and pressures of families and loved ones of injured patients brought into the unit. The care of the family of injured patients is therefore a challenge compounded by various other challenges. (Wentzel, Brysiewicz, 2014).

This is very different to that of the critical care setting and therefore it cannot be assumed that the needs of family members will remain the same in both environments (Redley & Beanland, 2004).

Having highlighted the differences between the Intensive Care setting and the Emergency Unit setting, it is also important to note that there are differences between the Emergency Unit, which provides acute care for traumatic injuries as well as medical emergencies and Trauma Casualty which specialises in providing acute care for patients with traumatic injuries. The nature of traumatic injuries is sudden and unexpected and therefore they are associated with high levels of anxiety for the patient and family of the injured patient.

Very little research has been done on the needs of families in this particular setting, and yet it is of vital importance to the role of the nurse in the emergency departments. Research has been conducted to review the Critical Care Family Needs Inventory and adapt and develop an instrument to assess the needs of family members accompanying patients into emergency departments. This instrument was developed and tested in a pilot study, in a metropolitan hospital in Melbourne, Australia (Redley, Le Vasseur, Peters, & Bethune, 2003).

The traumatic events which place families in crisis can lead to emotional and psychological distress. This can be lessened by the care proffered by the nurse at the very first contact with the Hospital, which is indeed trauma casualty. Holistic nursing practice must be informed by

research and therefore this study will seek to determine the needs of family members accompanying patients into trauma casualty and whether these needs are met.

1.2 Problem Statement

Trauma Casualty is an environment of constant unpredictability which adds to the stressors of acute emergency situations. These stressors have an impact on the both the casualty staff as well as the patient and his/her family. The emergency nurse, however, has a very important role with regards to the family of patients brought into the unit. This role can be difficult to navigate and fulfil in its entirety if the needs of the family members in this setting are not identified and understood.

The needs of family members in the Intensive Care or Critical Care setting have been researched using the Critical Care Family Needs Inventory (CCFNI), however, very little has been researched in the trauma and emergency setting (Linnarsson, Bubini, & Perseius, 2009).

The needs of family members in the emergency setting have been researched in Australia, (Redley, Le Vasseur, Peters, & Bethune, 2003) but little work has been done in South Africa, with specific regard to trauma care. South Africa experiences a phenomenally high prevalence of traumatic injuries, which has a profound effect on the families and significant others of these patients. There is therefore a dire need for research in this area, which this study will strive to meet.

1.3 Research Objectives

- To determine the needs of family members accompanying patients into trauma casualty in order of most important to least using the “Critical Care Family Needs Inventory Assessment Instrument Part One” (CCFNI-1).

- To administer a separate questionnaire (Critical Care Family Needs Inventory Assessment Instrument Part Two (CCFNI-2) to determine if the needs of family members who had accompanied a patient into the trauma unit / casualty area were, according to the family, met.

1.4 Research Questions

- What are the needs of family members accompanying patients into Trauma casualty, in order of importance, as perceived by them?
- According to the families accompanying patients into Trauma casualty, using a self administered questionnaire, are their needs being met?

1.5 Purpose of the Study

The purpose of this study was to determine the needs of family members accompanying patients into trauma casualty in order of importance as perceived by them, and to determine if these are being met. The identification of needs will attempt to inform the role of the nurse with regard to holistic nursing care which involves care of the family of the patient.

1.6 Operational Definitions

For the purpose of this study the following definitions were used:

- Family Member- A relative or person of significance of the patient (this includes partners, co-habitants, an accompanying colleague or friend)
- Trauma Casualty- A designated area inside of a hospital or clinic where primary emergency health care is rendered to patients with surgical and/or traumatic emergencies, where first evaluation/assessment and management is instituted within

the defined capabilities of that hospital or clinic. In this study the term trauma casualty will be used when referring to the study setting.

- Level 1 Trauma Centre- A regional resource centre that offers tertiary care facilities central to the trauma care system. This study will be set in a Quaternary Academic Hospital, within a Level 1 Trauma Facility.

- Professional Nurse- A nurse registered with the South African Nursing Council under regulation R2598

- Emergency Nurse- A professional registered nurse who has obtained a diploma or post graduate qualification specialising in Trauma and Emergency Nursing

1.7 Research Methodology

1.7.1 Research design

A quantitative, descriptive, contextual design was used. Quantitative research refers to the systematic collection of empirical data (Polit & Beck, 2004). Descriptive designs are used to elicit information about a particular topic or field of study as it naturally occurs. They can be used to identify problems or justify current practice (Burns & Grove, 2005). By using this design, the researcher was able to collect and analyse statistical data to determine the needs of family members of patients brought into trauma casualty.

1.7.2 Population

The population comprised of family members of patients brought into trauma casualty. From information gathered from the 2012 registries of the casualty department used in this setting, it was found that on average, 952 patients are seen per month.

1.7.3 Sample and sampling method

The target population consisted of family members of patients brought into trauma casualty who have met the inclusion criteria (N). Family members included significant others accompanying the patient into trauma casualty, where the patient or family was given the liberty to nominate a family member willing to participate in the study. The study included a family member from patients admitted to trauma casualty:

Family member inclusion criteria:

- The family member had to be over the age of 18 and able to give informed consent to participate in the study.
- The family member had to be literate in the English language in order to complete the self administered questionnaire.
- The family member had to be present in the hospital at the time of approach

Family members were excluded from the study for the following reasons:

- If a family member appeared overly distressed
- Family members who had been informed of the death of their relative

Statistical Considerations

In consultation with a statistician from the Medical Research Consortium the following method was used to determine the sample size. In this cross sectional study the sample size took into consideration the conservative scenario where for a given need the proportion is set at 0.5 (50%). A sample size of at least 97 (n=97) with a minimum of 80% (78) to ensure

validity, will estimate this proportion to an accuracy of within 0.1 (10%) with 95% confidence level.

The sample consisted of two groups, whereby a minimum of 50 family members were approached upon entering the trauma casualty department to complete the first questionnaire (CCFNI-1) regarding the importance of different needs. A second group of 50 were approached upon leaving the trauma casualty department to complete the second questionnaire (CCFNI- 2) regarding satisfaction of needs met while in the department. The total sample aimed for n=100, with two groups each n=50, allowing for refusals or non-complete questionnaires submitted. The two groups of family members completing the different parts of the questionnaire are not necessarily the same persons. The researcher spanned data collection days over alternate days and alternated between day and night shifts in order to glean a fair sample of patients coming in to trauma casualty.

1.7.4 Data collection

1.7.4.1 Procedure

Once permission was obtained from all ethical, academic, professional and organisational bodies data collection commenced.

A pilot study was conducted once permission was granted in order to ensure effectiveness and understanding of the instrument. The study and Pilot Study was conducted in a Public Level 1 Tertiary Academic Hospital in Johannesburg in the Trauma Casualty area.

Family members who met the inclusion criteria were introduced to the study by the researcher and permission requested, then the questionnaire left with family members to complete and return to a sealed box near the visitors' area ensuring confidentiality.

Two questionnaires were used. The first questionnaire regarding which needs are considered important to the family members of patients brought into trauma casualty were given to all family members waiting while a relative is being treated. The second questionnaire regarding the satisfaction of needs met were given to family members leaving the department after their relative had been admitted into trauma casualty. The two groups did not necessarily consist of the same family members.

1.7.4.2 Instrument

This study aimed to assess the needs of family members accompanying patients into trauma casualty. Needs are defined as present or absent using a self administered questionnaire. Redley, Le Vasseur, Peters and Bethune (2003) formulated an instrument to determine the needs of family members accompanying patients into the emergency department. By adapting the CCFNI for the emergency setting (as opposed to the Intensive Care Setting), an instrument consisting of needs statements rated according to importance as well as satisfaction; was compiled. The instrument makes use of the Likert scale format. The instrument addresses five principle needs.

1.7.4.3 Validity and reliability of instrument

The original instrument was tested in a pilot study in Melbourne Australia. An inter rater agreement level of 90% was determined to ensure relevance of the items (Redley, Le Vasseur, Peters & Bethune 2003)

For the purpose of this study the instrument was adapted for the South African context in terms of language and wording. The instrument was then re-evaluated after the pilot study was completed using the Cronbach Alpha validity test to ensure internal consistency at subscale level for items within each theme.

1.7.5 Data analysis

Descriptive Statistical Analysis was used to explore data collected. The Primary analysis required that the proportion of families expressing each need be determined in view of the confidence level of 95%. Data were captured on a Microsoft Excel Spread sheet and then cleaned and coded. The data were then imported to STATA statistical software for analysis.

The data were organised into the five major categories into which the instrument is divided. These categories are: Support, Comfort, Communication, Proximity and Meaning. Using the Likert scale, scores were allocated to the items within the categories to determine values. Content analysis was used for analysis of the open-ended questions

1.8 Pilot Study

A pilot study was conducted in the same setting as the full study in order to assess relevance and understanding of participants of the instrument.

1.9 Ethical Considerations

A proposal for the study was submitted to the Department of Nursing Education for peer review, and then to the University of Witwatersrand Postgraduate Committee for permission to conduct the study. Because research involved human participants, an application to the Human Research Ethics Committee (Medical) for research on human subjects was also submitted. Permission from the Gauteng Department of Health, the Chief Executive Officer of the Hospital as well as the unit manager of trauma casualty was requested. Permission from all mentioned authorities was granted.

The participants were given a letter of information and the posting of a completed questionnaire into a sealed box was taken to imply consent. No names or identifiable

information was used and the participants were assured that their participation is completely voluntary. An assurance of the option to withdraw from the study at any time with no consequences, and that their participation or withdrawal would not have any effect on the care of their loved one, was given. A sealed box was placed just outside the trauma casualty entrance for them to submit their questionnaires, which helped to ensure confidentiality of participants. If at any time the researcher encountered a family with signs of emotional distress, the family was given the option to be referred to an advanced psychiatric nurse (who had given her assent), for further counselling.

The study took into consideration the possibility that family members may be experiencing emotional distress at the time of approach and the researcher proceeded with caution after assessing anxiety levels. It was envisioned that not all family members would be emotionally fit to complete a follow up questionnaire and, therefore, the two questionnaires may not be given to the same sample set, allowing a family member to be released of obligation once one questionnaire was completed.

CHAPTER TWO

LITERATURE REVIEW

Chapter two of this research report will provide a review of the literature regarding the needs of family members accompanying patients into trauma casualty as well as comparative studies done in the ICU setting. An introduction to trauma in South Africa provides a brief opening, before discussing literature surrounding the effects of trauma on the family. Next, an introduction to trauma and emergency nursing is given, followed by lessons learned from critical care nursing, a sister specialty. These lessons are then reviewed for the emergency setting before an overview of the literature is presented.

2.0 Introduction

According to the South African Medical Research Council, in 2000 the second leading cause of death in males in South Africa was interpersonal violence, preceded only by HIV/AIDS related disease. It was shown that road traffic accidents fall within the top ten leading causes of death in South Africa (Norman, Bradshaw, Groenewald, Laubscher, Nannan, Nojilana, Pieterse, & Schneider, 2003).

The first line treatment for traumatic injuries begins in the Emergency Unit; also known as Trauma Casualty or Accident and Emergency Unit. These are specialised units that render acute care for injured patients. A Family member bringing a relative or loved one into the Emergency Unit is often acutely distressed by the sudden traumatic event. Research has shown that families experiencing the admission of a critically ill or injured patient can react with emotions such as shock, denial, anger, despair, guilt, and fear (Verhaeghe, Defloor, Van Zuuren, Duijnstee, & Grypdonck, 2005). The role of the emergency nurse in this specialised unit is therefore complex in that it includes care for the distressed family. This role, however;

cannot be clearly defined unless the needs of these families are explored. The needs of families in an ICU setting have been explored, however, the two settings are very different and therefore it cannot be assumed that the needs will remain the same. This indicates the need to explore the needs of families accompanying relatives or loved ones into trauma casualty. This will help define the role of the emergency nurse in casualty with regards to the care of family of patients admitted into the unit.

2.1 Traumatic Injuries in South Africa

Trauma is defined as "a harmful experience or situation that makes you feel upset or anxious" (Oxford Dictionary, 2005). Harmful experiences include traumatic injuries, such as assault, gun-shot wounds, stabbings, rape, burns, motor vehicle accidents, pedestrian vehicle accidents, motor cycle accidents, sporting accidents, accidental injuries, occupational injuries, and the like.

South Africa has trauma embedded in its social order (Williams, Williams, Stein, Seedat, Jackson, & Moomal, 2007). Statements describing South Africa as the "rape capital of the world" as well as statistics that charge the nation with having the highest rates of murder, assault and robbery support this description of South African society. Traumatic experiences are also caused by road traffic accidents and interpersonal trauma involving significant others or family members (Williams, Williams, Stein, Seedat, Jackson, & Moomal, 2007).

Statistics projected from the available epidemiological data have been used in numerous studies to highlight the burden of disease caused by traumatic injuries. The homicide rate places South Africa among the most violent countries in the world, next to Columbia (Norman, Matzopoulos, Groenwald & Bradshaw, 2007). The estimated annual trauma

caseload at secondary and tertiary level health facilities is approximately 1.5 million (40 per 1000 population). (Matzopoulos, Prinsloo, Bopape, Butchart, Litt &Lombard, 2006)

A study was done to explore the prevalence of individual traumatic events and multiple traumas, using a nationally representative sample of South Africans. The results showed that just under 75% of the sample had experienced some traumatic event during their lifetimes, and 43% reported having experienced trauma to a loved one or the unexpected death of loved ones (Williams, Williams, Stein, Seedat, Jackson, & Moomal, 2007).

The World Health Organisation (WHO) completed the first research study to explore the burden of high rates of traumatic injuries in South Africa. The study identified possible causes for or factors influencing the high rates of violence in South Africa as the history of violence in the apartheid era as well as income inequality and poverty, high unemployment, rapid social change, political corruption and poor rule of law, gender inequalities and family breakdown (Norman, Matzopoulos, Groenewald, & Bradshaw, 2007).

The results of the study showed that interpersonal violence caused around 1.0 million injuries per annum, followed by road traffic injuries, which were responsible for almost 0.5 million injuries. The homicide rate places South Africa among the most violent countries in the world. The high levels of gender-based and family violence are concerning (Norman, Matzopoulos, Groenewald, & Bradshaw, 2007).

Worldwide, road traffic injuries are responsible for the highest injury mortality. In South Africa, road traffic injuries ranked second to interpersonal violence and pedestrians are involved in more than half (52%) of road traffic fatalities (Norman, Matzopoulos, Groenewald, & Bradshaw, 2007).

A recent study conducted in Kwazulu Natal, South Africa which sought to determine the patterns of injury in road traffic accidents, found that on average 5 people were injured in a road traffic accident per day, with one fatality every alternate day. Increased time delays for the transfer of patients from the scene of the accident to appropriate hospital facilities were found to have an impact on the increase in mortality rates. (Parkinson, Kent, Aldous, Oosthuizen, Clarke, 2013)

WHO launched a road safety campaign in 2011 in order to address the growing burden of injuries and fatalities caused by road traffic injuries. The campaign also proposes a framework for developing and monitoring the road safety accomplishments of different countries. (WHO, 2012)

This included a profile developed by WHO on each country. The profile on South African Road Safety highlighted the decrease in mortality rates from 2006 to 2009, however the recorded fatality rate remained at a high of 13768 with 76% of the fatalities being male and 24% female. (WHO, 2013)

In a South African provincial study conducted in 2013, the pre-hospital burden of disease caused by Trauma in Kwazulu Natal was found to be of great significance. The results highlighted that 70% of prehospital emergency calls were trauma related, specifically due to interpersonal violence or road traffic accidents. Many severely injured patients are not able to access the prehospital care and transportation needed to ensure survival before reaching appropriate hospital care (Hardcastle, Finlayson, Heerden, Johnson, Samuels, Muckart, 2013).

A similar study looking at the in-hospital burden of disease caused by trauma in Kwazulu Natal, South Africa, obtained the trauma case loads from 36 of the 47 public hospitals

providing acute care for traumatic injuries. The annual trauma caseload in the province was predicted to range from 124,000 to 125,000 which may be translated into a national public hospital trauma incidence of approximately 750,000 cases per year (Hardcastle, Samuels, Muckart, 2013).

The burden of Trauma is therefore highlighted as a major comsumer of the country's vital resources in a complex trauma care system.

The South African Trauma system has been described as having complex variables such as social and economic disparities, complicated patient disease profiles with HIV as a compounding factor. Patients are often directly or indirectly affected by the levels of violence and substance abuse, especially in urbanised areas. Trauma care is affected by time and distance of transfers, which prevents access to basic trauma care with funding as a foundational issue. These complexities describe the challenges faced in Trauma Care in South Africa, however, the field of Trauma Care has been emerging and highlighted as a hub for research and further developments (Goosen, Bowley, Degiannis, Plani, 2003).

2.2 The effects of trauma on the family

Trauma is not only experienced by the injured person but by the family and significant others related to the injured person. The statistics (Norman, Matzopoulos, Groenewald, & Bradshaw, 2007) implicate South Africa as having trauma in its moral fibre, and therefore it can be said that South Africans live in a traumatic environment. A concern is then raised that our nation is at risk of chronic anxiety and the development of mental disorders caused by traumatic events. In 2007, a national study on psychological distress and multiple traumatic events was carried out. It was found that up to three quarters of the nations' population had experienced a traumatic event in their lifetime, with the most reported event being the

unexpected death of a loved one. The study highlighted the effect of traumatic events on the nation's risk for post traumatic stress disorder (Williams, Williams, Stein, Seedat, Jackson, & Moomal, 2007). A later study which sought to further analyse the South African Stress and Health Study, corroborated the finding (Atwoli, Stein, Williams, Mclaughlin, Petukhova, Kessler, Koenen, 2013).

Looking at the nation at large should leave Health Professionals with a great concern for the mental health of our country. However, the way to nurse a nation in crisis is to begin with the individual patient and the family unit affected.

Many families are faced with the sudden tragedy of having a loved one seriously injured by interpersonal violence, motor vehicle accidents or violent crimes. These families are dependant on the health professionals in trauma casualty not only to give acute care to their loved one but also to walk them through the process of dealing with the crisis they are facing. Registered Nurses in South Africa are legally and morally charged with the responsibility of caring for the family of patients through the facilitation of the attainment of optimum health for the individual, the family, groups and the community in the execution of the nursing regimen (South African Nursing Council, 2005:25). Trauma and Emergency nursing, however, being a specialised field, demands greater expectations of the emergency nurse.

2.3 Trauma and Emergency Nursing

Historically, the Trauma Casualty setting has its origin in military based care initiated in times of war (McQuillan, Makic & Whalen, 2009). Therefore, in its roots, trauma displays a nature of unpredictability, uncertainty, and the constant possibility of sudden crisis. This fast paced environment proves itself to be very different to that of the Critical Care setting.

Emergency Nursing involves the management of unstable, undiagnosed, patients in all age groups, from different settings and therefore emergency nurses need to have a unique ability to deal with a variety of stressors simultaneously Co-ordinating and providing acute care for injured patients, working with a multi-disciplinary team as well as dealing with the family of patients are but some of the responsibilities of the emergency nurse in a very unpredictable environment.

Emergency Nursing is a new and developing field in South Africa, with very few trained emergency nurses in the country. Training for this speciality is offered after the basic training programme for the Professional Nurse (Brysiewicz, Bruce, 2008). Although recognition for training is given by the South African Nursing Council, little guidance and no separate scope of practice leaves this speciality highly under-developed and the emergency nurse with many uncertainties (Gassiep, 2006).

The South African context provides many challenges for the emergency nurse, including high volumes of patients with high levels of intoxication and many being victims of interpersonal violence (Brysiewicz, Bruce, 2008). The disease profile of the patient is often complicated by co-morbidities such as HIV and Tuberculosis and not only poses difficulty for the care of patients but also puts the emergency nurse at risk (Brysiewicz, Bruce, 2008) (Brysiewicz, 2001). Therefore, although essential, emergency nursing care in South Africa is a challenging task (Brysiewicz, Bruce, 2008). This challenge is coupled with the challenge of dealing with the familes of injured patients.

The researcher has found this task to be challenging and, having witnessed many nurses unable to fulfil these roles, the care of the family has often been left to question.

The families of patients brought into the emergency department have found themselves in sudden uncertainty, and the environment often adds to their anxiety (McQuillan, Makic & Whalen, 2009).

The role of the emergency nurse is, therefore, to identify and meet the needs of the patient as well as the family. The needs of the families of patients brought into casualty cannot be assumed to be the same as those in a critical care setting (Redley & Beanland, 2004).

The American Association of Critical-Care Nurses (AACN) Synergy Model for Patient Care, developed by the AACN Certification Corporation in 1996, describes nursing practice that correlates the characteristics of the patient with the competencies of the nurse. Based on the characteristics of the patient and family, the nurse is able to determine the needs (Carlson, 2009). These competencies of the nurse include: clinical judgment, advocacy and moral agency, caring practices, collaboration, systems thinking, response to diversity, facilitation of learning, and clinical inquiry (Carlson, 2009).

The emphasis of the model is placed on the idea that the needs or characteristics of patients and families influence and drive the care offered by the nurses. Synergy results when the needs and characteristics of a patient, clinical unit or system are matched with a nurse's competencies. (Carlson, 2009)

2.4 Lessons from Intensive Care Nursing

This holistic care of patient and family has gained much attention in the Critical Care setting. The needs of families of patients in critical care or those receiving palliative care has been researched extensively. The Critical Care Family Needs Inventory (CCFNI), developed by Molter in 1979 and modified by Leske, has been used to evaluate and confirm the needs of family members whose loved ones are cared for in a critical care setting (Morton & Fontaine, 2009).

Qualitative (Verhaeghe, Defloor, Van Zuuren, Duijnstee, & Grypdonck, 2005) as well as quantitative research (Linnarsson, Bubini, & Perseius, 2009) has been undertaken to fully understand these needs in order to inform holistic care by nurses and physicians working in the intensive care/critical care units. The needs of families identified by research have been grouped into 5 main categories namely: Proximity, Assurance, Information, Support, and Comfort (Carlson, 2009).

A review of the literature conducted by Verhaeghe, Defloor, Van Zuuren, Duijnstee, & Grypdonck (2005), revealed that the need for information was often highlighted as one of the most important needs of the family. This is followed by the need for emotional support and assurance. Families indicated that they wish to receive accurate information; however, they still need to be assured of hope in the situation.

Another important need was that of proximity. The need to be able to see and be close to their loved one was noted as being a significant part of dealing with the crisis adequately (Verhaeghe, Defloor, Van Zuuren, Duijnstee, & Grypdonck, 2005).

Qualitative research on the topic told of the needs of families to build relationships with the caregivers of their loved ones along with similar needs as mentioned above (Linnarsson, Bubini, & Perseius, 2009).

South African research in the Critical Care setting has also revealed a move towards family centred care. Shaw, Davidson, Smilde, Sondoozi, Agan, (2014) emphasised the need for the multi-disciplinary team to be trained in the area of family communication and found that a simple training interventions enhanced family satisfaction with the care provided.

Research conducted in the paediatric intensive care setting in South Africa, has also highlighted the need for the for the competency levels of nurse practitioners to be improved in order for them to provide adequate emotional support for families. Family centred care in

the paediatric intensive care units has become a major philosophy of care with empowerment of the parents as the foundation of this philosophy (Roets, Rowe-Rowe, Nel, 2012)

Family Nursing has become a growing focus in holistic nursing practice. Swedish researchers have focused much of their work into developing this area of holistic care. Swedish researcher Saveman (2010) acknowledges the need for improvement in this area and highlights challenges that may hinder its growth. These included nurses own beliefs about the contribution families are able to give to the healthcare of the patient, and other factors such as the lack of time and sufficient education and training (Saveman, 2010). Nurses' attitudes about families' importance in nursing care have been shown by the literature to be restraining. The importance of families are acknowledged by the nurses, however nurses encouraging participation of families in the care and decision making for their loved one is scarcely found (Benzein, Johansson, Årestedt, Berg, Saveman, 2008)

Furthermore the need for counselling of patients and families in the emergency department is suggested to encourage family participation (Paavilainen, Salminen-Tuomaala, Kurikka, Paussu, 2009).

In order to ensure holistic nursing practice, these needs of the family must be taken into consideration. Critical care nursing, being a specialised field, has advanced because of its evidenced-based holistic practice. Trauma and Emergency nursing has a need for improvement in this area too.

2.5 The Emergency Setting

Very little research has been done on the needs of families particularly in this setting, and yet it is of vital import in informing the role of the nurse in casualty and the well being of a family thrown into crisis by sudden injury of a loved one. Researchers Redley et al. (2003)

conducted a concept analysis of the five major themes emerging in the critical care family needs inventory. The findings were as follows:

Proximity

Proximity, being the ability to see or spend time with the ill person was found to have great importance especially in the initial phases of admission and treatment (Redley, Beanland & Botti, 2003). Providing the opportunity for significant others to see or be present with the patient has been repeatedly suggested by the literature as an important need, despite the evidence suggesting the staff's negligence of this need, with a tendency to remove family members from the presence of the patient (Redley, Beanland & Botti, 2003).

Communication

Literature consistently found that the need for information and communication with casualty staff is an important need of significant others of critically ill patients. The information regarded as important included facts about treatment, progress of the patient's condition, what to expect and what is expected from the family. Another important aspect of the information provided was that it be regular and updated. (Redley, Beanland & Botti, 2003)

It is also important to note that the provision of information does not necessarily mean that effective communication has taken place. Communication must be effective and family members expressed their need to receive truthful information balanced with hope for their loved one (Linnarsson, Bubini & Perseius, 2009).

Meaning

Assurance and meaning has been described as the need to establish individual meaning from the experience, particularly during the early stages of a patient's illness. Family members include knowing what to expect, having hope for their loved one's survival, balanced with truthful information, as well as assurance that the best care is being given and the dignity of their loved one is protected as vital to the establishment of meaning in the situation (Redley, Beanland & Botti, 2003). Interventions used to provide meaning are not always clear, however it is the mark of an advanced practitioner to understand the needs of the families of patients and foster environments that will offer meaningful experiences in the hospital setting that will assist the family in coping with the crisis at hand and deal with the stress of having an injured loved one.

There are numerous factors that contribute to the establishment of meaning including the cultural, spiritual, emotional and social ideals that belong to each family and these must be considered at all times (Redley, Beanland & Botti, 2003).

Support

Support was not identified as a major need for family members in comparison to the need for proximity, communication and meaning. (Redley, Beanland & Botti, 2003) Support is defined by family members as having staff members encourage their expression of emotion, the giving of direction and explanations about the environment when at the patients' bedside, and having a quiet place to wait and be alone (Redley, Beanland & Botti, 2003). More often, support was sought from their own support structures made up of friends, family etc., however, effective communication and having a designated staff member to care for their loved one is also considered supportive (Redley, Beanland & Botti, 2003).

Comfort

Comfort is a combination of providing for the physical and emotional needs of the family. This includes emotional support as well as providing for their physical needs such as bathroom facilities, fluid access to food and privacy. Family members ranked comfort as low in importance in comparison with the other needs.

Upon the findings of the review, researchers Redley, Le Vasseur and Bethune (2003) developed and pilot tested an instrument for assessing the needs of family members accompanying patients into the Emergency Department and whether or not these needs were met. The research conducted to review the Critical Care Family Needs Inventory was used to adapt and develop an instrument to assess the needs of family members accompanying patients into emergency departments. The instrument was developed and tested in a pilot study, in a metropolitan hospital in Melbourne, Australia.

The findings of the study indicated that the needs for meaningful information followed by proximity and communication were the most important. However these needs were not always met (Redley, Le Vasseur, Peters, & Bethune, 2003).

2.6 Summary

The question posed is: What are the needs of family members accompanying patients into trauma casualty and are they being met?

Having felt the burden of trauma in the country and seen the devastating effects on families of patients brought into trauma casualty, the researcher concurrs with the literature which highlights the effects of trauma on families. The traumatic events which place families in crisis can lead to emotional and psychological distress. This can be lessened or contained by

the care of the Emergency nurse from the very first contact with the Hospital's Trauma Casualty. The families needs are of equal import to those of the injured person. The lack of research in this area leaves a gap in the specialised field of trauma and emergency nursing. Holistic nursing practice must be informed by research and therefore this study will seek to determine the needs of family members accompanying patients into trauma casualty, and whether these needs are met.

CHAPTER THREE

RESEARCH METHODOLOGY AND METHOD

3.0 Introduction

The research design is the plan by which the researcher will reach the objectives and purpose of the study.

A description of the research design includes the research setting, population, sample methods, and approach to data collection and data analysis.

This chapter will explore the detailed plan used to conduct this study. It will include the process of validation of the instrument used for data collection.

3.1 Research Methodology

A quantitative, descriptive, contextual design was used for the purpose of this study. The process was completed in 4 stages. The first stage involved the process of reviewing the instrument and modifying the language for contextual purposes.

A pilot study was conducted as the second stage in the research process. The purpose of the pilot study was to assess the clarity of the instrument, time taken to complete the questionnaire, and to allow for participants to raise any issues regarding the instrument.

Stage three was the data collection process, which involved engagement with the participants and handing out of the self administered questionnaires.

Data analysis is the fourth stage and this was divided into 3 steps:

1. Analysis of Demographic Information

2. Thematic organisation of analysed data

3. Content analysis of open ended questions

3.2 Research Design

A quantitative, descriptive, contextual design will be used. Quantitative research refers to the systematic collection of empirical data (Polit & Beck, 2004). Descriptive designs are used to elicit information about a particular topic or field of study as it naturally occurs. They can be used to identify problems or justify current practice (Burns & Grove, 2005). By using this design, the researcher is able to collect and analyse statistical data to determine the needs of family members of patients brought into trauma casualty as well as to determine if family members felt that these needs were met.

3.2.1 Quantitative Design:

A quantitative design was used to determine the needs of family members accompanying patients into trauma casualty as well as to determine how well their needs were met.

Quantitative research refers to the systematic collection of empirical data. It includes experiments, surveys and content analysis (Burns & Grove, 2005).

This study makes use of a quantitative instrument as well as content analysis of open ended questions.

3.2.2 Descriptive Design:

Descriptive Designs are used to elicit information about a particular topic or field of study as it naturally occurs. They can be used to identify problems or justify current practice (Burns & Grove, 2005).

They allow the researcher to describe and observe behavior or beliefs without influencing it. (Strydom, Fouche & Delport, 2005) By using a descriptive design, the data collected can be used to determine the needs of family members accompanying patients into trauma casualty and how well their needs are met.

Family members were able to express their opinions about which needs they deemed important. Family members also had the opportunity to voice their level of satisfaction with needs met while in trauma casualty.

3.2.3 Contextual Design

Trauma Casualty is a specific setting. Developed in the context of military influence, the trauma and emergency system has been developed to cater for the nature of trauma (McQuillan, Makic & Whalen, 2009). The word trauma is often associated with terms such as shock, injury, accidental injury, fatality, and calamity. These terms paint a picture of an environment that is unpredictable, fast moving and stressful (McQuillan, Makic & Whalen, 2009). In a South African context this includes injuries caused by interpersonal violence and crime.

Trauma Casualty provides the first line of treatment in the hospital setting for traumatic injuries. Triage, assessment and acute care and immediate life saving interventions form the basis of emergency trauma management, these include:

- Support of vital life functions
- Support of physiologic adaptation
- Promotion of safety and security
- Support for psychological and social adaptation

- Support of Spirituality

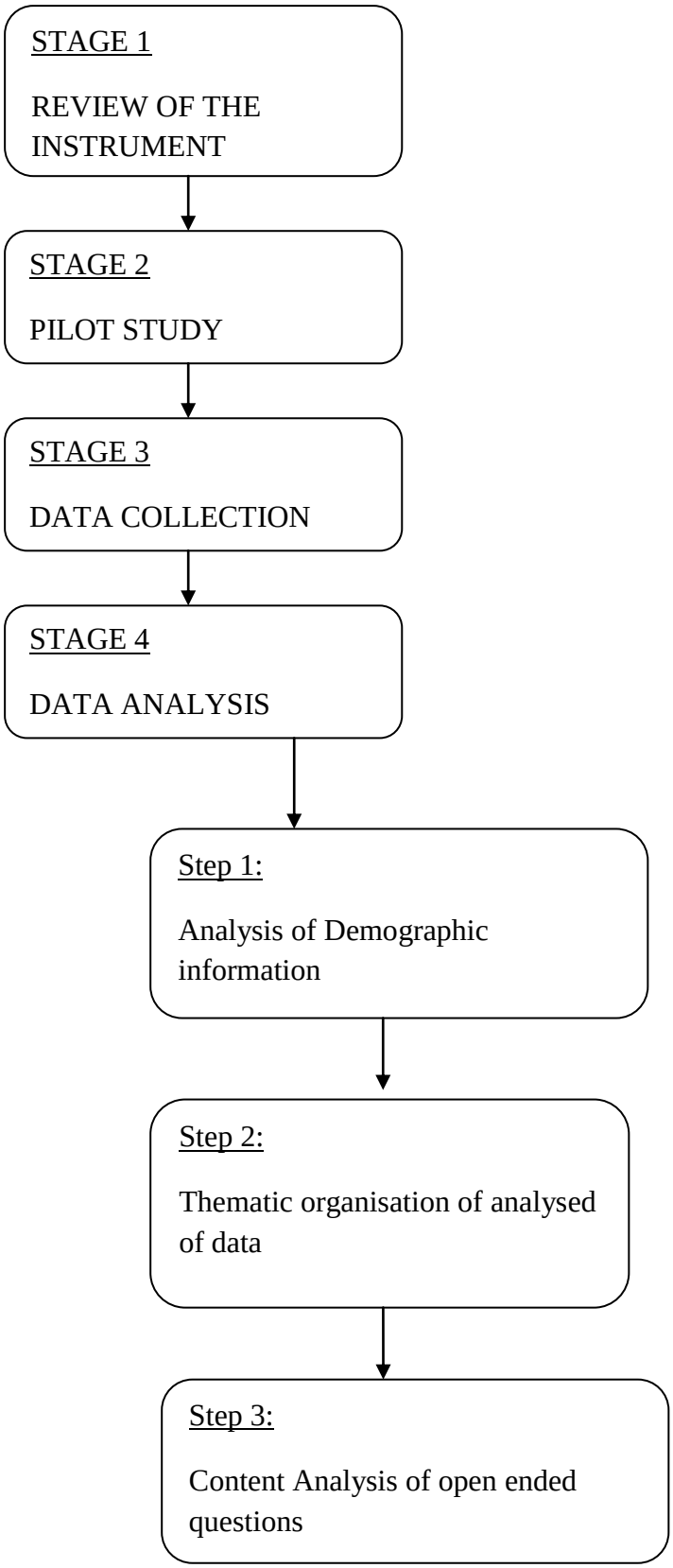
(McQuillan, Makic & Whalen, 2009).

There are differences between the Emergency Unit, which provides acute care for traumatic injuries as well as medical emergencies and Trauma Casualty which specialises in providing acute care for patients with traumatic injuries. The nature of traumatic injuries is sudden and unexpected and therefore these injuries are associated with high levels of anxiety for the patient and family of the injured patient.

Health Care Professionals working in the Trauma Casualty have to be equipped and prepared to work in these unpredictable, stressful situations. Trauma and Emergency Nursing has developed as a specialty area requiring specialist training for the Nurse to be able to care for the acute needs of the injured patient as well as the family (McQuillan, Makic & Whalen, 2009).

The setting used for the purpose of this study embodies the context described above. A Level 1 Trauma Care Facility was used, which can be defined as a Trauma facility within a tertiary teaching hospital that takes a lead role in education, research and system planning in a regional trauma care system.

Figure 3.1 Overview of Research Plan



3.4 Research Method

3.4.1 Stage 1- Modification of the instrument

In stage one the instrument was reviewed and after permission sought from and granted by the original author, the following changes were made:

Additions to the questionnaire are highlighted, while deletions are crossed out

*PART A

This section asks about your time in the (trauma casualty) ~~emergency~~ department. Please either write a response or tick the appropriate box.

*4.What is your relationship to the ill/ injured person? (Please tick box)

- ❑ 1. HUSBAND OR WIFE
- ❑ 2. ~~DEFACTO OR~~ PARTNER
- ❑ 3. ARE YOU A PARENT (MOTHER OR FATHER)
- ❑ 4. BROTHER OR SISTER
- ❑ 5. ARE YOU A CHILD (SON OR DAUGHTER)
- ❑ 6. OTHER (PLEASE SPECIFY)

_____

*PART B

This section asks about your needs while you ~~accompany~~ (are with) your relative in the ~~emergency~~ (trauma casualty) department. Please rate each of the following statements by marking the appropriate box. The person who was ill or injured is referred to as "your relative".

*	HOW IMPORTANT IS ~~EACH NEED TO YOU WHILE IN THE ED?~~ (IT FOR YOU…)

*7. To have a person to care for the family (while they wait)

*9. To have friends and relatives with you while in the ~~emergency~~(trauma casualty) department

*15. To ~~be spared~~ (not be told about) distressing details about your relative's illness or injury

*18. To know about the (level of) expertise of staff caring for your relative

*19. To know about the expected outcome (of your relative)

*20. To have questions (about your relative) answered honestly

*25. To have explanations about the ~~treatment area~~ (trauma casualty environment) before going in to see your relative for the first time

*30. To feel (that you can help with) ~~helpful to~~ your relative's care

*38. To be reassured (about) ~~what~~ normal emotional responses ~~are~~

*39. To (express emotions and concerns) ~~share emotions~~ with staff

*40. To feel (like) there is hope

*41. To be told about religious (/spiritual help available) ~~services~~

* 46. What were the most helpful behaviours of the ~~ED~~(trauma casualty) staff?

*47. **What were the most unhelpful behaviours of the ~~ED~~ (trauma casualty) staff?**

~~50. What is your country of origin? (Please write)~~

~~51.What is your postcode? (Please write)~~

* Thank you for your valuable contribution to this study.

If you wish to be informed of the study findings please write your name and address on the cover of this questionnaire, then detach the cover page and (place in the sealed box in the reception area) ~~return it to me in the emergency department you attended~~. I will (gladly) send you results on completion of this study.

Changes made were grammatical and made to ensure clarity within the context of the research setting; however an effort was made to keep the essence and aim of the statements the same.

The numbering of the items was kept in order so as not to confuse participants, however during data analysis, the numbering was changed in order for items to correlate with the themes to which they belonged.

3.4.1.1 Instrument

This study sets out to assess the needs of family members accompanying patients into Trauma Casualty. Needs are defined as present or absent using a self administered questionnaire. Redley, Le Vasseur, Peters and Bethune (2003) formulated an instrument to determine the needs of family members accompanying patients into the emergency department. By adapting the CCFNI for the emergency setting (as opposed to the Intensive Care Setting), an instrument consisting of needs statements rated according to importance as well as satisfaction; was compiled. The instrument makes use of the Likert scale format. The instrument addresses five principle needs. Items within the instrument are in random order; however each item belongs to one of the Principle needs/themes. CCFNI is the first questionnaire, administered to family members upon entry into trauma casualty. This questionnaire consists of needs statements which were ranked by the participant on a scale ranging from not important to very important. The second questionnaire (CCFNII) uses the same needs statements, however it is administered to family members who are leaving or have spent some time in trauma casualty. Participants were asked to rank how well these needs were met by the staff in trauma casualty.

3.4.1.2 Validity and Reliability of Instrument

The original instrument was tested in a pilot study in Melbourne Australia. An inter rater agreement level of 90% was determined to ensure relevance of the items. (Redley, Le Vasseur, Peters & Bethune 2003)

For the purpose of this study the instrument was adapted for the South African context in terms of language and wording. The instrument was then re-evaluated after the pilot study had been completed using the Cronbach Alpha validity test to ensure internal consistency at subscale level. Acceptable values for the Cronbach Alpha range from 0.70-0.95, where lower values indicate either a low number of questions or low correlation between the items (Tavakol & Dennick, 2011). If an item is found to have a low value, the proposed method suggested by Tavakol & Dennick (2011) is to discard the item and recalculate the score in order to determine if a stronger score is generated. If a noteworthy difference is made, the item will be discarded before data analysis. Items which generate a high alpha value may indicate redundancy of the items within the theme or that the test is too long (Tavakol & Dennick, 2011). Therefore items with higher alpha values be revised, and items within the theme checked for redundancy. Items which tend to ask the same thing will be removed and the score recalculated to determine if the correlation value is strengthened by removal of this item. If discarding of items does not make a substantial difference to the strength of the alpha value, the items will be re-inserted and used for data analysis.

3.4.2 Stage 2- Pilot Study

A pilot study was conducted to ensure clarity of the questionnaire and to assess the time taken to complete a questionnaire. The Pilot study also assessed whether items in the instrument were omitted and gave the participants an opportunity to raise any concerns about the instrument.

The study and Pilot Study was conducted in a Public Level 1 Tertiary Academic Hospital in the Johannesburg in the Trauma Casualty area.

No issues were raised. The modified language in the questionnaire appeared to be understood and questions were answered in full. The time taken for a participant to complete a questionnaire never exceeded 15 minutes. Data collected in the pilot study were analysed and included in the results.

These positive observations were noted and data collection commenced as step 3.

3.4.3 Stage 3- Data Collection

3.4.3.1 Population

The population is the total number of individuals possessing the inclusion criteria for the study to be conducted (Burns & Grove, 2005).

The population comprised of family members of patients brought into trauma casualty. Family members include significant others accompanying the patient into trauma casualty. A significant other can be defined as "a person, parent or peer who has great influence on one's behaviour and self-esteem or a spouse or cohabiting lover" (Collins English Dictionary).

From information gathered from the 2012 registries of the trauma casualty used in this setting, it was found that on average, 952 patients are seen per month

3.4.3.2 Sample and Sampling Method

Sampling involves the process of selection of the proportion of the population to be used in the study (Burns & Grove, 2005).

The target population consisted of all family members of patients brought into trauma casualty who met the inclusion criteria (N). The study included a family member from patients admitted to trauma casualty (n=97):

Family member inclusion criteria:

- The family member had to be over the age of 18 and able to give informed consent to participate in the study.
- The family member had to be literate in the English language in order to complete the self administered questionnaire.
- The family member had to be present in the hospital at the time of approach.

The study excluded family members of patients who were being resuscitated at the time of approach, and family members were only approached once the patient had been stabilised and the family was aware of the patient's condition.

3.4.3.3 Statistical Considerations

In consultation with a statistician from the Health Research Consortium the following method was used to determine the sample size. In this cross sectional study the sample size took into consideration the conservative scenario where for a given need the proportion is set at 0.5 (50%). A sample size of at least 97 (n=97) with a minimum of 80% (78) to ensure validity, will estimate this proportion to an accuracy of within 0.1 (10%) with 95% confidence level.

$$\text{Sample Size} = \frac{Z^2 \times P \times (1-P)}{C^2}$$

$$\text{Therefore: Sample Size} = \frac{1.96^2 \times 50/100 \times (1-50/100)}{0.1^2} = 97$$

Z=Confidence Interval of 95%= 1.96
P=Prevalence (statistically assumed at 50%)
C=Significance level/ P value of 10%=0.1

The sample consisted of two groups, whereby 50 family members were approached upon entering the trauma casualty department to complete the first questionnaire (CCFNI- 1) regarding the importance of different needs. A second group of 52 were approached upon leaving the trauma casualty department to complete the second questionnaire (CCFNI- 2) regarding satisfaction of needs met while in the department. The total sample was 97 which allowed for 5 refusals or non-complete questionnaires submitted. The two groups of family members completing the different parts of the questionnaire were not necessarily comprised of the same persons.

3.4.3.4 Procedure

Permission was obtained from all ethical, academic, professional and organisational bodies including the management of the Hospital used and the management of the Trauma Department of the hospital.

Family members who met the inclusion criteria were introduced to the study by the researcher, given an information sheet, an invitation to participate tendered and consent to participate requested, then the questionnaire was left with family members to complete and return to a sealed box near the visitor's area ensuring anonymity. Family members were approached while waiting in the waiting area after they had seen their family member, and their family member was admitted to the unit and being treated by the multidisciplinary team. The researcher liaised with the sister in charge of the unit to obtain permission to approach and assess the anxiety levels of the family member and only proceeded if the family member appeared calm, and had been informed of the patient's condition. If family members appeared to be too distressed or anxious, the researcher did not proceed with data collection. Two self administered questionnaires were used. The first questionnaire regarding which needs are considered important to the family members of patients brought into trauma casualty were

given to all family members waiting while a relative is being treated. The second questionnaire regarding the satisfaction of needs met will be given to all family members who met the criteria for inclusion, who were leaving the department after their relative had been admitted into trauma casualty. The two groups did not necessarily (but may have) consisted of the same family members.

3.5 Stage 4- Data Analysis

Descriptive Statistical Analysis was used to explore data collected. The Primary analysis required that the proportion of families expressing each need be determined in view of the confidence level of 95%. Data was captured on a Microsoft Excel Spread sheet and then cleaned and coded. The data was then imported to STATA statistical software for analysis.

Data analysis was divided into 3 steps:

1. **Analysis of Demographic Information**

The demographics of the population were analysed and described using statistical analysis.

2. **Thematic organisation of analysed data**

The data were organised into the five major categories into which the instrument is divided. These categories are: Support, Comfort, Communication, Proximity and Meaning. The needs were ranked according to importance as well as satisfaction as to whether the need was met or not. Using the Likert scale, scores were allocated to the items within the categories to determine values.

Needs statements were renumbered from numbers 1 to 40, and assigned to themes as follows:

Need statements assigned to the theme ‘meaning’

8. To know all the specific facts concerning your relative’s progress

9. To know why things were done for your relative

14. To know about the expected outcome of your relative

15. To have questions about the condition of your relative answered honestly

17. To be assured that the best care possible has been given to your relative

29. To be treated as an individual

30. To feel hospital staff care about your relative

35. To feel like there is hope

36. To be told about religious/spiritual help available

Need statements assigned to the theme ‘proximity’

16. To be told about transfer plans while they are made

18. To stay out of the way during your relative's care

19. To see your relative as soon as possible

22. To see what was happening to your relative

23. To be with your relative at any time

27. To have time alone with your relative

Need statements assigned to the theme ‘communication’

3. To find out about the condition of your injured relative before being asked to sign papers

6. To have explanations given in understandable terms

7. To be kept updated frequently

10. To be protected from sights or sounds that may be distressing

11. To talk to a doctor

12. To talk to a nurse

13. To know about the level of expertise of staff caring for your relative

25. To feel that you can help with your relative's care

26. To be included when decisions are made

40. To be able to contact staff at a later date to ask questions

Need statements assigned to the theme ‘comfort’

5. To have a private place to wait

28. To feel accepted by hospital staff

31. To be assured of the comfort of your relative

37. To have food and refreshments nearby

38. To have a telephone in or near the waiting room

39. To have toilet facilities nearby

Need statements assigned to the theme ‘support’

1. Have a doctor or nurse meet you on arrival at the hospital

2. To have one person to care for the family

4. To have friends and relatives with you in the trauma casualty department

20. To have explanations about the casualty environment before going in to see your relative for the first time

21. To have a staff member with you while visiting your relative

24. To be given directions regarding what to do at the bedside

32. To be encouraged to express emotions

33. To be reassured about normal emotional responses

34. To share emotions with staff

Scoring of the instrument was as follows:

CCFNI

HOW IMPORTANT IS IT FOR YOU…			
1.	2.	3.	4.
NOT AT ALL	NOT VERY	SLIGHTLY	VERY

CCFNII

HOW WELL WAS EACH NEED MET BY CASUALTY STAFF?			
1.	2.	3.	4.
NOT MET	NOT VERY WELL	WELL	VERY WELL

3. Content analysis of open ended questions

Three open ended questions were included in the instrument to allow participants to add reflective comments or address needs that were not mentioned in the needs statements included in the instrument. This allows for a broader understanding of the data collected and would assist in corroborating the findings of statistical data. The three open-ended questions were grouped into categories using content analysis.

The three steps were applied to both CCFNI- 1 and CCFNI- 2 and therefore the layout of the results followed the above format.

3.6 Ethical Considerations

A proposal for the study was submitted to the Department of Nursing Education for peer review, and then to the University of Witwatersrand Postgraduate Committee for permission to conduct the study. Because the research aimed to involve human participants, an application to the Ethics Committee for research on human subjects was also submitted. Permission from the Gauteng Department of Health, the Chief Executive Officer of the Hospital as well as the unit manager of trauma casualty was requested. Permission from all mentioned authorities was granted.

The prospective participants were given a letter of information, and a completed questionnaire indicated implied consent. No names or identifiable information were used and they were assured that their participation would be completely voluntary, that they were able to withdraw from the study at any time with no consequences, and that participation or withdrawal would not have any effect on the care of their loved one. A sealed box was placed just outside the trauma casualty entrance for them to submit their questionnaires, which ensured confidentiality of participants. If at any time the researcher encountered a family with signs of emotional distress, the family was given the option of referral to an advanced psychiatric nurse- (who had given her assent), for further counselling.

The study took into consideration the possibility that family members may have been experiencing emotional distress at the time of approach and the researcher ensured to proceed with caution after assessing anxiety levels. It also took into consideration that not all family members may be emotionally fit to complete a follow up questionnaire and therefore the two questionnaires might not be given to the same sample set, allowing a family member to be released of obligation once one questionnaire was completed.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS CCFNI-1

4.0 Introduction

This chapter will expound on the results of questionnaire CCFN-1 which sought to determine which needs were considered important by family members accompanying patients into trauma casualty. Descriptive statistics were used to describe the findings of the questionnaire.

Data will be presented in three steps:

Step 1:

Analysis of Demographic Data

Demographic data and other information were used to describe the sample population and the factors surrounding the admission of the patient and the experience of the family member.

Step 2:

Thematic Organisation of Analysed Data

The Cronbach Alpha item correlation test was performed to determine item correlation within each of the 5 themes. The Item Correlation Test results will be analysed for each theme, before analysis of the questionnaire. For this study an alpha ranging between 0.70- 0.95 was considered acceptable, if alpha values for a theme are below or above this range, justification for use of the data will be made. Low alpha values may be attributed to a low number of questions or low interrelatedness of the items within the theme. In order to determine the best correlation value, items that generate a low alpha values are deleted and then the score is recalculated. If a noteworthy difference is made from deleting the item, the item will be

discarded before analysis of data, however if the difference in the score is minimal, the item will be re-inserted for data analysis. If the alpha value is above 0.95 the researcher will revise the items for repetition, and redundant items removed.

The items in the questionnaire were grouped into the five major themes and analysed according to the mean scores for each item and then the overarching theme, as well as the frequencies and percentages for each of the five themes. The five themes which are presented are Meaning, Communication, Proximity, Support and Comfort.

Step 3:

Content analysis of open ended questions

Responses to the open ended questions were recorded and analysed. Analysis of responses included identifying existing and recurring concepts and grouping these concepts into categories. Eight categories were used: Communication, Proximity, Time taken to be attended to, Friendliness or caring gestures, Professionalism, Treatment of the patient, Equality and Physical Needs of family members.

An overview and discussion of the results will then be presented in relation to the objectives of the study

4.1. Step 1- Demographic Data

Participants (n=52) completed a CCFNI- 1 questionnaire, however not all questionnaires were fully completed. The following data sets seek to explore the demographics of the participants as well as the factors around the admission of their relative into the trauma casualty.

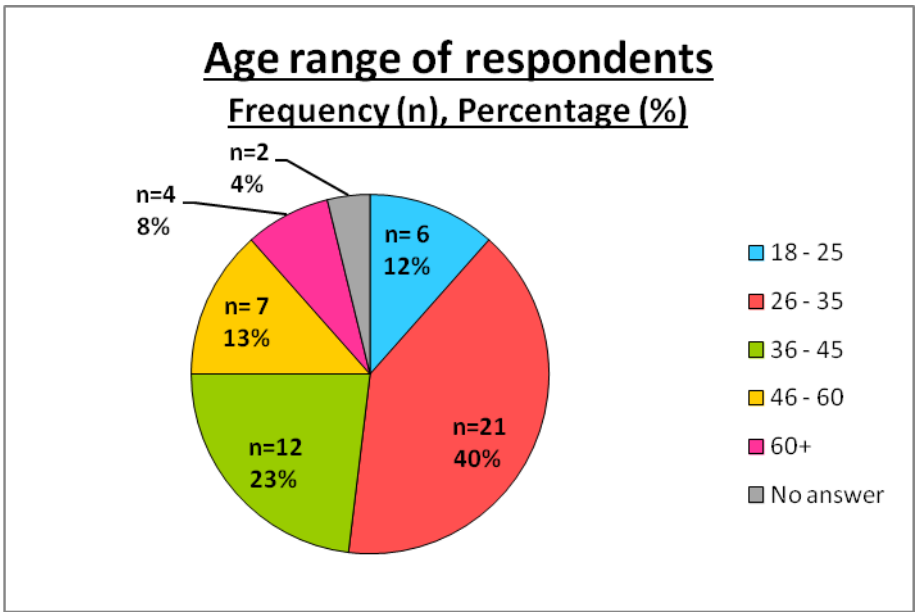


Figure 4.1 Age range of respondents (Frequency and Percentage)

Of the 52 participants, 2 participants did not disclose their age while the majority fell within the range of 26-35 years old. Forty percent (n=21) of participants fell within this range while 23% (n=12) of participants were between the ages of 36-45 years, 13% (n=7) fell within the range of 46-60 years, 12% (n=6) of participants were between ages 18-25 years and 8% (n=4) of participants were 60 years and older. The mean age was 38.2.

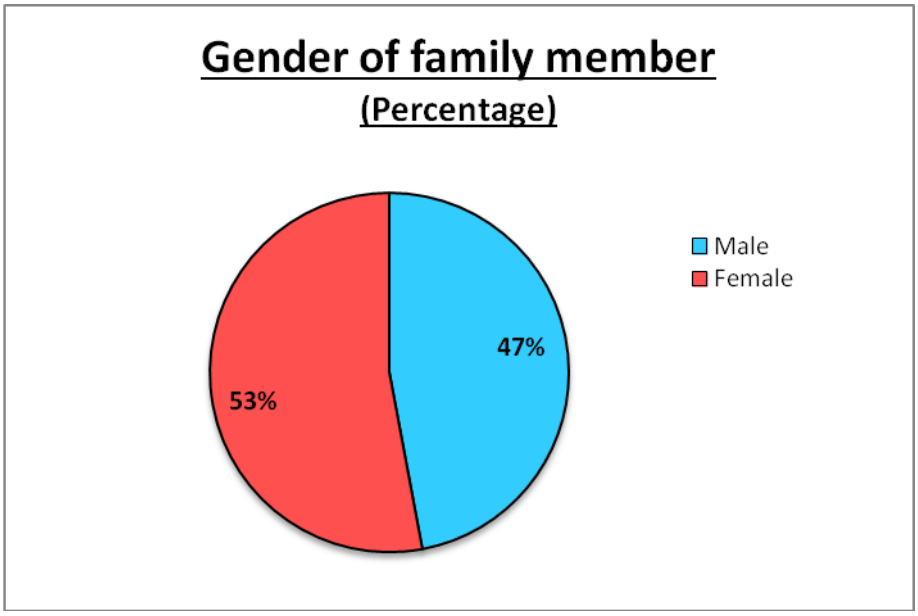


Figure 4.2 Gender of Family members (Frequency and Percentage)

Of the 51 participants who responded to this question, 47% (n=24) were male and 53% female (n=27).

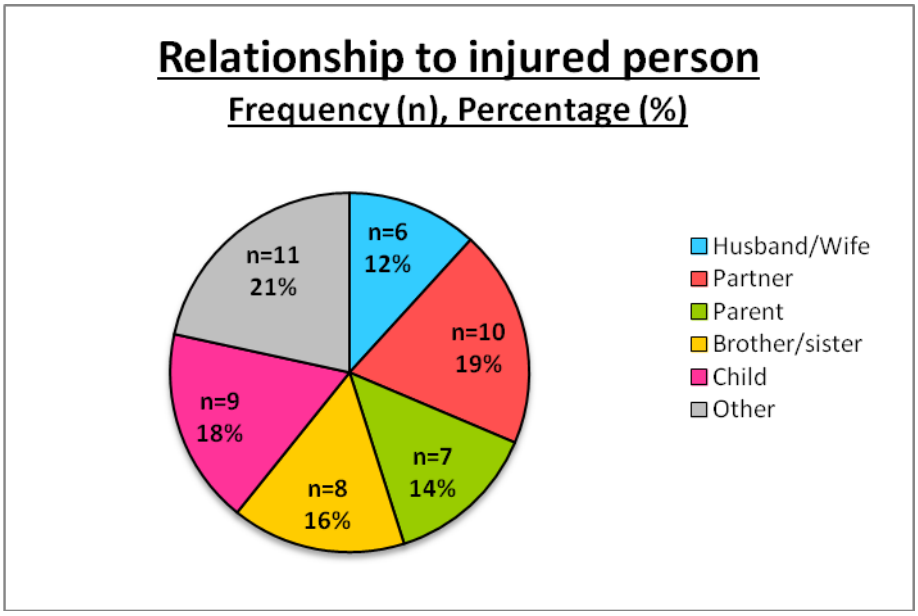


Figure 4.3 Relationship to Injured Person (Frequency and Percentage)

The relationship of the participants to the patients varied in that 12% (n=6) were marriage spouses of the patient, 19% (n= 10) were unmarried partners, 14% (n=7) were parents of the

patients, 16% (n=8) were siblings to the patients, 18% (n=9) were children of the patients and 21% (n=11) other, this included friends, neighbours, colleagues etc. One participant did not respond to this question.

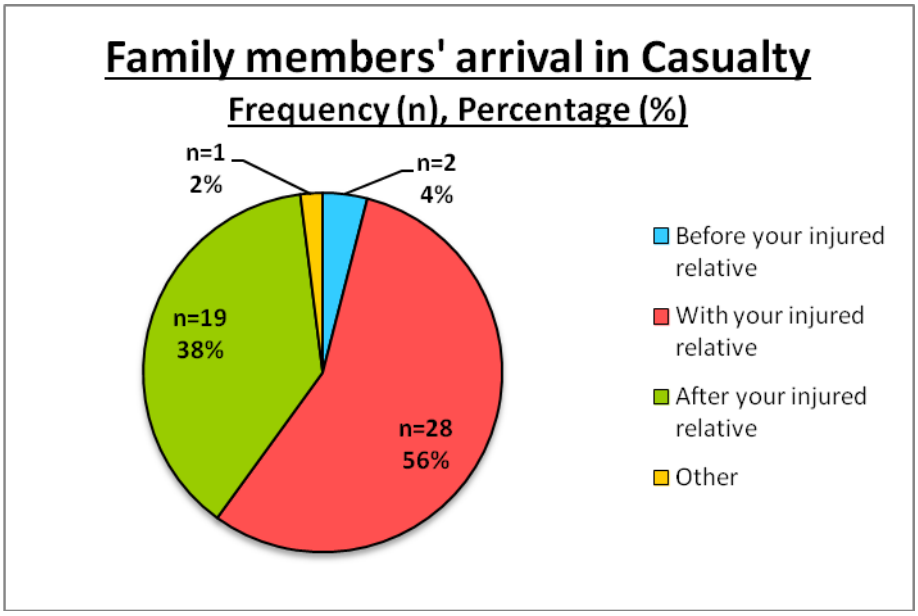


Figure 4.4 Family members arrival in trauma casualty (Frequency and Percentage)

Of the 50 participants who responded to this question, 56% (n=28) arrived with their injured relative, often as the one bringing them into trauma casualty. Thirty-eight percent (n=19) of the participants arrived after their injured relative, 4% (n=2) arrived before their injured relative and 2% (n=1) stated as other.

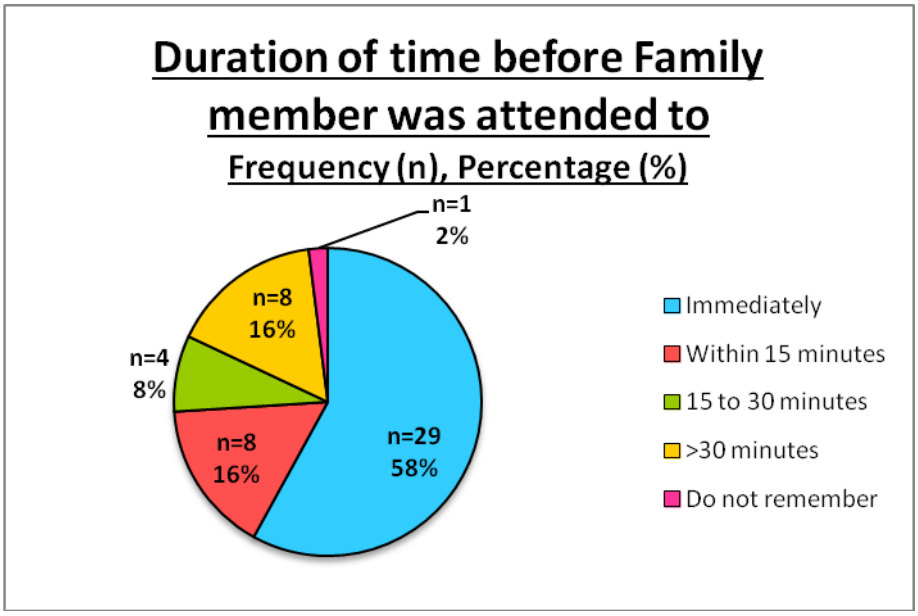


Figure 4.5 Duration of time before Family member was attended to (Frequency and Percentage)

Fifty-eight percent (n=29) of participants were responded to immediately by trauma casualty staff, while 16% (n=8) were attended to within 15 minutes. Eight percent (n=4) of participants waited for between 15 to 30 minutes and 16% (n=8) waited longer than 30 minutes; 2% (n=1) of participants could not remember the time taken before they were attended to. Fifty participants responded to this question.

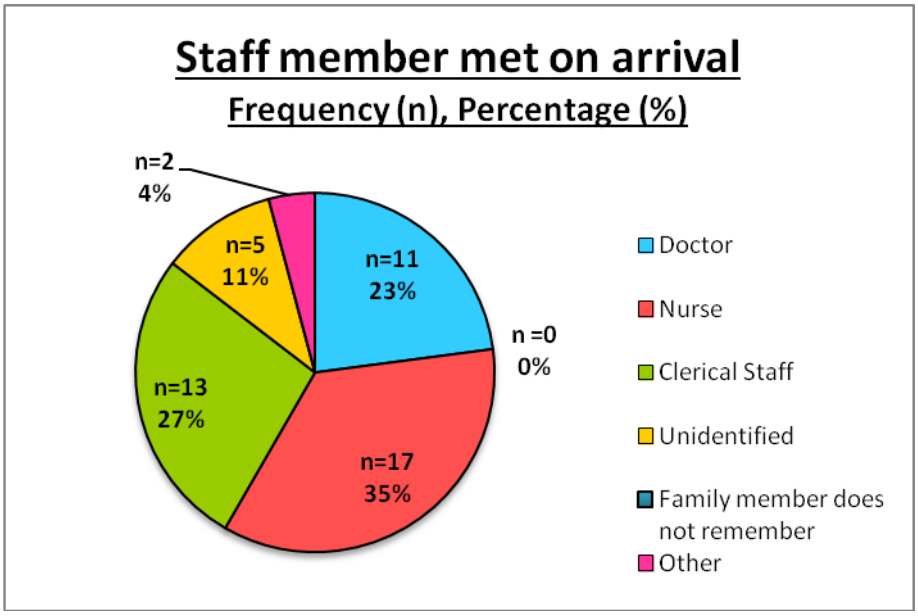


Figure 4.6 Staff member met on arrival (Frequency and percentage)

Thirty-five percent (n=17) of participants were met on arrival by a nurse, 27% (n=13) were met by clerical staff, 23% (n=11) of participants were met by a doctor, 11% (n=5) were met by unidentified members of staff, 4% (n=2) classified the person they met on arrival as other (this included porters). Forty eight participants responded to this question.

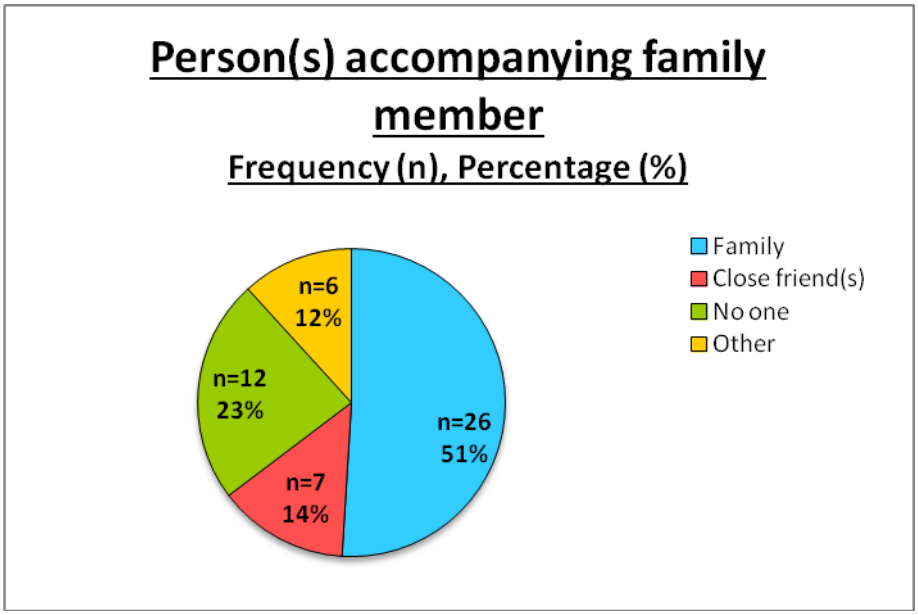


Figure 4.7 Person(s) accompanying Family member (Frequency and Percentage)

Of the 51 participants responding to this question, 51% (n=26) were accompanied by another family member, 23% (n=12) were not accompanied by anyone, 14% (n=7) were accompanied by a close friend/s and 12% (n=6) were accompanied by other unspecified persons.

4.2 Step 2- Thematic Organisation of Analysed Data

4.2.1 Meaning

The following Items were assigned to the theme Meaning:

Table 4.1 Needs statements assigned to the theme "Meaning"

8. To know all the specific facts concerning your relative's progress
9. To know why things were done for your relative
14. To know about the expected outcome of your relative
15. To have questions about the condition of your relative answered honestly
17. To be assured that the best care possible has been given to your relative
29. To be treated as an individual
30. To feel hospital staff care about your relative
35. To feel like there is hope
36. To be told about religious/spiritual help available

Table 4.2 Cronbach Alpha Item Correlation Test Results for the theme "Meaning"

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	Alpha
qu8	48	+	0.5179	0.3353	0.2577	0.7352
qu9	47	+	0.4748	0.2904	0.2673	0.7448
qu14	50	+	0.7844	0.6786	0.2113	0.6819
qu15	51	+	0.6558	0.512	0.2388	0.715
qu17	51	+	0.6131	0.4639	0.229	0.7038
qu29	51	+	0.5442	0.3614	0.2566	0.7341
qu30	49	+	0.5969	0.4233	0.2611	0.7387
qu35	51	+	0.6117	0.4611	0.2287	0.7035
qu36	50	+	0.4497	0.2693	0.2606	0.7382
Test scale					0.2457	0.7457

The Item correlation test for the theme showed consistency between items within the category. A strong Alpha value of 0.7457 was generated and no items needed to be removed.

Table 4.3 Analysis of Need Statements within the theme "Meaning"

Ranking	Question	Statement	Total score	Mean score	Mode
1	17	To be assured that the best care possible has been given to your relative	197	3.86	4
2	30	To feel hospital staff care about your relative	188	3.84	4
3	15	To have questions about the condition of your relative answered honestly	195	3.82	4
4	14	To know about the expected outcome of your relative	188	3.76	4
5	35	To feel like there is hope	192	3.76	4
6	8	To know all the specific facts concerning your relative's progress	180	3.75	4
7	9	To know why things were done for your relative	171	3.64	4
8	29	To be treated as an individual	185	3.63	4
9	36	To be told about religious/spiritual help available	153	3.06	4

Within the Likert scale, a ranking of 4 represents a statement considered to be "very important". Al l statements within the theme yielded a mode of 4. The needs statement with the highest mean score was Item 17"To be assured that the best care possible has been given to your relative". The lowest scoring needs statement was Item 9"To know why things were done for your relative". The total score for the theme was 1649, with a mean score of 3.68

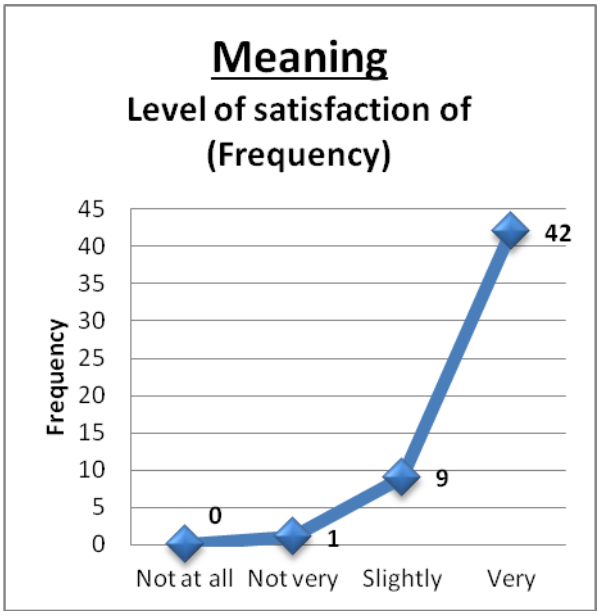


Figure 4.8 Level of satisfaction of needs met (Frequency)

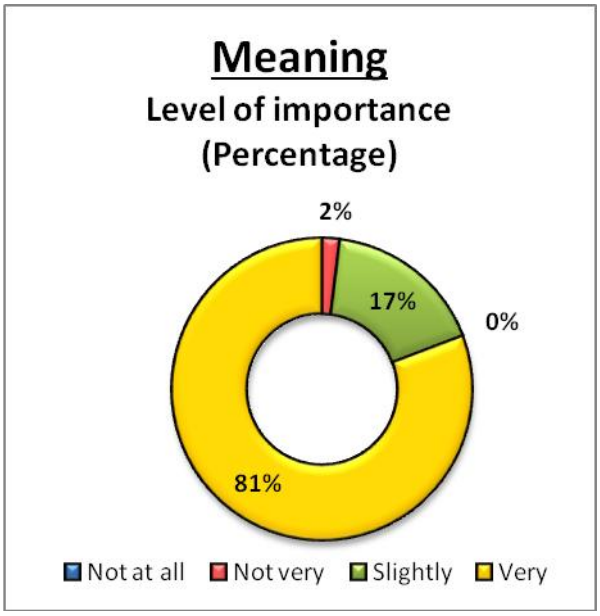


Figure 4.9 Level of satisfaction of needs met (percentage)

Of the total sample, 81% (42 participants) ranked the statements belonging to the theme "Meaning" as very important. Seventeen percent (n=9) of the participants ranked the need statements relating to Meaning as slightly important and 2% (n=1) responded by ranking these statements as not very important. No participants ranked the needs statements belonging to this theme as not important at all.

4.2.2 Proximity

The following Items were assigned to the theme "Proximity":

Table 4.4 Needs statements assigned to the theme "Proximity"

16. To be told about transfer plans while they are made
18. To stay out of the way during your relative's care
19. To see your relative as soon as possible
22. To see what was happening to your relative
23. To be with your relative at any time
27. To have time alone with your relative

Table 4.5 Cronbach Alpha Item Correlation Test Results for the theme "Proximity"

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	alpha
qu16	48	+	0.6847	0.3466	0.415	0.7801
qu18	49	+	0.6556	0.476	0.3697	0.7458
qu19	48	+	0.8398	0.7232	0.3092	0.6912
qu22	48	+	0.751	0.6068	0.328	0.7094
qu23	50	+	0.7557	0.6074	0.3289	0.7102
qu27	49	+	0.6003	0.3982	0.3867	0.7592
Test scale					0.3563	0.7686

The Cronbach Alpha item correlation test showed a strong correlation for all items except for Item 16. To be told about transfer plans while they are made, which was then removed and the correlation re-calculated as follows:

Table 4.6 Cronbach Alpha Item Correlation Test Results for the theme "Proximity"

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	alpha
qu18	49	+	0.6539	0.4495	0.4659	0.7772
qu19	48	+	0.8435	0.7211	0.3517	0.6845
qu22	48	+	0.7336	0.5594	0.4152	0.7396
qu23	50	+	0.7812	0.6248	0.3866	0.716
qu27	49	+	0.6507	0.4383	0.4561	0.7704
Test scale					0.415	0.7801

The final alpha value did not yield significant change, and the initial score for the theme was calculated at an acceptable score of 0.7686. The needs statement 16"To be told about transfer plans while they are made" was found to be relevant to the context of the study and the Trauma Casualty Environment. The item was therefore kept for further analysis of the theme "proximity".

Table 4.7 Analysis of Need Statements within the theme "Proximity"

Ranking	Question	Statement	Total score	Mean score	Mode
1	16	To be told about transfer plans while they are made	179	3.73	4
2	19	To see your relative as soon as possible	177	3.69	4
3	27	To have time alone with your relative	175	3.57	4
4	22	To see what was happening to your relative	164	3.42	4
5	23	To be with your relative at any time	168	3.36	4
6	18	To stay out of the way during your relative's care	154	3.14	4

A mode of 4 ranging across all statements belonging to the theme Proximity indicates that participants ranked these needs are very important. The needs statement with the highest mean score was Item 16 "To be told about transfer plans while they are made". The lowest mean score belonged to Item 18 "To stay out of the way during your relative's care". The total score for the theme Proximity was 1017 and the mean for all statements belonging to this theme was 3.49.

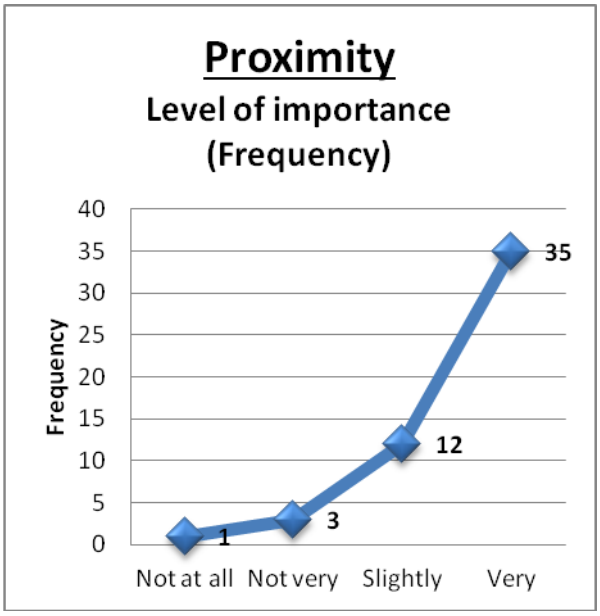


Figure 4.10 Level of satisfaction of met needs met (Frequency)

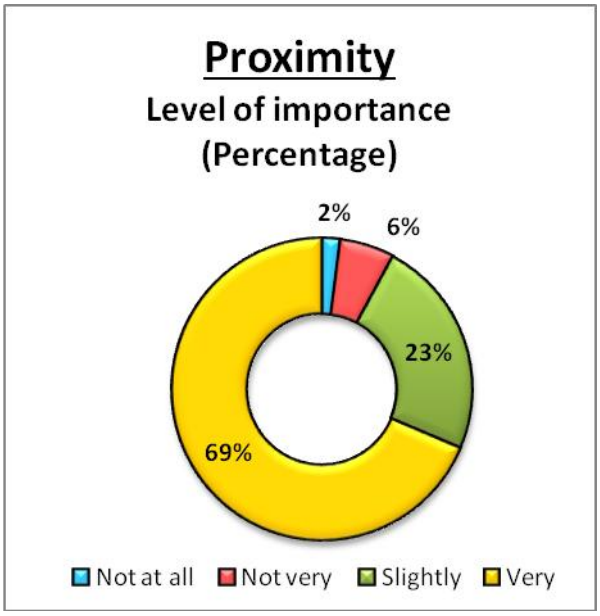


Figure 4.11 Level of satisfaction of needs (percentage)

Sixty-nine percent (n=35) of participants ranked the needs relating to the theme Proximity as very important while 23% (n=12) ranked the need as slightly important. Six percent (n=3) of the sample population ranked Proximity needs as not very important and 2% (n=1) found it to be not important at all.

4.2.3 Communication

The following Items were assigned to the theme “Communication”:

Table 4.8 Needs statements assigned to the theme “Communication”

3. To find out about the condition of your injured relative before being asked to sign papers
6. To have explanations given in understandable terms
7. To be kept updated frequently
10. To be protected from sights or sounds that may be distressing
11. To talk to a doctor
12. To talk to a nurse
13. To know about the level of expertise of staff caring for your relative
25. To feel that you can help with your relative's care
26. To be included when decisions are made
40. To be able to contact staff at a later date to ask questions

Table 4.9 Cronbach Alpha Item Correlation Test results for the theme “Communication”

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	alpha
qu3	51	+	0.4882	0.2985	0.1558	0.6241
qu6	51	+	0.6611	0.5119	0.1315	0.5768
qu7	51	+	0.5425	0.2683	0.1529	0.619
qu10	48	+	0.5508	0.3779	0.1469	0.6079
qu11	51	+	0.6983	0.5598	0.1248	0.5621
qu12	50	+	0.4347	0.2467	0.1627	0.6362
qu13	50	+	0.4645	0.2803	0.1586	0.6291
qu25	49	+	0.2745	0.0713	0.1848	0.671
qu26	50	+	0.3902	0.1961	0.1697	0.6478
qu40	50	+	0.3906	0.1972	0.1687	0.6461
Test scale					0.1557	0.6483

The Item Correlation test found that miniscule differences between item scores weakened the Alpha value. It was suggested that item 25: “To feel that you can help with your relative's care” be removed from the calculation and the correlation test recalculated to determine a stronger correlation value as follows:

Table 4.10 Cronbach Alpha Item Correlation Test results for the theme “Communication”

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	alpha
qu3	51	+	0.5185	0.3259	0.1859	0.6463
qu6	51	+	0.6768	0.5268	0.1588	0.6017
qu7	51	+	0.5642	0.3032	0.1817	0.6398
qu10	48	+	0.5434	0.36	0.1812	0.6391
qu11	51	+	0.6926	0.5471	0.1538	0.5925
qu12	50	+	0.4351	0.2392	0.1991	0.6654
qu13	50	+	0.5214	0.3396	0.1847	0.6444
qu26	50	+	0.3332	0.1253	0.2173	0.6895
qu40	50	+	0.4315	0.2354	0.2002	0.667
Test scale					0.1848	0.671

Item 26: “To be included when decisions are made” was also found to weaken the correlation value and therefore it was removed to further strengthen the correlation value:

Table 4.11 Cronbach Alpha Item Correlation Test results for the theme “Communication”

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	alpha
qu3	51	+	0.5429	0.3434	0.2216	0.6658
qu6	51	+	0.7036	0.5545	0.1872	0.6171
qu7	51	+	0.5905	0.3426	0.2133	0.6549
qu10	48	+	0.5339	0.3348	0.2232	0.668
qu11	51	+	0.6496	0.4834	0.1954	0.6296
qu12	50	+	0.4447	0.2391	0.2408	0.6894
qu13	50	+	0.583	0.4044	0.2117	0.6527
qu40	50	+	0.4352	0.2291	0.2447	0.694
Test scale					0.2173	0.6895

Item 40: “To be able to contact staff at a later date to ask questions” was removed to strengthen the correlation between items within the theme and the correlation test re-calculated:

Table 4.12 Cronbach Alpha Item Correlation Test results for the theme “Communication”

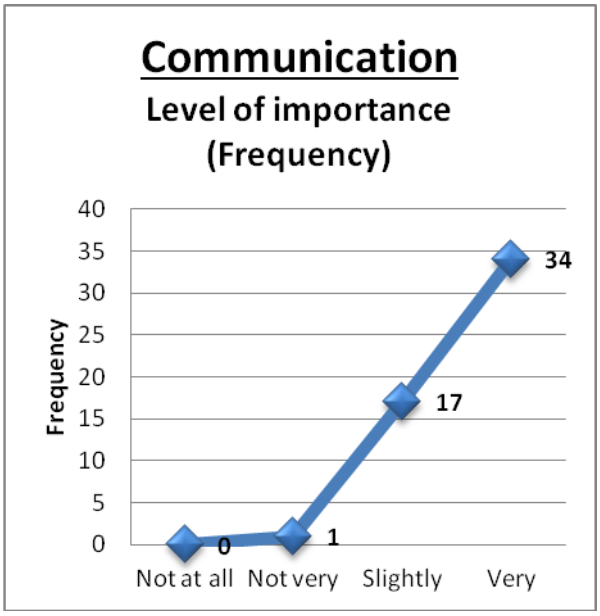
Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	alpha
qu3	51	+	0.569	0.3611	0.2497	0.6663
qu6	51	+	0.742	0.5872	0.203	0.6045
qu7	51	+	0.6204	0.3404	0.2446	0.6602
qu10	48	+	0.5337	0.3188	0.2591	0.6773
qu11	51	+	0.6552	0.4714	0.2229	0.6325
qu12	50	+	0.5037	0.2886	0.2688	0.6881
qu13	50	+	0.521	0.3102	0.2641	0.6829
Test scale					0.2447	0.694

Although 3 items were found to weaken the Alpha value, the difference was miniscule. Item 25: “To feel that you can help with your relative's care”, as well as 26: “To be included when decisions are made” and 40: “To be able to contact staff at a later date to ask questions” are relevant to the theme and therefore all items were kept for further data analysis.

Table 4.13 Analysis of Need Statements within the theme "Communication"

Ranking	Question	Statement	Total score	Mean score	Mode
1	12	To talk to a nurse	191	3.82	4
2	6	To have explanations given in understandable terms	193	3.78	4
3	7	To be kept updated frequently	193	3.78	4
4	11	To talk to a doctor	192	3.76	4
5	3	To find out about the condition of your injured relative before being asked to sign papers	188	3.69	4
6	26	To be included when decisions are made	183	3.66	4
7	13	To know about the level of expertise of staff caring for your relative	180	3.60	4
8	40	To be able to contact staff at a later date to ask questions	180	3.60	4
9	25	To feel that you can help with your relative's care	176	3.59	4
10	10	To be protected from sights or sounds that may be distressing	122	2.54	1 & 4

One statement within the theme generated a dual mode of 1 and 4 indicating a mixed response to this statement. One indicates a ranking of not important at all and 4 indicates that the needs statement is considered very important. The remaining needs statements all yielded a mode of 4. The needs statement which accrued the highest mean score was: 12 "To talk to a nurse". The lowest scoring needs statement for this theme was 10: "To be protected from sights or sounds that may be distressing". The total score for the theme "Communication" was 1798 and the mean score was calculated as 3.58.



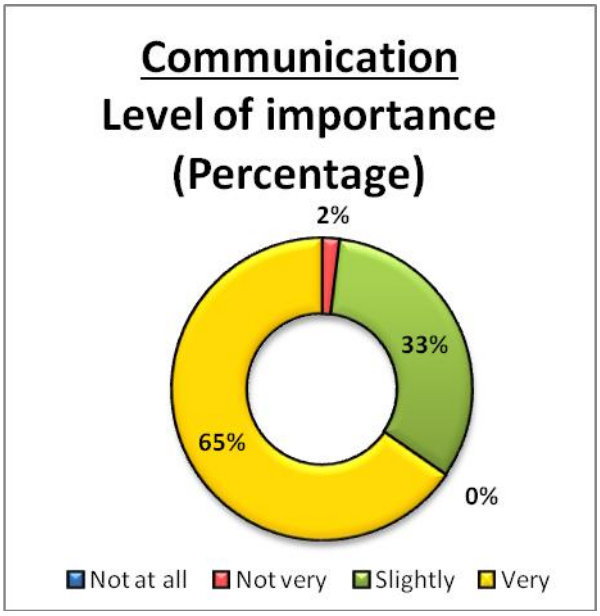


Figure 4.12 Level of satisfaction of met needs met (Frequency)

Figure 4.13 Level of satisfaction of needs (percentage)

Thirty-four of the 52 participants (65%), ranked the needs statements belonging to the theme Communication as very important. Of the sample population, 33% (n=17) ranked the needs belonging to this theme as slightly important, while 2% (n=1) expressed that it was not very important. None of the participants found Communication need statements to have no importance.

4.2.4 Comfort

The following Items were assigned to the theme "Comfort":

Table 4.14 Needs statements assigned to the theme "Comfort"

5. To have a private place to wait
28. To feel accepted by hospital staff
31. To be assured of the comfort of your relative
37. To have food and refreshments nearby
38. To have a telephone in or near the waiting room
39. To have toilet facilities nearby

Table 4.15 Cronbach Alpha Item Correlation Test Results for the theme "Comfort"

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	alpha
qu5	49	+	0.5985	0.3683	0.3246	0.7062
qu28	50	+	0.6146	0.4077	0.3115	0.6935
qu31	49	+	0.6522	0.3994	0.2983	0.68
qu37	49	+	0.5673	0.342	0.3379	0.7184
qu38	50	+	0.6964	0.5051	0.2872	0.6683
qu39	52	+	0.7359	0.5619	0.2691	0.648
Test scale					0.3049	0.7246

The Cronbach Alpha Item Correlation test was done for items within the theme "Comfort". A strong correlation value of 0.7246 was calculated. No items were removed.

Table 4.16 Analysis of Need Statements within the theme "Comfort"

Ranking	Question	Statement	Total score	Mean score	Mode
1	28	To feel accepted by hospital staff	188	3.76	4
2	39	To have toilet facilities nearby	195	3.75	4
3	31	To be assured of the comfort of your relative	182	3.71	4
4	38	To have a telephone in or near the waiting room	164	3.28	4
5	37	To have food and refreshments nearby	157	3.2	4
6	5	To have a private place to wait	128	2.61	3

A mode of 4 indicating a ranking of 'very important' was calculated for five of the six statements belonging to this theme. One needs statement produced a mode of 3 which represents the ranking "slightly important". The needs statement which accumulated the highest mean score was item 28: "To feel accepted by hospital staff". The lowest scoring needs statement was 5: "To have a private place to wait". The theme yielded a total score of 1014 and a mean score of 3.39.

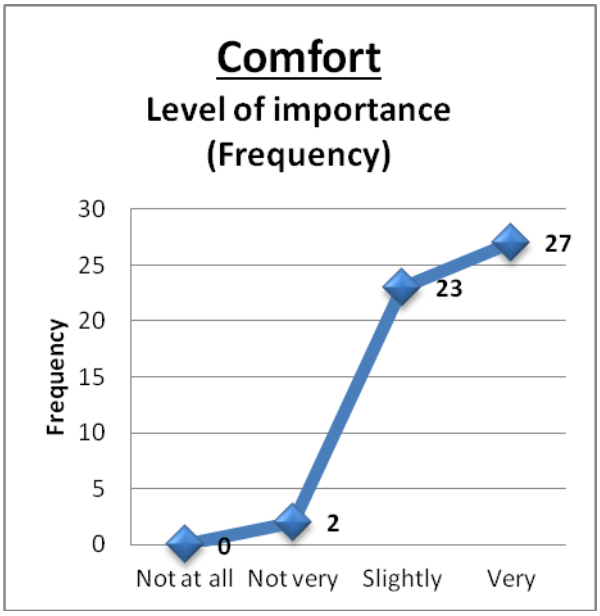


Figure 4.14 Level of satisfaction of met needs met (Frequency)

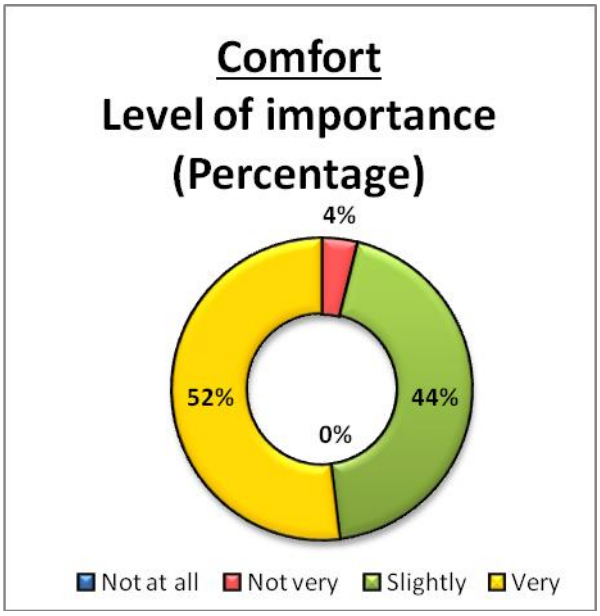


Figure 4.15 Level of satisfaction of needs (percentage)

A lesser difference between the ranking of 'very important' and 'slightly important' was found for the theme "Comfort". Twenty-seven participants (52%) found these needs statements to be very important while 23 participants (44%) found them to be slightly important. 4% (n=2) of the sample ranked the comfort needs statements as "not very important" while none ranked these needs as "not at all" important.

4.2.5 Support

The following Items were assigned to the theme "Support":

Table 4.17 Needs statements assigned to the theme "Support"

1. Have a doctor or nurse meet you on arrival at the hospital
2. To have one person to care for the family
4. To have friends and relatives with you in the trauma casualty department
20. To have explanations about the casualty environment before going in to see your relative for the first time
21. To have a staff member with you while visiting your relative
24. To be given directions regarding what to do at the bedside
32. To be encouraged to express emotions
33. To be reassured about normal emotional responses
34. To share emotions with staff

Table 4.18 Cronbach Alpha Item Correlation Test Results for the theme "Support"

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	Alpha
qu2	45	+	0.6075	0.4681	0.1774	0.633
qu20	49	+	0.4445	0.2441	0.2079	0.6774
qu21	49	+	0.6598	0.4969	0.1689	0.6191
qu24	48	+	0.4187	0.2145	0.2112	0.6817
qu32	50	+	0.6943	0.5343	0.1671	0.6162
qu33	50	+	0.6803	0.5084	0.1689	0.6192
qu34	51	+	0.5761	0.3819	0.1849	0.6448
Test scale					0.1918	0.6811

The Cronbach Alpha item correlation test was performed and differences between the values calculated for certain items weakened the alpha value. In order to find the strongest Alpha value, Item 1: "Have a doctor or nurse meet you on arrival at the hospital" was removed and the item correlation test re-calculated:

Table 4.19 Cronbach Alpha Item Correlation Test Results for the theme "Support"

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	Alpha
qu2	45	+	0.5999	0.4571	0.2187	0.6621
qu21	49	+	0.6452	0.4704	0.2118	0.6528
qu32	50	+	0.7294	0.5737	0.1998	0.6361
qu34	51	+	0.5994	0.3962	0.2229	0.6675
Test scale					0.2291	0.7039

Item 4. To have friends and relatives with you in the trauma casualty department was then removed and the test results re-calculated:

Table 4.20 Cronbach Alpha Item Correlation Test Results for the theme "Support"

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	Alpha
qu20	49	+	0.4714	0.2512	0.3088	0.7283
qu21	49	+	0.617	0.4214	0.2645	0.6833
qu24	48	+	0.4632	0.2423	0.3082	0.7278
qu33	50	+	0.7707	0.6109	0.2274	0.6385
Test scale					0.2674	0.7187

Item 20: "To have explanations about the casualty environment before going in to see your relative" as well as Item 24: "To be given directions regarding what to do at the bedside" was then removed in order to minimize differences between item correlation scores:

Table 4.21 Cronbach Alpha Item Correlation Test Results for the theme "Support"

Item	Obs	Sign	itemtest correlation	itemrest correlation	interitem correlation	Alpha
qu21	49	+	0.6183	0.3967	0.3201	0.7019
qu32	50	+	0.8105	0.6683	0.2499	0.6249
qu33	50	+	0.7939	0.6338	0.258	0.6349
qu34	51	+	0.6412	0.3958	0.3089	0.6909
Test scale					0.3088	0.7283

Differences between correlation values were minimal but noted. The Items in question were reviewed:

1. Have a doctor or nurse meet you on arrival at the hospital

4. To have friends and relatives with you in the trauma casualty department

20. To have explanations about the casualty environment before going in to see your relative for the first time

24. To be given directions regarding what to do at the bedside

These items are all relevant to the theme regarding support expected by family members, from Trauma Casualty Staff and add to the understanding of the experience of participants in relation to the theme. Having support from staff and the participants own social structures have been emphasised in a similar study by Redley, Le Vasseur, Peters & Bethune (2003) and therefore all items were kept for use in the data analysis in order to compare results to the finding of other pertinent studies.

Table 4.22 Analysis of Need Statements within the theme "Support"

Ranking	Question	Statement	Total score	Mean score	Mode
1	1	Have a doctor or nurse meet you on arrival at the hospital	189	3.71	4
2	33	To be reassured about normal emotional responses	177	3.54	4
3	4	To have friends and relatives with you in the trauma casualty department	169	3.52	4
4	34	To share emotions with staff	176	3.45	4
5	20	To have explanations about the casualty environment before going in to see your relative for the first time	167	3.41	4
6	24	To be given directions regarding what to do at the bedside	163	3.4	4
7	32	To be encouraged to express emotions	170	3.4	4
8	2	To have one person to care for the family	137	3.04	4
9	21	To have a staff member with you while visiting your relative	133	2.71	4

The theme "Support" produced a mode of 4 across all needs statements assigned to this theme. This indicates a ranking of "very important" for needs statements relating to support. The needs statement with the highest mean score was 1: "Have a doctor or nurse meet you on arrival at the hospital" while the lowest scoring was 2: "To have one person to care for the family". The total score for this theme was 1481 and the mean score was 3.35.

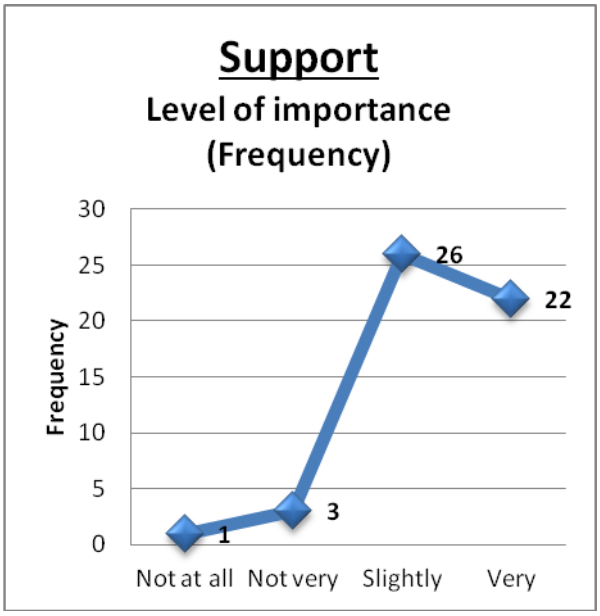


Figure 4.16 Level of satisfaction of met needs met (Frequency)

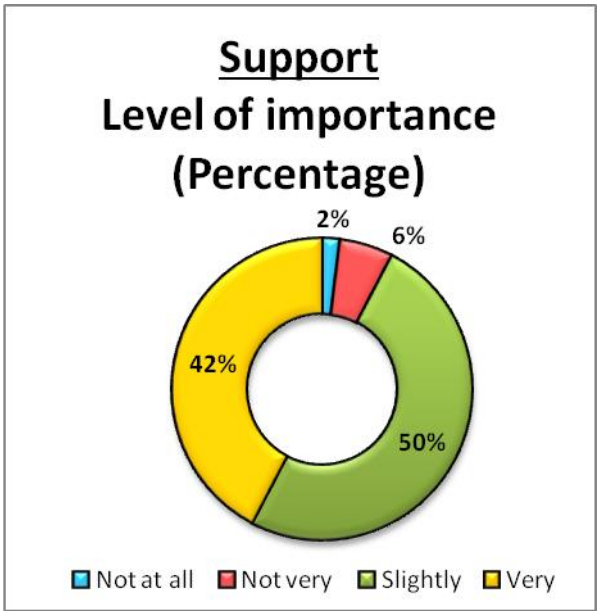


Figure 4.17 Level of satisfaction of needs (percentage)

Of the 52 participants who responded to the questions relating to this theme, 26 participants (50%) ranked Support needs as slightly important, while 22 participants (42%) ranked them as very important. Six percent (n=3) of the sample ranked the needs statements belonging to the theme Support as not very important and 2% (n=1) ranked these needs statements as having no importance.

4.3 Overview of Results for themes of CCFNI-1

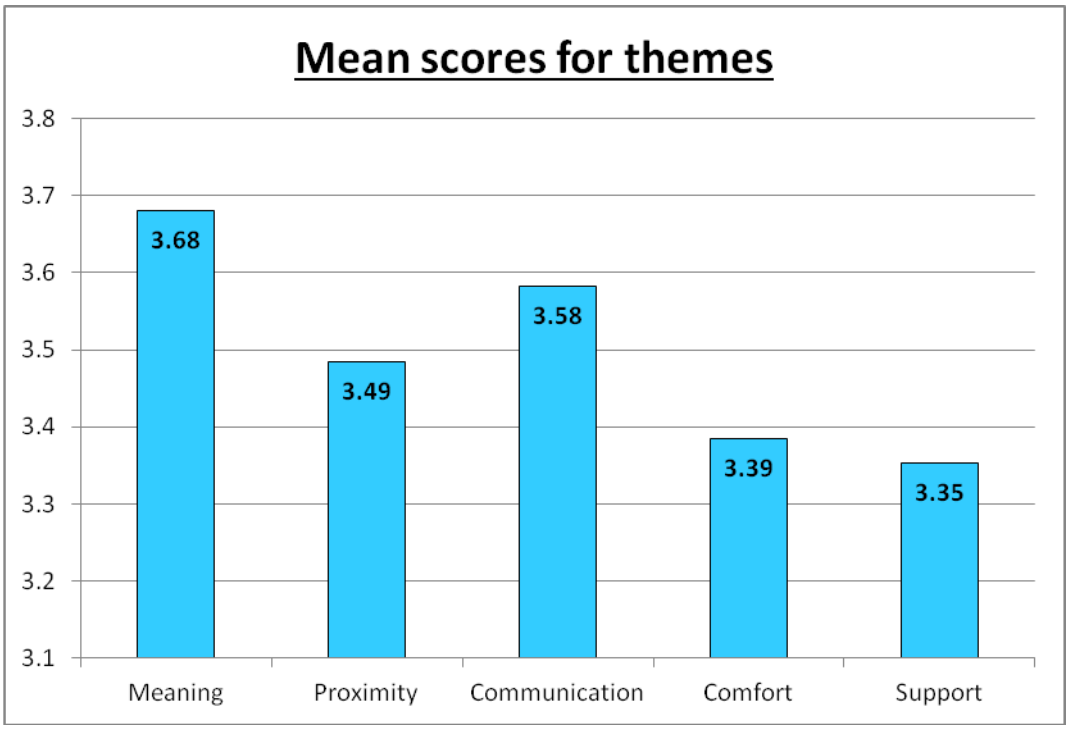


Figure 4.18 Overview of results for themes of CCFNI-1

The theme ranked with the highest mean score was Meaning and the lowest Support.

Table 4.23 Top ten ranked needs statements CCFNI-1

Ranking	Question	Statement	Total score	Mean score	Mode	Theme
1	17	To be assured that the best care possible has been given to your relative	197	3.86	4	Meaning
2	30	To feel hospital staff care about your relative	188	3.84	4	Meaning
3	15	To have questions about the condition of your relative answered honestly	195	3.82	4	Meaning
4	12	To talk to a nurse	191	3.82	4	Communication
5	6	To have explanations given in understandable terms	193	3.78	4	Communication
6	7	To be kept updated frequently	193	3.78	4	Communication
7	14	To know about the expected outcome of your relative	188	3.76	4	Meaning
8	35	To feel like there is hope	192	3.76	4	Meaning
9	11	To talk to a doctor	192	3.76	4	Communication
10	28	To feel accepted by hospital staff	188	3.76	4	Comfort

The top ten ranking statements were analysed according to mean scores, 5 of the top ten ranking statements belonged to the theme Meaning, while 4 belonged to the Communication theme. One needs statement in the ranking belonged to the Comfort theme.

4.4 Step 3- Content Analysis of Open ended questions

CCFNI- 1 included two open ended questions. Question 46 asked participants to comment on any **helpful** behaviours displayed by trauma casualty staff and question 47 asked participants to comment on any **unhelpful** behaviours displayed by trauma casualty staff. The participants' responses were analysed using content analysis. This questionnaire was given to family members on arrival in Trauma Casualty and therefore takes into account the first experience of the participants with staff.

The following categories emerged from the data taken from CCFNI- 1 and CCFNI- 2:

Categories emerging from the data include the following:

- Communication
- Proximity
- Time taken to be attended to
- Attitudes and gestures of caring
- Professionalism
- Treatment of the patient
- Equality
- Physical needs of the participants

Results will be presented per question before further discussion into each category.

The existence and recurrence of statements belonging to each category was counted and the statement classified as positive or negative. A positive statement refers to a comment that

commented positively on the behavior of the trauma casualty staff in relation to this category, while negative refers to a comment denoting displeasure of the participant with the behavior of the trauma casualty staff.

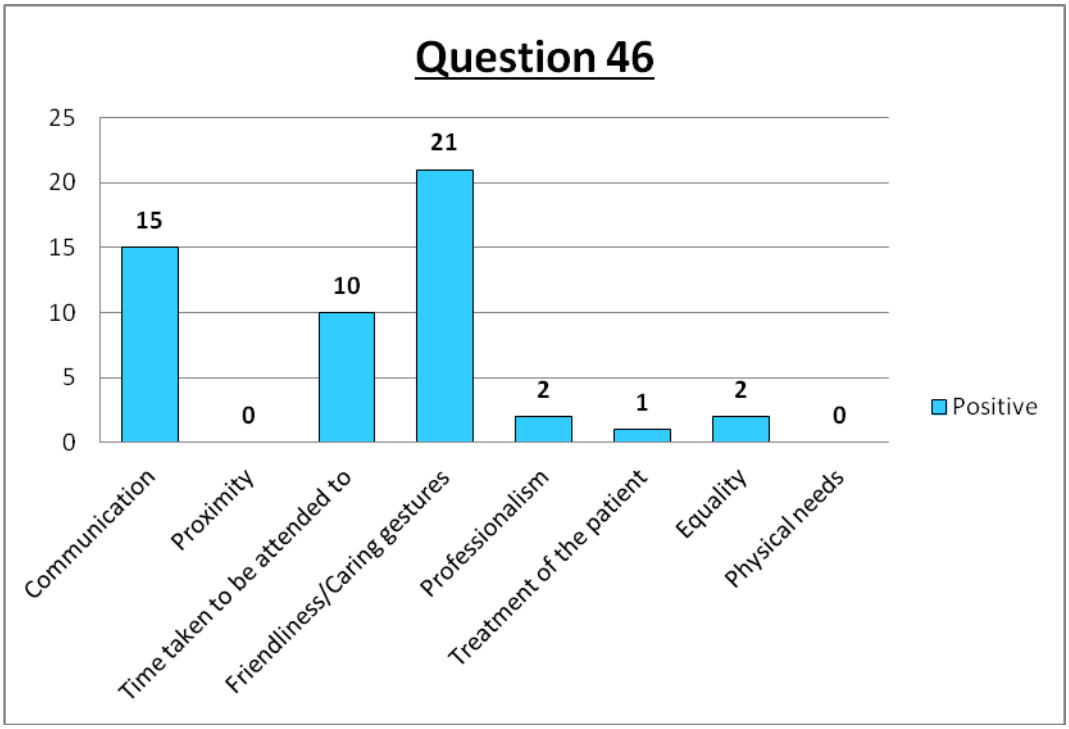


Figure 4.19 Responses to Question 46 "Helpful behaviours of trauma casualty staff"

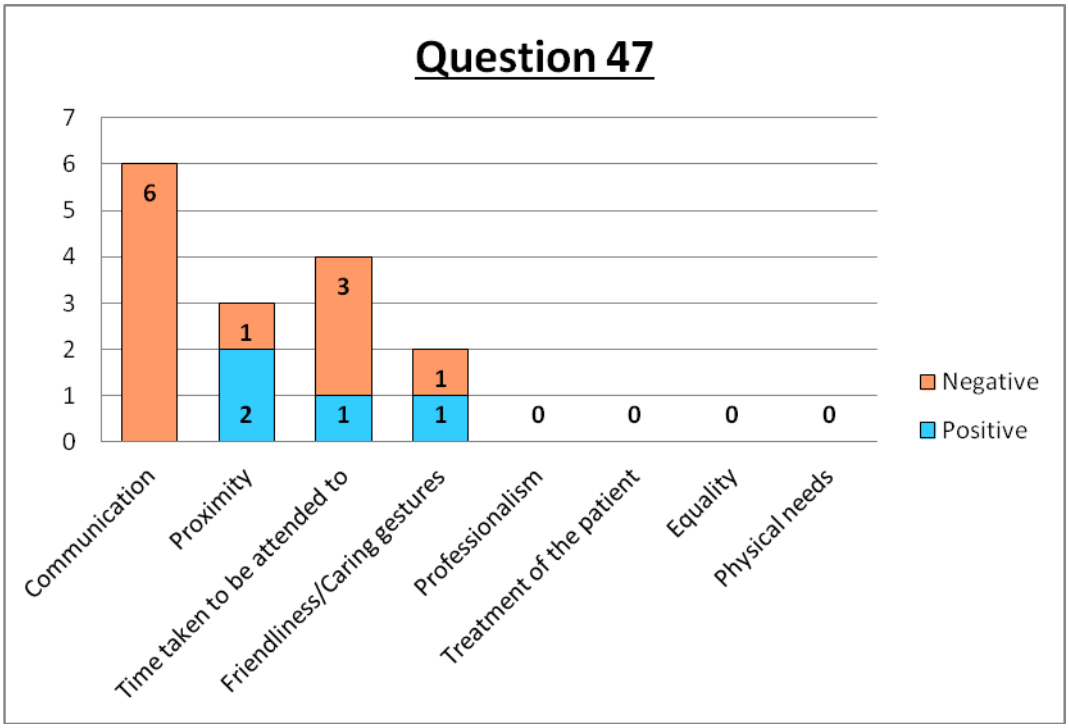


Figure 4.20 Responses to Question 47 "Unhelpful behaviours of trauma casualty staff"

Communication

52 participants responded to both Question 46 and Question 47. Of these responses, 15 comments were related to communication for Question 46, and 6 of the comments were related to communication for Question 47. All comments were positive, indicating a satisfaction of participants with the communication of staff members in Trauma Casualty.

A response to question 46 from one participant confirming this finding was as follows: *"They were informative and tried their best to keep us informed even though it was clear that they were very busy, I don't think it's possible for the staff to have done anymore than they did, we are grateful for everything*"

Proximity

Proximity refers to the accessibility of the participants to their injured relative. For question 46, there were no comments relating to proximity. However, three participants mentioned

proximity in question 47. Of these three comments, 2 were positive comments about satisfaction regarding the accessibility to see their relative immediately. One comment was negative, displaying frustration of the participant about not being able to see their injured relative.

In response to question 46, one participant reported that they had *"Enough time to talk to relative and staff kept distance and gave them space"*, while in response to question 47 a different participant was frustrated with the trauma casualty staff "*not letting us sit with the patient".*

Time taken to be attended to

10 participants commented positively in Question 46 regarding the time taken to be attended to, while Question 47 had one positive comment and three negative comments in this regard. Overall, participants' comments tend to display a general satisfaction with time taken to be attended to by staff in Trauma Casualty.

Although some participants displayed frustration with time taken to be attended to, displayed in comments such as "*The fact that we have to wait for 15min to 30min before actually seeing a doctor*" in response to question 47, some also displayed satisfaction such as one participant who noted the "*Immediate attendance with a smile*" in response to question 46.

Friendliness/Caring Gestures

Friendliness or caring gestures (such as smiles and welcoming attitudes) were included in this category. This category was commented on by 21 participants in question 46, and 2 participants on question 47. All comments in question 46 were positive, implying the participants' satisfaction with the friendliness of the Trauma Casualty staff. An example of

this is the response by one participant: "*Friendliness, how involved they were to help and their very caring nature*! Thanks"

One participant in question 47 described the trauma casualty staff as unfriendly and rude while the other comment in question 47 was positive. The negative comment was as follows: "*Most of them were very rude (I also work in a medical centre), and some of the behaviours were not acceptable, rude to family, don't answer questions, no names on telephone and put it down before finish talking, can't give any information, make fun and jokes in trauma unit while it's supposed to be a very concerned place*"

Treatment of the patient

Two participants responding to question 46 commented on the significance of being able to see that their injured relative was being attended to by trauma casualty staff, an example of such a response was: "*Immediate attendance to my son".* No comments relating to the treatment of the patient were included in question 47.

Professionalism

Professionalism was mentioned by two participants responding to question 46, and no responses in question 47. Both comments described the trauma casualty staff as having displayed professional behaviour, one response being: "*We were immediately helped by a nurse in casualty department, she was very helpful and friendly and was very professional*".

Equality

Included in the responses to question 46 were two participants' positive comments on the equality of treatment of patients from Trauma Casualty staff. No comments were made in

Question 47 with regards to equality. One participant commented that "*They seem to understand and they treat people equally with respect".*

4.5 Discussion of Results CCFNI-1

The first objective of the study was to determine the needs of family members in order of importance using the Critical Care Family Needs Inventory assessment instrument (CCFNI-1).

A total of 50 questionnaires were received from the family members of patients admitted to the trauma casualty over the months of May to June 2013. In the sample 53% of the respondents were females and 47 % males. Literature has shown that traumatic injuries are a leading cause of death in males, and this diagnosis has a higher occurrence in males than in females (Norman, Bradshaw, Groenewald, Laubscher, Nannan, Nojilana, Pieterse, & Schneider, 2003). Males are more likely to be exposed to traumatic situations (Williams, Williams, Stein, Seedat, Jackson, & Moomal, 2007) and therefore more males are admitted into trauma casualty. It is interesting to observe that these male patients are commonly accompanied by females when presenting to trauma casualty for admission. A study conducted by Chan, Li & Lee (2000) which looked at the needs of families in a state of bereavement in an emergency department revealed that women are more open to express health needs than men which have influence on the focus of this study. The largest portion of the respondents was female and therefore it can be assumed that their needs were openly expressed.

The needs of family members were ranked according to importance and analysed by assigning needs statements to themes. Five themes were used: meaning, proximity, communication, comfort and support.

4.5.1 Meaning

The theme Meaning was ranked as having the highest Mean score of all themes (3.68). More Needs statements from this particular theme occurred in Table 4.23 Top 10 Ranked Needs Statements CCFNI-1, than any other theme.

These finding echoed the pilot study done in Australia using the same instrument (Redley, Le Vasseur, Peters & Bethune, 2003). However this was different to literature reviewed for the ICU context where Communication was ranked as the most important need (Verhaege, Defloor, Van Zuuren, Duijnstee & Grypdonck, 2005). The highest scoring need was: "To be assured that the best possible care has been given to your relative".

"Meaning" implies depth of the quality of care given, which brings meaning to the family. The assurance that the best care is being provided satisfies far more than a need for factual information. Other statements assigned to "Meaning" which also formed part of the Top 10 ranking included "Question 30: "To feel hospital staff care about your relative". This sense of caring was ranked as being very important to family members and accrued a mean score of 3.84

The high ranking of the need for honest information (mean score=3.82) knowing the expected outcome (mean score=3.76) and a balance with hope (mean score=3.76) supports the emphasis of the theme in the literature used for revision and development of the instrument for use in the emergency care setting (Redley & Beanland, 2004). This need for honest information is coupled with the need of family members to build quality relationships with the health professionals caring for their loved one, as found in a study conducted to determine the expectations of family members with relatives admitted into an ICU setting (Siddiqui, Sheikh & Kamal, 2011)

These findings are significant for South Africa with its diverse setting, rich in different cultures and traditions. A culture-rich and culturally diverse society sensitises people to the significance of death and traumatic experiences, and as a result, the overall experience has a great impact on the family or social unit. “Meaning” becomes a very important aspect for the family. Trauma Casualty staff have a responsibility to recognise this phenomenon and be sensitive to the diverse needs of the families of injured patients.

4.5.2 Communication

“Communication” (mean score= 3.58) was the second most important theme in the findings of this study. Communication had the second highest mean score and four needs statements belonging to this theme were found in Table 4.23 Top 10 Ranked Needs Statements CCFNI-1 Top 10, in the overview of results.

This was similar to the findings of a comparative study done in Australia (Redley, Le Vasseur, Peters & Bethune, 2003). This differs from the findings of the study conducted by Verhaege, Defloor, Van Zuuren, Duijnstee & Grypdonck (2005) which found that Communication in ICU setting was ranked the highest need by family members. A novel finding from this study is ranking of the communicator of choice by families who ranked talking to a Nurse (4^{th}) as more important than talking to a Doctor (10^{th}). This finding highlights the importance of the role of the Nurse in meeting the needs of family members. Verhage, Defloor, Van Zuuren, Duijnstee & Grypdonck (2005) found that, in the ICU setting, nurses abdicated this responsibility, believing that it belonged to the Doctor. Other needs ranked as important included “6. To have explanations given in understandable terms” (mean score=3.07), and to be kept updated frequently (mean score=2.77).

4.5.3 Proximity

"Proximity" falls within the Top 3 themes found in the study done in the emergency department in Australia as well studies conducted in the ICU setting. This trend is repeated in the findings of this study. "Proximity" was ranked third most important with a mean score of 3.49, but the needs from this theme were not in the overall Top Ten needs statements.

Family members ranked need number "16. To be told about transfer plans while they are made" as most important (mean score=3.73). This was not consistent with current literature; which ranked "To see your relative as soon as possible" as most important (Redley, Le Vasseur, Peters & Bethune, 2003; Verhaege, Defloor, Van Zuuren, Duijnstee & Grypdonck, 2005).

Anxiety about a relative "being moved without notifying the family" is unique to this study. Classified as a Level-One Trauma hospital, this setting has a high rate of transfers to "step-down" facilities. The number of patients consulted in this trauma casualty per month can amount to 965 (Statistics Trauma and Emergency Department) with only 287 (29.7%) admitted to wards within the Hospital. This means that 70.3% of patients consulted were possibly discharged, transferred or deceased. Therefore it is not uncharacteristic for this to be an anxiety amongst family members accompanying relatives into trauma casualty, and consequently the need to be informed about transfer plans were ranked as highly important within this theme.

The second most important item under this theme was consistent with the pilot study conducted in an Australian emergency department which was "to see relative as soon as possible" (mean score=3.69) (Redley, Le Vasseur, Peters & Bethune, 2003).

4.5.4 Comfort

Comfort was ranked as the fourth most important theme (mean score=3.39), which is in keeping with the pilot study done in Australia in the emergency department (Redley, Le Vasseur, Peters & Bethune, 2003). However, 28 "To feel accepted by hospital staff" (mean score=3.76) which was considered the most important item within this theme, also ranked number 10 in the overall Top 10 ranking. This finding differs from those of similar studies conducted in the ICU setting and emergency department, where family members emphasised the importance of needs statements addressing the needs of the patient, such as "to be assured of your relative's comfort" before their own comfort needs. (Verhaege, Defloor, Van Zuuren, Duijnstee & Grypdonck, 2005).

"Acceptance" is a unique feature of this study as it is echoed by the category which emerged from the open-ended questions as "Equality". Sensitivity around Race and Nationality are current affairs in South Africa (with the influx of immigrants and the legacy of Apartheid influencing the delivery of health care). Further research into this area would add value to the care of family members specific to the context of South Africa.

4.5.5 Support

Support was ranked as the least important of all needs with a mean score of 3.35. The top three ranking statements within the theme included "having a doctor/nurse meet you upon arrival" (mean score= 3.71), "being assured about normal emotional responses" (mean score= 3.54) and to have "friends and relatives with you in the Trauma Casualty Department" (mean score= 3.52). This echoed the findings of study conducted by Redley, Le Vasseur, Peters & Bethune (2003), as it points to the idea that families seek support from two main sources : staff (this includes being able to express their emotions), and family and friends (which

constitutes social support). Findings in the literature suggested that the presence of social support increased the perception of needs being met well (Redley, Le Vasseur, Peters & Bethune, 2003). Nurses are identified as a part of the support needed from the health professional team, and their role is to ensure that families not only receive support from themselves, but also to understand and accommodate families enabling them to draw from their social support structures too.

4.5.6 Open-ended questions

Time taken to be attended to was an important category in the open-ended questions. Demographic data showed that patients may stay in casualty for up to 72 hours, which may be attributed to the large number of patients seen on a daily and monthly basis in conjunction with the scarcity of health professionals available to deal with the large number of patients. This is far more than the maximum stay of 32 hours found in the Australian Emergency Department (Redley, Le Vasseur, Peters & Bethune, 2003). The time spent in casualty affects the level of satisfaction as well as the depth of experience with Trauma Casualty staff.

Other important categories included "friendliness and caring gestures" as well as "professionalism". Although not included in the instrument, these three aspects (time spent in Trauma Casualty, friendliness and professionalism) have been identified as important expectations from family members. These should be taken into consideration when assessing the needs of the family member.

In response to the open-ended questions, Proximity was the third most mentioned category. There was a mixed response about satisfaction, but there was an implied importance.

Responses to the open-ended questions called attention to the need of family members to see the treatment of the patient. Witnessing nursing actions such as taking of blood pressure and

tending to open wounds was highlighted as bringing comfort to the relatives accompanying injured patients

4.6 Conclusion

This chapter sought to expound on the results of questionnaire CCFNI-1 and to determine which needs were considered important by family members accompanying patients into trauma casualty. Descriptive statistics were used to describe the findings of the questionnaire and data were presented according to themes. The major findings of this were in keeping with a comparative study done in Australia, which suggested that the most important needs of family members accompanying patients into trauma casualty are that of Meaning, followed by Communication and Proximity. Meaning requires that there is a depth of communication and understanding between the nurse and the family and that their holistic experience in the casualty is positive, enabling them to cope with the sudden crisis of having an injured relative. Trauma tends to be more sudden than medical emergencies and therefore the levels of anxiety may be expected to be higher than those of families in a mixed emergency department such as the one used in the study done in Australia. However, the trends tend to follow the same pattern. Important to this study however, is the emphasis on the need for the nurse to communicate and form part of the support for the family.

CHAPTER FIVE

DATA ANALYSIS AND DISCUSSION OF FINDINGS CCFNI- 2

5.0 Introduction

This chapter will expound on the results of questionnaire CCFNI-2 which sought to determine the level of satisfaction of family members accompanying patients into trauma casualty, with needs met by the trauma casualty staff. Descriptive statistics were used to describe the findings of the questionnaire.

Data will be presented in three steps:

Step 1:

Analysis of Demographic Data

Demographic data and other information were used to describe the sample population and the factors surrounding the admission of the patient and the experience of the family member.

Step 2:

Thematic Organisation of Analysed Data

The Cronbach Alpha item test correlation was performed to determine item correlation within each of the 5 themes. The Item Correlation Test results will be analysed for each theme, before analysis of the questionnaire. For this study an alpha ranging between 0.70- 0.95 was considered acceptable, if alpha values for a theme are below or above this range, justification for use of the data will be made. Low alpha values may be attributed to a low number of questions or low interrelatedness of the items within the theme. In order to determine the best correlation value, items that generate a low alpha values are deleted and then the score is

recalculated. If a noteworthy difference is made from deleting the item, the item will be discarded before analysis of data, however if the difference in the score is minimal, the item will be re-inserted for data analysis. If the alpha value is above 0.95 the researcher will revise the items for repetition, and redundant items removed.

The items in the questionnaire were grouped into the five major themes and analysed according to the mean scores for each item and then the overarching theme, as well as the frequencies and percentages for each of the five themes. The five themes to be presented are Meaning, Communication, Proximity, Support and Comfort.

Step 3:

Content analysis of open ended questions

Responses to the open ended questions were recorded and analysed. Analysis of responses included identifying existing and recurring concepts and grouping these concepts into categories. Eight categories were used: Communication, Proximity, Time taken to be attended to, Friendliness or caring gestures, Professionalism, Treatment of the patient, Equality and Physical Needs of family members.

An overview and discussion of the results is presented in relation to the objectives of the study.

5.1 Step 1-Demographic Data

A total of 50 participants completed the CCFNI- 2 questionnaire. All questionnaires were included for data analysis.

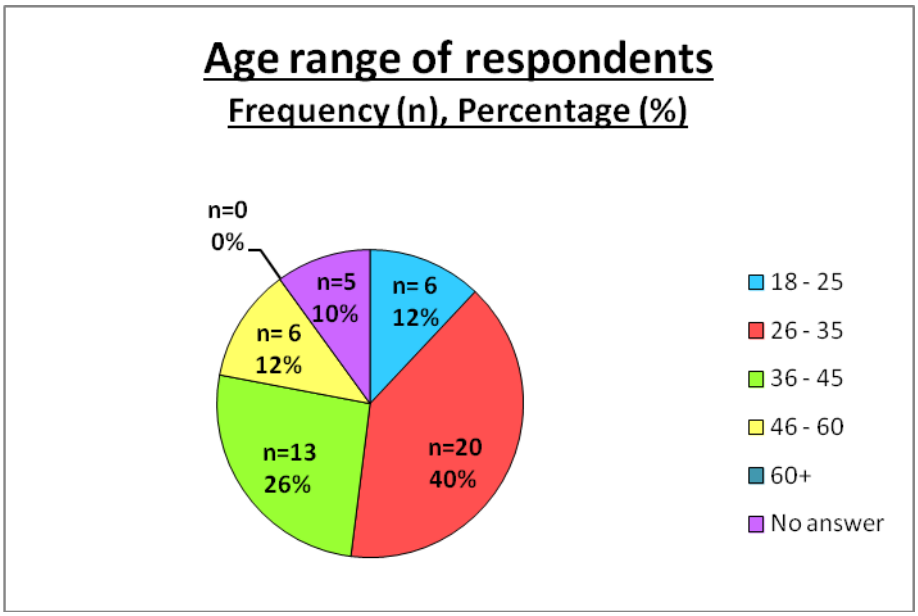


Figure 5.1 Age range of respondents CCFNI-2 (Frequency and Percentage)

Of the 50 participants, majority of the sample fell within the range of 26-35 years of age. Forty percent (n=20) of participants were aged between 26-35 years, while 26% (n=13) were between 36-45 years of age. 12% (n=6) were between 18-25 years and another 12% (n=6) of participants fell within the range of 46-60 years old. No participants were 60 years and older and 10% (n=5) of participants did not disclose their age. The mean age of 90% the sample population was 34.89 (10% did not disclose their age).

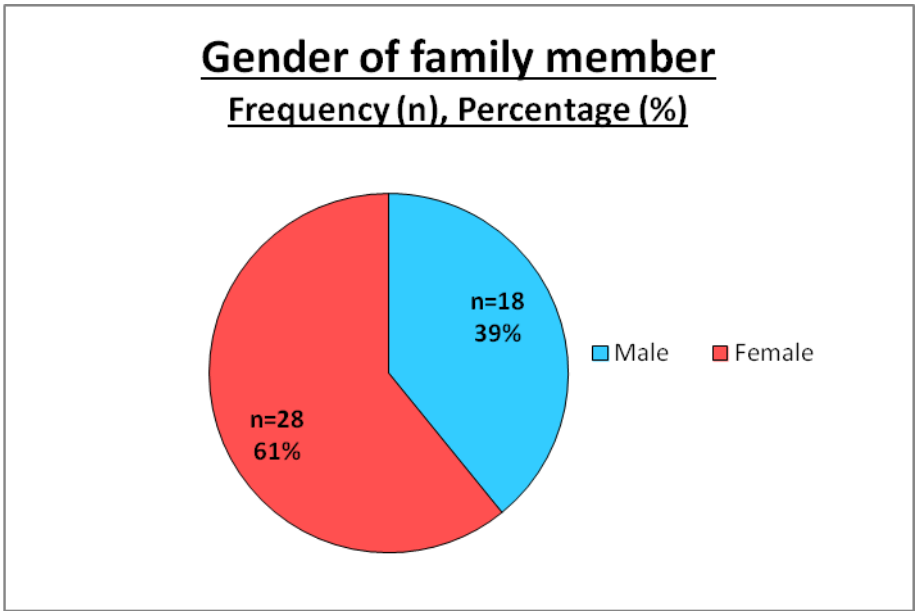


Figure 5.2 Gender of Family members (Frequency and Percentage)

Sixty-one percent (n=28) of the participants were female while 39% (n=18) of the participants were male. 4 participants did not respond to this question.

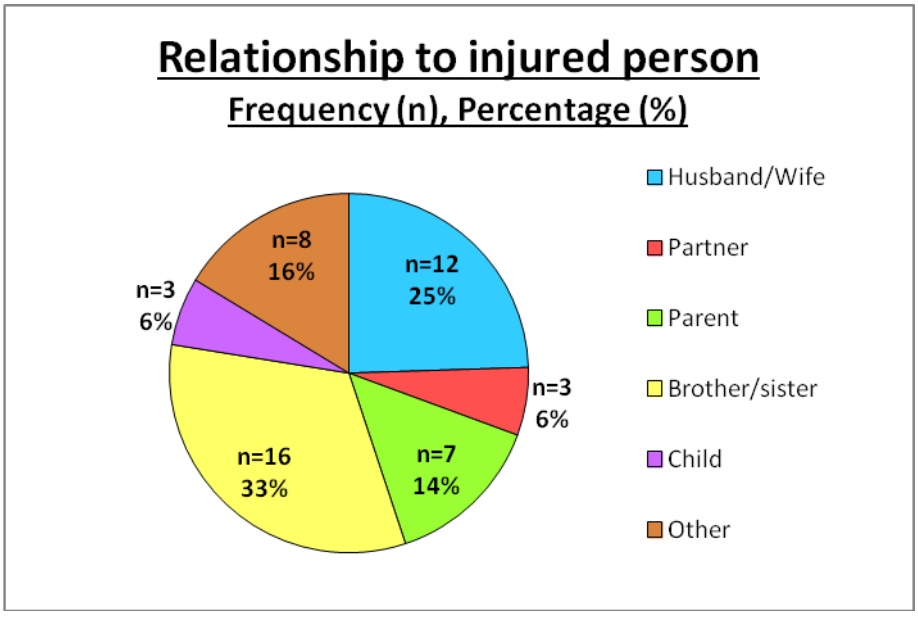


Figure 5.3 Relationship to Injured Person (Frequency and Percentage)

The relationships of the patient to the participant varied from 33% (n=16) being a sibling, 25% (n=12) were marital spouses, and 14% (n=7) classified themselves as other. Fourteen percent (n=7) of the participants were parents of the patient, while 6% (n=3) were children of the patient, and 6% (n=3) were unmarried partners. Forty-nine responses were counted for this question.

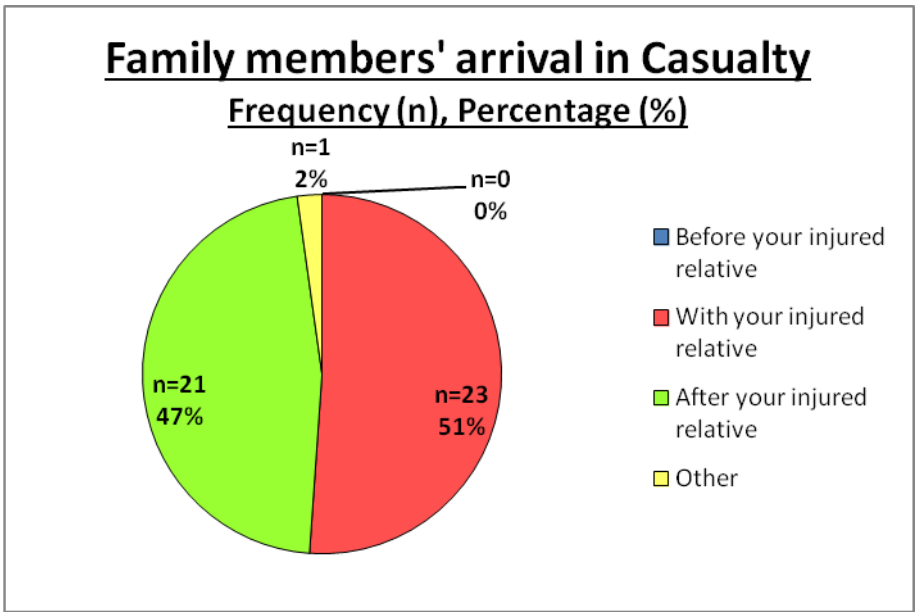


Figure 5.4 Family members' arrival in Casualty (Frequency and Percentage)

Fifty-One percent (n=23) of participants arrived with their injured relative, 47% (n=21) arrived after their injured relative, while none arrived before their injured relative and 2% (n=1) stated other but not specified. A total of 45 participants responded to this question.

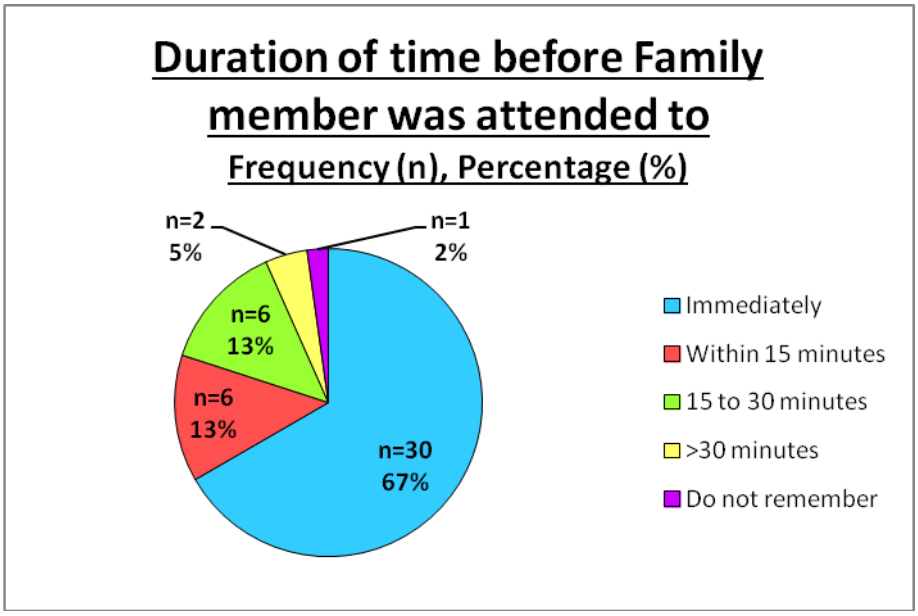


Figure 5.5 Duration before Family member was attended to (Frequency and Percentage)

Sixty-Seven percent (n=30) of participants were attended to immediately by casualty staff, 13% (n=6) within 15 minutes, 13% (n=6) waited 15-30 minutes, 5% (n=2) waited more than 30 minutes and 2% (n=1) did not remember the time taken to be attended to. Forty-five participants responded to this question.

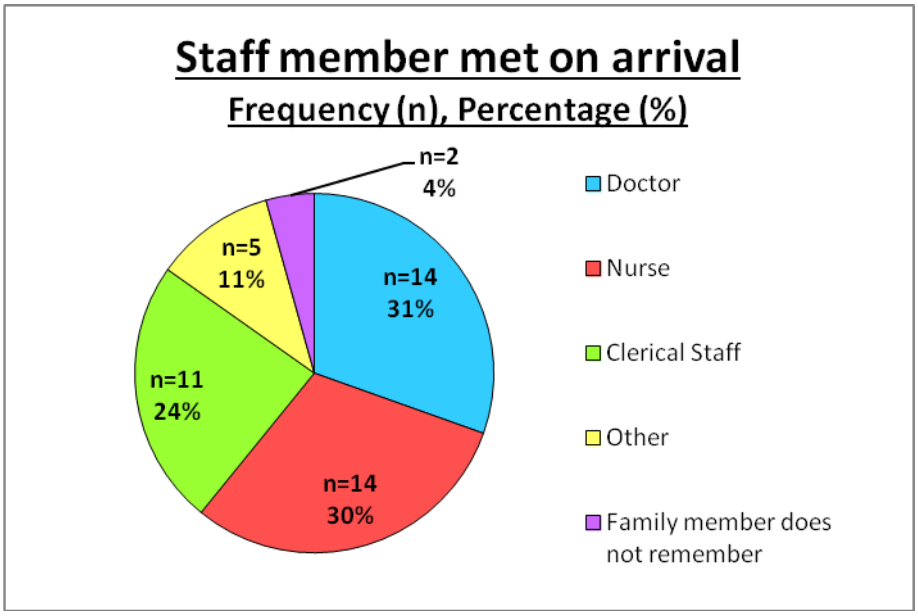


Figure 5.6 Staff member met on arrival (Frequency and percentage)

Thirty-one percent (n=14) of participants were met on arrival by the doctor and 30% (n=14) by a trauma casualty nurse. Twenty-four percent (n=11) of participants were first met by the clerical staff, while 11% (n=5) classified the person they met on arrival as other (this included porters and security officers); 4% (n=2) of the participants could not remember which staff member they first met on arrival at the hospital. Forty-six participants responded to this question.

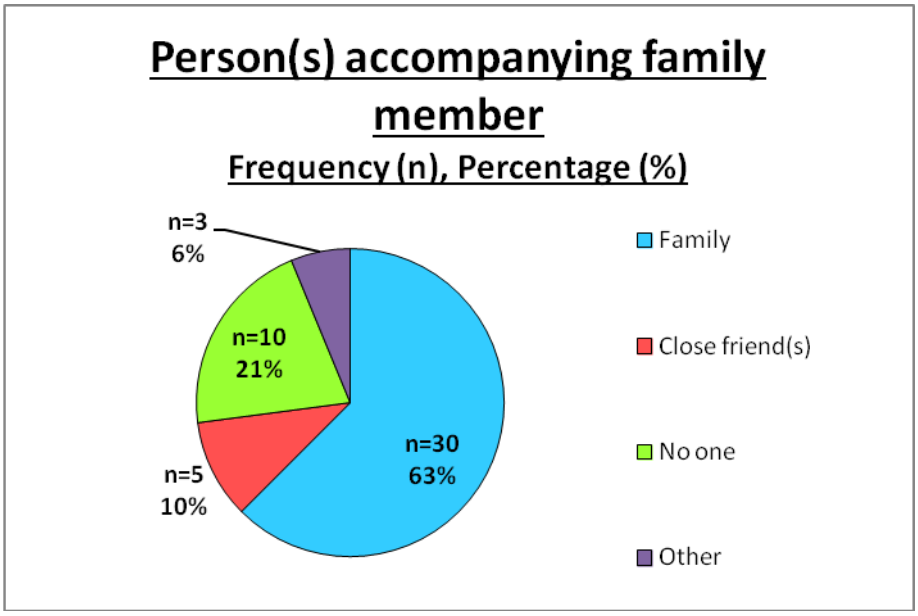


Figure 5.7 Person(s) accompanying Family member (Frequency and Percentage)

Of the 48 participants who responded to this question, 63% (n=30) were accompanied by another family member, 21% (n=10) were not accompanied by anyone, 10% (n=5) were accompanied by a close friend/s and 6% (n=3) were accompanied by unspecified persons.

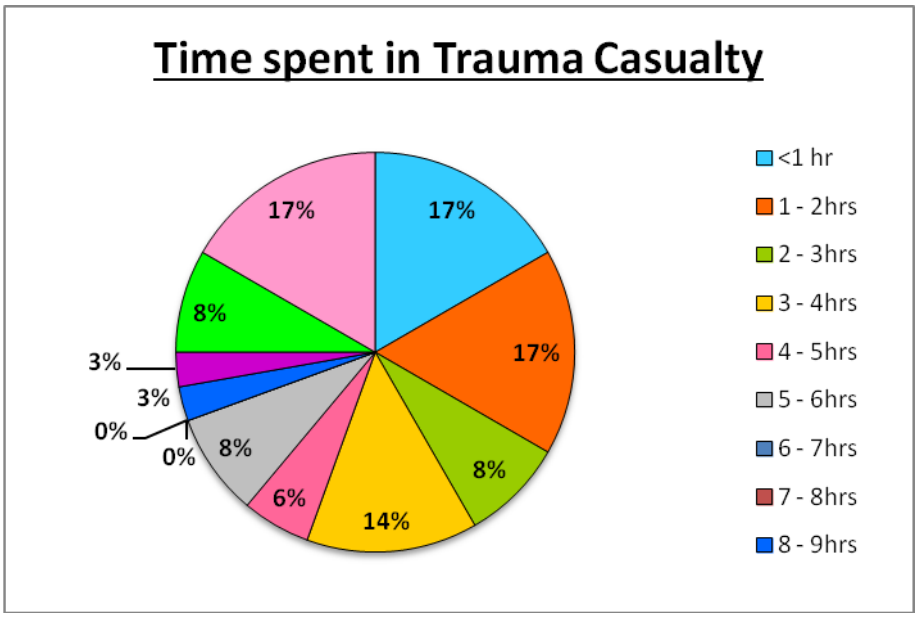


Figure 5.8 Time spent in trauma casualty Figure (Percentage)

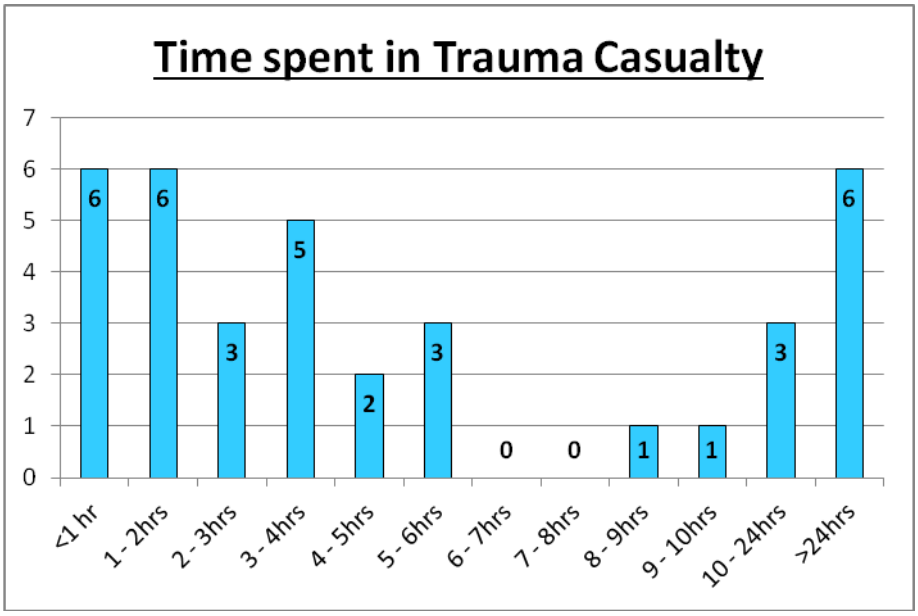


Figure 5.9 Time spent in trauma casualty (Frequency)

The 3 largest portions of the sample being 17% (n=6) spent a varied period of time in trauma casualty, from less than an hour, to 1-2 hours and another 17% (n=6) spent more than 24 hours in trauma casualty. Fourteen percent (n=5) of the participants spent 3-4 hours in trauma casualty while 8% (n=3) were in trauma casualty for 2-3 hours, another 8% (n=3) for 5-6 hours, and 8% (n=3) spent 10-24 hours in trauma casualty. Six percent (n=2) of the sample were in trauma casualty for 4-5 hours, 3% (n=1) were in casualty for 8-9 hours and 3% (n=1) of participants spent 9-10 hours in trauma casualty. 36 participants responded to this question.

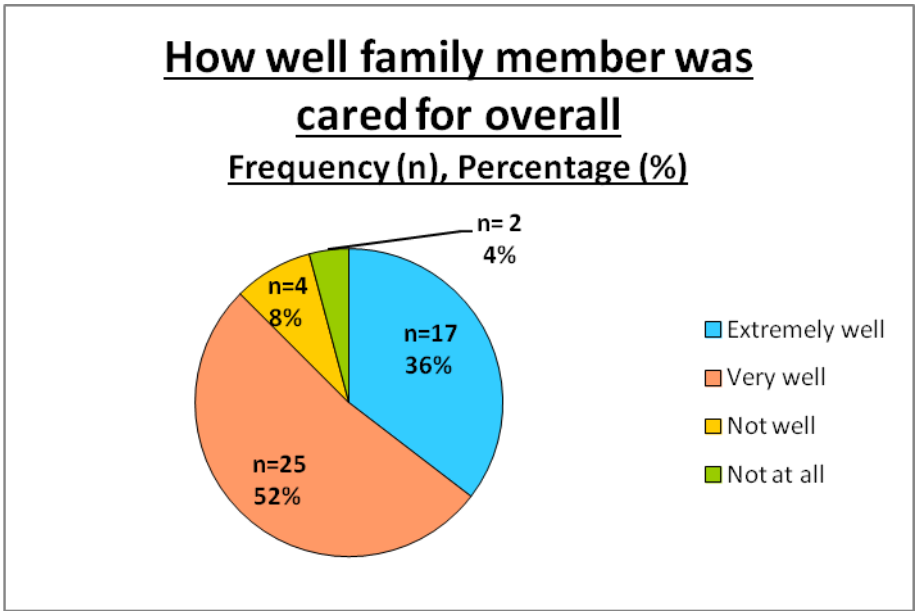


Figure 5.10 How well family member was cared for overall (Frequency and Percentage)

Forty-eight participants responded to this question. Fifty-two percent (n=25) of participants felt that they were cared for very well, while 36% (n=17) expressed that they were cared for extremely well by casualty staff. Eight percent (n=4) of participants felt that overall, they were not well cared for while 4% (n=2) felt not cared for at all.

5.2 Step 2- Thematic Organisation of Analysed Data

5.2.1 Meaning

The following items were assigned to the theme "Meaning":

Table 5.1 Needs statements assigned to the theme "Meaning"

8. To know all the specific facts concerning your relative's progress
9. To know why things were done for your relative
14. To know about the expected outcome of your relative
15. To have questions about the condition of your relative answered honestly
17. To be assured that the best care possible has been given to your relative
29. To be treated as an individual
30. To feel hospital staff care about your relative
35. To feel like there is hope
36. To be told about religious/ spiritual help available

Table 5.2 Cronbach Alpha Item Correlation test results for the theme "Meaning"

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu8	45	+	0.7619	0.6793	0.5917	0.9206
qu9	43	+	0.8013	0.7398	0.5804	0.9171
qu14	44	+	0.8175	0.7563	0.5753	0.9155
qu15	43	+	0.8538	0.8059	0.5659	0.9125
qu17	46	+	0.8575	0.8038	0.5655	0.9124
qu29	42	+	0.7878	0.7164	0.5828	0.9179
qu30	46	+	0.837	0.778	0.5686	0.9134
qu35	45	+	0.7492	0.6623	0.59	0.9201
qu36	40	+	0.6368	0.5299	0.6202	0.9289
Test scale					0.5824	0.9262

The Cronbach Alpha Item Correlation test revealed a strong correlation between items within the theme "Meaning". One Item was removed with the aim to strengthen the correlation

value. Item 36: “To be told about religious/spiritual help available” was removed and the score recalculated:

Table 5.3 Cronbach Alpha Item Correlation test results for the theme “Meaning”

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu8	45	+	0.7443	0.6442	0.6416	0.9261
qu9	43	+	0.8018	0.7346	0.6242	0.9208
qu14	44	+	0.8127	0.7446	0.6193	0.9193
qu15	43	+	0.8469	0.7927	0.6097	0.9162
qu17	46	+	0.882	0.8334	0.5997	0.9129
qu29	42	+	0.7873	0.7111	0.6294	0.9224
qu30	46	+	0.8657	0.8123	0.6042	0.9144
qu35	45	+	0.7674	0.6797	0.6336	0.9237
Test scale					0.6202	0.9289

The removal of Item 36 had minimal effect on the correlation value of the items within the theme and therefore the item was not removed. Item 36: “To be told about religious/spiritual help available” was found to be relevant to the holistic concept of support and therefore the item was not removed.

Table 5.4 Analysis of Need Statements within theme "Meaning"

Ranking	Question	Statement	Total score	Mean score	Mode
1	35	To feel like there is hope	153	3.40	4
2	30	To feel hospital staff care about your relative	153	3.33	4
3	17	To be assured that the best care possible has been given to your relative	149	3.24	4
4	29	To be treated as an individual	129	3.07	4
5	15	To have questions about the condition of your relative answered honestly	130	3.02	4
6	14	To know about the expected outcome of your relative	132	3.00	3
7	9	To know why things were done for your relative	128	2.98	4
8	8	To know all the specific facts concerning your relative's progress	127	2.82	4
9	36	To be told about religious/spiritual help available	90	2.25	1

Of the 9 Needs statements assigned to this theme, the statement with the lowest mean score also produced a mode of 1 indicating that participants found that the satisfaction of these needs were "not met". This needs statement was 36: "To be told about religious/spiritual help available". The needs statement 14: "To know about the expected outcome of your relative" produced a mode of 3 which ranks the satisfaction of the need met; as "well", while the remaining needs statements within this theme produced a mode of 4 which indicates that the satisfaction of the need was "very well" met. The highest mean score was shared between the following two needs statements:

30. To feel hospital staff care about your relative

35. To feel like there is hope

The total score accumulated for this theme was 1191, while the mean score for all needs statements assigned to this theme is 3.01.

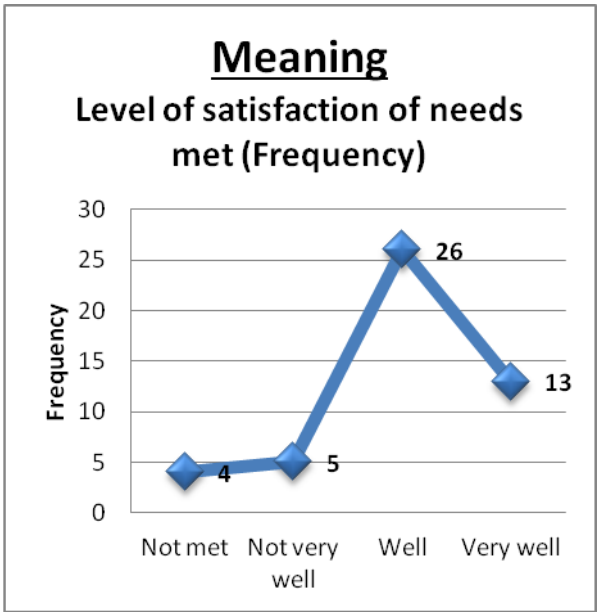


Figure 5.11 Level of satisfaction of met needs met (Frequency)

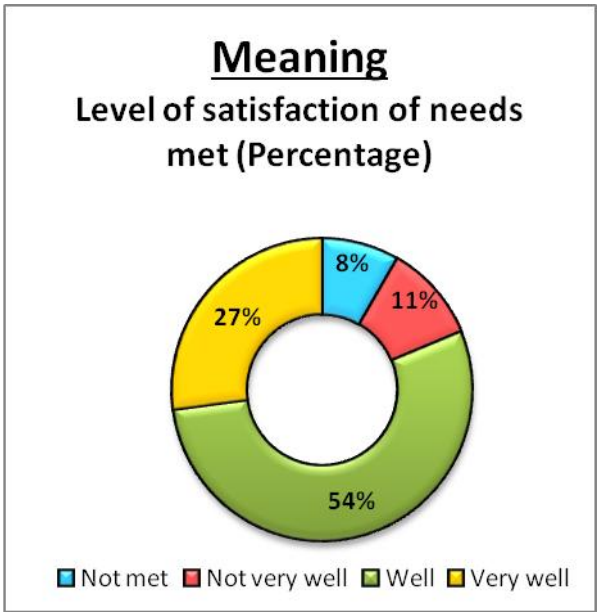


Figure 5.12 Level of satisfaction of needs (percentage)

Fifty-four percent (n=26) of participants ranked the satisfaction of needs related to theme "Meaning" as well met while 27% (n=13) ranked these needs as very well met. Eleven percent (n=5) of the sample population found that these needs were not very well met and 8% (n=4) rated them as not being met at all.

5.2.2 Proximity

The following Items were assigned to the theme “Proximity”:

Table 5.5 Needs statements assigned to the theme “Proximity”

16. To be told about transfer plans while they are made
18. To stay out of the way during your relative's care
19. To see your relative as soon as possible
22. To see what was happening to your relative
23. To be with your relative at any time
27. To have time alone with your relative

Table 5.6 Cronbach Alpha Item Correlation Test results for the theme “Proximity”

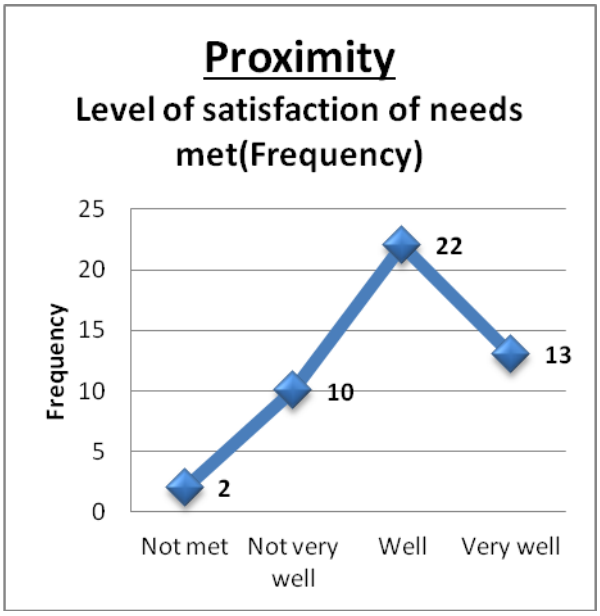
Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu16	39	+	0.7192	0.5844	0.4934	0.8296
qu18	44	+	0.6833	0.5181	0.5259	0.8473
qu19	45	+	0.7712	0.628	0.4775	0.8205
qu22	45	+	0.7647	0.6286	0.4805	0.8222
qu23	44	+	0.8645	0.7783	0.4374	0.7954
qu27	44	+	0.7185	0.5712	0.5009	0.8338
Test scale					0.4861	0.8502

Results of the Cronbach Alpha Item Correlation Test showed that all Items within the theme Proximity had a strong correlation. No Items were removed or replaced.

Table 5.7 Analysis of Need Statements within the theme "Proximity"

Ranking	Question	Statement	Total score	Mean score	Mode
1	19	To see your relative as soon as possible	143	3.18	4
2	27	To have time alone with your relative	135	3.07	4
3	18	To stay out of the way during your relative's care	132	3.00	3
4	23	To be with your relative at any time	125	2.84	4
5	22	To see what was happening to your relative	126	2.80	4
6	16	To be told about transfer plans while they are made	109	2.79	4

Within the theme Proximity, the needs statement 18 "To stay out of the way during your relative's care" produced a mode of 3, indicating the most frequent ranking of the satisfaction of this need as being met "well". The other need statements constituting this theme produced a mode of 4 indicating a level of satisfaction of need met as "very well". The highest scoring item was 19: "To see your relative as soon as possible and the lowest being" 16: "To` be told about transfer plans while they are made". The total score for the theme amounted to 770 and the mean score was 2.9.



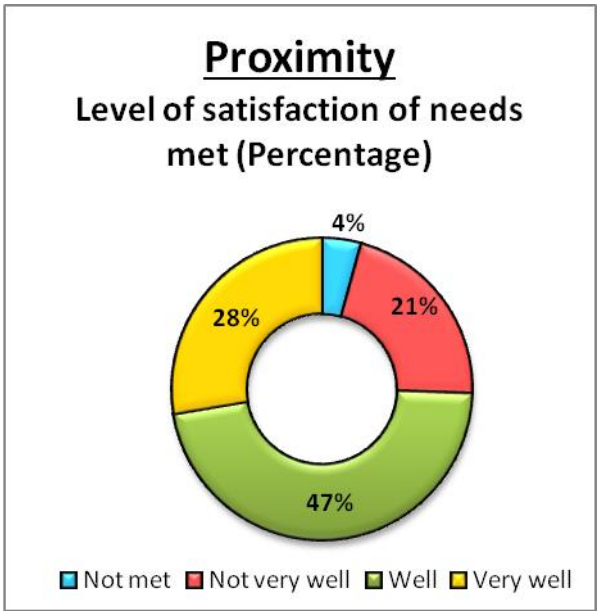


Figure 5.13 Level of satisfaction of met needs met (Frequency)

Figure 5.14 Level of satisfaction of needs (percentage)

Not all participants responded to the statements relating to the theme "Proximity", a total of 47 responses were used. Forty-seven percent (n=22) of participants felt that needs were met well, while 28% (n=13) felt that these needs were met very well. Twenty-one percent (n=10) of the participants ranked these needs as being met "not very well" and 4% (n=2) felt these needs remained unmet.

5.2.3 Communication

The following Items were assigned to the theme “Communication’:

Table 5.8 Needs statements assigned to the theme “Communication”

3. To find out about the condition of your injured relative before being asked to sign papers
6. To have explanations given in understandable terms
7. To be kept updated frequently
10. To be protected from sights or sounds that may be distressing
11. To talk to a doctor
12. To talk to a nurse
13. To know about the level of expertise of staff caring for your relative
25. To feel that you can help with your relative's care
26. To be included when decisions are made
40. To be able to contact staff at a later date to ask questions

Table 5.9 Cronbach Alpha Item Correlation Test results for the theme “Communication”

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu3	45	+	0.5705	0.4113	0.5101	0.9036
qu6	45	+	0.8046	0.7293	0.4662	0.8872
qu7	47	+	0.8164	0.7132	0.4623	0.8855
qu10	43	+	0.6287	0.5292	0.5039	0.9014
qu11	45	+	0.7046	0.6111	0.4861	0.8949
qu12	44	+	0.7488	0.6746	0.4786	0.892
qu13	43	+	0.794	0.7309	0.4696	0.8885
qu25	42	+	0.689	0.5869	0.4904	0.8965
qu26	43	+	0.7816	0.7134	0.4707	0.8889
qu40	37	+	0.7053	0.627	0.4829	0.8937
Test scale					0.4821	0.903

The Item Correlation Test revealed a strong correlation between items within this theme, Item 3. To find out about the condition of your injured relative before being asked to sign papers was removed in order to strengthen the correlation value:

Table 5.10 Cronbach Alpha Item Correlation Test results for the theme "Communication"

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu6	45	+	0.8011	0.6742	0.4944	0.8866
qu7	47	+	0.8394	0.7177	0.4882	0.8841
qu10	43	+	0.6696	0.5714	0.5311	0.9006
qu11	45	+	0.7161	0.6181	0.5184	0.896
qu12	44	+	0.7543	0.6734	0.5101	0.8928
qu13	43	+	0.7896	0.7178	0.5012	0.8894
qu25	42	+	0.6864	0.577	0.5292	0.8999
qu26	43	+	0.79	0.7211	0.5013	0.8894
qu40	37	+	0.7007	0.6169	0.5168	0.8954
Test scale					0.5101	0.9036

After removal of Item 3 it was noted that no significant difference was made to the alpha correlation value which was calculated as 0.9036, therefore all items within this theme were kept for data analysis.

Table 5.11 Analysis of Need Statements within the theme "Communication"

Ranking	Question	Statement	Total score	Mean score	Mode
1	6	To have explanations given in understandable terms	138	3.07	4
2	11	To talk to a doctor	138	3.07	4
3	10	To be protected from sights or sounds that may be distressing	128	2.98	3 & 4
4	12	To talk to a nurse	130	2.95	3
5	25	To feel that you can help with your relative's care	124	2.95	3
6	40	To be able to contact staff at a later date to ask questions	109	2.95	4
7	7	To be kept updated frequently	130	2.77	4
8	13	To know about the level of expertise of staff caring for your relative	118	2.74	3 & 4
9	3	To find out about the condition of your injured relative before being asked to sign papers	121	2.69	3
10	26	To be included when decisions are made	108	2.51	1 & 2 & 4

Items within the theme "Communication" produced modes which varied for each statement from a mode of 1 to 4. This indicates a very mixed response about the level of satisfaction of needs met relating to communication. The Item which accumulated the highest mean score was shared by two Needs statements, being:

6. To have explanations given in understandable terms

11. To talk to a doctor

The lowest mean score given was for Needs Statement 26: "To be included when decisions are made". The total score for the theme 1244 and the mean score was calculated as 2.87

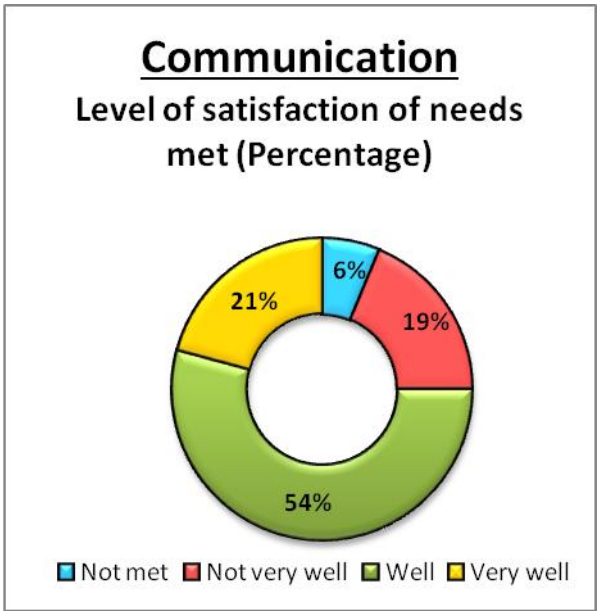


Figure 5.15 Level of satisfaction of met needs met (Frequency)

Figure 5.16 Level of satisfaction of needs (percentage)

Taking into consideration responses to all Needs statements within this theme, it was found that 54% (n=26) of the participants felt that communication needs were met well, while 21% (n= 10) felt that they were met very well. Nineteen percent (n=9) of participants felt that needs assigned to this theme were not well met and 6% (n=3) felt that these needs were not met at all.

5.2.4 Comfort

The following Items were assigned to the theme "Comfort":

Table 5.12 Needs statements assigned to the theme "Comfort"

5. To have a private place to wait
28. To feel accepted by hospital staff
31. To be assured of the comfort of your relative
37. To have food and refreshments nearby
38. To have a telephone in or near the waiting room
39. To have toilet facilities nearby

Table 5.13 Cronbach Alpha Item Correlation Test Results for the theme "Comfort"

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu5	43	+	0.7507	0.6134	0.5009	0.8339
qu28	43	+	0.7865	0.6639	0.4763	0.8197
qu31	42	+	0.807	0.6973	0.464	0.8123
qu37	42	+	0.7185	0.5666	0.5088	0.8382
qu38	40	+	0.7091	0.5568	0.5052	0.8362
qu39	44	+	0.7778	0.6488	0.4764	0.8198
Test scale					0.4887	0.8515

The Cronbach Alpha Item correlation test revealed a good correlation value of 0.8515, indicating the strength of correlation between items within this theme. No items were removed for the data analysis.

Table 5.14 Analysis of Need Statements within the theme "Comfort"

Ranking	Question	Statement	Total score	Mean score	Mode
1	39	To have toilet facilities nearby	147	3.34	4
2	31	To be assured of the comfort of your relative	135	3.21	4
3	28	To feel accepted by hospital staff	134	3.12	4
4	38	To have a telephone in or near the waiting room	108	2.7	4
5	5	To have a private place to wait	111	2.58	4
6	37	To have food and refreshments nearby	106	2.52	1 & 4

Needs statements within the theme Comfort were most frequently ranked as being very well met; hence all needs yielded a mode of 4, with the exception of 37: "To have food and refreshments nearby", which had a dual mode of 1 and 4. A ranking of 1 indicated that participants felt that this need was not met. The needs statement 39: "To have toilet facilities nearby" accrued the highest score and 37: "To have food and refreshments nearby" was

found to have the lowest score. The total score for the theme “Comfort” was 741 and the mean score was 2.91

Figure 5.17 Level of satisfaction of met needs met (Frequency)

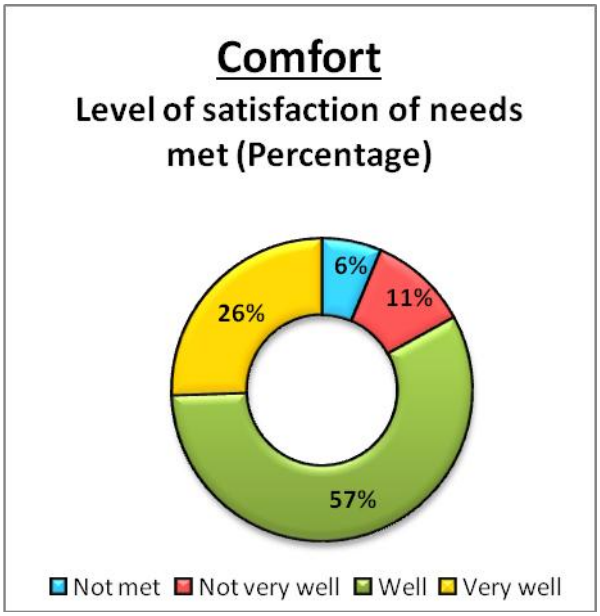


Figure 5.18 Level of satisfaction of needs (percentage)

Fifty-seven percent (n=27) of participants felt that their comfort needs were met well, while 26% (n=12) felt that they were met very well. Of the sample 11% (n=5) felt that these needs were not met very well and 6% (n=3) felt that they were not met at all.

5.2.5 Support

The following Items were assigned to the theme "Support":

Table 5.15 Needs statements assigned to the theme "Support"

1. Have a doctor or nurse meet you on arrival at the hospital
2. To have one person to care for the family
4. To have friends and relatives with you in the trauma casualty department
20. To have explanations about the casualty environment before going in to see your relative for the first time
21. To have a staff member with you while visiting your relative
24. To be given directions regarding what to do at the bedside
32. To be encouraged to express emotions
33. To be reassured about normal emotional responses
34. To share emotions with staff

Table 5.16 Cronbach Alpha Item Correlation Test Results for the theme "Support"

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu1	49	+	0.6663	0.4893	0.4831	0.882
qu2	48	+	0.6886	0.5231	0.472	0.8773
qu4	44	+	0.5255	0.372	0.4898	0.8848
qu20	42	+	0.7798	0.6968	0.4373	0.8615
qu21	44	+	0.7574	0.6674	0.4447	0.865
qu24	41	+	0.7806	0.7033	0.44	0.8627
qu32	41	+	0.8296	0.7639	0.427	0.8564
qu33	39	+	0.7871	0.7151	0.4362	0.8609
qu34	43	+	0.7694	0.6879	0.4382	0.8619
Test scale					0.4519	0.8812

The Cronbach Alpha Item Correlation Test revealed a strong alpha value of 0.8812, however by removing item 4: "To have friends and relatives with you in the trauma casualty department", a stronger correlation value was calculated:

Table 5.17 Cronbach Alpha Item Correlation Test Results for the theme "Support"

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu1	49	+	0.685	0.5429	0.5382	0.8908
qu2	48	+	0.7022	0.5698	0.5244	0.8853
qu20	42	+	0.7872	0.6986	0.4775	0.8648
qu21	44	+	0.738	0.6324	0.4961	0.8733
qu24	41	+	0.8	0.7204	0.4794	0.8657
qu32	41	+	0.849	0.7776	0.4614	0.8571
qu33	39	+	0.8195	0.7494	0.4706	0.8615
qu34	43	+	0.8003	0.7179	0.473	0.8627
Test scale					0.4898	0.8848

Item 2: "To have one person to care for the family" was also removed in order to generate a stronger correlation value and the score was recalculated as follows:

Table 5.18 Cronbach Alpha Item Correlation Test Results for the theme "Support"

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu1	49	+	0.7062	0.4255	0.6038	0.9014
qu20	42	+	0.7949	0.6991	0.5136	0.8637
qu21	44	+	0.7563	0.6432	0.5342	0.8731
qu24	41	+	0.7998	0.71	0.5177	0.8656
qu32	41	+	0.8587	0.7764	0.4917	0.853
qu33	39	+	0.8274	0.7502	0.5041	0.8591
qu34	43	+	0.8087	0.7184	0.5079	0.861
Test scale					0.5244	0.8853

Item 1: "Have a doctor or nurse meet you on arrival at the hospital" was the final Item removed in order to strengthen the Alpha value:

Table 5.19 Cronbach Alpha Item Correlation Test Results for the theme "Support"

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	Alpha
qu20	42	+	0.7714	0.6517	0.6296	0.8947
qu21	44	+	0.7545	0.6273	0.6457	0.9011
qu24	41	+	0.8266	0.7368	0.5984	0.8817
qu32	41	+	0.8852	0.7938	0.5646	0.8664
qu33	39	+	0.853	0.7774	0.5847	0.8756
qu34	43	+	0.8173	0.718	0.6009	0.8827
Test scale					0.6038	0.9014

Removal of the three items did not prove to make a significant difference to the alpha values and the original alpha value of 0.8812 was accepted, therefore no items were removed from this theme.

Table 5.20 Analysis of Need Statements within the theme "Support"

Ranking	Question	Statement	Total score	Mean score	Mode
1	1	Have a doctor or nurse meet you on arrival at the hospital	151	3.08	3 & 4
2	32	To be encouraged to express emotions	115	2.8	4
3	4	To have friends and relatives with you in the trauma casualty department	122	2.77	4
4	34	To share emotions with staff	119	2.77	4
5	2	To have one person to care for the family	131	2.73	3
6	21	To have a staff member with you while visiting your relative	120	2.73	4
7	24	To be given directions regarding what to do at the bedside	108	2.63	3
8	33	To be reassured about normal emotional responses	102	2.62	4
9	20	To have explanations about the casualty environment before going in to see your relative for the first time	103	2.45	3

Items assigned to theme support yielded modes varying between 3 and 4, indicating that the needs statements were most frequently ranked as either being met "well" or "very well". The Need statement surmounting the highest mean score was 1: "Have a doctor or nurse meet you on arrival at the hospital". The lowest score was calculated for the needs statement 20: "To have explanations about the casualty environment before going in to see your relative for the first time". The total score for this theme amounted to 1071 and the mean score was 2.73.

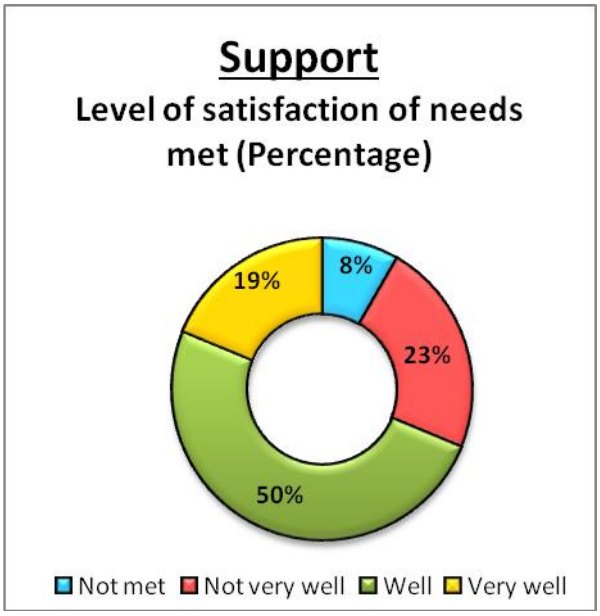


Figure 5.19 Level of satisfaction of met needs met (Frequency)

Figure 5.20 Level of satisfaction of needs (percentage)

Of the 50 participants, 50% (n=24) of the population felt that Support needs were met well, while the second largest portion of the population accounted for 23% (n=11) of participants who felt that these needs were not met well. Nineteen percent (n=9) of the population felt that these needs were met well and 8% (n=4) felt that they were not met at all.

5.3 Overview of Results for CCFNI-2

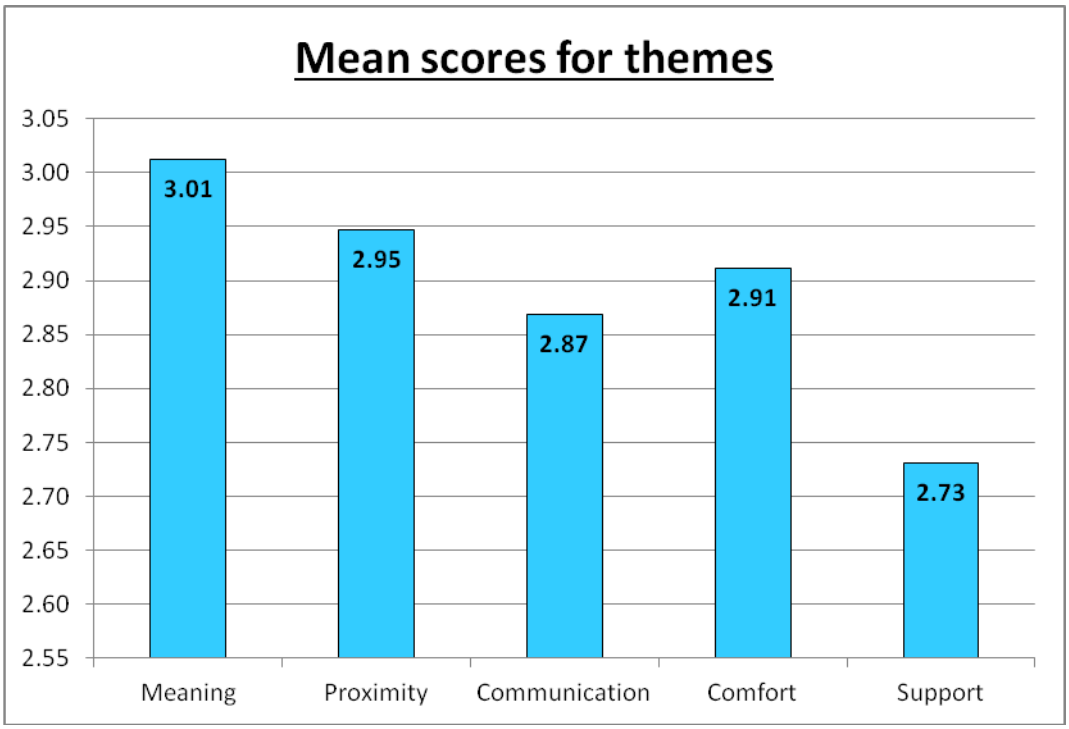


Figure 5.21 Overview of results for themes of CCFNI-2

The theme with the highest mean score was found to be Meaning. The lowest scoring theme was support. Differences between the mean score for the top three themes were below 1

Table 5.21 Top ten ranked needs statements CCFNI-2

Ranking	Question	Statement	Total score	Mean score	Mode	Theme
1	35	To feel like there is hope	153	3.40	4	Meaning
2	39	To have toilet facilities nearby	147	3.34	4	Comfort
3	30	To feel hospital staff care about your relative	153	3.33	4	Meaning
4	17	To be assured that the best care possible has been given to your relative	149	3.24	4	Meaning
5	31	To be assured of the comfort of your relative	135	3.21	4	Comfort
6	19	To see your relative as soon as possible	143	3.18	4	Proximity
7	28	To feel accepted by hospital staff	134	3.12	4	Comfort
8	1	Have a doctor or nurse meet you on arrival at the hospital	151	3.08	3 & 4	Support
9	29	To be treated as an individual	129	3.07	4	Meaning
10	27	To have time alone with your relative	135	3.07	4	Proximity

The highest ranking needs statement was “35. To feel like there is hope”. Needs statements in top ten ranking were derived from the themes “Meaning”, “Comfort”, “Proximity”, and “Support”. No needs statements from the theme “Communication” made it to the top ten needs ranking.

5.4 Step 3- Content Analysis of Open ended questions

CCFNI- 2 included three open ended questions. Question 45 asked participants to comment on any **helpful** behaviours displayed by trauma casualty staff and question 46 asked participants to comment on any **unhelpful** behaviours displayed by trauma casualty staff. Question 47 asked participants for any other **comments in general**. This questionnaire was given to family members after arrival in trauma casualty and therefore takes into account a prolonged experience of the participants with staff in trauma casualty. The participants' responses were analysed using content analysis. The following categories emerged from the data taken from CCFNI- 1 and CCFNI- 2:

Categories emerging from the data include the following:

- Communication
- Proximity
- Time taken to be attended to
- Friendliness and gestures of caring
- Professionalism
- Treatment of the patient
- Equality
- Physical needs of the participants

Results will be presented per question before further discussion into each category. The existence and recurrence of statements belonging to each category was counted and the statement classified as positive or negative. A positive statement refers to a comment that

commented positively on the behavior of the trauma casualty staff in relation to this category, while negative refers to a comment denoting displeasure of the participant with the behavior of the trauma casualty staff.

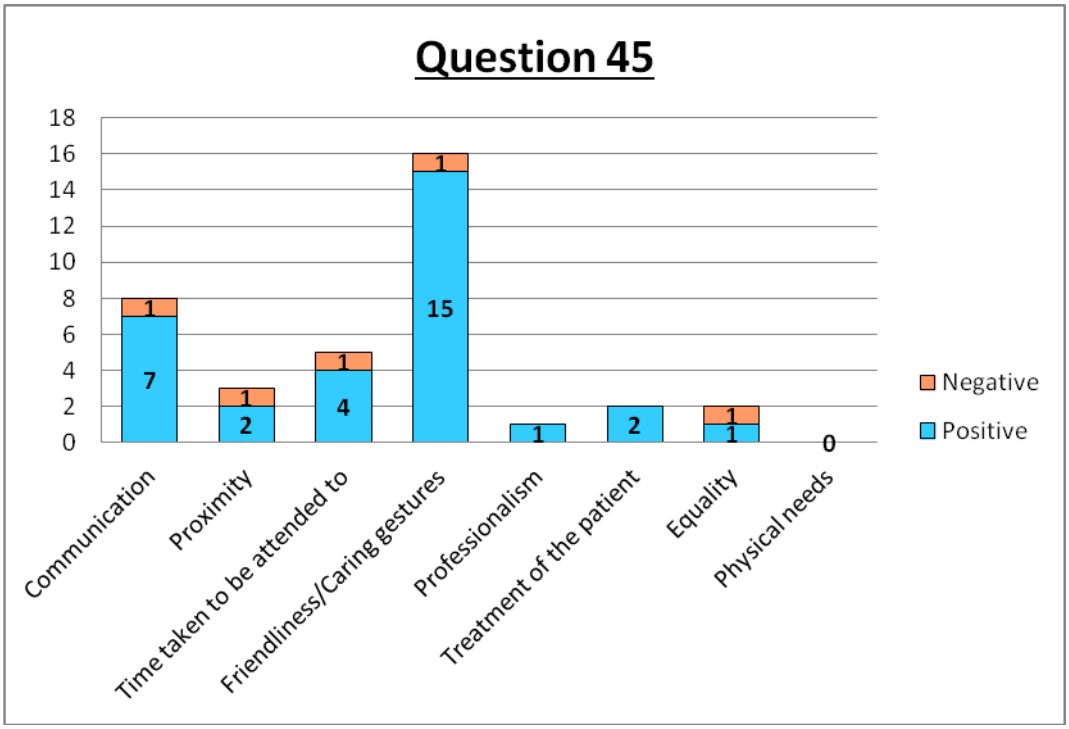


Figure 5.22 Responses to Question 45 "Helpful behaviour of trauma casualty staff"

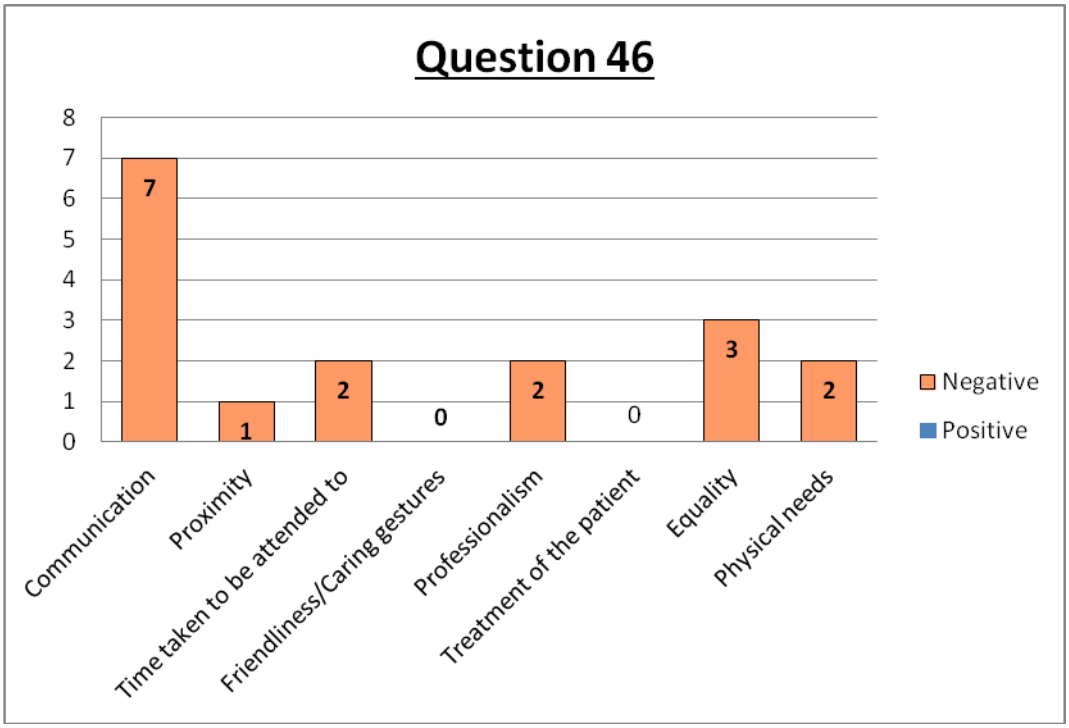


Figure 5.23 Responses to Question 46 "Unhelpful behaviour of trauma casualty staff"

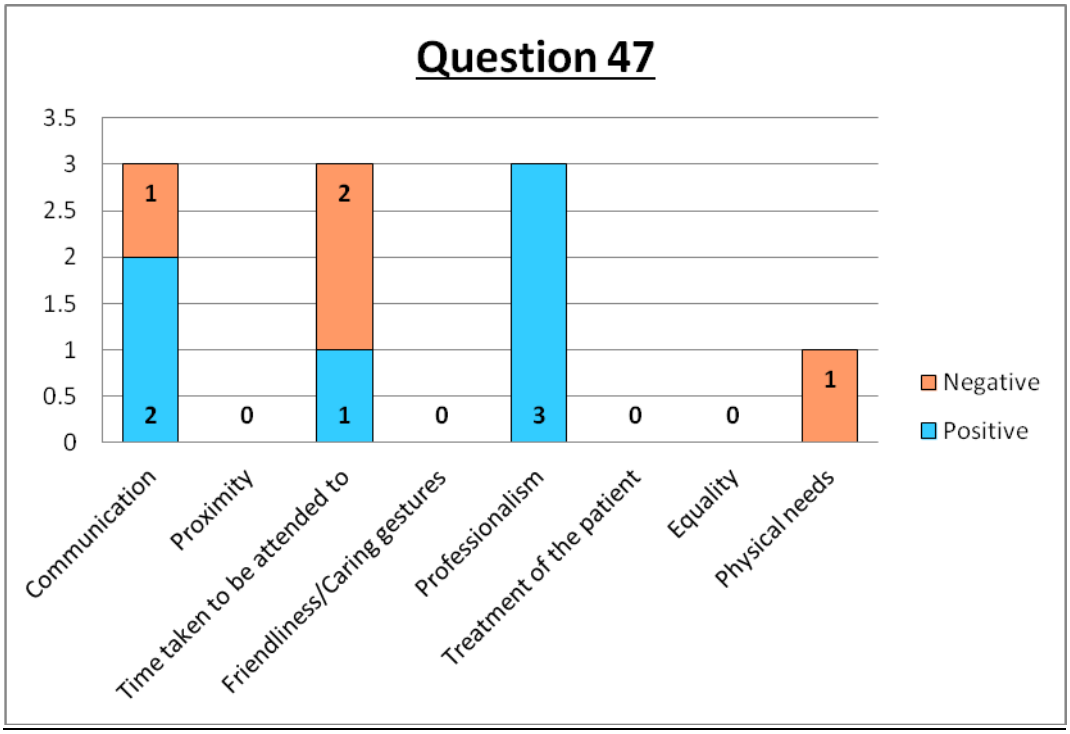


Figure 5.24 Responses to question 47 "General Comments"

Communication

In response to question 45, 8 comments were related to communication of which 7 were positive and 1 was negative. A positive comment included: "*Doctors were helpful in explaining my brothers condition as well as explaining what following steps are"*; while one participant responded negatively stating that *"nothing was explained to us and scan results took eight and a half hours to come, was not told the results".*

For Question 46, 7 of the comments were related to communication, of which all comments were negative, an example of this is seen in the comments which highlight the "*Lack of communication"* as stated by one participant.

Three responses in question 47 were related to communication of which two were positive and one was negative. One positive response included praise of telephonic communication: "*Phoning in to find out where my brother was, was excellent, they need to be told"* as well as general communication comments which displayed satisfaction with how nurses *"explained well and told where patient would go after surgery"*. One participant commented negatively stating that she was still hoping to be told about the condition of his/her relative: "*Hope I would be told how injured is she".*

Proximity

Proximity refers to the accessibility of the participants to their injured relative. For question 45, there were 3 comments relating to proximity, of the three comments, 2 were positive comments about having the accessibility to see their relative immediately, one of which were *"They do allow the family to speak to the patient".*

One comment was negative displaying frustration of the participant about not being able to see their injured relative: *"My son is injured and I'm not allowed to be with him during trauma, it was not busy at the casualty but we were told to sit outside".*

One response to question 46 was a negative comment relating to proximity where the family member expressed unhappiness with having "*to stay outside while waiting"* and none of the responses in question 47 related to proximity.

Time taken to be attended to

Four participants commented positively on the time taken to be attended to in question 45. An example of the positive response to this question regarding time taken to be attended to is seen in the comment affirming the staffs "quick attention to the patients". One participant commented negatively however stated that the prolonged time was made easier to bear by the friendliness of the nurse: "*After this long time waiting I was attended nicely with a nurse"*.

Two participants responded negatively in question 46, one of which stated *that "Patients wait for the doctors for a long time"*.

Responses to question 47 included 2 negative comments and 1 positive comment. An example of the negative comment can be seen in one patient's request: "*Please try to see people fast when they come with a big problem".* A positive affirmation is seen in the comment: "*well organised, helpful, **fast**, caring".*

Friendliness/Caring Gestures

Friendliness or caring gestures such as smiles and welcoming attitudes were included in this category. This category was commented on by 16 participants in question 46. 15 of the comments in question 46 were positive, and 1 was negative, implying the participant's

satisfaction with the friendliness of the trauma casualty staff. One participant commented that: "*They were all helpful and very much caring",* while another commented negatively stating that "*No helpful behaviours shown since we arrived".*

Professionalism

Professionalism was mentioned positively by 1 participant responding to question 45: "*Good public attendance"*. Two negative responses were noted in question 46, one of which were: "*We understand this department is the most stressful department but I think some of the casualty staff members have to go for customer service and trauma training or they must forget about their calling and passion"*.

Three positive comments were noted in question 47, and an example of this is: *"I got excellent service"*.

Treatment of the patient

Two participants responding to question 45 commented on the significance of seeing that their injured relative was being treated by trauma casualty staff. Participants commented that behaviours such as *"Cleaning wound"* and "*Checking Blood pressure*" were helpful. No comments relating to the treatment of the patient were included in question 46 and 47.

Equality

Included in the responses to question 45, was one participant's positive comment on the equality of treatment between patients from trauma casualty staff: "*I noticed equal care for all patients"*; and one negative comment: "*we were treated as outlaws in our own country"*. Three negative comments were made in response to question 46, one of which commented that there was "*no spirit of ubuntu*" and another related discrimination based on nationality

commented about "*being told by the administration officers that I am a foreigner of which I know and I don't want anyone to remind me of that, it feels like foreigners are less human beings"*. No comments were made regarding equality in question 47.

Physical Needs of Family Members

There were no comments in question 45 regarding the physical needs of family members. Two participants in response to question 46 considered having "*No water"* as unhelpful, while one commented, in response to question 47, on having "*No toilet paper, waiting area too small".*

5.5 Discussion of Results CCFNI-2

The second objective of this study was to determine whether the needs of family members accompanying patients into trauma casualty were being met.

This was achieved by using the CCFNI-2, and asking participants to rank needs statements according to how well each need was met. Needs statements were assigned to five major themes, namely Meaning, Proximity, Communication, Comfort and Support.

The sample consisted of 50 participants. Of the sample, 61% were female, while 39% were males. Literature states that victims of traumatic injuries are more likely to be male, (Williams, Williams, Stein, Seedat, Jackson, & Moomal, 2007) and therefore to add to this knowledge the findings of this research assumes that they are likely to be accompanied by females of a similar age. The most frequent age range of participants was 26-35 years of age.

Time spent in trauma casualty ranged from less than an hour to as many as 72 hours. The length of stay in casualty tends to decrease the level of satisfaction of care overall (Taylor & Benger, 2004).

Participants who completed CCFNI-2 were given the questionnaire before leaving the trauma casualty area, after having seen their relative and having had some encounter with trauma casualty staff.

5.5.1 Meaning:

Needs related to the theme “Meaning” achieved the most satisfaction (mean score= 3.01). Family members expressed that the need to feel like there is hope was met very well (mean score= 3.40). Assurance about the care of the relative; which achieved a mean score of 3.24, was considered to be a well-met need. The meeting of these needs have great influence on the

experience of the family and their ability to cope with the sudden crisis (Redley & Beanland, 2004). Trauma casualty staff have therefore offered meaning to the family in crisis and enabled them to better deal with the sudden disruption of their family unit.

5.5.2 Proximity

The second theme with the next highest ranking of satisfaction was proximity. Family members were satisfied with their access to see their relative and to have been given time alone with their injured relative. The findings of the open-ended questions echoed this sentiment (Positive comments about the accessibility of family members to the injured relatives). ICU studies found a high level of satisfaction for this theme too, and it was found to be related to having an open-visiting policy (Karlsson, Tisell, Engstrom & Andershed, 2011).

In this setting, there are no specific visiting hours, but short visits are allowed by staff at any time as per discretion of the trauma casualty staff. Although liberal visiting policies are being promoted by research, it was found that four concepts were important in establishing limits that benefit the patients (Cook, 2006). These concepts included consistency, communication, continuing education and evaluation, and should be considered when developing visiting policies (Cook, 2006). Nurses have been identified as being important in the development of these policies and should take an active role in their implementation (Cook, 2006).

5.2.3 Comfort

Comfort needs were the third-highest ranking needs (mean score= 2.91). Having nearby toilet facilities (mean score= 3.34) brought great satisfaction to the comfort of family members. The families' needs to be assured of the comfort of their relative (mean score= 3.21) and to be accepted by hospital staff (mean score= 3.12) was well met, while having a telephone

(mean score= 2.7), food and refreshments (mean score= 2.52), and privacy (mean score= 2.58) were not found to have high satisfaction levels.

Although literature has shown that comfort-needs were not highly ranked, they still contribute to the experience of family members and play a role in their overall satisfaction with care received (Verhaege, Defloor, Van Zuuren, Duijntee & Grypdonck, 2003). Findings to open-ended questions echoed satisfaction of physical needs which may be categorised under the theme "Comfort".

5.2.4 Communication

A concerning finding of this study was the level of satisfaction of needs related to "Communication". The importance of this theme was/has been repeated in literature (Redley & Beanland, 2004) and the findings of this study and yet it ranked fourth (mean score= 2.87) out of the five themes in terms of meeting those needs. Family members ranked the same need as well provided for in the ICU setting (Karlsson, Tisell, Engstrom & Andershed, 2011), while in the emergency department these needs were not always met (Redley, Beanland & Botti, 2003).

These findings were corroborated by the findings of the open-ended questions. Mixed responses about communication were found in the questions 45, 46 and 47. Responses included positive remarks as well as complaints about the sense of humour of staff. A review of the literature by Redley & Beanland (2004) reiterated the importance of caring, accurate and honest information, as well as appropriate humour.

The level of satisfaction of needs met regarding communication has been shown to have an effect on family members' general satisfaction of care rendered by health professionals, as

was found in a study which focused on the needs of family members of relatives receiving end of life care in an ICU setting (Heyland, Allan, Rooker, Dodek, Pighara & Gafni, 2009)

There is a large gap in care provided, which has been exposed in these findings. Nurses tend to underestimate the importance of this need and their role in providing for it (Kinrade, Jackson & Tomnay, 2009). This role needs to be emphasised, and it has been highlighted in the findings of this study.

5.2.5 Support

The needs with the least level of recorded satisfaction belonged to the theme "Support" which accumulated a mean score of 2.73. Although, family members were satisfied with being met on arrival by a nurse or doctor, the support from staff during the visits of relatives and while waiting was not considered well met needs. Social support from family and friends is often restricted as within the casualty department and therefore satisfaction was low. The presence of nurses and the support derived from nurses has been emphasised and said to increase the overall satisfaction of family members with the care provided by a health facility (Redley & Beanland, 2004). Family members have expressed their need to form high quality relationships with the health professionals caring for their loved ones in an ICU setting (Curtis, Patrick, Shannon & Treece, 2001) and although this theme is not highly ranked, it forms part of the overall experience of the family member accompanying a patient into trauma casualty (Redley & Beanland, 2004).. Therefore the lack of support underlined in these findings is of great concern.

5.5.6 Open-ended questions

Mixed feelings about the time taken to be attended to were found. Generally, family members found staff to be friendly and displaying professional behaviour. They expressed their

satisfaction with the care they received from trauma casualty staff. Many of the responses to the open ended questions expressed positive comments about the general care rendered in trauma casualty.

The category "Equality" was highlighted by family members. Dissatisfaction for the equality of care they perceived was expressed. Issues regarding nationality were highlighted by participants. The mixed responses related to this category showed some participants satisfaction with equality of care while others felt that they were discriminated against based on their nationality. Xenophobia as well as racism are unique issues in the context of South Africa, and its effects on the delivery of health care have not been extensively in an attempt to contextualise the role of the Health Care professional practicing in South Africa.

5.6 Conclusion

This chapter sought to expound on the results of questionnaire CCFNI-2 and to determine the level of satisfaction of family members accompanying patients into trauma casualty, with needs met by the trauma casualty staff. Descriptive statistics were be used to describe the findings of the questionnaire and data were presented according to themes. The major findings underlined that the need most well met were those relating to the theme Meaning. This is an important need as found in this study and surrounding literature and trauma casualty staff can be commended for their contribution to the experience of family members. Overall, family members felt that they were cared for well by the trauma casualty staff. However, a concerning issue remains that of communication which was shown by participant's responses to have poor satisfaction levels. A pressing need for communication has been identified and this must be emphasised in the role of the emergency nurse in trauma casualty. Equality has been a unique expressed need of family members in this study. Race and nationality have been acknowledged as factors affecting the delivery of care from health

professionals; and therefore the satisfaction of family members with the care received. Further research into this area would add to the uniqueness of the role of the South African Emergency nurse.

CHAPTER SIX

SUMMARY AND CONCLUSION

6.0 Introduction

This chapter will present the conclusions of the study, followed by a discussion of the limitations. The implications for clinical practice, nursing education and areas of further research recommendations will be presented.

6.1 Summary of the Study

The purpose of this study was to determine the needs of family members accompanying patients into trauma casualty in order of importance as perceived by them, and to determine if these are being met. The identification of needs will inform the role of the emergency nurse with regard to holistic nursing care which involves care of the family of the patient. The Research questions posed in the study were:

- What are the needs of family members accompanying patients into Trauma casualty, in order of importance, as perceived by them?
- According to the families accompanying patients into Trauma casualty, using a self administered questionnaire, are their needs being met?

The first research objective was to determine the needs of family members accompanying patients into trauma casualty in order of most important to least using the "Critical Care Family Needs Inventory Assessment Instrument Part One". Secondly, to administer a separate questionnaire (Critical Care Family Needs Inventory Assessment Instrument Part Two) to determine if the needs of family members who had accompanied a patient into the

trauma unit / casualty area were, according to the family, met. This will aid in informing the role of emergency nurses in the care of the family in a trauma casualty setting.

6.2 Main Findings

Two self-administered questionnaires were administered to two separate sample sets. The first questionnaire asked participants to rank needs statements according to importance. Needs statements were assigned to five major themes, namely, Meaning, Proximity, Communication, Comfort, and Support. Needs related to Meaning were ranked as most important. The need to derive meaning from the crisis situation that families find themselves in when a relative is injured has been highlighted as a means of developing an ability to cope with the anxiety and stress of the crisis (Redley, Beanland & Botti, 2003). Highly ranked needs in this theme included the need for honest information, as well as the need to feel that there is hope and to be assured of the best care for their injured relative. Traumatic injuries in South Africa are often related to violence as indicated by researchers Norman Matzopoulos, Groenewald & Bradshaw (2007); and this sudden calamity within the family can produce much anxiety, which can be lessened by the care of Trauma Casualty staff. In particular, the findings of this study have emphasised the role of the Emergency nurse in caring for the family and assisting in bringing meaning to the family's experience. The second most important theme ranked by family members was communication. Unique to this study was the ranking of the need to talk to a nurse. Families ranked this as the most important communication need, this was ranked above the need to talk to a doctor. In the "Communication" theme, family members expressed the need to talk to a nurse, to be given explanations in understandable terms and to be kept updated frequently as highly important needs. The next most important need was that of Proximity. Family members desire to be able to see their injured relative. The Trauma Casualty department used for the purpose of

this study made use of an open visiting policy with no fixed visiting times, however family members are restricted to short visits at a time. Literature has shown that units with open visiting policies derived a higher level of satisfaction from family members with regard to proximity (Cook, 2006). Needs related to Comfort and Support were not ranked as highly important, however, the focus on the need for support from doctors and nurses as well as other family and friends was noted.

The second questionnaire was used to determine the level of satisfaction for needs met, ranked by family members accompanying patients into Trauma Casualty. The needs that were met with the most satisfaction were found to belong to the theme Meaning. This is a positive finding. Meaning increases the family's ability to cope with the stressful situation (Redley, Beanland & Botti, 2003). Proximity was ranked as second among the five themes in terms of satisfaction of needs met. Families were satisfied with their accessibility to their injured relative. Although, unique to this setting was the ranking of importance of family members to know about transfer plans of their injured relative. The context of this study may lend some explanation to this finding. The setting of the study is a Level 1 Trauma Facility with a high number of admissions and high number of transfers to step-down facilities. The area surrounding the Hospital is urban and populated with many illegal and legal immigrants who would be brought to this particular department in cases of emergency. The fear of not knowing where a relative is being taken is evident in the emphasis placed on this need. Family members who may not know the area or are bound by language barriers may fear losing track of their injured relative, and therefore this need was emphasised as important by family members.

A concerning finding from the results of this questionnaire was the lack of satisfaction with needs related to communication. Family members expressed their dissatisfaction using the

ranking of the needs statements, as well as in the open ended questions. Family members expressed their frustration with having little or no explanation about the condition of the patient or what to expect while waiting to see their injured relative. Being updated frequently, and being included when decisions about their injured relative, were of the lowest ranking needs statements with regard to satisfaction of needs met.

From the categories that emerged from the open ended questions of both questionnaires, two were highlighted as important for future research and important for the needs of family members accompanying injured relatives into Trauma Casualty. The time spent in trauma casualty was significantly more than international studies which ranged from 1-36 hours (Redley, Beanland & Botti, 2003). In this study it can therefore be assumed to have a large influence on the level of satisfaction of care, as literature has found that the longer an injured relative is kept in trauma casualty; the more negative the experience becomes (Taylor & Benger, 2004).

Equality has emerged as a unique category, relevant to the context of the study setting. Family members desire to be treated equally, regardless of race and nationality. This is of particular importance to the South African context, where history has shown equality to be a source of conflict and contention. The South African nurse as well as the public (the patient and the family) will have either directly or indirectly been affected by the apartheid regime and more currently the influx of immigrants and the rise of xenophobia within the country.

The setting of the study is a metropolitan and is situated adjacent to an area that has been populated by immigrants, both legal and illegal. As a result, many patients admitted to this trauma casualty potentially have a restricted ability to communicate in English or any of the other 11 official languages of South Africa. This creates a major barrier to effective communication. Anxiety about admission requirements and identification documents add to

the stress of foreign injured patients as well as their family members. The responses of participants relating to discrimination based on nationality suggest a possible resentment from staff members when treating foreign patients.

This hospital in particular is situated in an area previously demarcated by the Group Areas Act as reserved for "whites only" (Group Areas Act 41 of 1950). This act was repealed in 1991, and although access to health care is now free and equal to all races, undertones of racism and conflict may still be found. An encouraging finding of this study, however, was the positive remarks about equality of care with regard to race. This is an affirmation of the growth of Post Apartheid South Africa.

These matters have surfaced in the expressed needs of patients and therefore cannot be ignored. Nurses need to become aware of their own personal difficulties related to these issues, as well the implications for patients and their families as emphasised by Swedish researcher Saveman (2010) who identified nurses own beliefs as a hindrance to embracing family centred care. Some Tertiary Training institutions in South Africa oblige graduating nurses to swear the "Hippocratic Oath" as well as the "Nurse's Pledge of Service". Both of these oaths bind the nurse to a commitment to care for patients regardless of race or nationality and within the South African context this has great significance, and should perhaps be re-emphasised in teaching.

6.3 Limitations of the Study

Limitations of the study included the sample size. The minimum sample requirement was achieved, however due to the size of the sample; findings are not necessarily applicable to the total population. The questionnaire did not include demographics such as education, culture, nationality and preferred language. These demographics would have enriched the findings

and correlations could have increased understanding of the needs of family members accompanying injured relatives into Trauma Casualty.

This study's inclusion criteria for family members included the ability to speak and understand English; however, due to the diversity of the family members and the context of the setting, this may have been a limitation for family members whose first language is not English.

6.4 Recommendations

Trauma and Emergency nursing is a developing speciality and the roles of the Emergency nurse are still being defined. The holistic care of the patient and family have been identified as a vital part of that role. Families in this study have highlighted their need to communicate with and find support from nurse and this should be emphasised in the definition of the Emergency nurse.

6.4.1 Implications for Clinical Practice

The findings of this study have important implications for the clinical practice of the emergency nurse. From its history, trauma and emergency nursing has had its focus on the patient in the emergency room. This focus is evolving and needs to include the important aspect of caring for families of patients admitted into trauma casualty (Cypress, 2013). The role of the nurse in communication has been emphasised and needs to be realised in practice. Family members have expressed their need for support and communication from the nurse, who in turn must become holistic in practice, taking into consideration the family in crisis. Lessons learned from research in the ICU setting have proved useful in defining the role of the emergency nurse. Research has suggested the use of scheduled family conferences in the ICU setting with an emphasis on the role of nurses in facilitating these conferences (Curtis,

Patrick, Shannon & Treece, 2001). These practices may assist in meeting the needs of family members for communication. Trends in Intensive Care nursing have also highlighted the need to care for families of patients as a part of holistic nursing care, and the role of the emergency nurse needs to broaden beyond the injured patient (Roets, Rowe-Rowe, Nel, 2012). The burden of crime and traumatic injuries in South Africa is heavy as stated by Hardcastle, Samuels & Muckart, (2013) and emergency nurses may become overwhelmed by the influx of patients (Brysiewicz, Bruce, 2008). However, there is a call for emergency nurses to become holistic in their practice.

Having celebrated 20 years of democracy, equality should be a term embraced by all health care professionals. However issues of discrimination based on race and nationality are of great concern in post-apartheid South Africa and the equality of patients should be reflected in the care of all Professional Nurses.

6.4.2 Recommendations for Nursing Education

The curriculum for specialist emergency nurses should have holistic practice at its core. The use of the synergy model which emphasises holistic care should be encouraged and educationalists are urged to move from a clinical focus to a holistic patient and family focus. Developing mature emergency nurses who are able to assess and care for the needs of families in crisis will enrich the specialty in a country where Trauma and Emergency services has become a growing need. Literature has highlighted that there is a need for the training of nurses to equip them in for dealing with families in crisis (Shaw, Davidson, Smilde, Sondoozi, Agan, 2014). This has been advocated for as far back as 1993 in a study conducted by Tye (1993) which highlighted that nurses felt inadequate to deal with the expectations of families in crisis, and emphasises that the role belongs to both the doctors as well as the

nurses. The synergy model seeks to develop a situation where the knowledge, skills and experience, and attitudes of a nurse meet the needs of a patient who is viewed holistically within a social context (Reed, Cline & Kerfoot, 2007)

The Synergy model provides a framework for the curricula of advanced nursing practitioners and gives nurse educators a model for developing competent, holistic nurse practitioners in a specialised field (Kaplow & Reed, 2008). A recent South African study proposed the Synergy model as a framework for improving the holistic care of patients and their families in the emergency department (Cypress, 2013). The study explored the lived experiences of patients, their families as well as the nurses working in the emergency department. The findings emphasised the need to recognise the family and important participants in the patients care, and proposed the Synergy model as a means to improve nurse's competencies in meeting the holistic needs of the patient and family (Cypress, 2013).

6.4.3 Recommendations for further research

The findings of this study point to issues relevant to South Africa such as equality. Issues regarding race, culture and nationality are contemporary for the Emergency nurse and research in these areas will equip the emergency nurse to deal with families in a diverse setting. Another pressing issue identified in this study was the paucity of communication between Trauma casualty staff and family members. Perceptions of nurses regarding their role in communication with the family is an area worth exploring in order to understand the reasoning behind this matter, before interventions can be suggested.

This study did not take into consideration family members with critically ill relatives, and end of life care is becoming a growing part of the services offered in the casualty setting (Bailey, Murphy & Porock, 2011). Exploring the needs of family members with regard to end of life

care given in the trauma casualty department may provide richness to the body of knowledge that will be used to define and expand the role of the emergency nurse.

6.5 Conclusion

In conclusion, this study has highlighted the needs of family members accompanying injured relatives into Trauma Casualty in order of importance. The findings also explored the level of satisfaction of needs met and identified issues of concern regarding the care of families. This study has set the platform for the development of holistic Trauma and Emergency Nursing in South Africa. Knowledge obtained from this study may be disseminated and may prove useful for emergency nurses to become aware of their role in meeting the needs of family members accompanying injured patients into Trauma Casualty.

Reference List

Atwoli, L., Stein, D., Williams, R., Mclaughlin, K., Petukhova, M., Kessler, C., Koenen, K. 2013 *Trauma and posttraumatic stress disorder in South Africa: analysis from the South African Stress and Health Study.* Biomed Central Psychiatry, Vol 13 pg 1-12

Bailey, C., Murphy, R. & Porock, D., 2011. *Trajectories of End-of-Life Care in the Emergency Department.* Annals of Emergency Medicine. Vol 57:4, pg 362-369

Benzein,E., Johansson, P., Årestedt, K., Berg, A., Saveman, B., 2008 *Families' Importance in Nursing Care: Nurses' Attitudes-An Instrument Development.* Journal of Family Nursing, Vol.14, pg 97-116

Burns, N. & Grove, S., 2005. *The Practice of Nursing Research: Conduct, Critique, and Utilisation Fifth Edition.* Missouri: Elsevier.

Brysiewicz, P., Bruce, J., 2008 *Emergency Nursing in South Africa.* International Emergency Nursing Vol. 16, pg 127–131

Brysiewicz, P., 2001 *Trauma in South Africa.* International. Journal of Trauma Nursing, Vol.7 pg 129-132

Cardona, V. Hurn,P., Mason, B., Scanlon, S. & Veise-Berry, S., 1994. *Trauma Nusring: From Resuscitation Through Rehabilitation Second Edition.* Philadelphia: W.B Saunders Company.

Carlson, K., 2009. *AACN Advanced Critical Care Nursing.* Missouri: Elsevier.

Collins English Dictionary - Complete & Unabridged 10th Edition. Retrieved May 09, 2014, from Dictionary.com website:http://dictionary.reference.com/browse/significant other

Cook, D., 2006. *Open Visiting: Does this Benefit Adult Patients in Intensive Care Units.* MSC: Dissertation Otago Polytech, New Zealand.

Curtis, R., Patrick, D., Shannon, S., Treece, P., Engelberg, A. & Rubenfield, G., 2001. *Family Conference as a Focus to Improve Communication about End-of-Life Care in the Intensive Care Unit: Opportunity for Improvement.* Critical Care Medicine, Vol 29:2, pg 26-33.

Cypress, B., 2013 *Using the Synergy Model of Patient Care in Understanding the Lived Emergency Department Experiences of Patients, Family Members and Their Nurses During Critical Illness: A Phenomenological Study.* Dimensions of Critical Care Nursing, Vol. 32, pg 310-321

Gassiep, J., 2006. *The Role of the Emergency Nurse in the Prehospital and the Emergency Room*. Unpublished Dissertation, University of the Witwatersrand, Johannesburg.

Group Areas Act 41 of 1950. Available online: http://www.disa.ukzn.ac.za/index.php?option=com_displaydc&recordID=leg19500707.028.020.041. [Accessed 12 February 2014]

Goosen, J., Bowley, D.M., Degiannis, E., Plani, F., 2003. *Trauma care systems in South Africa.* International Journal of the Care of the Injured, Vol 34, pg 704–708

Hardcastle, T., Finlayson, M., Heerden, M., Johnson, B., Samuel, C. & Muckart, D., *2013 The Prehospital Burden of Disease due to Trauma in KwaZulu-Natal: The Need for Afrocentric Trauma Systems.* World Journal of Surgery, Vol 37, pg 1513-1525

Hardcastle, T., Samuel, C. & Muckart, D., 2013. *An Assessment of the Hospital Disease Burden and the Facilities for the In-hospital Care of Trauma in KwaZulu-Natal, South Africa.* World Journal of Surgery, Vol 37, pg 1550-1561

Healy, S., Tyrrell, M., 2011 *Stress in Emergency Departments: Experiences of Nurses and Doctors* Emergency Nurse, Vol.19, pg 31-37

Heyland, D., Allan, D., Rooker, G., Dodek, P., Pighora, D. & Gafni, A., 2009. *Discussing Prognosis with patients and their families near the end of life: Impact on Satisfaction with End-of-Life Care.* Journal of Open Medicine, Vol 3:2, pg 101-110

Hornby, A., 2005. *Oxford Advanced Learner's Dictionary of Current English, Seventh Edition*. Oxford: Oxford University Press

Kaplow, R. & Reed, K., 2008. *The AACN Synergy Model for Patient Care: A Nursing Model as a Force of Magnetism.* Nursing Economics, Vol 26:1, pg 17-25.

Karlsson, C., Tisell, A., Engstrom, A. & Andershed, B., 2011. *Family Members Satisfaction with Critical Care: A Pilot Study.* Nursing in Critical Care: British Association of Critical Care Nurses, Vol 16:1, pg 11-18.

Kinrade, T., Jackson, A. & Tomnay, J., 2009. *The Psychological Needs of Families during Critical Illness: Comparison of Nurses and Family Members Perspectives.* Australian Journal of Advanced Nursing, Vol 27:1, pg 82-88

Li, S., Chan, C. & Lee, D., 2002. *Helpfulness of Nursing Actions to Suddenly Bereaved Family Members in an Accident and Emergency Setting in Hong Kong.* Journal of Advanced Nursing, Vol 40:2, pg 170-180

Linnarsson, J., Bubini, J. & Perseius, K., 2009. *Review: A Meta-Synthesis of qualitative research into needs and experiences of significant others to critically ill or injured patients.* Journal of Clinincal Nursing, pg 3102-3111.

Matzopoulos, R., Prinsloo, M., Bopape, J., Butchart, A., Litt, D. & Lombard, C., 2006. Estimating the South African trauma caseload. *International of Injury Control and Safety Promotion,* 13(1), pg 49-51.

Morton, P. & Fontaine, D., 2009. *Critical Care Nursing: A Holistic Approach.* Philadelphia: Lippincoot Williams and Wilkins.

McQuillan, K., Makic, M. & Whalen, E., 2009. *Trauma Nursing: From Resuscitation Through Rehabilitation.*. 4th ed. Missouri: Saunders Elsevier.

Norman, R., Bradshaw, D., Groenewald, P., Laubscher, R., Nannan, N., Nojilana, B., Pieterse, D., & Schneider, M., 2003. *Initial Burden of Disease Estimates for South Africa 2000.* South African Medical Research Council. [Online]
Available at: http://www.mrc.ac.za/bod/bod.htm
[Accessed 24 September 2012].

Norman, R., Matzopoulos, R., Groenewald, P. & Bradshaw, D., 2007. *The high burden of injuries in South Africa.* Bulletin of the World Health Organisation Volume 85:9 , pg 649-732.

Norman R, 2002. *Estimates of Injury Mortality and Disability based on the Cape Metropole Study.* Cape Town: South African Medical Research Council.

Norman, R., Matzopoulos, R., Groenewald, P. & Bradshaw, D., 2007. *The high burden of injuries in South Africa.* Bulletin of the World Health Organization, Volume 85, pg 695-702.

Paavilainen, E., Salminen-Tuomaala, M., Kurikka, S., Paussu, P., 2009. *Experiences of Counselling in the Emergency Department during the Waiting Period: Importance of Family Participation.* Journal of Clinical Nursing, Vol.18, pg 2217–2224

Parkinson, F., Kent, S., Aldous, C., Oosthuizen, G., Clarke, D., 2013. *Patterns of injury seen in road crash victims in a South African trauma centre.* South African Journal of Surgery, Vol 51, pg 131-134

Polit, D. & Beck, C., 2004. *Nursing Research: Principles and Methods Seventh Edition.* Philadelphia: Lippincott Williams and Wilkins.

Redley, B. & Beanland, C., 2004. *Revising the Critical Care Family Needs Inventory for the Emergency Department.* Journal of Advanced Nursing Volume 45:1, pg 95-104.

Redley, B., Beanland, C. & Botti, M., 2003. *Nursing Theory and Concept Development or Analysis Accompanying critically ill relatives in emergency departments*. Journal of Advanced Nursing, 44:1, pg 88-89.

Redley, B., Le Vasseur, S., Peters, G. & Bethune, E., 2003. *Families' Needs in Emergency Departments: Instrument Development.* Journal of Advanced Nursing Volume 43:6, pg 606-615.

Reed, K., Cline, M. & Kerfoot, K., 2007. *Implementation of the synergy model in critical care*. In R. Kaplow, & S.R. Hardin (Eds.), *Critical care nursing. Synergy for optimal outcomes,* pg 1-12. Sudbury, MA: Jones & Bartlett Publishers.

Roets, L., Rowe-Rowe, N., Nel, R., 2012 *Family Centred Care in the Paediatric Intensive Care Unit.* Journal of Nursing Management, Vol. 20, pg 624–630

Ross-Adjie, G.M., Leslie, G., Gillman, L., 2007 *Occupational Stress in the ED: What Matters to Nurses?* Australasian Emergency Nursing Journal, Vol.10, pg117—123

Saveman, B., 2010 *Family Nursing Research for Practice: The Swedish Perspective.* Journal of Family Nursing, Vol.16, pg 27-44

Shaw, D., Davidson, J., Smilde, R., Sondoozi, T., Agan, D., 2014 *Multidisciplinary Team Training to Enhance Family Communication in the ICU.* Critical Care Medicine. Vol. 42, pg 265-271

Siddiqui, S., Sheikh, F. & Kamal, R., 2011. *What Families Want: An Assessment of Family Expectations in the Intensive Care Unit.* International Archives of Medicine, Vol 4:21, pg 2-5.

Strydom, H., Fouche, C. & Delport, C., 2005. *Researcher at Grass Roots: For the Social Sciences and Human Service Professions.* 3rd ed. Pretoria: Van Schaik.

South African Nursing Council. 2005. *Nursing Act No. 33 of 2005.* <http://www.sanc.co.za/pdf/Nursing%20Act%202005.PDF.> [Accessed 06 Nov 2012

Tavakol, M. & Dennick, R, 2011. *Making sense of Cronbach's alpha.* International Journal of Medical Education, Vol 2, pg53-55

Taylor, C. & Benger, J.R., 2004. *Patient satisfaction in emergency medicine.* Emergency Medicine Journal Vol 21, pg, 528–532.

Tye, C., 1993. *Qualified Nurses Perceptions of the Needs of Suddenly Bereaved Family Members in the Accident and Emergency Department.* Journal of Advanced Nursing, Vol 18, pg 948-956

Verhaeghe, S., Defloor, T., Van Zuuren, F., Duijnstee, M. & Grypdonck, M., 2005. *The Needs and Experiences of Family Members of Adult Patients in an Intensive Care Unit: A Review of the Literature.* Journal of Clinical Nursing, pg 501-509.

V*iolence, injuries and disability: World Health Organisation Biennial Report* 2010-2011. 2012, World Health Organization

G*lobal Status Report on Road Safety 2013*, 2013 World Health Organisation

Wentzel, D., Brysiewicz, P., 2014 *The Consequence of Caring too much: Compassion Fatigue and The Trauma Nurse*. Journal of Emergency Nursing, Vol.40, pg 95-97

Williams, S., Williams, D., Stein, D., Seedat, S., Jackson, P., Moomal, H., 2007. *Multiple Traumatic Events and Psychological Distress: The South Africa Stress and Health Study*. Journal of Traumatic Stress, Vol. 20, No. 5, pg 845–855.

APPENDIX 1:
PARTICIPANT INFORMATION LETTER AND CONSENT FORM

The needs of families accompanying patients into Trauma Casualty

Dear Sir/Madam

My name is Meghan Johnson, and I am presently studying towards a Masters Degree in Nursing Science at the University of the Witwatersrand. I am conducting a research study on the needs of families accompanying patients into Trauma Casualty and would like to invite you to participate in the study.

The aim of the study is to identify the needs of family members/significant others of patients brought into trauma casualty with a view to inform nurses and thus improve holistic nursing care. Holistic nursing care encompasses the needs of the patient as well as the family.
I would like to state that there are no benefits or forms of remuneration for participating in the study, however participating in the study will give you the opportunity to make known your needs as a family member of an injured patient and voice your satisfaction or dissatisfaction with the care you have received thus far.

Should you agree to participate, you will be required to complete a two part questionnaire. The first part will be given to you on entry into casualty and will ask you about your needs as the family member of a patient admitted into casualty. The second part will be given to you upon leaving the casualty area, having visited your relative, and experienced the services offered by the unit. Your completion of the questionnaire will indicate your consent to participate.
If at any time you experience emotional difficulty in answering the questions due to anxiety about your loved one, I will gladly refer you for counselling with an advanced psychiatric nurse Dr Gayle Langley (contact number: 0114884270).

This information will help to educate and improve nursing care in the emergency unit.
Participation in this study is completely voluntary and you may withdraw from the study at any point with no repercussions for you or your family member. Anonymity and confidentiality will be maintained. All information obtained from you will be kept in the strictest confidence. Your consent form will be separated from your responses, so your name will not be linked to your responses. All information will be kept in a safe place.

If you have any questions regarding the study, please feel free to contact me at (011) 488-4217 during office hours, or 0729976409 after office hours.

Thank you for your time and effort.

Meghan Johnson

APPENDIX 2:

PERMISSION FROM AUTHOR TO USE INSTRUMENT

Hi Meghan

Thank you for your interest in my research, I was only visiting Durban in South Africa last month. There has been a lot of interest in this area of research over recent years.

I have attached copies of the tools I developed and used in my research for your use.

I would be pleased if you would share with me the findings of your research when it is completed.

The time difference between our countries makes it difficult to telephone, but please let me know if I can be of any further assistance.

Kind regards

Dr Bernice Redley MRCNA, PhD

Senior Research Fellow

Deakin-Epworth Centre for Clinical Nursing Research

185-187 Hoddle Street

Richmond, Vic 3121

Tel: (03) 9426 6565

Direct: (03) 9936 8078

Mob: 0433 975 382

e-mail: Bernice.redley@deakin.edu.au

APPENDIX 3:
PERMISSION FROM JOHANNESBURG HEALTH DISTRICT TO CONDUCT RESEARCH

From: Johannesburg research [johannesburg.research@gmail.com]
Sent: 18 March 2013 09:27 PM
To: Meghan Johnson
Subject: Re: FW: For submission to gauteng health for permission

Dear Ms Johnson,

Please refer to your application to conduct a research titled **The needs of family members accompanying patients into a Trauma Casualty.**

1. We have noted that you would like to conduct your study in a trauma Casualty.

2. The trauma casualties in the Johannesburg Health District are situated in the two Central Hospital (and).

3. You would require permission from the CEO of these two hospitals which would be sufficient for you to assess these facilities. You may not need any other approval from the District Research Committee.

Please feel free to contact us, if you have any further queries. On behalf of the District Research Committee, we would like to thank you for choosing our District to conduct such an important study.

With regards,

Dr N Mutshekwane

Chairperson

District Research Committee

Johannesburg Health District

APPENDIX 4:

PERMISSION FROM HEAD OF TRAUMA DEPARTMENT [redacted] HOSPITAL TO CONDUCT RESEARCH

From: Stephens Moeng [moengm@mweb.co.za]
Sent: 13 February 2013 03:15 PM
To: Meghan Johnson
Subject: Re: Request for permission to conduct research in Trauma Casualty

Just to follow up on the last meeting
You are given permission to continue with the study
I presume you also have the CEO permission

Sent from my iPad

On 08 Feb 2013, at 12:26 PM, Meghan Johnson <Meghan.Johnson@wits.ac.za> wrote:

Goodfafternoon Dr Moeng, I have just been up to the trauma office to drop off a copy of my protocol as requested but found it locked. I will bring it with when we meet on Monday at 14:00. Have a good day further.

Kind Regards
Meghan Johnson
Meghan.Johnson@wits.ac.za
0114884217
Department of Nursing Education

From: Stephens Moeng [mailto:moengm@mweb.co.za]
Sent: 06 February 2013 02:18 PM
To: Meghan Johnson
Subject: Re: Request for permission to conduct research in Trauma Casualty

Hi
Please see me next Monday in pm
About 2-3 if it suites you
Thanks

Sent from my iPad

On 06 Feb 2013, at 12:42 PM, Meghan Johnson <Meghan.Johnson@wits.ac.za> wrote:

Goodafternoon Dr Moeng, I trust you are well. Attached is my permission letter requesting your permission to conduct research in trauma casualty, area 163, [redacted]. Please review. I look forward to your response.
Thank you

Kind Regards
Meghan Johnson
Meghan.Johnson@wits.ac.za
0114884217

Department of Nursing Education

<permission request Dr Moeng.doc>

This communication is intended for the addressee only. It is confidential. If you have received this communication in error, please notify us immediately and destroy the original message. You may not copy or disseminate this communication without the permission of the University. Only authorized signatories are competent to enter into agreements on behalf of the University and recipients are thus advised that the content of this message may not be legally binding on the University and may contain the personal views and opinions of the author, which are not necessarily the views and opinions of The University of the Witwatersrand, Johannesburg. All agreements between the University and outsiders are subject to South African Law unless the University agrees in writing to the contrary.

APPENDIX 5: PERMISSION TO CONDUCT RESEARCH FROM CEO [redacted] HOSPITAL

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

[redacted] HOSPITAL

Enquiries:
Office of the Chief Executive Officer
[redacted] Hospital
Tell: 011 488 3792
Fax: 011 488 3753
Email: lindiwe.mngomezulu@gauteng.gov.za
Date: 25th March 2013

M. Johnson
St Barnabas College
P O. Box 88188
Newclare
2112

Dear Mr.\Mrs. Johnson

RE: "RE: Permission to conduct retrospective study on: The need of family members accompanying patients into Trauma Casualty"

Please note that permission to conduct the above mentioned study is provisionally approved. Your study can only commence once ethics approval is obtained. Please forward a full protocol and a copy of your ethics clearance certificate as soon as the study is approved by the ethics committee for the CEO's office to give you the final approval to conduct the study.

Recommended/~~not recommended~~

Dr. M. Mofokeng
Clinical Director
Date: 25/03/2013

Approved/not approved

Ms. G. Bogoshi
Chief Executive Officer
Date: 26.3.2013

APPENDIX 6:

CCFNI-1 NEEDS ASSESSMENT QUESTIONNAIRE

PART A

This section asks about your time in Trauma Casualty Department. Please tick the appropriate box or write your response where appropriate.

1. When did you arrive in the Trauma Casualty Department? (Please tick box)
   - ❑ 1. BEFORE YOUR INJURED RELATIVE
   - ❑ 2. WITH YOUR INJURED RELATIVE
   - ❑ 3. AFTER YOUR INJURED RELATIVE
   - ❑ 4. OTHER (Please Specify)
2. How soon after your arrival at the hospital were you attended to by hospital staff? (Please tick box)
   - ❑ 1. IMMEDIATELY
   - ❑ 2. WITHIN 15 MINUTES
   - ❑ 3. BETWEEN 15-30 MINUTES
   - ❑ 4. GREATER THAN 30 MINUTES
   - ❑ 5. DO NOT REMEMBER
3. Which staff did you first meet on arrival at the hospital? (Please tick box)
   - ❑ 1. DOCTOR
   - ❑ 2. NURSE
   - ❑ 3. CLERICAL STAFF (ADMIN CLERK)
   - ❑ 4. DID NOT IDENTIFY THEMSELVES
   - ❑ 5. DO NOT REMEMBER
   - ❑ 6. OTHER (PLEASE SPECIFY) _____
4. What is your relationship to the injured person? (Please tick box)
   - ❑ 1. HUSBAND OR WIFE
   - ❑ 2. PARTNER
   - ❑ 3. ARE YOU A PARENT (MOTHER OR FATHER)
   - ❑ 4. BROTHER OR SISTER
   - ❑ 5. ARE YOU A CHILD (SON OR DAUGHTER)
   - ❑ 6. OTHER (PLEASE SPECIFY) _____
5. Who has come with you to the trauma casualty? (Write numbers)
   - ❑ 1. FAMILY: Number _____
   - ❑ 2. CLOSE FRIENDS: Number _____
   - ❑ 3. NO-ONE
   - ❑ 4. OTHER (PLEASE SPECIFY) _____

PART B

This section asks about your needs while you are with your relative in the Trauma Casualty Department. Please rate each of the following statements by marking the appropriate box. The person who was injured is referred to as "your relative".

	HOW IMPORTANT IS IT FOR YOU…			
	1. NOT AT ALL	2. NOT VERY	3. SLIGHTLY	4. VERY
6. To Have a doctor or nurse meet you on arrival at the hospital	❑	❑	❑	❑
7. To have a person to care for the family while they wait	❑	❑	❑	❑
8. To find out the condition of your injured relative before being asked to sign papers	❑	❑	❑	❑
9. To have friends and relatives with you while in the trauma casualty department	❑	❑	❑	❑
10. To have a private place to wait	❑	❑	❑	❑
11. To have explanations given in understandable terms	❑	❑	❑	❑
12. To be kept updated frequently	❑	❑	❑	❑
13. To know all the specific facts concerning your relative's progress	❑	❑	❑	❑
14. To know why things were done for your relative	❑	❑	❑	❑
15. To not be told about distressing details about your relative's illness or injury	❑	❑	❑	❑
16. To talk to a doctor	❑	❑	❑	❑
17. To talk to a nurse	❑	❑	❑	❑
18. To know about the level of expertise of staff caring for your relative	❑	❑	❑	❑
19. To know about the expected outcome of your relative	❑	❑	❑	❑
20. To have questions about your relatives condition answered honestly	❑	❑	❑	❑

21. To be told about transfer plans while they are made	❑	❑	❑	❑

	HOW IMPORTANT IS IT FOR YOU…			
	1. NOT AT ALL	2. NOT VERY	3. SLIGHTLY	4. VERY
22. To be assured that the best care possible has been given to your relative	❑	❑	❑	❑
23. To stay out of the way during your relative's care	❑	❑	❑	❑
24. To see your relative as soon as possible	❑	❑	❑	❑
25. To have explanations about the casualty environment before going in to see your relative for the first time	❑	❑	❑	❑
26. To have a staff member with you while visiting your relative	❑	❑	❑	❑
27. To see what was happening to your relative	❑	❑	❑	❑
28. To be with your relative at any time	❑	❑	❑	❑
29. To be given directions regarding what to do at the bedside	❑	❑	❑	❑
30. To feel that you can help with your relative's care	❑	❑	❑	❑
31. To be included when decisions were made	❑	❑	❑	❑
32. To have time alone with your relative	❑	❑	❑	❑
33. To feel accepted by hospital staff	❑	❑	❑	❑
34. To be treated as an individual	❑	❑	❑	❑
35. To feel hospital staff care about your relative	❑	❑	❑	❑
36. To be assured of the comfort of your relative	❑	❑	❑	❑
37. To be encouraged to express emotions	❑	❑	❑	❑
38. To be reassured about normal	❑	❑	❑	❑

emotional responses	

	HOW IMPORTANT IS IT FOR YOU…			
	1. NOT AT ALL	2. NOT VERY	3. SLIGHTLY	4. VERY
39. To be able to express emotions and concerns with staff	❑	❑	❑	❑
40. To feel like there is hope	❑	❑	❑	❑
41. To be told about religious/spiritual help available	❑	❑	❑	❑
42. To have food and refreshments nearby	❑	❑	❑	❑
43. To have a telephone in or near the waiting room	❑	❑	❑	❑
44. To have toilet facilities nearby	❑	❑	❑	❑
45. To be able to contact staff at a later date to ask questions	❑	❑	❑	❑

46. What were the most helpful behaviours of the ED staff?

47. What were the most unhelpful behaviours of the ED staff?

DEMOGRAPHIC INFORMATION

48. What is your age?_____

49. What gender are you? Please mark appropriate box

    1. Male ☐
    2. Female ☐

Thank you for your valuable contribution to this study.

If you wish to be informed of the study findings please write your name and address on the cover of this questionnaire, then detach the cover page and place in the sealed box in the casualty reception area. I will gladly send you results on completion of this study.

APPENDIX 7:

CCFNI-2 NEEDS SATISFACTION ASSESSMENT QUESTIONNAIRE

PART A

This section asks about your time in the trauma casualty department. Please either write response or tick the appropriate box.

1. How many days has it been since you were first in Trauma Casualty with your injured relative?

   _____ DAYS

2. About what time did you
   A. ARRIVE : _____
   B. LEAVE : _____
   TRAUMA CASUALTY? (Please write approximate times)

3. When did you arrive in the trauma casualty department? (Please tick box)

❑ 1. BEFORE YOUR INJURED RELATIVE
❑ 2. WITH YOUR INJURED RELATIVE
❑ 3. AFTER YOUR INJURED RELATIVE
❑ 4. OTHER (Please Specify)

4. How soon after your arrival at the hospital were you attended to by hospital staff? (Please tick box)

❑ 1. IMMEDIATELY
❑ 2. WITHIN 15 MINUTES
❑ 3. BETWEEN 15-30 MINUTES
❑ 4. GREATER THAN 30 MINUTES
❑ 5. DO NOT REMEMBER

5. Which staff did you first meet on arrival at the hospital? (Please tick box)

❑ 1. DOCTOR
❑ 2. NURSE
❑ 3. CLERICAL STAFF
❑ 4. DID NOT IDENTIFY THEMSELVES
❑ 5. DO NOT REMEMBER
❑ 6. OTHER (PLEASE SPECIFY)

   _____

6. What is your relationship to the ill/ injured person? (Please tick box)

- ❑ 1. HUSBAND OR WIFE
- ❑ 2. DEFACTO or PARTNER
- ❑ 3. MOTHER OR FATHER
- ❑ 4. BROTHER OR SISTER
- ❑ 5. SON OR DAUGHTER
- ❑ 6. OTHER (PLEASE SPECIFY) _____

7. Please indicate how well you were cared for overall by hospital staff while you were in the trauma casualty department

- ❑ 1. EXTREMELY WELL
- ❑ 2. VERY WELL
- ❑ 3. NOT WELL
- ❑ 4. NOT AT ALL

8. Who was with you in the trauma casualty department? (Write numbers)

- ❑ 1. FAMILY: Number _____
- ❑ 2. CLOSE FRIENDS: Number _____
- ❑ 3. NO-ONE
- ❑ 4. OTHER (PLEASE SPECIFY) _____

PART B

This section asks about your needs while you accompanied your relative in theTrauma Casualty. Please rate each of the following statements by marking the appropriate box. The person who was injured is referred to as "your relative".

	HOW WELL WAS EACH NEED MET BY CASUALTY STAFF?			
	5. NOT MET	6. NOT VERY WELL	7. WELL	8. VERY WELL
9. To Have a doctor or nurse meet you on arrival at the hospital	❑	❑	❑	❑
10. To have a person to care for the family as they wait	❑	❑	❑	❑
11. To find out the condition of your injured relative before being asked to sign papers	❑	❑	❑	❑
12. To have friends and relatives with you while in the trauma casualty	❑	❑	❑	❑

department				
13. To have a private place to wait	❑	❑	❑	❑
14. To have explanations given in understandable terms	❑	❑	❑	❑
15. To be kept updated frequently	❑	❑	❑	❑
16. To know all the specific facts concerning your relative's progress	❑	❑	❑	❑
17. To know why things were done for your relative	❑	❑	❑	❑
18. To be protected from sights or sounds that may be distressing	❑	❑	❑	❑
19. To talk to a doctor	❑	❑	❑	❑
20. To talk to a nurse	❑	❑	❑	❑
21. To know about the level of expertise of staff caring for your relative	❑	❑	❑	❑
22. To know about the expected outcome of your relative	❑	❑	❑	❑
23. To have questions about the condition of your relative answered honestly	❑	❑	❑	❑
24. To be told about transfer plans while they are made	❑	❑	❑	❑

	HOW WELL WAS EACH NEED MET BY CASUALTY STAFF?			
	1. NOT MET	2. NOT VERY WELL	3. WELL	4. VERY WELL
25. To be assured that the best care possible has been given to your relative	❑	❑	❑	❑
26. To stay out of the way during your relative's care	❑	❑	❑	❑
27. To see your relative as soon as possible	❑	❑	❑	❑
28. To have explanations about the casualty environment before going in to see your relative for the first time	❑	❑	❑	❑
29. To have a staff member with you	❑	❑	❑	❑

while visiting your relative				
30. To see what was happening to your relative	❑	❑	❑	❑
31. To be with your relative at any time	❑	❑	❑	❑
32. To be given directions regarding what to do at the bedside	❑	❑	❑	❑
33. To feel that you can help with your relatives care	❑	❑	❑	❑
34. To be included when decisions were made	❑	❑	❑	❑
35. To have time alone with your relative	❑	❑	❑	❑
36. To feel accepted by hospital staff	❑	❑	❑	❑
37. To be treated as an individual	❑	❑	❑	❑
38. To feel hospital staff care about your relative	❑	❑	❑	❑
39. To be assured of the comfort of your relative	❑	❑	❑	❑
40. To be encouraged to express emotions	❑	❑	❑	❑
41. To be reassured about normal emotional responses	❑	❑	❑	❑

	HOW WELL WAS EACH NEED MET BY CASUALTY STAFF?			
	1. NOT MET	2. NOT VERY WELL	3. WELL	4. VERY WELL
42. To express emotions and concerns with staff	❑	❑	❑	❑
43. To feel like there is hope	❑	❑	❑	❑
44. To be told about religious/spiritual help available	❑	❑	❑	❑
45. To have food and refreshments nearby	❑	❑	❑	❑
46. To have a telephone in or near the waiting room	❑	❑	❑	❑
47. To have toilet facilities nearby	❑	❑	❑	❑
48. To be able to contact staff at a later date to ask questions	❑	❑	❑	❑

49. What were the most helpful behaviours of the TRAUMA CASUALTY DEPARTMENT staff?

50. What were the most unhelpful behaviours of the TRAUMA CASUALTY DEPARTMENT staff?

51. Do you have any other comments?

DEMOGRAPHIC INFORMATION

52. What is your age?_____

53. What gender are you? Please mark appropriate box

    3. Male ☐

    4. Female ☐

Thank you for your valuable contribution to this study.

If you wish to be informed of the study findings please write your name and address on the cover of this questionnaire, then detach the cover page and place in the sealed box in the casualty reception area. I will gladly send you results on completion of this study.

APPENDIX 8 HREC ETHICS CLEARANCE CERTFICATE

R14/49 Miss Megan Johnson

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M130133

NAME: (Principal Investigator)	Miss Megan Johnson
DEPARTMENT:	Department of Nursing Education [redacted] Hospital
PROJECT TITLE:	The Needs of Family Members Accompanying patients into a Trauma Casualty
DATE CONSIDERED:	25/01/2013
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Dr Gayle Langley
APPROVED BY:	Professor PE Cleaton-Jones, Chairperson, HREC (Medical)

DATE OF APPROVAL: 05/02/2013

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES