INTENSIVE CARE UNIT EXPERIENCES OF CRITICALLY ILL ADULT PATIENTS

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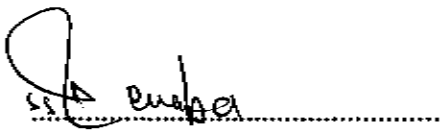
DECLARATION

I Stellah Saape Bokaba declare that this research report is my own work. It is submitted for the Degree of Master of Science (nursing) in the University of Witwatersrand, Johannesburg. It has never been submitted before for any degree or examination at this or any other University.



Stellah Saape Bokaba

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Date.

DEDICATION

To all patients in General ICU, Trauma ICU, Cardiothoracic IC, Coronary care ICU, and Neurosurgical ICU who participated in this research.

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ABSTRACT

The purpose of the study was to describe and compare critically ill adult patients' experiences of Intensive Care Unit admission. The study is based on the patient's severity of critical illness according to the simplified acute physiology score (SAPS II score): Group I (Less critically ill) with low SAPS II score (p-value of 0.00 to 0.05) and Group II (Critically ill) with high SAPS II score (p-value 0.051to1.00)

Research done in South Africa and other countries suggests that an increasing number of ICU patients report having experienced bad dreams, nightmares, anxiety, delirium, confusion and inability to communicate (Roberts, 2004:208). ICU patients experienced extreme vulnerability, helplessness and emptiness because they could not communicate with nurses and relatives as they wanted to.

A descriptive comparative study was used. The sample comprised 98 patients selected from the five Intensive Care Units of an academic hospital in Gauteng, Johannesburg, in the period 1 March 2007 to 31 May 2007.

Simple random sampling was used. Data was collected using the Intensive Care Experience questionnaire. Data was analysed descriptively to determine the incidence of critically ill adult patients'intensive care unit experiences. The ethical principles were maintained throughout the study.

The responses from the subjects indicated that Group I and Group II differ significantly in terms of their frightening experiences. Group I experienced more bad dreams than Group II. The study and the findings will be published in the recognised nursing journal.

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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

In this chapter, an overview of the study is described, which includes the background and the motivating factors for the study, the study aim, research questions, objectives, and the significance of the study. Terms are identified and their meanings in the context defined.

1.2 BACKGROUND TO THE STUDY

Intensive Care Units (ICUs) are designed to admit patients with life-threatening illnesses, who need close monitoring, are dependent on life-sustaining treatment, need organ support, and ongoing maintenance of physiological stability. Most patients in ICUs are very ill, unstable and totally dependent on nurses and doctors because they cannot do anything for themselves. This is a very traumatic and stressful experience.

Critically ill patients are vulnerable to the initial stressors associated with their illness and to the highly invasive procedures and interventions that are necessary to overcome their critical illness. Such stressful procedures and interventions include: insertion of intravenous lines; arterial lines; central lines; intra-aortic balloon pumps; endo-tracheal intubation and mechanical ventilation. Medications used to optimise mechanical ventilation such as dormicum (a sedative); morphine (an analgesic) and norcuron (a neuromuscular blocker)

predispose patients to weird dreams, nightmares, and confusion (Grandberg, Engberg & Ahlstom, 2002: 29; McKinley, Nagy, Steyn-Parbury & Bramwell, 2002:31).

Dormicum is a short acting benzodiazepine with central nervous system depressant effects, sedation and sleep producing properties. It is mostly used on ICU patients to relieve anxieties that may be caused by the ICU environment, their critical illness, medical and surgical interventions. The side effects include: amnesia of short or long duration, causing patients to have no recollection of events following its administration. It also causes drowsiness, depression of mood, lethargy, ataxia, headache, confusion and hallucinations (Beers, Porter, Jones, Kaplan & Berkwits, 2006:340)

Morphine is a narcotic used to treat moderate to severe pain. It works by depressing the pain perception centre in the brain. The side effects of morphine include: mood changes, dizziness and confusion. It also causes central nervous system depression which becomes more pronounced when used in combination with sedatives like the benzodiazepines (Beers, et al., 2006:370).

Norcuron is a neuromuscular blocker that causes skeletal muscle relaxation. It is used to facilitate endotracheal intubation and mechanical ventilation. Norcuron may cause side effects like headache, dizziness and confusion (Archangelo & Peterson, 2005: 25).

In a prospective clinical study conducted in Germany on ventilated ICU patients who were treated with morphine, dormicum and neuromuscular blockers, 70 % of these patients reported that they experienced dreams, nightmares and hallucinations (Rundshagen, Schnabel, Wegner & Esch, 2001: 38). Not all dreams, nightmares and hallucinations among ventilated ICU

patients can be related to sedations and analgesia. Ely, Stephens, Jackson, Thomason, Truman, Gordon, Dittus & Bernard (2004:108), in a prospective cohort study conducted in the United States, 40% of ICU patient reported dreams, nightmares and hallucinations in the absence of sedations and analgesia.

Ventilated patients in ICUs have been known to express experiences of weird dreams and nightmares. The experiences appeared real and occurred while they were awake. Furthermore, patients experienced emotional instability, a feeling of loss of self-control, feeling like strangers or aliens in their own bodies. Literature indicates that these ICU experiences of dreams may be frightening (Johnson, 2004:194), horrific (Grandberg, et al., 2002:23) and bizarre (Jones & Loyns, 2003:367). Other experiences include feelings of disembodiment, where patients could not recognise parts of their body as their own.

All these together with the uncertainty of the prognosis and the threat of death also produce stress and lead to frustration in patients, which may have an impact on their health-related quality of life later (Karachi, Hanekom & Faure, 2006:42). In a qualitative study that was conducted in ICUs in Gauteng province, South Africa, patients expressed similar experiences of discomfort, pain, confusion, frustration and fear of death (McKibbin & Wilson, 2001:34). Patients with severe sepsis, elevated urea, severe trauma and old age may have worse experiences because such factors could contribute to confusion, delirium and nightmares (Roberts & Chaboyer, 2004:174; Lof, Bergeron & Ahlston, 2005:161). Reduction in health-related quality of life both in physical and emotional domains was reported in Western Cape

and in some patients required further intervention 12 months after discharge (Karachi et al., 2006:42).

It is important that patients be given information about their conditions on admission if they are conscious and stable, or when they regain consciousness and are stable, in order to help them understand all the dynamics involved in ICU, as well as their conditions. Reasons for the use of different interventions, machines, lines, the possible side effects of common medications like morphine and dormicum, and many other activities should be explained. This will ease their frustrations and possible long-term psychological impact that could affect their health related quality of life. Communication remains the cornerstone of nursing practice.

1.3 PROBLEM STATEMENT

The ICU environment is scary to most patients. Patients in ICU are critically ill, and some have to undergo unusual, painful procedures and often verbalise their fears, because they know that the ICU is for critically ill people. Critically ill patients are completely dependent on nurses, for basic self-care activities. Ventilated patients are known to experience dreams, nightmares and hallucinations with untoward reactions lasting beyond the recovery period. The researcher worked in ICU for the past ten years and informal interviews conducted with patients in this ICU seems to suggest that some patients are haunted by their experiences of fear and hallucinations up to 12 months post discharge. In South Africa, three studies were conducted by Gwala, (2000:23) in Kwa Zulu Natal; Karachi, et al., (2006:42) in Tygerberg; Klopper, Andersson, Minkinnin, Ohlsson & Sjorstrom, (2005:17) in North West Province, and

results confirm the existence of such experiences. Whether these memories were factual or delusional, nurses working in ICU need to be aware in order to improve the quality of life of patients after discharge. Very little is known about these problems in this research setting. It is this that prompted the researcher to conduct this research.

1.4 AIM OF STUDY

The aim of the study was to describe and compare critically ill adult patients' experiences of Intensive Care Unit admission. The study is based on the patient's severity of critical illness according to the simplified acute physiology score (SAPS II score):

- Group I with low SAPS II score (p-value of 0.00 to 0.05)
- Group II with high SAPS II score (p-value 0.051 to 1.00)

1.5 RESEARCH QUESTIONS

- What are the critically ill adult patients' experiences of the Intensive Care Unit?
- Do patients who have higher SAPS II score encounter worse experiences than those with low SAPS II score?
- What recommendations can be made for clinical practice and education of critical-care nurses?

1.6 RESEARCH OBJECTIVES

The objectives of the study were to:

- Describe critically ill adult patients' experiences with reference to their awareness of surroundings, their fears, ability to recall their experiences and their satisfaction with care.
- Compare critically ill adult patients with high SAPS II score with those having low SAPS II score.
- Make recommendations for clinical practice and education for critical care nurses in order to address the identified problems.

1.7 SIGNIFICANCE OF THE STUDY

The outcomes of this study will contribute to the body of knowledge of critical care nurses. It will assist the nurses to prepare their patients and families to understand and interpret such experiences on discharge from ICU, and to distinguish between what is real and unreal.

The outcome of this study will fill an important practice gap in this context and thereby preventing long-term consequences related to admission in ICU.

This information may be used as a basis for decision-making in order to provide individualised holistic care, enhancing speedy recovery and preventing long-term adverse effects on patients' health-related quality of life.

1.8 DEFINITION OF TERMS

Critically ill patient:

- Refers to an adult patient admitted to the Intensive Care Unit because of a life-threatening or potentially life-threatening illness or injury. This includes

severely ill patients with an SAPS II score of 0.51 to 1.00, and less severely ill patients with an SAPS II score of 0.00 to 0.5 (Butcher & Melander 1999:39; Le Gall, Lemeshow & Saulnier 1993: 2958).

Intensive care experiences:

- Daily occurrences and incidents in the Intensive Care Unit that have a direct impact on the patient's physical, psychological, social and spiritual wellbeing. This may include fears, dreams and nightmares (Butcher & Melander 1999: 62).

Intensive Care Unit:

- A specifically designated area offering facilities for care and management of critically ill patients (Butcher & Melander 1999:39).

Intensive Care Unit nurse:

- A registered nurse who has undergone an accredited course in critical care nursing and who is registered as a critical-care nurse with the South African Nursing Council(SANC), in accordance with regulation number R212 as amended by regulation R75 (South African Nursing Council Regulations under the nursing Act 50 of 1978).

Ward:

- A hospital-based general unit or step-down facility to which the Intensive Care Unit patient is discharged (Barnhart 2000:2357).

1.9 CONCLUSION

An overview of the study has been given, which includes the background of the study, problem statement, research questions and objectives, significance of the study, and definition of terms. In the following chapter, a review of relevant literature will be presented

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Previous studies conducted on this area were used to guide the literature review and experiences of patients admitted in ICU are discussed below. A psychologist Abraham Maslow identified five basic human needs that have to be satisfied for the survival of every individual. The basic needs were ranked in order of relative importance: Physiological needs, safety needs, love and affection needs, self esteem and self actualisation needs (Louw, Edwards, Foster, Gilbert, Louw, Norton, Plug, Shuttleworth-Jordan & Spangerberg, 2005:449). Maslow's needs theory was used to guide this research. The five levels of Maslow's hierarchy of needs theory were adapted to suit the needs of ventilated patients in ICU. Patients in the ICUs have basic needs like any other individual, however, due to circumstances originating from their disease conditions and medical interventions, some needs are violated, resulting in some physiologic and psychologic imbalances.

2.2 PHYSIOLOGICAL NEEDS

Physiological needs are inherent in all human beings, among them are needs for shelter, oxygen, food, fluids, sleep and comfort (Ellis & Nowlis, 2001:80). Maslow regarded the

physiological needs as the most basic for every individual, and should be satisfied before any other need (Louw, et al., 2005:449)

2.2.1 PHYSICAL SAFETY

Every individual needs a comfortable relaxed physical environment (Louw, et al., 2005:449). In ICU patients feel isolated because they have been moved away from their familiar environments. Activities in ICUs such as routine monitoring and evaluations on patients by doctors, nurses, physiotherapists and other health-care professionals, make patients feel uneasy (Butcher & Melander, 1999:51). This is compounded by the fact that most are restrained, attached to various machines, endo-tracheal tubes and ventilators, and intravenous lines. They are therefore unable to move freely as they wished (Butcher & Melander, 1999:52). This leads to feelings of frustration and helplessness (Grap, Blencha & munro, 2002:246). However, a hermeneutic phenomelogical study conducted in Sweden by Fredericksen & Ringsberg (2006:128) revealed that for some patients mechanical ventilation symbolised security and a promise to life, giving them hope to live again.

Grap, et al., (2002:246) further indicated that, owing to the nature of their critical illness, some ICU patients cannot do anything for themselves. They are completely dependent on nurses because they cannot perform basic self-care activities such as washing. They feel as if they have lost control over their immediate environment and over life itself. With nurses washing them, they felt as if they had been robbed of their privacy and dignity.

2.2.2 SEVERITY OF ILLNESS

The severity of illness, together with other contributing factors such as old age, social problems prior to admission, sepsis, multi-organ dysfunction and severe trauma, may worsen the ICU experiences. Elderly patients (aged 65 and above), with sepsis and multi-organ dysfunction experience confusion and delirium, which may increase their length of hospital stay and further exposure to nosocomial infections (Roberts & Chaboyer, 2004:174; Lof, et al., 2005:160).

2.2.3 ANXIETY AND FEAR

An emotional comfort is a basic need for every individual, if violated, anxiety may be the result (Louw, et al., 2005:449). Anxiety is a psychological condition characterised by worry, restlessness, irritability and decreased ability to concentrate (Butcher & Melander, 1999:52). This can be related to the unwelcoming and scary nature of the ICU together with the critical nature of the patients' condition (Butcher & Melander, 1999:52). Nursing literature suggests that patients in ICU experience anxiety (Grap, et al., 2002:247). In a descriptive study conducted on ventilated ICU patients six months after discharge, in the South Eastern United States Hospital, 51% of patients experienced anxiety (Grap, et al., 2002:247). A psychiatric follow-up study conducted on ICU patients who suffered from acute respiratory distress syndrome in Grosshdern University Hospital in Europe, six years after discharge from ICU, indicated that 75% of patients experienced anxiety and panic attacks (Stoll, Kapfhammer, Rothenhausler & Halle, 1999:699). Another qualitative study conducted in Europe by Moser, Lee Chung, McKinley, Riegel, Kyunge, Cherrington, Blakely, Biddle, Frazier & Garvin,

(2004:281) suggested that anxiety in some patients in ICU is related to lack of co-operation. A descriptive study conducted in Europe on ICU patients cited that, as a result of anxiety, some patients displayed lack of co-operation, such as pulling of tubes, lines, anger and hostility (Moser, et al., 2004:281). Anxiety can lead to long-term psychological effects that may affect patients' quality of life (Stoll, et al., 1999:699). An ongoing reassurance to ICU patients could help to ease their fears, anxieties and prevent such long-term psychological effects. This was confirmed in a hermeneutic study conducted by Grandberg, et al., (2002:22), which revealed that patients verbalised that their fears and anxieties were reduced by the caring relationships and reassurance from nurses.

2.3 SAFETY NEEDS

All human beings share a need to feel physically and emotionally safe. Trauma and illness threaten both physical and emotional safety (Ellis & Nowlis, 2001:80).

2.3.1 REST AND SLEEP DISTURBANCES.

Rest and sleep are important components of the healing process (Frisk & Nordstrom, 2003:343). ICU patients do not get enough time to rest and sleep because of various activities in the unit. Sleep interruptions result in disturbed cognitive functioning and excessive fatigue (Grap, et al., 2002:247; Frisk & Nordstrom, 2003:343). A qualitative descriptive study conducted on ICU patients in KwaZulu Natal, South Africa, two weeks after discharge indicated that noise from telephones, buzzers, machine alarms, and nurses' conversations were very disturbing (Gwala, 2000:29). McKinley, et al., (2002:30) cited another qualitative study

conducted at the Royal Northshire Hospital in Sydney, Australia on ICU patients six months after discharge. This study showed that therapeutic procedures like suctioning, turning and bathing were also not appreciated by patients because the procedures made it difficult for them to rest and sleep as they wished. However, a hermeneutic phenomenological study conducted in Sweden by Karlsson and Forsberg, (2007:44) revealed that some patients were not bothered by noise from machines and alarms. Suctioning of the airway did not bother them either, although it was awful, they experienced a relief after getting rid of secretions.

Noise levels in ICUs should be kept as low as possible by lowering voices when talking or answering the telephones, and promptly attending to alarms to prevent continuous disturbing noise. Explanations should be given to patients about the need for alarms and other disturbing procedures that cannot be avoided. This will allow patients to have enough rest and sleep and thus prevent further physiological complications and unwarranted discomfort.

2.3.2 DISCOMFORT

Physical comfort is important for every human being (Louw, et al., 2005:449). ICU patients experience various forms of discomfort from a range of procedures, including medical and nursing interventions, and sleeping in one position for a long time because they cannot change position on their own owing to pain, or are expected to adopt a particular position owing to their disease condition. Discomfort may lead to excessive fatigue that may interfere with tissue healing (Butcher & Melander, 1999;42).

Grap, et al., (2002:247) conducted a descriptive study on ICU patients who were ventilated, six months after discharge, eighty six percent of patients reported that they experienced

discomfort from irritation by the endo-tracheal tubes in their throats. It was described as a choking or a gagging sensation, which made it difficult for them to breath. Grap, et al., (2002:248) further indicated that the discomfort from the ET tube made patients very agitated and restless with subsequent movement or displacement of the ET tube. This allowed easy translocation of sub-glottic secretions into the lungs, thus increasing ventilator-associated pneumonia, and subsequent increase in hospital stay.

Explanations to patients about the importance of different procedures and interventions have been reported to give patients better understanding, build trust on nurses and increase cooperation and tolerance of discomfort and pain (Magnus & Turkington, 2005:170).

2.3.3 PAIN AND VENTILATION.

To be pain free is a basic need for every person (Louw, et al., 2005:449). Pain is an unpleasant sensory and emotional experience associated with tissue damage (Butcher & Melander 1999:53). It is common in ICU patients. According to a qualitative study conducted on ICU patients in North West Province, South Africa, ventilated patients experienced worse pain than did non-ventilated ones. Nurses relied on their own pain assessment such as a rise in blood pressure and pulse, facial or verbal expressions. This did not work for all patients because some patients still maintained normal vital parameters and remained expressionless in the presence of unbearable pain (Klopper, Anderson, McKinnen, Ohlsson & Sjorstrom, 2005:17)

Pain was so severe that it was often reported as one of the major experiences (Gardner, Elliot, Gill, Griffin & Crawford, 2005:245). Some patients felt as though they were much closer to death. Analgesics are important in the ICUs for pain control.

2.3.4 SAFETY AND SECURITY

Griffith & Jones (2004:344) in their study reported that patients verbalised that they felt very safe in ICU, as the care was exceptional, individualised and patient-focused. They saw nurses as angels who worked hard to make them better. These made them feel very safe and valued. To them, there is no place like ICU.

To some patients, ICU was some form of life security where every category of health professional was readily available. Patients reported that they would rather be in that busy, noisy environment than be in a ward where there is no individualised care, and doctors came only once or twice a day, if patients were lucky enough (Griffith & Jones, 2004:344).

A warm, professional and caring environment is important in ICU so that patients can feel safe.

2.3.5 DREAMS AND NIGHTMARES

Dreams are visions that are seen, thought of, felt or heard during sleep (Barnhart, 2000:639). A nightmare is an extreme form of a dream that can be very distressing, causing fear and anxiety (Barnhart, 2000:1405).

Dreams and nightmares are common in ICU and literature relates these to the side effects of analgesics, sedatives and neuromuscular blockers that are prescribed to patients in ICU. Grandberg, et al., (2002:23) conducted a qualitative study on ICU patients, using a hermeneutic approach, in Helsinburg Hospital, Sweden, four to eight weeks after discharge. The study indicated that neuromuscular blocking agents like norcuron, sedatives like dormicum, analgesics like morphine are given to ventilated patients to optimise ventilation, reduce anxiety and fear, control pain and to induce unconsciousness. Known side effects of these drugs include confusion, weird dreams, and nightmares. Dreams that were reported by patients included seeing people trying to kidnap them, doctors trying to kill them with poisonous injections and feeling as if they were sinking into a deep hole. These dreams have been reported to continue even six months after discharge (Grandberg, et al., 2002:23).

De Papathanassoglou and Patiraki (2003:15) conducted a phenomenological study on ICU patients who were ventilated, in an academic hospital in Greece, one to six years after discharge. Participants in this study reported to have dreams, six months after discharge. Dreams included seeing themselves as if they were being transformed into totally different persons and could see their bodies change into different shapes, feeling over-inflated like balloons. Some felt as if they were in a strange, faraway planet, as if they were suspended in space, and hearing voices from far away, planning bad things about them. Some patients, in their dreams, could see themselves die, but not completely because they were transformed into newborns. Dreams have been reported even on participants who are familiar with ICU. (Bowers, 2004:174). An ICU nurse who was admitted as a patient in an ICU reported that she

was haunted by dreams more than six months after discharge, seeing colleagues as potential murderers who wanted to kill her (Bowers, 2004:174).

Dreams and nightmares could have long-term effects on patients' health-related quality of life. A debriefing session with the patients and the health-care professionals is important upon recovery from the critical phase, to help the patients through their experiences and to prevent long-term effects.

2.3.6 DELIRIUM

Delirium refers to a disturbance of consciousness and mental status characterised by an acute onset and fluctuating impairment of cognitive functioning, that disturb the ability to receive, process, store and recall information (Roberts, 2004:207). It is a serious form of organ dysfunction, associated with poor hospital outcomes (Roberts, 2004:207).

Patients in ICU are at risk of developing delirium owing to the nature of ICU environment, the multi-system illness, use of psychoactive drugs, surgical and medical interventions, sleep deprivation as well as use of various technologies (Butcher & Melander, 1999:52). According to Ely, Inouye, Bernard and Gordon (2001:2703), in a prospective cohort study on adult ICU patients, at the university-based hospital of the United States of America, six months after discharge from ICU, delirium was reported in 85% of patients that were admitted in ICU. Seventy percent of cases were undiagnosed or unrecognised. Delirious patients have increased mortality and morbidity.

Once patients develop delirium, it becomes difficult to discharge them. Such patients are kept longer in ICU, and are exposed to a risk of nosocomial infections. These factors further increase their state of confusion. The increase of the length of hospital stay may impact on the patients' health-related quality of life, hospital expenditure and increased costs for the patients. Most serious complications of delirium include respiratory difficulties, prolonged ventilation and self injuries (Ely, et al., 2001:2703). Some patients may develop amnesia upon recovery (Jones, et al., 2001:575)

Fleminger (2002:4) is of the view that delirious patients experience more scary dreams than do non-delirious patients. Monitoring signs of delirium and trying to modify or avoid those factors that can precipitate it may assist patients to regain their full potential after discharge from ICU.

Factors associated with delirium included pain, smoking, fever, hypertension, hypotension, anaemia, hyperamylasemia, hyperbilirubinemia, hypokalemia, hyponatremia, metabolic acidosis, respiratory distress, elevated blood glucose levels, azotemia and respiratory distress (Bergeron, Dobois, Dumont, Diaz & Skrobik, 2001:862). All these factors are common in ICU patients.

It would benefit ICU patients if these precipitating causes of delirium are identified, prevented and treated in advance in order to prevent complications that may lead to poor patient outcomes and post traumatic stress disorder.

2.4 LOVE AND AFFECTION

Maslow describes love and affection as needs to be loved, understood and accepted in a group (Louw, et al., 2005:449). Every human being needs a mutually meaningful relationship with other people. A warm, loving and caring relationship from relatives and staff is likely to reinforce a sense of security to patients (Ellis & Nowlis, 2001:81).

2.4.1 COMMUNICATION WITH CRITICALLY ILL PATIENTS.

Communication refers to both verbal and non-verbal interactive strategies between patients and health-care professionals. Communication with patients is very important for their psychological integrity (Butcher & Melander, 1999:51). The critical nature of patients, the disease process, modern technological support, invasive and non-invasive procedures used, all affect the patient's ability to communicate (Alasad & Ahmad, 2004:356). When caring for critical patients, communication can easily be missed or undervalued (Hemsley, 2001 in Alasad & Ahmad, 2004:356).

Alasad and Ahmad, (2004:356) in a qualitative study conducted in three Intensive Care Units of Jordan hospitals, in the city of Aman, indicated that most patients who were unconscious or ventilated in these ICUs, reported high levels of stress and anxiety because nurses never informed them about different interventions and procedures. Some patients were distressed about inappropriate staff comments, and conversations about other patients. Alasad & Ahmad, (2004:356) further reported that unconscious and sedated patients can hear, but they

cannot respond verbally. It is important that ICU patients be informed of any interventions and procedures done on them, as well as their progress.

Gwala (2000:69) in an exploratory survey conducted on ICU patients in KwaZulu Natal, South Africa, cited that communication with the critically ill patients in ICU is a problem. Patients reported that they felt as if they were unfairly treated because they were not given adequate information about their conditions. They felt left out in aspects of their own care. They also complained that nurses were not giving them enough attention on the social, psychological, and spiritual aspects, but concentrated too much on the physical and the medical part.

Klopper, et al., (2005:16), in a qualitative study conducted on ICU patients in North West Province, South Africa, reported that some patients were so frustrated because of their personal problems. They wished that someone could listen even if they did not offer any solution, but that would make them feel better.

However, studies by (Magnus and Turkington, 2005:170; Karlsson & Forsberg, 2007:43), reported that patients verbalised that communication was not a problem, they understood that verbal communication would not be possible, but were happy with alternative means of communication like using gestures, writing and hand squeezing.

Engaging in social conversations with ICU patients can be very therapeutic. The involvement of family members has beneficial effects in reducing stress. Giving sufficient information and clear explanation about patients' diagnosis, condition and prognosis, as well as involving them in planning of some aspects of their care, is important. This will help reduce their fears and

anxieties that they may experience as a result of the critical illness of their loved ones. (Azoulay, Chevret, Leleu, Pochad, Barboteu, Adrie, Canoui, Le Gall & Schlemmer, 2000:3044).

Giving information and support may help patients to preserve their self-identity and self-esteem, which will in turn enhance their well-being (Alasad & Ahmad, 2004:360).

Communication remains an essential part of caring for critically ill patients. Verbal and non-verbal communication can help to decrease patients' anxieties, facilitate their co-operation and maximise recovery.

2.5 SELF ESTEEM

Self esteem refers to a psychological need for recognition, respect and achievement (Louw, et al., 2005:449). It originates from assessment of a person's own adequacy and competency, as well as the feeling of being valued by others (Ellis & Nowlis, 2001:81). The psychological needs may be violated in ICU patients due to some psychological effects of their condition.

2.5.1 EFFECTS ON HEALTH-RELATED QUALITY OF LIFE

Torrance & Chronic, (2004:74) defines health-related quality of life (HRQL) as all aspects of human existence relating to health, Barnard, (2000:1703), as the maximum physical and psychological ability of an individual. HRQL is mostly affected in critical illness because of different stressful experiences of ICU stay. Karachi, et al., (2006:42), in a prospective observational study conducted on ICU patients twelve months after discharge from the Intensive Care Unit of Tygerberg Academic Hospital, South Africa, also indicated a gross

effect on the overall health-related quality of life of patients after discharge. Patients suffered a dramatic decrease in the total functional autonomy. Basic self-care was totally impossible, especially in trauma patients. Of the patients that were interviewed, 53% showed significant reduction of health-related quality of life in the psychological domain and 48% reduction in the physical domain.

Studies conducted between 6 months to 12 months after discharge indicated that patients showed signs of anxiety, depression and self care deficits. Some could not return to their previous level of activity, most of them had to give up their jobs, leading to socio-economic imbalance and poverty (Granja, Texeiro-Pinto, & Costa-Pereira, 2002:905).

According to Granja, Lopez, Moreira, Diaz & Costa-Pereiro, (2005:97), in another prospective cohort study in Portugal conducted six months after discharge, patients reported worse experiences of reduced quality of life. 54% of patients interviewed showed signs of anxiety and depression, 37% had mobility problems and 22% experienced self-care deficits.

In a prospective cohort study conducted on ICU patients three years after discharge from the University Hospital of Paris, Mechanically ventilated patients experienced worse health-related quality of life than the general population (Combes, Costa, Troillet, Baudot, Mokhtari, Gilbert & Chastre, 2003:1375). Acute respiratory distress syndrome survivors and cardiac patients with multiple organ failure have been reported to perform poorly (Combes, et al., 2003:1375)

It appears that complete recovery is a process and the convalescent stage is a challenge, with external factors inducing further stress at home. Being able to perform basic activities of

living and the inability to support the family and perform expected roles further leads to depression (Griffith & Jones, 2001:355).

Referring patients to rehabilitation programmes and support groups could help them with coping skills after their critical illness

2.6 SELF ACTUALISATION

Maslow describes self actualisation as an effort to fulfil one's potential, experiencing life fully and developing one's unique values (Ellis & Nowlis 2001:81. The effects of illness and ICU admission may disturb the fulfilment of potentials and reaching set goals after discharge.

2.6.1 POST TRAUMATIC STRESS DISORDER (PTSD)

Post traumatic stress disorder is a condition of disturbed mental and physical functioning as a result of previous traumatic experience (Griffith & Jones, 2001:355). It is characterised by anger, hostility, anxiety, depression and reduced self-care activities. The development of post traumatic stress disorder in ICU patients has been related to a number of stressful memories of experiences that patients recall from their stay in ICU (Jones, Griffith, Humphris & Skirrow, 2001:575).

Cuthbertson, Hull, Strachan & Scott, (2003:453), in a prospective cohort study on general ICU patients in an academic hospital in North Scottland investigated post traumatic stress disorder three months after discharge from ICU, and reported that 53% of patients developed PTSD, the worst form being repeated thoughts of death.

In a qualitative study, Griffith & Jones (2001:355) reported that some patients with post traumatic stress disorder had episodes of conflict and these extended to their families. They experienced anxiety and panic attacks owing to the uncertainty of their condition, not being sure that they would be healthy and normal again. Many were scared to be left alone fearing that they would have an attack and just stop breathing.

Kapfhammer, Rothenshauser, Krauseneck, Stoll & Schelling (2004:47), in a psychiatric follow-up study conducted on long-term patients who survived acute respiratory distress syndrome in the Intensive Care Unit of Grossharden University Hospital, USA, eight years after discharge, reported that 43.5% of patients were found to have symptoms of PSTD. The symptoms included anger, anxiety, reduced conversation, reduced attention span, and poor short-term memory.

Jones et al., (2001:575) proposed interviewing strategies to discuss the experiences and memories in order to make sense of what happened, to prevent their long-term psychological effects.

2.7 CONCLUSION

In this chapter, literature about experiences of the critically ill adult patients in the ICUs has been reviewed. The severity of the critical illness, the multi-organ failure, trauma, drugs used in ICU as well as old age may worsen the experiences of patients in ICU. The following chapter will address details of the methodology used to conduct the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter the quantitative methodology used for this study is described. The study setting, the population and sampling procedures are clarified. The data collection instrument, data collection procedures and the pilot study are described. Ethical considerations, validity, reliability and data analysis are described.

3.2 RESEARCH DESIGN

A quantitative, descriptive, comparative study was used. Burns & Grove (2001:808) describes a quantitative research as a formal, objective, systematic process that describes, tests relationships, and examines causes and effects of interactions among variables. Polit & Hungler (1995:15-16) further describe it as a research method that uses structured procedures and formal instruments to collect information under conditions of control, and follows statistical methods to analyse data. A descriptive study focuses on describing the phenomenon as it naturally happens without introducing any intervention. A comparative design examines and describes variables in two or more groups that occur naturally in a setting (Burns & Grove, 2001:249).

In this study, experiences of ICU admissions of critically ill adult ICU patients with low SAP II scores (p-value of 0.00 – 0.5) are compared with those of high SAPS II scores (p- value of 0.51 – 1.00).

3.3 RESEARCH SETTING

The research took place in the Gauteng Province, in five different ICUs of a tertiary hospital in Johannesburg. The five ICUs were; General ICU, Trauma ICU, Coronary care ICU, Cardio thoracic ICU and the Neurosurgical ICU. The number of beds in the ICUs range from six to twelve. Each ICU is divided into rooms of different sizes ranging from one to six beds, with screens in between beds for privacy. The front area of the rooms is made of glass, mostly facing the central nurses' desk making it easy for the staff to view the patients. There are technical equipments next to each bed like: ventilators, monitors, intravenous fluid pumps, and enteral feed pumps. Nurses, doctors and other members of the health team provide a continuous service to their patients day and night.

The design is similar in each ICU. The glass doors allow the staff to view patients at all times unless screened for specific procedures.

The interviews were conducted at the patients' bedside during weekdays, Mondays to Fridays between 09H00 to 16H00 in ICU, when they were physically and emotionally stable before discharge.

3.4 POPULATION

The study population consisted of critically ill adult patients with low SAPS II score: p- value

of 0.00 to 0.5 (Group I) and those with high SAPS II scores: p-value of 0.51 to 1.00 (Group II) that fitted the inclusion criteria in the five Intensive Care Units of a tertiary hospital in Gauteng.

3.5 INCLUSION CRITERIA

Both Group I and Group II consisted of adult males and female patients over the age of 18. All patients were previously ventilated for a short period (2 to 7 days). The total length of stay in hospital for both groups was not more than two weeks. The ability to speak either English or Afrikaans was an additional criterion applied.

3.6 SAMPLING

Records of critically ill adult patients in the five Intensive Care Units: General ICU, Cardiothoracic ICU, Coronary Care ICU, Trauma ICU and Neurosurgical ICU were reviewed in order to establish the reasons for admission, diagnosis, to determine length of stay and the possibility for inclusion in the study. Patients were randomly selected and interviewed 24 to 48 hours after extubation, or once the critical phase was over, until the required sample size was achieved. Simple random sampling was used following the fish-bowling technique. The subjects in the sampling frame were assigned research code numbers, each was written on a separate slip and put in a bowl. One slip was selected at a time, noted and put back into the bowl. The same procedure was repeated until the total number of 98 was reached. Once a patient was selected, the severity scoring (SAPS II) was done and was either allocated to Group I or Group II depending on the p-value (0.00 to 0.5) Group I, and (0.51 to 1.00) Group

II. This procedure was followed until 49 subjects in each Group were achieved as discussed with the statistician.

The SAPS II is a score of estimating the probability of hospital mortality that was developed in a European and American multicentre study (Annexure IX). The scoring system requires that data of physiological variables of a patient be collected in 24 hours, and the worst value be recorded. The worst value was defined as the value that would be assigned the greatest number of SAPS II points. The data and physiological variables include: Age, heart rate , systolic blood pressure, body temperature, FiO2\PaO2 if on ventilation or CPAP, urinary output in 24 hours, serum urea and creatinine, white cell count, serum potassium, serum sodium, serum bicarbonate, serum bilirubin, Glascow Coma Scale, chronic diseases and type of admission. Each variable is allocated a score, then all scores are added up and a p-value calculated. A p-value of 0.00 to 0.5 indicate low mortality and a p-value of 0.51 to 1.00 indicate high mortality (Le Gall, Lemeshow and Saulnier 1993:2957-2962)

3.7 DATA COLLECTION

Prior to visiting the research site, the researcher first sought permission from the ethics committee and the CEO of the hospital. The researcher approached the patients in the ICUs and introduced herself 24 to 48 hours after extubation, or after the critical phase, to obtain an informed consent (Annexure III). The topic of the research, the significance of the study and all relevant information about the study was given in writing (Annexure II) and clarified verbally. Consent was requested and permission confirmed in writing (Annexure III). Once

the consent was granted, data were collected using an Intensive Care experiences questionnaire (Annexure I).

A total of ninety eight (98) patients were interviewed: 49 patients with low SAPS II score (p-value 0.00 – 0.5) and another 49 patients with high SAPS II score (p- value of 0.51 – 1.00). The interviews were conducted during weekdays, Mondays to Fridays from 09:00 to 16:00, at the patients' bedside. Data were collected over a period of three months (From 1st March 2007 to 31st May 2007.

3.8 DATA COLLECTION INSTRUMENT

The researcher used the Intensive Care Unit experiences questionnaire (Annexure I) which was developed and validated by Rattray, et al. (2004:64-73).

The questionnaire consisted of 24 items sorted in four constructs:

Awareness of Surroundings (9 items):

Under this construct the researcher wanted to explore whether the subjects were aware of their immediate environments. The researcher also wanted to know whether the patients had any recollection of being in ICU. They were asked whether they were able to recognise their relatives, aware of the presence of someone near, whether they knew where they were or what was happening to them. The patients were also asked whether they remembered their relatives, felt safe, in control and able to let people know what they wanted.

Frightening Experiences (6 items):

The researcher conducted an investigation on the subjects to get an understanding of the frightening experiences that they had in ICU like bad dreams, feeling scared, seeing strange things, feeling helpless, feeling pains and thoughts of possibilities of death.

Recall of experiences (5 items)

In this construct, questions were designed to elicit if the subjects wished to remember more about their experiences, if their memories were clear, whether they wished to remember more about what was happening to them, also to find out more about their sleeping patterns and whether they could differentiate between day and night.

Satisfaction with care (4 items):

The researcher wanted to know if subjects were satisfied with the care they received and to comment on the noise levels and constant disturbances.

The items were considered individually in data analysis. Good perception was defined by the outcomes; "all of the time," and "most of the time" (positive items) and bad perception was defined by "never" and "rarely" (negative items).

Scores ranged from 1 to 5: Never (1), Rarely (2), Sometimes (3), Most of the time (4), All the time (5). The minimum score was 24 and maximum score, 120.

Permission to use the instrument was obtained by the researcher from the authors (Annexure VIII).

3.9 VALIDITY AND RELIABILITY OF THE INSTRUMENT.

Data collection was done by the researcher alone, using an ICE questionnaire which was developed and validated by Rattray et al. in 2004. The researcher asked the same questions as

on the ICE questionnaire in exactly the same manner to all the subjects. The items of the instrument were generated, developed (n = 34) and evaluated (n = 109) through an extensive, update literature review in the original two-part study. From a set of 31 items, exploratory factor analysis identified four components of intensive-care experiences:

- Awareness of surroundings (nine items);
- Frightening experiences (six items);
- Recall of experiences (six items);
- Satisfaction with care (four items).

Cronbach's alpha statistics were acceptable for each component (0.71 – 0.93). Correlational analysis with the subscales of Hospital Anxiety and Depression scale, and Impact on Event Scale demonstrated concurrent and univariate validity (Rattray, et al., 2004:64-73).

3.10 PILOT STUDY

A pilot study was conducted following receipt of a letter of permission from the management of the tertiary hospital in Gauteng. The pilot study aimed at verifying the adequacy of the methodology, data collection instruments, and the feasibility of the study.

A total of four subjects were used to conduct a pilot study (two from Group I with low SAPS II scores of 0.00 to 0.5, and two from Group II with high SAPS II scores of 0.51 to 1.00.) The instrument and the methodology were found to be appropriate, so no adjustments were necessary. The researcher received maximum co-operation from subjects and no problems were encountered.

3.11 DATA ANALYSIS

Data sets were grouped according to the patients' SAPS II scores and collated carefully. Data analysis was done in consultation with the statistician. The second statistician was consulted in view of the not so significant differences that were found. The detail is presented in chapter four.

3.12 ETHICAL CONSIDERATIONS

The research protocol was first submitted to the Department of Nursing Education and the Post-graduate Office of the University of the Witwatersrand for review on the feasibility of conducting the study, and for approval. The protocol was submitted to the Committee for Research on Human Subjects of the University of the Witwatersrand, and clearance was granted (Annexure V). For permission to conduct research in the academic hospital, the protocol was also submitted to the Gauteng Department of Health (Annexure VI), the CEO and the Director of the hospital (Annexure VII). Permission was granted in writing (Annexures VI and VII).

Subjects were approached and given written and verbal information about the research (Annexure II). Subjects were informed that their participation was voluntary and that they could withdraw from the study at any time without fear of victimization. Patients' informed consent was also granted in writing (Annexure III). Prior arrangements were made with the psychiatric nurses to see subjects who might be emotionally affected during the interview, for

counselling. No problems were encountered and no psychiatric referrals were made. Confidentiality and anonymity were maintained by using research-assigned code numbers.

3.13 CONCLUSION

The research methodology was described. This included the research design, the research setting, population, sample and sampling, the data collection instrument and procedures, the pilot study, and the ethical aspects involved in the study. In the next chapter, data analysis, and the results of the study will be presented and interpreted.

CHAPTER FOUR

RESULTS OF THE STUDY

4.1 INTRODUCTION

In this chapter, the results of the study are presented relating to the Intensive Care Unit experiences of critically ill adult patients, according to the severity of illness as rated by the SAPS II scores. A quantitative, descriptive, comparative design was used to achieve the set objectives. Data will be presented, analysed and described to meet the set objectives and the Intensive Care Experience questionnaire: awareness of surroundings; frightening experiences; recall of experiences and satisfaction with care. Participants with low SAPS II scores (p-value of 0.00 to 0.05) were labelled Group I, and those with high SAPS II scores (p-value of 0.051 to 1.00) were labelled ++Group II.

4.2 APPROACH TO DATA ANALYSIS

Data were entered into a Microsoft Excel spreadsheet. Entries were checked and verified with the statistician. Descriptive and inferential statistics were used to analyse data. The Cronbach's alpha was used to test the internal consistency of the research instrument. The t-test was used to determine and compare differences between the mean values of Groups I and II.When analysing the internal consistency of the instrument, the values of the Cronbach's alpha were high for all constructs in both Group I and Group II, ranging from 0.710 to 0.9848. These indicated a high degree of internal consistency of the research instrument. In analysing

the participants' responses to the questionnaire, all constructs of the questionnaire and their items were analysed individually. In this research, a p-value of 0.05 and below indicated significant differences, from 0.051 to 0.099 indicated marginal significance and 0.1 and above, not significant.

4.3 DEMOGRAPHIC DATA

The demographic data of subjects (Gender and age) for Group I and Group II was presented.

4.3.1 Gender

Table 4.1 Gender distribution for Group I and Group II

	Males (n=62)	Females (n=36)	Total
Group I	34 (39.39%)	15 (30.61%)	49 (100%)
Group II	28 (57.14%)	21 (42.86%)	49 (100%)

The sample consisted of both males and females in both groups: males' n = 62 (62.63%) and females' n = 36 (36.37%). Group I consisted of more males n = 34 (69.39%) than females n = 15 (30.61%). In Group II also, the majority of participants were males: n = 28 (57.14%) than females: n = 21 (42.86). Comparison of the gender distribution for Group I and Group II shows that Group I had more males than Group II.

4.3.2 Age

Table 4.2 age distribution for Group I and Group II

Age	Group I n=49	Group II n=49
20-40	18 (36.74%)	7 (14.28%)
41-60	29 (59.19%)	21 (42.86%
61-84	2 (4.8%)	21 (42,85%)
TOTAL	49 (100%)	49 (100%)

In Group I, 36.74% (n = 18) were in the age range of 20 to 40; 59.19% (n = 29) in the age range of 41 to 60; 4.8% (n =2) in the age range of 61 to 84.

In Group II, 14.28% (n = 7) were in the age range of 20 to 40; 42.86% (n = 21) were in the age range of 41 to 60; 42.85% (n = 21) in the range of 61 to 84. Comparison between the two groups indicates that Group II had more of the older subjects than Group I.

4.4 RESULTS AND DISCUSSION

Responses to "most of the time" and "all the time" were grouped together and taken as positive responses, and responses to "never", "rarely" and "sometimes" were grouped together and taken as negative responses.

4.4.1 AWARENESS OF SURROUNDINGS (n=98)

Under "Awareness of Surroundings", subjects were interviewed to find out what they remembered about the ICU environment, the people, and what was happening to them.

Table 4.3 Results on awareness of surroundings

Item	Less critically ill-Group I (n=49)	Critically ill-Group II (n=49)	p-value
I recognised my relatives	11 (22.45%)	14 (28.57%)	0.488
I was aware of someone near to me	12 (24.49%)	14 (28.57%)	0.647
I knew where I was	11 (22.45%)	14 (28.57%)	0.488
I knew what was happening to me	6 (12.24%)	10 (20.41%)	0.279
I remember my relatives being with me	9 (18.37%)	12 (24.49%)	0.461
I felt safe	23 (46.94%)	17 (34.69%)	0.219
I felt in control	1 (2.04%)	0 (0.00%)	
I was able to let people know what wanted	4 (8.16%)	6 (12.24%)	0.507
I have no recollection of ICU	1 (2.04%)	0 (0.00%)	

The subjects were asked whether they recognised their relatives, and it was found that a low percentage recognised their relatives. There was a slight difference between the two Groups. 14 (28.57%) in Group II recognised their relatives as compared with 11 (22.45%) in Group I who recognised their relatives. However, the differences were not significant (p= 0.488).

A low number of subjects in both groups were aware of someone near them. Comparing Group I and Group II on this item, 14 (28.57%) in Group II and 12 (24.49%) in Group I were aware of someone near them. The p-value was 0.647, which indicated that no significant differences existed between Group I and Group II.

Comparing the two Groups about knowing where they were, the responses of the subjects showed that in Group II, 14 (28.57%), and in Group I, 11 (22.45%) knew where they were. There was a slight difference between the two groups, which was not significant (p= 0.488).

When Groups I and II were compared about knowing what was happening to them, it was also found that a low percentage of subjects in both groups knew what was happening to them, 6 (12.24%) in Group I which was slightly lower than in Group II: 10 (20.41%). Comparison shows that the two groups did not differ significantly (P=0.279).

Interviews about whether they could remember their relatives being with them revealed that few subjects in both groups could remember their relatives being with them. In Group II, 12 (24.49%) could remember their relatives compared with 9 (18.37%) in Group I who could remember their relatives. The p-value was 0.461 which indicated that the groups did not differ significantly.

The responses of subjects to the question of safety in ICU indicated that a fair percentage in both Group I and Group II felt safe. Comparison of the two groups indicated that Group I had a higher percentage of the subjects who felt safe: 23 (46.49%) as compared with Group II: 17 (34.69%). However, the differences were not significant (p= 0.219).

Investigations about feeling in control during their admission to ICU, the scores indicated that subjects from both groups did not feel in control. Comparison of the groups showed that only 1 (2.04%) in Group I felt in control and none (0.00%) of the subjects in Group II felt in control.

Subjects were interviewed about being able to let people know what they wanted, and the responses indicated that only a low percentage of subjects from both groups could let people know what they wanted, Group I with a lower percentage 4 (8.16%) than Group II: 6 (12.24%) The differences between the two groups were insignificant (p= 0.507).

Subjects were asked about their recollection of ICU admission, and only 1 (2.04%) of subjects in Group I had recollection of ICU, and none (0.00%) in Group II had recollection of ICU.

4.4.2 FRIGHTENING EXPERIENCES

Subjects were interviewed to find out what experiences were frightening and how they felt about them.

Table 4.4 Results on frightening experiences

Item	Less critically ill-Group I (n-49)	Critically ill-Group II (n=49)	p-value
I seemed to have bad dreams	21 (42.86%)	11 (22.45%)	0.034
I felt scared	22 (44.90%)	13 (26.53%)	0.060
I saw strange things	22 (44.90%)	14 (28.57%)	0.096
I felt helpless	25 (51.02%)	20 (40.82%)	0.312
I thought I would die	26 (53.06%)	18 (36.73%)	0.106
I seemed to be in pain	36 (73.47%)	36 (73.47%)	1.000

The responses of the subjects about having bad dreams indicated that a high percentage of subjects in Group I: 21 (42.86%) had bad dreams as compared with 11 (22.45%) in Group II. The p-value was 0.034, which indicated that differences between Group I and Group II were significant.

When the subjects were interviewed about feeling scared, differences were noted between the two groups. A higher percentage in Group I: 22 (44.90%) felt scared as compared with 13 (26.53%) of subjects in Group II who felt scared. However the differences were marginally significant (p= 0.060).

Responses about seeing strange things showed that more subjects in Group I: 22 (44.90%) saw strange things than those in Group II: 14 (28.57%). Although the differences were noted between the two groups, they were marginally significant (P= 0.096).

When the subjects were interviewed about feeling helpless, many of the subjects in both groups verbalised that they felt helpless. Comparing the two groups, a higher percentage in Group I: 25 (51.02%) felt helpless than in Group II: 20 (40.82%). The differences were not significant (p= 0.312).

The responses on thoughts of death indicated that more subjects in Group I: 26 (53.06%) thought that they would die as compared with Group II: 18 (36.73%) who had similar thoughts. These results indicate that there were differences, but they were not statistically significant. The p-value was 0.106.

Investigations about feeling pains in ICU revealed that the majority from both Group I and Group II, with equal percentage (73.47%) verbalised that they seemed to be in pain. There were no differences between the two group (p= 1.000).

4.4.3 Recall of experiences

In this item, the researcher wanted to find out whether the subjects could recall all their experiences in ICU, and whether they wanted to remember the experiences or not.

Table 4.5 Results on recall of experiences

Item	Less critically ill-Group I (n=49)	Critically ill-group II (n-49)	p-value
I wish I remembered more about it	2 (4.08%)	3 (6.12%)	0.648
Most of my memories are blurred	2 (4.08%)	3 (6.12%)	0.648
I wish I had known more about what was happening to me	8 (16.33%)	5 (10.20%)	0.375
I seemed to sleep too much	5 (10.20%)	6 (12.24%)	0.749
I never knew whether it was day or night	6 (12.24%)	4 (8.16%)	0.507

Comparison of the groups regarding recall of experiences, in particular concerning whether they wished to remember more about their experiences, a lower percentage from both groups, with a slight difference, wished to remember more about it. In Group I, only 2 (4.08%) and in Group II, only 3 (6.12%) wished to remember more about it.

The response of the subjects to the question of blurred memories indicated that only a small percentage in both groups had blurred memories. In Group I, only 2 (4.08 %) had blurred

memories as compared with 3 (6.12%) of Group II who had blurred memories. There was a slight difference between the two groups which was insignificant. The p-value was 0.648.

A lower percentage in both groups wished they had known more about what was happening to them during their stay in ICU. Group II had slightly lower percentage: 5 (10.20%) of subjects who wished they had known more about it than in Group I: 8 (16.33%). The p-value was 0.375 which indicated that the differences between the two groups were statistically insignificant.

Only a lower percentage in both Group I and Group II verbalised that they seemed to sleep too much. In Group II: 6 (12.24%) verbalised that they seemed to sleep too much as compared with 5 (10.20%) in Group I. The differences between the two groups were very little and insignificant (p= 0.749).

A lower percentage from both Group I and Group II could differentiate between day and night, with only a slight difference between the two groups. In Group I: 6 (12.24%) knew whether it was day or night, as compared with 4 (8.16%) in Group II who knew whether it was day or night. The p-value was 0.507, thus indicating that the differences between the groups were not significant.

4.4.4 SATISFACTION WITH CARE

In this item, the subjects were interviewed to determine whether they were satisfied with the care they received in ICU.

Table 4.6 Results on satisfaction with care

Item	Less critically ill-Group I (n=49)	Critically ill-Group II (n=49)	p-value
My care could have been much better	7 (14.29%)	5 (10.20%)	0.539
My care was good as it have been	6 (12.24%)	5 (10.20%)	0.749
I was constantly disturbed	23 (46.94%)	14 (28.57%)	0.063
It was always too noisy	23 (46.94%)	14 (28.57%)	0.063

When subjects were interviewed about how they felt about their care in ICU, a low percentage from both Group I and Group II felt that their care could have been much better. In Group I: 7 (14.29%) of subjects felt that their care could have been much better compared with 5 (10.20%) in Group II. The p-value was 0.539 which indicated that the differences were not significant.

The responses of the subjects to the item "my care was as good as it could have been", indicated that a low percentage of subjects from both groups felt that their care was as good as it could have been. The comparison between Group I and Group II shows little difference: Group I: 6 (12.24%) and Group II: 5 (10.21%) which was of no significance (p= 0.749).

To the question of being constantly disturbed, some differences were noted between the two groups. More subjects in Group I: 23 (46.94%) felt that they were constantly disturbed as compared with 14 (28.57%) in Group II. However, the differences were marginally significant (p=0.063).

When asked about the noise in ICU, a fairly high percentage of subjects in group I: 23 (46.94%) responded that it was always too noisy as compared with 14 (28.57%) in Group I who responded that it was always too noisy, however, the differences between the groups were not significant (p=0.603).

4.5 T-TEST ON BOTH GROUPS

The t-test was performed for the two groups on each of the four constructs (Refer annexure X)

In awareness of surroundings, the mean score for Group I was 20.79592, and for Group II was 20.28571. The difference between the means was .5102041. The p value was 0.7657, thus there were no significant differences for the total scores of awareness of surroundings.

The t-test on frightening experiences showed that the mean score for group one was 19.85714 and for group two was 16.55102. The difference between the means of the two groups was 3.306122. The p value was 0.0217. This indicates that groups differ significantly with respect to the total score for frightening experiences.

When comparing the means of the two groups on recall of experiences, it was noted that the mean score for Group I was 13.79592, and for Group II was 13.55102. The difference between the two means was .244989. The p value was 0.6947 which indicated that the two groups did not differ significantly.

For satisfaction with care, in Group I the mean score was 11.67347, and for Group II the mean score was 10.44898. The difference between the means was 1.22449. The p value was

0.925, which means that the differences between Groups I and II were marginally significant with regard to the total scores for satisfaction with care.

The mean score for the total questionnaire in Group I was 66.12245, and the mean score for the total questionnaire for Group II was 60.83673. The difference between the means was 5.285714. The p-value was 0.294 which indicated that Groups I and II did not differ significantly with regard to the total questionnaire.

4.6 Conclusion

The purpose of this study was to compare the Intensive Care Unit experiences of critically ill adult patients with low SAPS II scores (Group I) with those with high SAPS II scores (Group II).

In this chapter, data was presented, analysed and discussed. In comparing the two groups, it was identified that some differences between group one and two were noted, but they were mostly insignificant. The only significant differences found were on frightening experiences. In the following chapter, results and main findings will be discussed, conclusions as well as recommendations will be made.

CHAPTER FIVE

DISCUSSION OF FINDINGS, RECOMMENDATIONS, LIMITATIONS AND CONCLUSIONS

5.1 INTRODUCTION

In this chapter, a summary of the research, findings, conclusions and limitations are presented. Recommendations for clinical practice, nursing education, and further research are presented.

5.2 SUMMARY OF STUDY

Admission to ICUs and treatment in ICUs exposes patients to a many terrible experiences, some real and others unreal. These result from the life-threatening physical condition, and from the intensive medical treatment, as well as painful and uncomfortable procedures.

The aim of this study was to describe and compare critically ill adult patients' experiences of ICU admissions, based on the severity of illness according to the Simplified Acute Physiology score (SAPS II score): Group I with low SAPS II score (p-value of 0.00 to 0.05) and Group II with high SAPS II score (p- value of 0.051 to 1.00).

The following research objectives were developed to achieve the purpose of the study:

- To describe the critically adult patients' experiences of ICU, regarding awareness of surroundings, frightening experiences, recall of experiences, and satisfaction with care.
- To compare critically ill adult patients of low SAPS II scores with those of high SAPS II score

A descriptive, comparative design was used to achieve the set objectives. The study population consisted of all patients admitted in the five ICUs of an academic institution in Gauteng, over a period of three months. The sample consisted of 98 critically ill adult patients, 49 in each group. Data collection was carried out using a structured interview schedule. Consent was obtained from the Gauteng Department of Health, from the Institution and from the patients before the commencement of data collection.

Data were entered into a Microsoft Excel spreadsheet. Descriptive statistics were used to analyse data. A p-value of 0.00 to 0.05 indicated that significant differences existed between the groups, a p-value of 0.051 to 0.099 indicated that the differences were marginal and a p value of 1.00 and above indicated that no significant differences existed. Other statistical tests that were used included the t-test to compare mean values of Groups I and II.

5.3 MAIN FINDINGS

The findings of this study are discussed under the four constructs: Awareness of surroundings, frightening experiences, recall of experiences and satisfaction with care. The items under each construct will be discussed individually where necessary.

5.3.1 AWARENESS OF SURROUNDINGS

The construct awareness of surroundings was discussed under the following items: Recognising relatives, awareness of someone near, knowing where they were, knowing what was happening to them, remembering their relatives being with them, feelings of safety, feeling in control, being able to let people know what they wanted, and having no recollection

of ICU. Whether the ICU patients are aware of their surroundings or not, could be related to the use of sedatives, analgesia, neuromuscular blockers or the severity of their critical illness at that time (Refer page 2). Claesson, Mattson & Idval (2004:117) suggested that sedations be used sparingly, as over sedation may cause memory gaps.

In this study, it was found that a low percentage of patients in both groups, (22.45%) in group I and (28.57%) in group II recognised their relatives. These results are similar to a study conducted on ICU patients by Jones, et al., (2001:575), who found that some ventilated ICU patients did not recognise their relatives.

The majority of subjects from both groups were not aware of someone near them. Statistics show that a fairly low percentage from both groups were aware of someone near them, with group II (28.57%) slightly higher than group I (22.45&). The p-value was 0.647, which indicated that no significant differences existed between Group I and Group II. Studies conducted in Australia (Roberts, et al., 2007:1669); and in Sweden (Karlsson & Forsberg, 2007:47) seem to indicate that patients are aware of people around them by voices and noise in the background. It appears there are differences in literature about whether patients are aware of people around or not, depending on where the study was conducted.

Most patients from both group I and group II did not know where they were, and did not know what was happening with them. The subject of what was happening in and around ventilated patients is being associated with being informed. Alasad, et al., (2004:356) confirms that ventilated patients can hear what is said to them. Magnus & Turkington, (2005:170) further

confirmed that informing patients about their conditions can reduce stress, therefore, knowing is related to being informed.

A fairly low percentage of subjects from both groups remembered their relatives being with them. Group II had a slightly higher percentage than group I. The p-value was 0.461, indicating that no significant differences existed between the two groups. The results of the study show that most patients did not remember their relatives being with them. This is congruent with a study by Capuzzo, et al., (2003:50), which indicated that many ventilated patients never remembered their relatives being with them. Most of those patients were either very critical at that time, or were given sedatives and neuromuscular blockers (Refer page 2).

An outstanding finding about this study was that despite all negative experiences in the ICUs, most subjects in both groups reported that they felt safe, but Group I was slightly more: (46.94%) than Group II: (34.69%). Although some differences between the two groups were noted, they were statistically insignificant ($p= 0.219$). These results are consistent with the findings from the study by Griffith and Jones (2001:445), which indicated that patients felt much safer in ICU than in other units because nurses and doctors are always there to see any change in condition and immediately respond. However, Lof, et al., (2005:1560); Schou & Egerod, (2007:174) pointed out that patients experienced threads to safety when they were extubated because they thought that they might not be able to maintain the airway after extubation. Pattison (2005:712) suggested that patients be given continuous information and reassurance about every procedures. This may help to reduce their fears.

The feeling of loss of control and the inability to let people know what was happening were statistically insignificant. These results could be attributed to restricted movements and being confined to bed. Pattison (2005:709) further suggested that patients should be kept informed about every situation, every intervention and reasons for such.

Schou & Egerod (2007:175) revealed that ventilated patients understand that verbal communication is not always possible, and alternative means of communication like using gestures, lip reading, communication charts and hand squeezing are effective.

5.3.2 FRIGHTENING EXPERIENCES

Frightening experiences that were discussed included bad dreams, feeling scared, seeing strange things, feeling helpless, thoughts of death and pain. The effects of drugs and the critical nature of the patients' condition could also be related to the frightening experiences(Refer page 2). Claesson, et al., (2004:117) suggested that the ICU patients should not be heavily sedated, as this may help them to have real memories and less dreams and nightmares.

A high percentage of patients in group I: (42.86%) experienced bad dreams, compared with group II: (22.45%). The p-value was 0.034, which indicated that significant differences existed between the two groups. Literature on ICU patients is inundated with reports on dreams and nightmares, whether real or unreal is not a matter for discussion. Patients in ICU seem to have factual memories and may have difficulties separating real from unreal (Pattison, 2005:708). Grandberg, et al., (2002:23) highlighted that these visual or auditory phenomena may occur at a point of awareness or wakefulness and sleep. Patients reported seeing strange

things that left them scared and anxious (De Papathanassoglou & Patiraki, 2003:17). In this study strange things that patients reported included seeing people trying to kidnap and kill them. Patients also reported seeing themselves walking on air to a far away destination that they never even reached, and they felt very tired as if they were really walking. Dreams, delusions, hallucinations and nightmares have multifactoral causes that include sedation withdrawal (Jones, et al., (2001:575), sleep disturbances and ventilation (Rundshagen, 2001:40), different medications given (Grandberg, et al., 2002:23; Rundshagen, 2001:40). Some dreams are persecutory in nature and distressing to patients. Some involve familiar surroundings (Bowers 2004:174). Rundshagen et al., (2001:40) reported that 70% of patients in their study had dreams following treatment with sedatives, analgesia and neuromascular blockers. Roberts & Chaboyer (2004:174) reported that patients experienced strange dreams, where patients reported seeing staff trying to kidnap and kill them. Similar results were found in the present study. Pattison (2005:711) indicated that unfortunately not all dreams are recalled instantly, it may take sometime after the critical stage, therefore critical care follow up clinics may help to make sense of dreams and deal with arising issues. The result of the study motivates the need for a closer relationship between nurses and patients, with ongoing care and support to help patients to cope or deal with their tormenting visions and emotional experiences.

Responses about feeling scared in ICU showed that a fairly high percentage in Group I: (44.90%) felt scared compared with (26.53%) in Group II who felt scared. Although some differences were noted, they were marginally significant ($p= 0.060$). Lantz and Severison (2001:130) reported that ICU patients often verbalised that they felt scared and anxious due to

threats of death and disability when they realised the severity of their critical illness. Pattison (2005:710) reported that more than half of critical care patients experience anxiety, which may occur both at the time of their critical illness or after discharge, and it is sometimes difficult to diagnose. Mckinley, et al., (2002:31) highlighted that this calls for a development of patient anxiety rating scale that may help to identify signs of anxiety as it sets in. Pattison further reported that the long term implications of anxiety arising from memories of critical illness may worsen the health related quality of life. Schou & Egerod (2007:176) pointed out that patients reported that their fears and anxieties were reduced by the caring relationships of nurses and relatives. Ongoing reassurance by nurses and family members may help reduce patients' fears. Relaxing visiting times in the ICUs may also benefit patients as their families will stay longer with them. Pattison (2005:710) highlighted that the use of therapeutic touch and therapeutic use of self may also be beneficial in reducing fears and anxieties experienced by ICU patients

The majority of subjects in this study felt helpless with a higher percentage in Group I: (51.02%) as compared with Group II: (40.82%). The outcome of the scores showed that the differences between the groups were insignificant ($p= 0.312$). Previous studies by Grap, et al., (2002:247) indicated that patients experienced feelings of helplessness because they could not engage in basic self-care activities, having to be washed by nurses and having no privacy. In this study, patients also experienced feelings of helplessness, as if they have been robbed of their privacy because nurses had to wash them. Ongoing reassurance to patients and informing them that nurses are there to help make up for their deficits throughout their convalescence period until they are stable, is important.

The differences between group I and group II about thoughts of death and pain were statistically insignificant. Majority of patients from both groups combined (89%) had repeated thoughts of death. Schou & Egerod (2007:176) reported that thoughts of death among ventilated patients were triggered by severe pains, severity of the condition, and weakness. A study conducted by Kłopper, et al., (2005:17) on ventilated ICU patients indicated that pain was one of the major experiences in ICU. Roberts, et al., (2007: 1676) suggested that pain relief medications be given appropriately without over sedation in order to promote physical comfort.

Goodridge, Duggleby, Gjevre & Rennie (2008:163) reported that most of the critically ill patients in ICU are aware of their critical condition and the prognosis. Some of them present with panic, anxiety and anger towards the health care personnel and family. Goodridge, et al., suggested that nurses working in ICU be given psychological support in dealing with end of life issues and ensuring that patients' dignity is maintained until death. Langley & Schmollgruber (2006:64) suggested that end of life care must be compassionate, ethical and focussed on patients as well as their family members.

5.3.3 RECALL OF EXPERIENCES

Recall of experiences was discussed under the following items: Wishing to remember more about the experiences, blurred memories, wishing to have known more about what was happening while in ICU, seeming to sleep too much, and knowing whether it was day or night. These could also be related to drugs and the severity of the patients' conditions (Refer page 2).

The results on wishing to remember more about their stay in ICU, and knowing more about what was happening to them while in ICU were similar in both groups, and the differences were statistically insignificant. This was congruent with the studies conducted by Roberts et al., (2007:1674) and Ringdal et al., (2006:350) on ventilated ICU patients, who found that the majority of patients wished they could never remember anything about their stay in ICU because it was all traumatic and depressing. Roberts, et al., (2007:1676) further reported that psychological recovery is as important as the physical recovery, therefore, ongoing support and debriefing from nurses and family could help to overcome the negative psychological effects.

A low percentage of subjects in both groups had blurred memories, with Group II slightly higher than Group I. The p-value was 0.648 which and no significant differences existed between the two groups. However, according to Lof et al., (2005:156), most patients had vivid memories about their admission and stay in ICU, but they could not remember many things that occurred while in ICU. Roberts, et al., (2007:1676) suggested that debriefing sessions may be helpful to fill in the missing gaps of memories from admission, throughout their stay in ICU.

Sleep disturbances were reported in both groups and no significant differences were noted ($p=0.749$). According to Gwala (2000:26) noise from telephones, buzzers, machines, alarms and nurses conversations was very disturbing. Pattison (2005:713) suggested that ICU nurses need to ensure that patients' environment and nursing practices allow opportunity for rest and

sleep, thereby minimising the precursors to delirium and anxiety, which may have long term psychological impact.

No significant differences were found between group I and group II with respect to time perception (p=0.507). Some patients said they could notice that it was the end of shift only when new nurses took over, but they did not really know whether it was day or night shift. These results are consistent with the findings of the previous studies by Schou & Egerod (2007:177), who reported that patients had distorted perceptions of time, and could not differentiate between day and night.

5.3.4 SATISFACTION WITH CARE.

Satisfaction with care was discussed under the following items: Care could have been much better, care was as good as it could have been, constant disturbance, and noise.

The care received in ICU was expressed as satisfying in both groups and no significant differences were noted between group I and group II. Despite the negative experiences of ICU admission and stay, patients still verbalised that they were happy about the care they received in ICU. Similar findings were reported by Griffith & Jones (2001:344); Schou & Egerod 2007:177), who indicated that in their studies ICU patients expressed that care was exceptional.

A higher percentage: (46.94%) in group I was constantly disturbed than in group II: (28.57%). However, differences noted were proved to be of marginal significance (p= 0.063). Subjects in this study reported that procedures like turning, suctioning and bathing were very

disturbing. These results were similar to a study by McKinley, et al., (2002:32). Some patients in this study, some patients from both groups felt disturbed by such procedures. In contrary, a study by Karlsson and Forsberg (2007:44) revealed that patients were not disturbed by suctioning, but they experienced a relief after getting rid of secretions.

More of group I subjects (46.94 %) complained of noise than in group II (25.57%), and the differences were marginally significant (p=0.063). Strahan et al., (2003:51) reported that patients verbalised that it was always too noisy, especially from the night staff. According to Karlsson and Forsberg (2007:44), patients were not bothered by noise.

The overall findings of this study indicate that Group I and Group II differed in terms of their frightening experiences of ICU. Group I experienced more bad dreams and nightmares as compared to Group II.

5.4 LIMITATIONS

The following was identified as limitation:

- The research was conducted in a single hospital, although it was in several multidisciplinary ICU.

5.5 RECOMMENDATIONS

The recommendations are described according to practice, education, and research.

5.5.1 Practice

Care and caring relationships of family appears to have an effect on the reduction of fears and anxieties of ICU patients, thus the presence of relatives around a critically ill patient should be encouraged, and in some units, the relaxation of visitation rights to families is recommended.

Organising debriefing sessions upon extubation may benefit patients by allowing them to talk about their frightening experiences, be able to make sense of what happened, differentiate between what is real and not real. This may help to prevent the long-term psychological effects of the critical illness and ICU experiences.

Follow up interviews of patients after discharge and continued rehabilitation may help to prevent the development of psychological condition and post traumatic stress disorder.

For patients that are admitted for elective procedures, information pamphlets with all the details relating to the procedure, and ICU as a unit, what to expect during admission may be helpful to reduce stress and anxieties. A brief orientation of patients and relatives may also be helpful.

5.5.2 Education

While it often appears that critical care nurses are working in a high technical environment and the nature of knowledge and skills required from these nurses is of high clinical quality, there is a need to emphasise holistic care in the critical care curriculum, as well as skills for counselling and debriefing. More emphasis on the psychological and the spiritual aspect of ICU patients is recommended for the critical care curriculum.

5.5.3 Research

As the present study was conducted in only one hospital, making generalisation impossible, a multi-centre study in Gauteng and most parts of the country is recommended.

The outcome of the study showed that less critically ill patients experienced more bad dreams than the critically ill ones. Further studies to establish the reason for such differences is recommended with bigger samples.

5.6 CONCLUSION

The purpose of this study was to describe and compare critically ill adult patients' experiences of Intensive Care Unit admission, based on the patients' severity of illness according to the simplified acute physiology score. (SAPS II score): Group I with low SAPS II score and Group II with high SAPS II scores.

Patients who were admitted in ICU were in a critical state, in most cases unconscious or disorientated. When they regained consciousness, or became orientated, they found themselves in a strange environment, with strange people. Most of them had no memories of how they came to ICU. Some patients reported that they felt bad when they could not remember events of the previous days, as if they were mentally unstable. Some could not remember any of the family members coming to visit, as if they were neglected by their loved ones.

Most patients reported that they experienced bad dreams and nightmares in ICU, and some were scared to talk about them. Lack of communication was also reported as a major problem, mostly in ventilated patients, as they were not able to talk. Patients felt neglected or being taken for granted by both nursing and medical staff because they were not informed of their conditions or interventions made.

Discomfort from the endo-tracheal tube was described as being unbearable, especially during suctioning, as if the airway was completely closed. Pain was also reported as a major problem, especially in post-operative surgical patients. All these experiences may predispose patients to long term psychological effects that can impact on their health related quality of life. However, most patients still regarded ICU as the safest place because nurses and doctors are always available.

Although some differences were found between Group I and Group II, most of them were proved to be statistically non-significant. Significant differences between Groups I and II were noted on frightening experiences, Group I experienced more bad dreams than Group II. The p-value was 0.034.

The t-test was performed and differences between the mean values compared for all components of the questionnaire for Groups I and II. Some differences were noted, but they were all not significant except on frightening experiences. The p-value was 0.021. This means that critically ill patients with low SAPS II scores (0.00 to 0.05) experienced worse frightening experiences in ICU than those with high SAPS II scores of (0.51 to 1.00). However, when the t-test was performed for the entire questionnaire, the p-value was 0.294,

therefore, the differences between group I and II were statistically not significant. This indicates that critically ill adult patients with low SAPS II scores (0.00 to 0.05) and those with high SAPS II scores (0.5 to 1.00) do not differ.

In conclusion, the responses from both Group I and Group II shows that critically ill and less critically ill patients admitted in ICU do differ in terms of their frightening experiences. Group I (Less critically ill) experienced more bad dreams compared to group II (Critically ill).

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ANNEXURE I

INTERVIEW SCHEDULE (THE ICE QUESTIONNAIRE)

	Intensive care experience	**1** **Never**	**2** **Rarely**	**3** **Sometimes**	**4** **Most of the times**	**5** **All the times**
	AWARENESS OF SURROUNDINGS:					
1	I recognised my relatives					
2	I was aware of someone near to me					
3	I knew where I was					
4	I knew what was happening to me					
5	I remember my relatives being with me					
6	I felt safe					
7	I felt in control					
8	I was able to let people know what I wanted					
9	I have no recollection of being in ICU					
	FRIGHTENING EXPERIENCES					
1	I seemed to have bad dreams					

2	I felt scared					
3	I saw strange things					
4	I felt helpless					
5	I thought I would die					
6	I seemed to be in pain					
	RECALL OF EXPERIENCES					
1	I wish I remembered more about it					
2	Most of my memories are blurred					
3	I wish I had known more about what was happening to me					
4	I seemed to sleep too much					
5	I never knew whether it was day or night					
	SATISFACTION WITH CARE					
1	My care could have been much better					
2	My care was good as it could have been					
3	I was constantly disturbed					
4	It was always too noisy					

OPEN ENDED QUESTION:

Is there anything else you wish to add or discuss with me?	YES\NO

ANNEXURE II

MSc Nursing student

Intensive Care Unit experiences of critically ill adult patients

INFORMATION LETTER

NAME OF PATIENT\GUARDIAN

My name is Stellah Saape Bokaba an MSc student at the University of Witwatersrand.

As part of my course requirements; I am expected to conduct a clinical research under supervision.

The research focuses on the intensive care unit experiences of critically ill adult patients. The study will be conducted at the intensive care units of the Johannesburg Hospital for a period lasting over three months.

The outcomes of the study will contribute to the body of knowledge of critical care nurses, assisting the nurses to prepare their patients and families with respect to understanding and interpreting such experiences on discharge from ICU, from what is real and unreal.

I therefore invite you to participate in the study, and would like to assure you that all information will be kept confidential and anonymous, no names will be mentioned. You have the right to withdraw from the study at any moment should you wish to.

For more information or queries, I can be reached at 083 661 8434.

Thank you

Stellah Saape Bokaba

Intensive Care Unit experiences of critically ill adult patients.

PATIENT CONSENT FORM

I _____ (Name) give permission to be included in the study.

I have read with understanding the content of the information sheet and I have been given the opportunity to ask questions I might have regarding the procedure and my consent to my being included in the study.

_____ _____

Date Signature

A_____ (Witness)

Faculty of Health Sciences
UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

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FAX 643-4318 TELEPHONE 717-2075/2076
E-MAIL healthpg@health.wits.ac.za

MISS SS BOKABA
7381 KHOKHONOKA STREET
EXTENSION 9
VOSLOORUS
1475

APPLICATION NUMBER 0417844T
STATUS (DEG 47) (MM034) PZZ

2006-07-06

Dear Miss Bokaba

Approval of protocol entitled Intensive care unit experiences of critically ill adult patients

I should like to advise you that the protocol and title that you have submitted for the degree of Master Of Science In Nursing (Part-Time) (Coursework) have been approved by the Postgraduate Committee at its recent meeting. Please remember that any amendment to this title has to be endorsed by your Head of Department and formally approved by the Postgraduate Committee.

Mrs. AA Tjale has/have been appointed as your supervisor/s. Please maintain regular contact with your supervisor who must be kept advised of your progress.

Please note that approval by the Postgraduate Committee is always given subject to permission from the relevant Ethics Committee, and a copy of your clearance certificate should be lodged with the Faculty Office as soon as possible, if this has not already been done.

Yours sincerely

S Benn (Mrs)
Faculty Registrar
Faculty of Health Sciences

Telephone 717-2075/2076

Copies - Head of Department____Supervisor/s

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Bokaba

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER M060238**
PROJECT	Intensive Care Unit Experiences of Critically Ill Adult Patients Approved subject arranging counselling for volunteers
INVESTIGATORS	SS Bokaba
DEPARTMENT	Dept of Nursing Education
DATE CONSIDERED	06.02.24
DECISION OF THE COMMITTEE*	

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 06.02.27 **CHAIRPERSON** .....
(Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : Mrs A Tjale

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10005, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

PROVINCIAL RESEARCH COMMITTEE.

RESEARCH PROPOSAL EVALUATION FORM FOR APPROVAL BY THE HEAD OF THE DEPARTMENT.

Date submitted: 24-05-2006
Date Reviewed: 05/10/2006
Title: INTENSIVE CARE UNIT EXPERIENCES OF CRITICALLY ILL ADULT PATIENTS

Principal investigator: Stellah S. Bokaba
Supervisor's Name: Mrs A. Tjale
Research Site(s): Johannesburg Hospital.
Type of research: Non Trial
Reviewer's name: Dr ML Likibi
SECTION A: EVALUATION

	YES	NO	N/A
1. Is this research project within the scope of the Department of Health key policy priorities/directives?	X		
2. Content of Research: Original work • New facts, ideas • Confirmation of uncertain data • Repetition of known data and consequently of limited importance • Unreliable and/or inadequate • Confusion of topics/questions • Intervention study	X	X X X X X	
3. Is the title of the research project suitable?	X		

4. Are the objectives of the research project adequate?	X		
5. Could the objectives be limited to better focus on the project's main objective?		X	
6. writing style • The text of the proposal is clear • The nomenclature used is correct • The references used are relevant, comprehensive and accurate (corrected) • The spelling and grammar are correct • The language needs improvement • The research proposal needs restyling and rewriting	 X X X X	 X X	
7.Are the research methods appropriate to the study	X		
8. Does the study have ethical approval? If yes, name the ethics committee: Wits ethics committee	X		
9. Is the definition and measurement of variables consistent with the scope of the proposal	X		
10. Is data collection method in line with study design?	X		
11. Is time frame of the proposal adequate to meet the objectives?	X		
12. Is it stated in the proposal the method of dissemination of the results of the research project?	X		
13. Is the possible conflict of interests clarified? Are financial implications and financial support transparent?	X		

REVIEWER 'S FINAL CONCLUSION

The project is accepted without change

13. COMMENTS ON PROPOSAL CHANGE/REVISION

N/A

Section B: Proposal summary

A descriptive comparative, design will be used to describe critically ill patient's experiences regarding their awareness of surroundings, fears, recall of experiences of intensive care unit and satisfaction with care and to compare critically ill adult patients with high SAPS II score and low SAPS II score.

Research done in other countries suggests that an increasing number of patients report having experienced delirium, confusion, anxiety, nightmares, inability to communicate

with patients experiencing a feeling of extreme vulnerability, helplessness and emptiness as they could not communicate with nurses and relatives as they wanted to.

The outcomes of this study will contribute to the body of knowledge of critical care nurses, assisting the nurses to prepare their patients and families with respect to understanding and interpreting such experiences on discharge at ICU, from what is real and unreal.
The result of the study will help develop guidelines for critically care practice and improve patients experiences of ICU, thereby preventing long term consequences related to their admission in ICU.
Finally the study will help ICU nurses to better understand patient's experiences, behavioural patterns, feelings, and base decisions for intervention on such understanding, provide individualized holistic care, enhancing speedy recovery and prevention of long term consequences on patients' health related quality of life

The study is carried out for a MSC degree in the department of Nursing education.

There are no financial implications for the Department of Health as the researcher will fully pay for her study project.

The Ethics clearance certificate from Wits University Ethics committee is hereby attached.

The evaluator:

Dr. Mupata Leiwi Likibi
Specialist: Research and Epidemiology

Recommended/~~Not recommended~~ Subject to inform The GDoH before publication.

Dr A Rahman
COD
Date: 19/12/06

Approved/~~not approved~~

Ms S. Ngcobo
HOD
Date: 27/12/06

Act

Gauteng Department of Health

Enquiries: M. Motjelele
(011): 488-3785
(011) 488-3753

02 February 2007

Dear. Mrs Bokaba

RE: Permission to Undertake Research on: Intensive care unit experiences of critically ill adult patients

Permission is granted for you to conduct the above research as described in your request provided:

1. Johannesburg hospital will not in anyway incur or inherit costs as a result of the said study.
2. Your study shall not disrupt services at the study sites.
3. Strict confidentiality shall be observed at all times.
4. Informed consent shall be solicited from patients participating in your study.

Please liaise with the Head of Department and Unit Manager or Sister in Charge to agree on the dates and time that would suit all parties.

Kindly forward this office with the results of your study on completion of the research.

I wish you success in your studies.

Yours sincerely

Eagle Pillay
Chief Executive Officer

OfficeNet

From: Janice Rattray [j.z.rattray@dundee.ac.uk]
Sent: 14 March 2006 01:40 PM
To: OfficeNet
Subject: Re: Request to use ICE Questionnaire for data collection

Intensive Care
Experience Ques..

Dear Stellah,

Thank you for your request. I am happy to give you permission to use the ICEQ in your research and am attaching a copy of this.

Good luck with your study and I would be interested in your results.

Janice

Dr. Janice Rattray
Lecturer/Postgraduate Student Adviser
School of Nursing and Midwifery
University of Dundee
Ninewells Hospital
Dundee
DD1 9SY

telephone 01382 632304 ext 33848
e-mail j.z.rattray@dundee.ac.uk

ANNEXURE IX

THE SAPS II SCORE

	VARIABLE	FINDINGS	POINTS	SCORE
1	**Age in years (As in last birthday)**	<40	0	
		40-59	7	
		60-69	12	
		70-74	15	
		75-79	16	
		>=80	18	
2	**Heart rate per minute**	<40	11	
		40-69	2	
		70-119	0	
		120-159	4	
		>=160	7	
3	**Systolic blood pressure**	<70	13	
		70-79	5	

		100-199 >=200	0 2	
4	**Body temperature**	<=39 >=39	0 3	
5	**Pao2\FIO2 if on CPAP or ventilation**	<100 100-199 >=200	11 9 6	
6	**Urinary output**	<0.500 0.500-0.999 >=1000	11 4 0	
7	**Serum urea and creatinine**	<28 28-83	0 6	
8	**White cell count**	<1.0 1.0-19.9	12 0	

		>=20	3	
9	**Serum potassium**	<3.0 3.0-4.9 >=5.0	3 0 3	
10	**Serum sodium**	<125 125-144 >=145	5 0 1	
11	**Serum bicarbonate**	>15 15-19	6 3	
12	**Serum bilirubin**	<4.0 4.0-5.9 >=6.0	0 4 9	
13	**Glasgow coma scale>6**	<6 6-8 9-10 11-12 14-15	26 13 7 5 0	

14	**Chronic diseases**	Metastatic carcinoma Hematologic emergencies, AIDS	9 1 17	
15	**Type of admission**	Scheduled surgery Medical Unschduled surgery	0 6 8	

TOTAL SCORE=

ANNEXURE X

T-TEST ON BOTH GROUPS

Results of the t-test on awareness of surroundings, frightening experiences, recall of experiences, satisfaction with care and the total questionnaire.

Awareness	Obs	Mean	Std err	Std Dev	95% Conf	Interval
Group I	49	20.79592	1.07142	7.499943	18.64168	22.95015
Group II	49	20.28571	1.329288	9.305017	17.613	22.95843
Combined	98	205408	.8496442	8.411049	18.85451	22.22712
Difference		.5102041	1.707322		-2.878803	3.899212
Fright.						
Group I	49	19.85714	.948504	6.639528	17.95005	21.76424
Group II	49	16.55102	1.052637	7.368461	14.43455	18.66749
Combined	98	18.20408	.7245157	7.17234	16.76672	19.64204
Difference		3.306122	1.416935		.4935285	6.118716
Recall						
Group I	49	13.79592	.3842149	2.676904	13.02702	14.56482

Group II	49	13.55102	.4906102	3.434271	12.56458	14.53746
Combined	89	13.67347	.3096646	3.065523	13.05887	14.28807
Difference		.244898	.6220448		-.9898508	1.479647
Satisfaction						
Group I	49	11.67347	.5243954	3.670761	10.6191	12.72784
Group II	49	10.44898	.4940644	3.458451	6.455596	11.44236
Combined	98	11.06122	.3637291	3.600734	10.33932	11.78313
Difference		1.22449	.7204785		-.2056487	2.654628
Total questionnaire						
Group I	49	66.12245	1.672261	11.70583	62.76014	69.48475
Group II	49	60.83673	1.708907	11.96235	57.40075	64.27272
Combined	98	63.47959	1.219212	12.06958	61.05979	65.89939
Difference		5.285714	2.390987		.5396425	10.03179