THE PERCEPTIONS OF CRITICAL CARE NURSES
REGARDING THE USE OF ALTERNATIVE MEDICINES
IN INTENSIVE CARE UNITS

by

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DEDICATION

To Almighty Allah, for the help, grace and strength shown to me during these trying times.

This dissertation is dedicated to my parents, whose sacrifices and love have made my education possible, and to my loving daughter and brother for their support and encouragement.
ACKNOWLEDGEMENTS

I wish to acknowledge my sincere gratitude to the following individuals for their assistance in my research project:

1. Dr. W.E. Nel, my study leader, for her support, sacrifice and patience.
2. My daughter, Tasneem, for her love, encouragement and sacrifices.
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SUMMARY

The perceptions of critical care nurses regarding alternative medicine for the critically ill patient is a contextual, qualitative research study using the phenomenological method to obtain and analyse data.

The objectives are:

- to explore and describe alternative medicine in the critically ill patient and
- to give guidelines to the critical care nurses.

Seven participants were interviewed. The interview was coded by the researcher and an independent nursing researcher. The researcher used the method described by Tesch in Cresswel to analyse the results. The findings were compared to relevant available literature. Data obtained revealed that there is a lack of knowledge with regard to alternative medicine. There is a need for education, information, understanding and insight in this sphere. Guidelines for critical care nurses were proposed.
OPSOMMING

Die persepsies van kritieke sorgverpleegsters in alternatiewe medisyne vir die kritieke siek pasiënt is 'n kontekstuele, kwalitatiewe navorsing-studie wat 'n fenomenologiese benadering gebruik om data in te samel en te ontleed.

Die doelstellings is:

- om alternatiewe medisyne vir die kritieke pasiënt te ondersoek en beskryf,

- om riglyne in kritieke-sorg-verpleging te verskaf.

Sewe proefpersone is ondervra. Die navorser en 'n onafhanklike verplegings-navorser het die ondervragings opgeteken. Die navorser het die inhoud ontleed met behulp van die metode soos beskryf deur Tesch in Cresswel. Die bevindinge is vergelyk met die in relevante beskikbare bronne. Daar is klaarblyklik 'n gebrek aan kennis van alternatiewe medisyne, en daar is 'n behoefte aan opvoeding, inligting, begrip en insig in dié gebied. Riglyne word voorgestel vir kritieke-sorg verpleging.
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CHAPTER ONE

1. PROBLEM STATEMENT AND MOTIVATION FOR THE RESEARCH STUDY

1.1 INTRODUCTION

In this research study alternative medicine includes the use of vitamins, anti-oxidants and herbal medicine, which counteract the dangerous effects of free radicals on the human body. The immune system preserves the internal environment. Cellular components of the body continually grow, mature, die and are replaced. The immune system is thus able to mount a response against normal cells that are no longer functioning competently. Specialized immunocompetent cells serve as scavengers that degrade and remove damaged or dead cells from the human body. Failure to maintain the immune system optimally often leads to autoimmune disease.

Impairment of the immune system such as in surgery, trauma, environmental factors and certain drugs pose a threat to the immune function. Insufficient intake of vitamins and anti-oxidants such as vitamins A, E, pyridoxine, biotin, folic acid components, zinc and iron compromises immune function. Supplementation by alternative medicine increases in-vitro lymphocyte proliferation, thereby maintaining the immune system optimally (Clochesy, Breu, Cardin, Rudy and Whittaker, 1993:1168–1188).

In 1997 a patient had a coronary artery bypass graft with complications. On day 70 the patient was still ventilated and on a pressure support of twelve. The patient was transferred to a High Care Unit because medical costs were escalating and medical insurance was exhausted. The family discussed feelings of disillusionment and a sense of failure and hopelessness with the critical care nurses, and suggested that alternative medicine be included in the treatment of the patient. This was discussed with the attending doctor, who really felt that he had failed the patient and the family. However, he explained with great difficulty that he would have to stop all conventional treatment as he feared
that certain herbal medicines and certain vitamins combined with conventional medicine would disadvantage the patient's condition further. He also stated that he knew very little about alternative medicine. Considering the factors discussed, the family continued treatment with the attending doctor. Despite the hard and endless efforts of the critical care team, the patient died on the 75th day.

The feelings of the critical care nurses were two-fold. Some nurses felt that the doctor was within his rights and that there is no place for alternative medicine in the critical care environment. Other nurses felt a great amount of guilt, remorse and a sense of failure. Questions were asked amongst the nurses and discussed in the tea-room—about the team approach, the integration of methods of health care and holistic patient care. Relevant questions were asked, such as: is there a lack of knowledge with regard to alternative medicine, or does conventional medicine precede all other alternatives?

If intensivists and critical care nurses can understand and have insight into the language of alternative medicine in an adjunct capacity, a broader spectrum of medical and nursing models through which to approach and care for a patient can be used (Buckman and Lewith, 1994:103-106).

The use of alternative medicine by the public is increasing. Relatives of patients are demanding that such products be used on their critically ill relatives, whilst being nursed in the critical care units. Some doctors and nurses are negative and have misconceptions about these products. They usually decline the requests made by the relatives (HSRC, 1983:27-30).

When a human being who is afflicted with a critically ill condition, suddenly stops taking alternative medicine in the critical care units, what occurs to the immune system of this patient in the critical care environment?

Recently, a profound revolution in thinking about health and disease has come about. It embodies the concept of a holistic approach to medicine—seeing the human being as a complete entity, physically, emotionally and environmentally, who functions in an integrated biopsychosocial manner to achieve his quest for
wholeness (Botes, 1995:59).

1.2 PROBLEM STATEMENT

What are the preceptions of critical care nurses regarding the use of alternative medicines in intensive care units?

1.2.1 OBJECTIVES OF THIS RESEARCH STUDY

The objectives of this research study are:

- to explore and describe the perceptions of critical care nurses in alternative medicine, and to set guidelines for critical care nurses.

1.3 DEFINITIONS FOR THIS RESEARCH STUDY

1.3.1 VITAMINS AND MINERALS

Nutriment, the part of food which nourishes the body, consists of macro- and micronutrients. Micronutrient vitamins are needed in small amounts and have a catalytic function. Vitamins are classified into fat-soluble (A, D, E & K) or water-soluble (B & C) groups. Elements such as calcium, phosphorous and potassium occur in the body in concentrations >0.005%. Others are termed trace elements. For instance, iron, zinc and iodine occur in concentrations <0.005%. These vitamins and minerals assist in carrying off acid waste and neutralize body pH. They are essential for neutralizing free radicals and are potent fuel for maintaining the immune system (Berkow (ed.), 1982:870–880).

1.3.2 ANTI-OXIDANTS

Anti-oxidants lessen and guard against free radical damage, both endogenously and exogenously, by volunteering electrons to stop chain reactions, neutralising free radicals and then destroying them. They ‘scavenge’ and neutralize free radicals, the main cause of a host of degenerative diseases. Anti-oxidants are available to human beings in the form of vitamins A, C and E, and in
herbal preparations from grape seed extract known as proanthocyanidins. Anti-oxidants have a powerful immune-supporting function (Masquelier and Laparra, 1985:360).

1.3.3 HERBAL MEDICINE

Proanthocyanidins have a 95% immune-supporting function as well as a relaxing function on the endothelium of coronary arteries, which have been researched in previous studies. Aloe vera is referred to as the 'medicine plant'. Research done in Texas on Aloe vera found that it inhibits a devastating blood-vessel-constricting agent known as thromboxane A2 (TXA2) and prevents its production (Grant, 1998:7–13).

Glutathione works with cysteine and glutamine as a glucose tolerance factor and anti-oxidant to neutralize radiation toxicity and inhibits free radicals. It also assists leucocytes in killing bacteria, and in combining with vitamin E to break down fat peroxides, and it protects against cerebrovascular effects. Astragalus is a strong immunity-enhancing herb. Research has been done to show that Astragalus increases the strength of T lymphocytes and macrophages (Beal, Verlag & Stuttgarg, 1980:9).

1.3.4 THE IMMUNE SYSTEM

The main function of the immune system is to maintain host defense mechanisms and homeostasis. The immune system protects living organisms from external invaders of various origins such as bacteria, viruses, fungi and chemicals. Immunologic responses carry out three functions. These are: defense, homeostasis and surveillance. Regulation of the immune system occurs through a host of chemical mediators interacting with many different types of cells (Clochesy et al. 1993:1168).

1.3.5 IMMUNOCOMPETENCE

Immunocompetence is the ability of the individual to maintain health in spite of biological and environmental damage such as surgery, trauma, insults due to
illness, a high concentration of oxygen therapy and hormonal imbalances such as in diabetic and obese patients. These are but some of the threats to the immune system in critically ill patients. If the immune system is suppressed, phagocytosis or cellular immune responses may be ineffective. Knowledge of potential threats will assist critical care nurses in protecting patients from, or lessening the effects of, immunosuppressive therapy (Clochesy et al. 1993:1185–1189).

1.3.6 FREE RADICALS

Free radicals play a role in the deterioration of the body. They are compounds that are produced internally. Molecular energy is introduced, which interacts with byproducts of cellular damage to form oxygen free radicals. The human body is composed of millions of molecules and cells. Surrounding each molecule are pairs of electrons. Free radicals cause a break-up of these molecules, corroding and destroying the delicate biological tissues (Masquelier and Laparra, 1985:7–9).

1.3.7 CRITICAL CARE NURSES

Critical care nurses are highly specialised nurses. They are skilled and competent personnel who have a solid understanding of the body of knowledge of critical care nursing and of pertinent information from other disciplines. These highly competent and skilled people provide intensive care for patients requiring both close monitoring and critical care intervention. Collaboration requires recognizing the value and rights of each health care giver (Clochesy et al. 1993:xiii).

1.4 ASSUMPTIONS OF THIS RESEARCH STUDY

1.4.1 METATHEORETICAL ASSUMPTIONS

MAN in this research study is the critical care nurse and the critically ill
The critically ill patient experiences stressors in his internal and external environment. The patient can be qualitatively described on a continuum from severe illness to minimum illness, and the potential for health exists (RAU, 1992:56–60). Physiologically the internal environment of the patient is compromised because critically ill patients exhibit the stress response, characterised by hypermetabolism, hypercatabolism and glucose intolerance. The use of sedation and narcotics decreases intestinal motility, leading to luminal stasis. Antibiotic usage leads to the bacterial overgrowth of pathogens (Shikora and Ogawa, 1996:309–402).

Free radicals play a key role in the deterioration of the body and are highly active compounds formed internally and externally in the environment. Oxygen free radicals, although basic to the metabolic activity of the body, may also be responsible for the pathogenesis of a wide variety of other diseases such as inflammation, acute respiratory distress syndrome, tissue ischaemia and cranial injury (Shikora and Ogawa, 1996:309–402).

The external environment of the patient, such as the administration of a high concentration of oxygen via mechanical ventilation, can result in pulmonary pathology called oxygen toxicity. The generation of free radicals within the body poses no problem as long as natural control mechanisms remain intact.

1.4.2 METHODOLOGICAL ASSUMPTIONS

The scientific methodology of the study focuses on the usefulness and application of knowledge for the improvement of nursing practice (Botes, 1991:10).

1.5 RESEARCH DESIGN AND METHODOLOGY

1.5.1 RESEARCH DESIGN

The research strategy is a descriptive, contextual and qualitative study.
1.5.2 RESEARCH METHODOLOGY

A discussion of the research method follows:

A focus group interview will be used as a data collection method, to determine
the perceptions of critical care nurses in alternative medicine for the critically
ill patient, and to set guidelines for critical care nurses.

1.5.2.1 POPULATION AND SAMPLING

All the registered nurses working in the critical care units and who are qualified
in critical care.

Target population follows and includes selection criteria to be met for
participation in the research study. These are critical care nurses who:
- have a diploma, honours or masters degree in critical care.
- have two years’ experience in critical care.
- are of a multicultural society.
- are English and/or Afrikaans speaking and understanding.

1.5.2.2 ANALYSIS OF DATA

The data analysis method of choice will be Tesch’s method (1990), as discussed

1.5.3 IMPLEMENTATION AND COMMUNICATION OF THE FINDINGS
OF THIS RESEARCH STUDY

The researcher will communicate the findings and recommendations to the
critical care units in writing. Findings will also be presented to a research
conference, which will also be developed into an article for publication. A
hard copy of the research study will be made available to the Rand Afrikaans
University.

1.5.4 TRUSTWORTHINESS

This will be ensured by methods referred to by Guba and Lincoln (in
Krefting, 1991:215) with special reference to independent coder, triangulation and consensus. Literature checks will be done scientifically to account for trustworthy data collection and analysis. Ethical considerations will be based upon the position paper of ethical standards for nurse researchers, as stated by the South African Nurses Association in 1991, as well as in Burns and Grove (1993:336–357).

1.6 CONCLUSION

In this chapter, the problem to be researched as well as the motivation for this research study has been discussed. Assumptions are clearly stated. The research design and method are briefly highlighted. Chapter one, as the orientation chapter, forms the structural point of reference for the rest of this research study. In chapter two the research design and method as well as trustworthiness and reliability will be discussed in detail.

1.7 CONTENT

CHAPTER ONE: Problem Statement and Motivation for the Research Study.
CHAPTER TWO: Research Design and Method.
CHAPTER THREE: Description of the Perceptions of the Critical Care Nurse in Alternative Medicine.
CHAPTER FOUR: Guidelines for Critical Care Nurses, Conclusions and Recommendations.
CHAPTER TWO

2. RESEARCH DESIGN AND METHOD

2.1 INTRODUCTION

This chapter is concerned with the methodology of the study. The research design entails research decisions which must be taken with regard to the research strategy, method of collecting data, data analysis, reliability and trustworthiness (Botes, 1995:4–9).

These research decisions are taken within the framework of the determinants of research. This involves a logical relationship.

2.2 RATIONALE

Nursing is a health care science and is closely related to the social sciences. Critical care nurses work holistically with patients in body, mind and spirit. Each of us is an integrated whole, each one functioning within an internal and an external environment. Within the social sciences qualitative research has emerged as a scientific method. This method of research concerns itself with issues related to human behaviour and functioning. Qualitative methods are used to uncover and understand the perceptions of critical care nurses in alternative medicine for the critically ill patient.

2.3 OBJECTIVES OF THIS RESEARCH STUDY

The objectives of this research study are:
- to explore and describe the perceptions of critical care nurses in alternative medicine, and to set guidelines for critical care nurses.

The aims are as follows:
- To explore and describe the perceptions for critical care nurses in alternative medicine.
- To set guidelines for critical care nurses.
2.4 RESEARCH DESIGN AND METHOD

The design and method of the study will be described.

2.4.1 RESEARCH DESIGN

The design used in this study will be qualitative, descriptive and contextual.

2.4.1.1 QUALITATIVE

Qualitative research combines the scientific and artistic nature of nursing to enhance the understanding of the human health experience. Qualitative research involves broadly formulated questions about human experiences and realities studied through suitable qualitative subjective perceptions for the understanding of human experience (Burns and Grove, 1993:28). Exploring and describing information on these perceptions will give insight into the holistic and interactional team approach in critical care.

2.4.1.2 EXPLORATIVE

Exploring generates a new understanding of the phenomenon and thus has the potential to generate statements (Mouton and Marais, 1989:43). The researcher departs from a point of reference of not knowing and thus uses exploratory methods to gain information about alternative medicine.

2.4.1.3 DESCRIPTIVE

In this study data is reduced and presented as an accurate description. When a study is descriptive (Talbot, 1994:90), it is more structured and organised according to themes, and the saturated themes will provide guidelines intended to support this study (Strauss and Corbin, 1990:29).

2.4.1.4 CONTEXTUAL

This research study uses a contextual or idiographic approach because it focuses on the critical care environment (Strauss and Corbin, 1990:96).
summarizes a context as a particular set of conditions within which the action/interaction strategies are taken. Talbot (1994: 93) argues that context explains why certain attributes of a phenomenon appear when they do and how they are interconnected. This study is contextual in that it deals with critical care nurses to be interviewed in the focus group and who are committed to a critical care environment of a specific hospital.

2.4.2 RESEARCH METHOD

A discussion of the research method follows.

2.4.2.1 POPULATION

Population is an identification of a group of persons, agencies, places and other units of interest that can by definition be placed together. For the aims of this study the population is both targeted and accessible (Burns and Grove, 1993:236). The focus group selected for this study is a special type of population group in terms of purpose, size and procedure (Krueger, 1994:6). The population group in this study are seven critical care nurses who work in a critical care environment and have two years’ critical care experience.

2.4.2.2 SAMPLING

Sampling involves the process of selecting a group of people, events or other elements with which to conduct a study (Burns and Grove 1993:236). The sample will be selected using the purposive, convenience method and participants will need to meet the specific criteria. For this study, selection of the sample as well as criteria for selection follow.

a. Selection of Participants: Participants will be selected as a purposive, convenience sample, intended by the researcher to be representative of the target population.

b. Purposive selection: The participants will be deliberately selected as representative of the target population because of their specific characteristics.
c. **Convenience selection:** For this study, seven critical care nurses were selected who:

- have a diploma, honours or masters degree in critical care.
- have two years’ experience in critical care.
- are of a multicultural society.
- are English and/or Afrikaans speaking and understanding.

Seven participants were selected, of whom six participants were Afrikaans-speaking and one participant was English-speaking. All the participants, the researcher and the independent researcher speak and understand both languages.

- **Informed Consent:** Information on all aspects of the study were disclosed, i.e. the purpose, method, objectives, potential risks, benefits and the participants’ input. Participation was free of force, fraud, duress or any form of constraint or coercion (Burns and Grove, 1993:104; SANA, 1991). The researcher obtained informed consent (Appendix 3, p. 49).

- **Gaining access:** A formal letter (care of the Rand Afrikaans University) was written to the hospital management. A short informational motivation accompanied this letter (Appendix 1, p. 45). Each participant received an information letter explaining relevant aspects of this research study (Appendix 2, p. 47).

- **Communication of relevant information:** According to Burns and Grove (1993:104–106), the following information must be communicated (SANA, 1991): Human rights will at all times be protected and respected. Participants will be informed that they fulfil the selection requirements and what these requirements entail. Expected duration of participation and the length of the interview will be stated. A place conducive to privacy will be used for the focus group interview.
2.4.2.3 FOCUS GROUP INTERVIEW

i. Data collection

The method that was used to obtain data was a focus group interview. A focus group is a special type of group in terms of purpose, size, composition and procedures. The group was composed of seven to ten participants who were selected because they had certain characteristics in common.

The researcher created a permissive environment in the focus group that nurtured different perceptions and points of view without pressuring participants to vote, plan or reach a consensus. It was conducted by an independent researcher who is skilled in conducting this type of group interview. The focus group interview was selected for this study because it offered a natural environment.

Participants sometimes are influenced by each other, just as we are influenced in our daily lives. As a data collection procedure it provides qualitative data in gaining insights into the perceptions and opinions of participants. Critical care nurses work closely together in the critical care environment. Attitudes and perceptions relating to concepts, products, services or health care are developed in part by interaction with other people. We are a product of our environment and are influenced by people around us. People may need to listen to opinions of others before they form their own personal viewpoints (Krueger, 1994:6–11).

A focus group interview has certain requirements that must be adhered to:

The Moderator

According to Morse (1994:227) the moderator can be an independent researcher who should meet certain criteria. The moderator must be:

- skilled in the technique of focus group interviewing.
- not known to the participants.
- knowledgeable about the aims and objectives, as well as the questions to be asked during the interview.
The moderator or independent researcher has experience of qualitative research and has the skills of listening and probing. The moderator is empathetic, flexible, objective and will lead the group without influencing the participants. Non-directive open-ended questions will allow the individuals to respond without setting boundaries or providing clues for potential responses (Krueger, 1994:39-115). In this study an independent researcher was used to facilitate the group interview since the researcher is inexperienced in conducting a focus group interview. The independent researcher who has a doctoral qualification, is highly professional and skilled in conducting a focus group interview, as well as being experienced in qualitative research.

The moderator was requested to be at the venue twenty minutes prior to the discussion. Introductions were made, enhancing a trusting and relaxing atmosphere for the participants. Tea, coffee and snacks were served in this time, which promoted the relaxing atmosphere.

a. **Field Notes**

Field notes are an important data collection technique. Non-verbal responses and gestures made by the participants, as well as interactions between participants, were jotted down in conjunction with verbal responses, augmenting pertinent information relevant to the study. This was done in accordance with Woods and Catanzaro (1988:331). The researcher took such field notes while sitting outside the circle and retaining eye contact with the moderator.

b. **The Environment**

The environment must be free of external distractions or stimuli. Placards are removed from the walls. Notice boards are placed indicating that a group session is in progress. Three audio-cassette recorders were used and were tested to ensure that they were functioning. Consent was obtained for the use of the recorders. The recorders were placed in the centre of the table, in full view of the participants. Chairs were placed in a circle to maintain a non-threatening
environment. Chairs were situated so that all the participants were able to make eye contact with the moderator. The researcher sat outside this circle, but in full view of the moderator so that eye contact was clearly exchanged between moderator and researcher. This was done in accordance with Krueger (1994:88). In this study the venue used was the boardroom. Telephones were taken off the hook. Tea, coffee and snacks were served twenty minutes prior to commencing the group interview.

c. Participants

Participants in any study have the right to self-determination, privacy, anonymity and confidentiality, fair treatment and protection from any harm. In this study the researcher gave tremendous attention to ethical considerations.

d. Written Consent

Written consent (Appendix 4, p. 50) to conduct, tape-record and transcribe the interview was obtained from the participants who were assured of anonymity and confidentiality with regard to information obtained from the interview (Burns and Grove, 1993:104; SANA:1991).

e. The question put to the participants

The following question was asked:

WHAT ARE YOUR PERCEPTIONS OR FEELINGS WITH REGARD TO ALTERNATIVE MEDICINE IN THE CRITICALLY ILL PATIENT?

WAT IS JULLE PERSEPSIES, OF GEVOELENS OOR DIE GEBRUIK VAN ALTERNATIEWE TERAPIE VIR DIE KRITIEK SIEK PASIENT?

f. The Researcher

The researcher has undergone a post-graduate education programme in research methodology and critical care nursing. This study will be supervised
by doctoral nursing researchers, who are actively involved in qualitative research. The study will be assessed by these nurse specialists with the view to facilitate moral and just nursing research. Interaction with these nurse specialists will occur at short periodic intervals (Minichiello, Aroni, Timewell & Alexander, 1991:236–244).

ii Data analyses

a. Assembling and Organizing the data

The field notes made after the interview were studied thoroughly. The data obtained was integrated with the results of the transcriptions in order to reach a descriptive conclusion. The researcher followed the method of data analysis described by Tesch (1990) in Cresswell (1994:155).

b. Method of Data Analysis

Tesch (1990) in Cresswell (1994:155) states that after the interview had been transcribed a sense of the whole was obtained by reading through all the transcripts. Tesch recommends the following:

Jot down ideas in the margin as they come to mind and ask the following questions: What is it about? What is the underlying meaning? Write your thoughts in the margin. Complete this for all the transcriptions and make a list of all the topics. Cluster similar topics together. Form these topics into three major columns. Codes are written down next to the appropriate segments of text. Check to see if new categories or codes emerge. Find the most descriptive wording for your topics and turn them into categories. In this study the above method was used to obtain information from the interview transcriptions. A final decision was made on a main category and sub-categories in this study.

Triangulation of the data was made by consulting a nurse researcher (independent coder) who analyzed the interview independently of the researcher. After the interview was analyzed, the researcher and the independent coder met for a consensus discussion.
c. Literature Control

The results of the research were discussed in the light of relevant literature and information. Referential checks enhanced the scientific trustworthiness of the study. This was a strategy used to ensure trustworthiness by means of triangulation (Krueger, 1994:5-7).

2.4.2.4 TRUSTWORTHINESS

Throughout the various stages of the research study the researcher strove to adhere to the principles of trustworthiness. Guba and Lincoln (in Krefting, 1991:215) regard trustworthiness as the method of ensuring ethical considerations in qualitative research. For the purpose of this study the researcher applied four criteria and strategies adopted in Guba's model (in Krefting, 1991:217) for establishing and ensuring trustworthiness (Table 2.1, p. 20).

Truth value

Truth value is the first criterion addressed to establish trustworthiness. This criterion is used to assess to what extent the findings are a true representation of current occurrences as described and experienced by the participants. The strategy for establishing truth value is credibility. Credibility is achieved by the following: prolonged engagement, the trust prevailing between the critical care nurses because they work as a team for many hours, peer examination, interview technique, establishing authority of the researcher, structural coherence and referential adequacy. (Table 2.1, p. 20).

Applicability

The second criterion addressed is called applicability. The term refers to the findings being applicable to other contexts and settings or other groups (Krefting, 1991:216-217). This is confirmed by using purposive sampling, working contextually and dense description (Krefting, 1991:216) (Table 2.1, p. 20).
Consistency

The third criterion is called consistency. Here it is assessed to what extent the replication of the study with the same subjects or a similar context would lead to the same findings. Dependability is a strategy used to establish consistency. This is achieved by providing a dense description of research method, step-wise replication, triangulation, peer examination and code-recode procedure (Krefting, 1991:216–217) (Table 2.1, p. 20).

Neutrality

The fourth criterion is suggested for assessing trustworthiness. Neutrality is established by keeping a confirmability audit, triangulation and reflexivity (Krefting, 1991:217–221). Table 2.1 on page 20 provides an overview of the strategies applicable to this study.

Throughout the various stages of this research study the researcher strove to adhere to the principles of Trustworthiness. For the purpose of this study the researcher adopted the strategies recommended by Guba’s model (in Krefting, 1991:217).

Reliability

In order to ensure reliability of the study, the following control mechanisms were implemented:

Field notes were immediately recorded to ensure accurate recall of circumstances surrounding each interview. This included detailed observations, non-verbal communications, gestures, body language and other data that were not recorded on the tapes.

Strategies used to collect, analyse and report data were precisely recorded. Verbatim transcriptions of the tape-recorded interview were made by an independent researcher.

Theoretical coding (content analysis) was done by an independent coder.
Findings were compared with available literature and research relating to this study, after information was obtained from the participants (Woods and Catanzaro, 1988:136).

2.5 RECOMMENDATIONS

Recommendations were made on the strength of the research findings. These should be applied in nursing education, nursing practice and nursing research and should be used to give guidelines to critical care nurses (Botes, 1995).

2.6 CONCLUSIONS

The research design and method described in this chapter, as well as the strategies used to ensure trustworthiness and reliability, helped to illuminate the perceptions of critical care nurses in alternative medicine for the critically ill patient.
<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>CRITERIA</th>
<th>APPLICABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>Prolonged engagement</td>
<td>Prolonged engagement with critical care nurses to establish trust.</td>
</tr>
<tr>
<td></td>
<td>Reflexivity</td>
<td>Field notes will be taken by researcher in the focus group interview.</td>
</tr>
<tr>
<td></td>
<td>Member checking</td>
<td>To validate that the information obtained is correct.</td>
</tr>
<tr>
<td></td>
<td>Triangulation</td>
<td>Two researchers, literature control and observation to ascertain if truth is reflected.</td>
</tr>
<tr>
<td></td>
<td>Peer examination</td>
<td>Two nurse researchers have doctorates in nursing research. They will nurture, supervise and observe the researcher’s capabilities and ethical standards.</td>
</tr>
<tr>
<td></td>
<td>Structural coherence</td>
<td>The focus will be on the perceptions regarding vitamins, anti-oxidants and herbal medicine.</td>
</tr>
<tr>
<td>Transferability</td>
<td>Nominated sample. Dense description</td>
<td>Purposive sampling will be used. Complete description of design and methodology, as well as the accompanying literature control, to maintain clarity, will be used.</td>
</tr>
<tr>
<td>Dependability</td>
<td>Dependability audit.</td>
<td>Field notes and reflexivity notes will be checked.</td>
</tr>
<tr>
<td></td>
<td>Dense description.</td>
<td>Research methodology will be fully described.</td>
</tr>
<tr>
<td></td>
<td>Peer examination</td>
<td>Independent checking by a peer and supervision by experts.</td>
</tr>
<tr>
<td></td>
<td>Code/recode procedure.</td>
<td>A consensus discussion will be held.</td>
</tr>
<tr>
<td>Confirmability</td>
<td>Audit trial</td>
<td>By checking field notes and reflecting.</td>
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<tr>
<td></td>
<td>Reflexivity</td>
<td>By checking field notes and reflecting.</td>
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CHAPTER THREE

3. DESCRIPTION OF THE PERCEPTIONS OF CRITICAL CARE NURSES IN ALTERNATIVE MEDICINE

3.1 INTRODUCTION

During the focus group interview which was conducted by an independent researcher the seven participants openly expressed their perceptions regarding alternative medicine. They experienced difficulty in relaxing and being spontaneous at first, but shortly relaxed and felt comfortable with each other. Valuable information was obtained from the group interview session. The question put to the group was: What are your perceptions or feelings with regard to alternative medicine in the critically ill patient?

This study uses qualitative methods and data analysis to uncover the perceptions of critical care nurses regarding alternative medicine in the critically ill patient. In this chapter the researcher will follow the process of content analysis and triangulation of the data, and adopt strategies from Guba and Lincoln to ensure and establish trustworthiness, all of which is discussed under Data Analysis in sections 2.4.2.3 and 2.4.2.4.

The analysis of the data will be discussed and the results obtained will be described in a narrative format. Each category and sub-category will be verified by relevant quotations from the raw data and supported by literature control. The identified categories will be used in describing the perceptions of critical care nurses in alternative medicine for the critically ill patient.

3.2 AN OVERVIEW OF THE MAIN CATEGORIES AND SUB-CATEGORIES OF THE PERCEPTIONS OF CRITICAL CARE NURSES IN ALTERNATIVE MEDICINE

The main categories and sub-categories are shown in Table 3.1 (p. 36).

3.2.1 SUBJECTIVE PERCEPTIONS

The subjective perceptions in the study were categorised as a main category.
The participants expressed feelings, mixed feelings and beliefs which are sub-categorised further. They describe the importance of maintaining the immune system at an optimal level. These subjective perceptions will be discussed further.

3.2.1.1 FEELINGS

Positive feelings were expressed by the participants as there is a growing tendency towards dietary supplements. They had experienced vitamins, antioxidants and herbal medicine at one time or another in their lives, whether as medicinal preparations or as food products. The public is increasingly using alternative medicine.

Some participants see antioxidants as a health byword of the nineties. They talk about it protecting against the free radical attacks that cause acute respiratory distress syndrome, myocardial infarction, sepsis, candidiasis albicans, chronic fatigue syndrome, cancer, respiratory infections and major insults to the critically ill patient. Antioxidants scavenge free radicals, neutralise their damage and render them harmless, while enhancing the immune system. The following quotes were made by the participants:

“... as jy met 'n gesonde liggaam in 'n ding ingaan, wanneer jy siek is en jy kan jou ... hmm ..., ek weet nie 'n mens reërg kan sê, 'n fisiese toestand optimaal kry nie, kan jy beter daardie siekte hanteer, chirurgie, lang termyn siekte en aan lange gewys, ... daar is definitief plek daarvoor”.

“... hmm oor die vitamienes en die anti-oxidante voel ek definitief daar, daar is ... hmm plek vir dit in die kritiek siek pasiënt”.

Clochesy et al. (1993:1187) states that the medical profession is beginning to realise that the immune system can be artificially controlled and therefore the participants feel positive about alternative medicine in the critically ill patient. In vitro enhancement is a burgeoning area of research. Recent research has shown a broad role for the complement factor as a contributor to inflammation, immune tissue injury and modulation of the immune response.
Patients requiring intensive medical and surgical treatment are exposed to additional immunosuppressant conditions such as age, diabetes and hormonal imbalances, surgery, trauma and psychological distress, which influence immunocompetence. Vitamins and anti-oxidants are necessary to all of the processes that take place during healing. Angiogenesis, collagen formation and epithelialization all require vitamins and anti-oxidants. Water soluble vitamins especially important to healing are vitamins B and C. Vitamin B1 (thiamine) is necessary for the strength of collagen. Vitamin B5 (pantothenic acid) deficiency is associated historically with decreased fibroblasts and experimentally with decreased tensile strength. Data from a study shows that supplementation with arginine, omega 3 fatty acids improves immunologic, metabolic and clinical outcomes in patients who undergo major surgery (Clochesy et al. 1993:1187). The participants' feelings are correct in stating that alternative medicine can maintain the immune system optimally.

3.2.1.2 MIXED FEELINGS

A few of the participants expressed mixed feelings about anti-oxidants and herbal medicine, because they felt that they lacked knowledge regarding these products. Due to their lack of insight and understanding they also said that there were risks involved. Alternative medicine is not included in the curricula of medical doctors and nurses. Patients are less knowledgeable. Even though some of the public use alternative therapy they do not have enough knowledge, and usually resort to obtaining information from pamphlets, friends and family. However these participants expressed the need to be educated in this sphere. They also felt the public should receive some form of education. They even stated that they had no idea that anti-oxidants originated from yellow and green fruit and vegetables and some medicinal plants. The following thoughts were expressed by the participants:

"My gevoel is dat ek nie genoeg daarvan weet nie, maar ek is bereid om my, myself bloot te stel, en dit, ek wil met dit experimenteer, ek is oop daarvoor, ek weet niks daarvan nie, nie genoeg nie, dit is 'n risiko ek weet, want jy ken
nie genoeg nie ...". "Dan moet iemand nou érens vir almal in die mediese vlak ..., 'n blits opleiding gee, laat almal net weet waaroor dit gaan".

"Ek dink as dit moet, jy op 'n basiese vlak moet begin, die volk oplei oor alternatiewe terapie asook die dokters en verpleegsters".

The scenario related in chapter one shows very clearly that the attending doctor had no knowledge of alternative medicine and therefore was reluctant to include such therapy in the care of the patient. He also stated that he felt alternative medicine in conjunction with conventional medicine would be a further disadvantage to the patient. Some doctors and nurses have mixed feelings because they have misconceptions about these products.

Bourland (1997:558) states that public interest in alternative medicine is increasing and that students in different fields of health care are becoming increasingly aware of its benefits. They are asking questions about anti-oxidants, vitamins and herbal medicine. In many instances alternative medicine is used without full knowledge of their possible benefits or risks to health. Before there can be a public policy recommendation for the widespread use of vitamin E and other anti-oxidants, there must be a solid understanding of the mechanisms of these vitamins in atherogenesis as well as any side effects.

Thomas, Carr, Westlake and Williams (1991:207–210) state that a study done on the use of alternative medicine and conventional health care in Great Britain found that patients using alternative care have not turned their backs on conventional care. In this way alternative care seems to be used more often as a supplement to, rather than as a substitute for, conventional care and therefore is described as having a complementary role in health care in the future.

The British Medical Association has recommended that alternative medicine should be incorporated into medical undergraduate training and accredited post-graduate training should be set up. This will ensure appropriate referrals and introduce these therapies to doctors and other health professionals (Fisher & Ward, 1994:107–111).
3.2.1.3 BELIEFS

A few participants had the belief that when one has experienced vitamins, anti-oxidants or herbal medicine and it has been effectively therapeutic, then one is very likely to continue with such a product, rather than discontinue it. This is supported by the following statements:

"Ek het reërig 'n bietjie doubts gehad of 'n ding my metabolisme laat vinnig werk en ek het net doubts gehad oor dit tot, 'n paar van ons het dit begin gebruik ..., en jy kan regtig sien, ek het dit self belewe".

"You know when you have a client/patient who is used to herbs, you can't change him, you rather allow him to continue".

A patient whose coronary arteries were 50% occluded, and who was facing triple bypass surgery, started taking grape seed extract (Pycnogenol). She had already had six previous heart attacks. Four months later her coronary angiogram showed that her arteries were completely clear. Pycnogenol grape seed extract would be a part of her life forever, she said. (Grant, 1998:12).

Grant (1998:11-12) cites a case study of a person who used Pycnogenol and who was troubled by severe respiratory distress at that time. After being on the product for seven weeks, he stated that he could breathe freely and that the quality of his life has improved greatly.

3.2.1.4 PERCEPTIONS

The participants had the perception that the immune system of a patient must be maintained optimally pre-operatively to avoid any complications and to avoid facing a variety of fatal degenerative diseases. This is supported by the following quote:

"... pre-operatief 'n maand voor die tyd sodat dit klaar die immuun sisteem en die liggaam kan opbou".

Clochesy et al. (1993:493) gives an overview of the threats to immunocompetence. They state that patients requiring medical or surgical treatments are
exposed to additional immunosuppressant conditions, such as age, diabetes mellitus and trauma. They state that insufficient intake of vitamin A, pyridoxine, biotin, folic acid components, zinc and iron alter immune functions. The participants recommend that the immune system be maintained optimally before medical interventions are instituted.

Another participant stated that alternative medicine is a natural therapy and therefore perceives it as having fewer side-effects than conventional medicine. This is supported by the following statement:

"... veral ons terugkoms met die gebruik van natuurlike produkte minder nadele as die goed wat chemies is, julle weet".

The researcher states that the participants perceive alternative medicine as a natural therapy and that it therefore has fewer side effects than conventional medicine. These perceptions stem from a lack of knowledge or understanding about alternative medicine. This is supported by Kerr, Bender and Monti (1996:208) who state that the efficacy of anti-oxidant vitamins such as vitamin E in the prevention of disease is not completely understood. Supplementation with vitamin E may be beneficial when combined with a low-fat diet, whereas other fat-soluble vitamins such as vitamin A may have toxic effects that outweigh the benefits.

3.3 A PLACE FOR ALTERNATIVE MEDICINE IN THE CRITICALLY ILL PATIENT

This is the second main category. The participants clearly expressed that there is a place for alternative medicine in the critically ill patient, because critically ill patients have a great severity of injuries which may involve more than one organ and develop major insults and secondary complications. This is referred to in 3.2.1.3. The sub-categories will be discussed as follows:

3.3.1 USES OF VITAMINS, ANTI-OXIDANTS AND HERBAL MEDICINE

The participants expressed the importance of maintaining the immune system
optimally and thereby planning and implementing strategies for the patient. This is supported by the following quote:

"... en ons pasiënte is gewoonlik hierdie siek pasiënte wat minder weerstand het, diabetiese pasiënte, pre-operatief, post-operatief, ná narkose, vir wondgenesing en wat alles aan betref, nogal lang termyn pasiënte, net om hulle witseltelling te help, dink ek sal dit nice wees, om weerstand op te bou".

Participants reacted as shown in Table 3.1:

i. **Post-operatively**

Post-operatively the critically ill patient must overcome weaknesses and gain strength by the use of vitamins, anti-oxidants and herbal medicines for post-anaesthetic recuperation.

Clochesy *et al.* (1993:1274) state that arginine, omega 3 fatty acids, vitamins A, C and E improve immunologic function in the post-operative patient. Ornithine alpha ketohideriale used in surgical patients has been shown to enhance healing.

ii. **The acute critically ill patient**

The participants feel that supportive nutrition is essential to avoid complications or major insults. This is supported by the following statement:

"kruiie, vitamienes verbeter immunitet so dit moet help vir die kritiek siek pasiënt en vir die herstel agterna, of voor hulle hospitaal toe gaan".

iii. **The short term critically ill patient**

The short term critically ill patient must be assessed for signs and symptoms of long term complications and repercussions.

"... ons KVO pasiënte word beter na l2 ure gewoonlik, maar kan kritiek siek wees, ten opsigte van sy toestand en die immuune sisteem".
iv. The aged critically ill patient

The aged are most vulnerable and the participants felt that early vitamins and anti-oxidant supplements can repair tissue injury, promote healing and early recuperation.

"... baie van ons pasiënte is baie oud, algemene ouderdom is hierso tagtig tot negentig. Ondersteuning met vitamienes is belangrik".

v. The long term critically ill patient

The participants felt that the critically ill patient who is assessed as taking a longer time to recover, should be supported by vitamins and anti-oxidants to maintain the immune system. This is supported by the following statements:

"Ek dink vitamienes en anti-oxidante kan dan begin ... lang termyn soos ek sê, kry mense soos in daai geval, kan begin, want ons ken baie pasiënte wat lang-termyn begin word".

"... en ons pasiënte is gewoonlik hiedie siek pasiënte wat minder weerstand het, diabetiese pasiënte, pre-operatief, ná narkose of operasies, vir wondgenesing en wat alles aan betreft, nogal langtermyn pasiënte; net om hulle witseltelling te help dink ek sal dit nice wees, om weerstand op te bou".

Barton (1994:135–136) notes that oxidant injury after infection, shock reperfusion, constitutes one of the major pathological processes in the critically ill patient. Lipid peroxidation by toxic oxygen radicals and the resultant cell membrane disruption is thought to be the final common pathway in cellular death.

Toxic oxygen radicals are generated by phagocytic cells to kill invading microorganisms and are also generated after shock, ischaemia and reperfusion.

The uncontrolled propagation of these toxic radicals often leads to more cellular injury than that caused by the original insult, and it contributes to the generalized changes in capillary permeability and diffuse tissue injury.
characteristic of the multiple organ dysfunction syndrome. A number of naturally occurring scavengers of oxygen radicals exist, including the superoxide dismutases and glutathion peroxidase. An important function of vitamins seems to be their role as glutathion precursors. Vitamin E and vitamin C (ascorbic acid) are important anti-oxidants that may have a role in the immune system of the critically ill patient. Also, dietary supplements of vitamin E are associated with a lower risk of coronary artery diseases.

Grant (1998:16–17) indicates that previous studies of vitamin C and pulmonary functions have shown that vitamin C decreases broncho-constriction and may have other beneficial effects in asthmatics.

Hennekens (1990:4) gives an overview of beta carotene as a vitamin A precursor converting to vitamin A in the liver as the body needs it—a powerful effective anti-oxidant for immune health. Supplementation protects against respiratory diseases and infections—a key in preventing some kinds of cancer and in developing anti-tumour immunity.

3.3.2 MEDICINAL USES

The participants see a growing movement back to nature in the search for cures, health and longevity. The researcher has clarified this by using different sections that include the following: pain control, wound healing, bronchospasm, anti-depressants and a future in health economics. This is supported by the following statements:

“Ek dink vitamienes en anti-oxidante kan dan begin ... lang termyn soos ek sê, kry mense soos in daai geval, kan begin want, ons ken baie pasiënte wat lang termyn begin word”.

“... en ons pasiënte is gewoonlik hierdie siek pasiënte wat minder weerstand het, diabetiese pasiënte, pre-operatief, ná narkose, post-operatief, vir wondgenesing en wat alles aan betref, nogal lang termyn pasiënte, net om hulle witseltelling te help dink ek sal dit nice wees om, weerstand op te bou".

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i. **In pain control**

Some participants expressed their own experiences of having used herbal medicine as a pain control that was very effective.

“... hmmm die pyn goed werk, maar ek gaan nie vir jou die fynere goed vertel, hoe dit werk nie, maar ek weet dit werk”.

White willow is an effective pain killer. An infusion is made of the willow bark which contains glucoside, silicium which is aspirin from which acetylsalicylic acid was first derived when synthetic aspirin is taken internally. It causes thinning of the blood and possible haemorrhaging in the stomach. The same effect is obtained from the white willow bark but without the danger of bleeding in the stomach. In the first century AD, Dioscorides prescribed willow preparations for pain and inflammation (Beal et al., 1980:22).

Beal et al. (1980:12–13) state that scientists have isolated a substance present in both *Aloe vera* and human tissues that is responsible for aloe’s extraordinary pain blocking powers. This substance is called bradykinine, an enzyme that helps locate foreign invaders. It also assists the circulatory system in removing foreign substances such as bacteria and viruses before they can spread further and cause pain and damage. In further studies it was found that aloe inhibits a devastating blood vessel constricting agent, known as TXA2 and keeps it from being produced while maintaining a balance between several prostaglandins, the powerful hormones that ease pain and aid in healing.

ii. **Wound healing**

Some participants feel that the critically ill patient who is immunocompromised, especially the critically aged patient who is vulnerable at this stage, faces a common problem in developing pressure sores. This is supported by the following statement.

"En ons pasiënte is gewoonlik hierdie siek pasiënte wat minder weerstand het, ... vir wond genesing en wat alles aanbetref ... net om hulle witseltelling te help ...".
One of the participants related the following incident.

"My ma het 'n spataar ulkus op haar enkel gehad. Sy begin toe met kruie en homeopatiese middels, nou ja, ek self daar gesien het dat dit daar kan werk".

The above information is supported by the study done by Goode, Burns and Walker (1992:925–927) which describes pressure sores as a common problem in elderly patients. An immunocompromised situation may directly cause its development.

Since zinc and vitamin C play important roles in wound healing, it is reasonable to hypothesize that these nutrients might be important in preventing pressure sores.

Goode et al. (1992:925–927) describe a study conducted in the United Kingdom. Blood samples were taken from 21 elderly patients. Several indices of zinc states and levels of vitamins A, C and E were measured.

Ten of the patients developed pressure sores during their hospital stay. These ten patients had vitamin C levels below the normal reference levels. This study indicates that vitamin C depletion is associated with an increased risk of pressure sores. There was no evidence that vitamin A, vitamin E or zinc was associated with pressure sore development.

A Texas research team found that Aloe vera has anti-inflammatory characteristics and is instrumental in the healing of ulcers and other afflictions (Beal et al., 1980:12–13).

iii. Herbs relieve bronchospasm

One of the participants related an experience that she had with a patient who was bronchospastic. The attending doctor suggested that “Bloekomolie” be used, to nebulise the patient.

"'n Dokter wat by ons werk vat partykeer bloekomolie ... hmm ... vir die pasiënt wat bronchospasties is en hom stoom".
The researcher has done a literature study on “bloekomolie”, but has not found literature substantiating the use of “bloekomolie”. The doctor that recommended its use was asked about its origin and about literature to date. The doctor replied that it was “ouma raad”. This also shows the lack of knowledge, even though it works effectively as referred to in 3.2.1.2.

iv. **Herbal medicine used as an anti-depressant**

One of the participants said that the critical care patients, especially long term patients, are often depressed and withdrawn in the critical care environment.

"Ek dink dat dit as 'n anti-depressant gebruik word, veral op die pasiënt wat langtermyn is".

Hennekens (1990:12) states that Siberian ginseng has been extensively studied by Russian scientists and numerous clinical trials have established that *E. senticosis*, as it is also called, acts as an asaptogen and assists in depression, stressful conditions and mental instability.

v. **Herbal medicine: A future in health economics**

One participant felt that the health system presently is encouraging medical aid schemes to use products that are more cost effective. Homeopathy has already been recognised by some of the medical aid schemes and it is therefore felt that there is a future for natural and less expensive products.

Wetzier (1997:830) states that it is clear from the foregoing that the variety of alternative therapies is large and the number of people exploring alternative treatments equally large. There is a world-wide shift towards alternative medicine. Since the final word on any one of these therapies has not been written, it remains only to say that there does seem to be a need for alternative approaches. The future is geared towards finding the most effective, accessible and affordable alternative therapies and these have to be evaluated in their own right.
"Ja, as ek net dink, ek werk nou vir 'n jaar met die mediese fondse en ek moet sê, as 'n mens kyk na die gesondheid sisteem en waarna dit neig, dink ek kan ons dalk meer neig na alternatiewe produkte toe ... hmm goedkoper produkte, maar effektief, sekere mediese fondse betaal al vir homeopate, maar nie vir vitamienes nie. Ek dink nogtans dat uit 'n finansiële oogpunt en gesondheidsaspekte, dink ek gaan alternatiewe terapie meer 'n rol speel in die kritiek siek pasiënt, om die immune sisteem optimaal te kry".

Fisher and Ward (1994:107–110) state that European institutions are starting to influence other countries in using cost effective products such as alternative medicine.

Barton (1994:136) emphasises that the changing health care climate will include cost containment, the availability of products that are measured in terms of clinical outcomes, such as morbidity and length of stay. In maintaining the immune system optimally, insults and complications can be avoided, thereby creating a cost effective health care system.

3.3.3 CONTRA-INDICATIONS OR NON-USES

All the participants felt that vitamins and herbal medicines should not be given as a substitute for conventional prompt treatment in the event of a crisis, or a resuscitative critical and emergency situation.

Prompt action is required and is supported by the following statement:

"Ek kan eintlik onderskeid maak dat waar daar 'n noodsituasie is en jy gou deur 'n instandhouding goed moet inspuis en gou werk, daar liever met gewone medikasies te werk gaan as om vitamienes en kruie te gee, wat te lank vat om te werk. Dit is mos 'n nood situasie ..."

The mortality rate in critical care can be strikingly reduced by optimal and prompt management, for instance in prompt administration of thrombolytic therapy, aspirin, beta blocking agents, a heparin infusion and nitrates for relieving coronary artery spasm. Patient survival after a serious traumatic
event depends on prompt, rapid and systematic assessments in conjunction with immediate resuscitative interventions. Delay in implementing definitive critical interventions will adversely affect patient outcomes and may increase mortality by more than 15% for every hour of delay (Clochesy et al. 1993:10). Alternative medicine can therefore assist in rendering the immune system optimal, as there is a time factor involved. Conventional medicine, and not alternative medicine, is used where a life or death situation exists.

3.3.4 ADMINISTRATION OF ALTERNATIVE MEDICINE

i. **Via a nasogastric tube**

The participants agreed that vitamins and anti-oxidants can be fed via a nasogastric tube.

"Hy kan dit net deur 'n nasogastriese buis kry, en dit sluit al drie in ... ".

Meguid & Campos (1996:216) state that when the gastrointestinal tract is functioning, the critical care patient who cannot or will not eat must be tube fed. Functioning of the gastro-intestinal tract enables the patient to digest and absorb the vitamins, anti-oxidants and herbal medicine. This mode of nutritional support is safe and effective and is superior to current parenteral solutions because they contain vitamins, arginine, fish oil and nucleolar elements that have beneficial physiologic effects in the critically ill patient.

ii. **Via a central venous catheter**

Participants stated that vitamins and anti-oxidants could be administered via this route. Herbal medicine should not be given via this route, as products are high in osmolality and can be a danger to the patients who are unable to swallow and absorb.

"Kruie mag nie intravenieus gegee word nie. Dis gevaarlik want dit kan nie geabsorbeer word nie, maar die vitamienes en anti-oxidante wel".
Wetzier (1997:80) studied a prospective randomized double blind trial concerning the effects of branched chain amino acids (BCAA) versus conventional trans parenteral solutions. Twenty-three catabolic surgical patients showed a 60% improvement when they received BCAA enriched trans parenteral solution. It improved nitrogen retention, elevated their absolute lymphocyte count and improved plasma transferring levels. Cost is a determining factor with BCAA enriched solutions.

iii. *Via a Dobhoff*

The participants felt that vitamins and anti-oxidants can be administered through a dobhoff where pre-digested, or elemental products are used that ensure absorption of nutrients across the gut mucosa without harming pancreatic enzymes.

"*baie pasiënte moet 'n dobhoff kry wat deur die duodenum gaan, as hulle nie kan absorbeer nie*".

Meguid *et al.* (1996:486) have indicated that fistula output is decreased by resting the gastrointestinal tract, by not stimulating it via the passage of nutrients, but the nutrients given via the duodenum reported a 50% decrease in gastrointestinal secretions shortly after the institution of a dobhoff to maintain bowel rest. Drainage of the gastrointestinal tract continues, whilst maintaining the immune status of the patient by using a dobhoff.

### 3.4 CONCLUSION

In this chapter a discussion of the research findings was presented. The guidelines based on these categories, sub-categories and sections will be discussed in Chapter 4. In conclusion, these critical care nurses reflect their perceptions on alternative medicine in the critically ill patient.
TABLE 3.1: An overview of the main categories, and sub-categories of the perceptions of critical care nurses in alternative medicine

<table>
<thead>
<tr>
<th>MAIN CATEGORY</th>
<th>SUB-CATEGORY</th>
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<tr>
<td>3.2.1 Subjective perceptions</td>
<td>3.2.1.1 Feelings</td>
</tr>
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<td></td>
<td>3.2.1.2 Mixed feelings</td>
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CHAPTER FOUR

4. CONCLUSIONS, PROPOSED GUIDELINES AND RECOMMENDATIONS

4.1 INTRODUCTION

In chapter three the results were discussed with reference to the relevant available literature. The data obtained and the literature have led to the following conclusions:

4.2 CONCLUSIONS

The participants openly discussed their perceptions about alternative medicine. They regarded it as a promising future development.

On the whole the participants felt that economic realities will seriously influence decisions about the provision of and the establishment of a cost effective integration of health care for the critically ill patient.

Participants emphasized the importance of maintaining the immune system at an optimal level, since critically ill patients are immunocompromised. Findings in the literature confirm that supplementation with anti-oxidants and vitamins improves immunologic, metabolic and clinical outcomes. This confirms the feelings of the participants.

Some of the participants expressed a lack of knowledge, understanding and insight regarding alternative medicine. They also felt that the public had less knowledge of this and that there were risks involved. Data from the literature confirms that toxicity does exist in certain herbal medicines and vitamins. The participants showed a lack of knowledge by stating that these are natural products and therefore do not cause any side effects.

Feelings of ambivalence, insecurities, doubts and fears came through very clearly as the participants stated their awareness of the limitations in this sphere. Education at all levels is strongly recommended. The participants
feel that they would like to explore, experiment and gain knowledge about alternative medicine. The participants mentioned some of the herbal medicines they had encountered, and that a medical doctor had used herbal products in patient care. No literary confirmation was found on the herbal products used by the doctor.

Critical care nurses feel and believe that medicine today stands on the threshold of a deep and radical change.

This study supports the problem statement that there is a place for alternative medicine in the critically ill patient. Therefore the following guidelines are proposed for critical care nurses:

4.3 GUIDELINES FOR CRITICAL CARE NURSES

4.3.1 FORMAL EDUCATION OF THE CRITICAL CARE NURSE

Formal education of critical care nurses on the use of alternative medicine should be emphasised, so that knowledge, understanding and insight into maintaining the immune system optimally with these products can be obtained. In the future, more emphasis should be placed on the development and planning of nursing care curricula so that they extend beyond anatomy, physiology, pharmacology, and medical and surgical nursing. Critical care nurses could play a more meaningful role if alternative medicine is an integral part of the critical care educational programme.

The interface of critical care nursing education with other educational programmes must be assessed for its clinical implementation within the critical care environment.

Education for critical care nurses should be reality-based. The curricula should be needs-based and the outcomes of the education system should reflect the competencies of the professional based on the comprehensive model of health care delivery. A multi-disciplinary approach in the education and training
of health professionals is imperative to facilitate teamwork for the efficient delivery of critical care.

Training programmes are currently being offered by technikons and will encompass naturopathy and herbal medicine. Students will learn the art of healing using natural methods. Co-operation between the healing arts can only be of benefit to the patient.

Curricular review, participatory education, multiprofessional models and lifelong education, in-service training and education should therefore form the fundamentals of an education reform strategy. Multi-professional education with specific competencies for safe practice is imperative.

Workshops should be established for training programmes which are also offered by technikons and include intense curricula on alternative medicine. Attendance of lectures and tutorials with corresponding clinical practice will form the basic pattern for students studying alternative medicine.

The process of curricular reviews should be done annually to accommodate changing needs. An urgent transformation of the nursing education programme is therefore necessary.

4.3.2 COST EFFECTIVENESS A PRIORITY

Critical care nurses should assess and keep themselves up to date on the cost of conventional medicines versus alternative medicines, thereby giving attention to the most cost effective method.

On the whole, participants felt that economic realities will necessitate use of cost effective products in critical care.

4.4 RECOMMENDATIONS

The recommendations arising from this study are as follows:
4.4.1 EDUCATION

Designing in-service education programmes and curricula for alternative medicine training of critical care nurses at under- and post-graduate levels. Critical care nurse awareness programmes should be developed and published in formal scientific journals. Critical care nurses must be equipped with essential skills. These can be obtained from information systems.

4.4.2 NURSING RESEARCH

The lack of scientific research by nurses in this field has left a huge gap in the available information. As a result of these limitations, critical care curricula are often inadequate. Certain assessments are often overlooked due to a lack of knowledge. The need to continue nursing research in this field is therefore imperative.

4.4.3 RESPONSIBILITY AND UPDATING OF KNOWLEDGE

Critical care nurses share a responsibility for their future education in alternative medicine, by updating their knowledge, understanding and insight into its use and effects, and on how the immune system can be maintained optimally.

A system should be created for sharing information by telematics, or by the internet. Computers and other technology can be used to retrieve and share information through electronic mail such as the internet and websites. Critical care nurses should hold conferences and pool ideas on the topic of alternative medicine in critical care.

Critical care nurses should empower themselves by taking the lead in issues related to alternative medicine. Discussions at the International Council of Nurses, as well as at critical care congresses, will promote insight into alternative and allied health fields.

Emphasis is currently placed on the importance of understanding basic principles of free radical scavengers and the damage they cause in the human
Critical care nurses should debate relevant issues about free radical scavengers and should recognise situations or conditions that cause irrevocable damage, so that the opportunity to intervene is provided and to prevent devastating outcomes.

Critical care nurses should explore sponsorships from local companies, philanthropic individuals and groups to get them to sponsor talks and projects on alternative medicine, and its integration into the critical care environment.

4.5 POSITIVE ASPECTS

The positive aspect of this study is that it has highlighted the need for further research on this subject. It has also emphasized the need to approach the patient in a holistic manner.

4.6 CONCLUSIONS

In conclusion, it has been shown that there is a place for alternative medicine in the critically ill patient. Critical care nurses require the means and ways of incorporating this new dimension in health care. Guidelines for critical care nurses have been formulated and proposed. It is also recommended that incentivists be included in the educational programmes, thereby enhancing the team approach to health care. Since there is a lack of research in this field, suggestions have been made for further research.

4.7 SUMMARY

To summarise, chapter one formulates the problem statement and motivation for the research study. Chapter two describes the research method and design. Chapter three describes relevant information obtained from the participants and is justified by a literature control. In Chapter four guidelines are proposed for critical care nurses, and recommendations are made. Positive and negative aspects of this study are noted.
LIST OF REFERENCES


REQUEST TO DO RESEARCH AT YOUR HOSPITAL

I, Shehnaaz Moola, a Masters Degree student at the Rand Afrikaans University, wishes to conduct a research study at your hospital. The research project is fully explained per annexure A which is attached to this letter.

Thanking you

SHEHNAAZ MOOLA (MRS)
M. CUR.-STUDENT

DR. W.E. NEL R.N., Ph. D
SUPERVISOR
SENIOR LECTURER: DEPARTMENT OF NURSING
Shehnaaz Moola  
c/o Department of Nursing  
Rand Afrikaans University  

ATTENTION: MATRON

22 July 1998  
The Hospital Management  
P.O. Box 27213  
Pretoria  
0001

To The Manager/Unit Manager/Critical Care Nurses.

Re: REQUEST FOR YOUR PERMISSION TO CONDUCT RESEARCH IN YOUR HOSPITAL (ANNEXURE A).

I am a Master’s Degree student in General Intensive Care at the Rand Afrikaans University. It is required of me to conduct a research study to obtain an M Cur Degree. I hereby request your personal and professional permission to partake in my research project at your hospital. The unit concerned will be the Intensive Care Unit.

The title of the research study is: THE PERCEPTIONS OF CRITICAL CARE NURSES IN ALTERNATIVE MEDICINE.

The rationale for conducting this study is that more critical care nurses and the public are using alternative medicine. In this research study, alternative medicines include: herbal medicines, vitamins and anti-oxidants. The researcher would like to know what the perceptions of critical care nurses are in alternative medicine.

Selection criteria for participation in a focus group will be voluntary. Interviewers must have a diploma in critical care nursing, two years’ of critical care experience and participants will be English and/or Afrikaans speaking.

Ethical standards will be adhered to at all times. An audio-tape recording will be made of the interview, and will be transcribed by the researcher. Anonymity will be ensured by entrusting one person to transcribe the focus group interview.

Confidentiality will be maintained by inserting a clause on the Informed Consent. Participants will keep a copy of Informed Consent for their own records.

Duration of the focus group interview will be one hour. After the information has been transcribed, the audio-tapes will be disposed of.
A separate letter requesting permission to use the boardroom will be written. An individual date and time for the focus group interview will be scheduled.

The identity of the researcher, helpers and supervisors will be made available to the interviewees. All publications that might grow from this research will be discussed with the participants and a publication clause will also be incorporated into the informed consent letter.

Results will be made available to the Pretoria Heart Hospital.

Thanking you.

Yours sincerely

S. MOOLA
RAU Student No: 9607469

Tel: (h) 012-3740262 (w) 012-3411002.
Dear Colleague

Re: PARTICIPATION IN THE RESEARCH PROJECT.

As part of the M Cur degree (General Intensive Care Nursing Science), I am required by the Rand Afrikaans University to do a Research project, which I am presently busy with.

I hereby request your permission to partake in this Research Study. The objectives of the research study are as follows: to explore and describe the perceptions of Critical Care Nurses in Alternative Medicine in the critically ill patient, and to give guidelines for the Critical Care Team.

Alternative medicine in this research study includes herbal medicine, vitamins and anti-oxidants.

HERBAL MEDICINE

Nature's natural anti-oxidants are concentrated and come in the form of fruit and vegetables e.g. grape seed extract that has a 95% immune supporting function. Herbal plants, also known as medicine plants, increase the strength of T cells. Glutathione neutralises radiation toxicity and inhibits the free radical.

VITAMINS

Vitamin A is an anti-infective and an anti-oxidant for immune health. Vitamin C protects against viral and bacterial infections; supports adrenal and iron insufficiency, especially under stress. Vitamins detoxify harmful chemicals in the body. They aid in tissue growth and repair, and decrease cholesterol. Manganese is necessary for DNA/RNA production. Super-oxide dismutase works with catalase to scavenge and neutralise free radicals and enhance the immune response.

ANTI-OXIDANTS

The body normally produces anti-oxidant enzymes. In a critically ill condition, the body does not produce sufficient anti-oxidants and the cell-destroying oxidants (free radicals), destroy the interior of the cell.
Free radicals play a key role in the deterioration of the body and are found in the internal and external environment, e.g. chemicals in oxygen therapy, antibiotics, radiation therapy and various stressors. Free radicals are neutralised by enzymatic activity of natural antioxidants, including vitamins and herbal medicines.

A focus group interview will be used as a data collection method. The focus group is a semi-structured informal group session that is conducted and led by an independent moderator. The target population required must be selected according to specific criteria. These are:

Critical Care Nurses of a specific hospital in Gauteng.
Nurses who speak and understand English and/or Afrikaans.
Be of a multicultural society.
Nurses who have a Diploma/Honours or Masters qualification in Critical Care Nursing.
At least two years' of Critical Care experience.

Your participation is therefore requested if you meet with the above-mentioned criteria. The researcher plans to have one focus group on the 2nd of September 1998 at 08h00 in the board room of the Pretoria Heart Hospital. A moderator will lead the focus group. The researcher will be present to take field notes. The duration of the focus group session will be one and a half hours. It will be appreciated if you could be at the venue at 08h00. Refreshments will be served prior to the focus group session. Trustworthiness will be ensured by the method referred to by Guba and Lincoln (1985). Ethical considerations will be based upon the position paper of Ethical Standards for nurse researchers as stated by the Nurses’ Association.

Specific questions related to the research study will be asked during the interview. Cards will be handed out to you with the question in English and Afrikaans. The interview will be recorded using audio-cassettes so that the data collection is done accurately.

Confidentiality will be maintained by the external transcriber, external coder and myself. Data obtained will not be associated with any of the participants. Audio-cassettes will be wiped out after coding. The transcribed interview will be kept safely by the external coder and researcher until further interpretations and conclusions are made. Thereafter they will be wiped by the researcher.

You are under no circumstances coerced to partake in this research study. If you do not wish to, you have the right to withdraw at any time. The researcher is available to answer any questions with regard to the rights and participation in the research project. I attach a consent form.

Mrs S. Moola
APPENDIX 3

I, ........................................................................................................................................, hereby give my consent to participate in the focus group interview that will be held on the 2nd September 1998. I hereby also give consent for transcription of the interview and use thereof for the research study conducted by Mrs. S. Moola.

Signed at Pretoria on ............... day of .................................................................................. 1998

.............................................................................. ...................................................... ......................................................
Participant .................................................. Researcher .................................................. Witness

Please place this letter into the envelope enclosed. It can be delivered to the address below, or alternatively it can be collected by the researcher.

Thanking you in anticipation.

S. Moola
P.O. Box 27213
Sunnyside
0132

Tel (w): (012) 3411002
Tel (h): (012) 3740262.
THE CONFIDENTIALITY NOTE

I hereby promise to protect the human rights of all the participants in this research study. This includes anonymity of all the participants. No moral judgment shall be passed on the information generated and all information will be treated with the utmost confidentiality.

The audio-tapes will be wiped out and discarded as soon as all the information obtained has been transcribed. Ethical research standards will be strictly adhered to.

THE RESEARCHER

SHEHNAAZ MOOLA
SIGNATURE: ........................................
DATE: ................................................
PLACE: .............................................

THE SUPERVISOR

DR. ELIZABETH NEL (R.A.U.)
SIGNATURE: ........................................
DATE: ................................................
PLACE: .............................................

THE INDEPENDENT CODER AND RESEARCH INTERVIEWER

DR. ELNA GROSS
SIGNATURE: ........................................
DATE: ................................................
PLACE: .............................................

R.A.U. NURSING DEPARTMENT (011) 4892580 (TEL)
(011) 4892257 (FAX)
Dear Matron

Re: REQUESTING PERMISSION FOR THE USE OF THE BOARDROOM

I hereby request permission to conduct a focus group interview in the boardroom on the 2nd September 1998. The boardroom will be required from 08h00 to 10h00.

The duration of the group interview will be one hour only. However, half an hour will be used for setting up the venue. The other half hour will be used for serving tea/coffee and snacks, which will be sponsored by myself.

The focus group will consist of seven members, who meet the criteria of my research study. A moderator, Dr. Elna Gross will lead the focus group session. Confidentiality, anonymity and trustworthiness will be maintained at all times. Audio-cassette recorders will be used to interview the participants. Lastly, but not least, the venue will be maintained with dignity and responsibility.

Thanking you in anticipation.

Yours faithfully

Shehnaaz Moola.
weerstand sou opbou, en ons pasiente is gewoonlik hierdie siek pasiente wat minder weerstand betref, diabetiese al daai goed, so dit sal vir my baie nice wees, as dit kon gegee of voor of pre-operatief 'n maand voor die tyd dat dit klaar die immune systeem en die liggaam kan opbou, want dit vitamines neem te lank waar dit wond genesing en alles aanbetref, so dit sal nogal nice wees en nogal langtermyn pasiente net om hulle witsetting te help, dink ek sal dit nice wees.

Moderator: Verduidelik net vir my in die begin praat jy van kruie en herbal stuff ensovoorts, het jy toe ingesuited vitamines en anti-oxidante?

Respondent 2: Ja!

Moderator: Goed, ek wil net seker maak daaroor want aan die einde het jy van vitamines gepraat en aan begin begin van kruie. So dit wat eintlik drie saam. Herbs, ... hmmm ... verduidelik net vir my jy begin met kruie, is daar heetemal .........

Respondent 2: Hmm... Ek week ... hmmm ... spesifiek aan 'n plant produk soos Modury as ek dit kan noem, is 'n produk wat plant stimuleer or stimulate wat jy kan drink, jy drink dit gewoonlik voor hulle ingaan dan het jy klaar die voorsorg wat hulle nodig. Dit gaan deur 'n tekort verhoog word.

Moderator: Jy't gese jy is, is bewus van kruie wat al werk? Waar die vorige persoon gesê het sy is nie baie bekend met kruie nie, is ek, reg?

Respondent 1: Ds reg.

Moderator: Is daar nog iemand?

Respondent 3: Eee... ek het nie mos geweet wat is anti-oxidante nie, is, het ek maar toevallig iets in die nuusbrief afgekom, ek het amper 'n tipe van ... hmmm ... omdat ek nie self gebruik het nie het ek ... hmmm ... ek, ek weet nie of dit reg effektief is nie dat ek dit nooit dit beleef of gesien dat die effektief is nie. Hulle se dat dit effektief maar ek het dit nooit .... So ek is miskien bevooroordeeld daarteen wat ek weet nie die effek wat dit het nie, vitamines weet ek wel want ... hmmm ... hmmm ... ek werk partykeer by (noem hospitaal) en hulle lang termyn pasiente wat ons hier het is 'n baie kort tydperk hier en partykeer kry julle wat hulle ook byvoorbeeld en nie geeet nie en weet so kry jy hulle in 'n toestand wat nie optimal is nie, om 'n lugmag gewoonlik wat dit 'n tydperk om met hulle te ge......inne werk. En